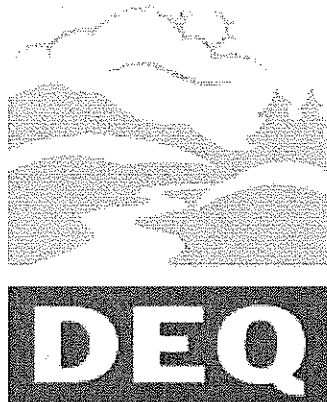


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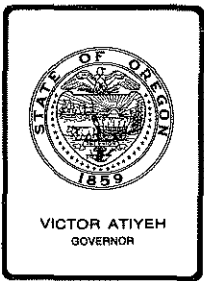
OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of
Environmental
Quality

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Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. T, January 30, 1981, EQC Meeting

Adoption of Proposed Rules Governing On-Site Sewage Disposal, OAR 340-71-100 to 71-600, to Replace Rules Governing Subsurface and Alternative Sewage Disposal, OAR 340-71-005 to 71-045, 340-72-005 to 72-030, 340-74-004 to 74-025, and 340-75-010 to 75-060.

Background and Problem Statement

ORS 454.625 requires the Commission to adopt such rules as it considers necessary for the purpose of carrying out ORS 454.605 to 454.745, Subsurface and Alternative Sewage Disposal.

At its August 1975 meeting, the Commission adopted a comprehensive set of rules, which were the product of eighteen months work by a sixteen member citizens task force. That rule package became effective in September 1975. Since that date, these rules have been amended extensively due to program changes brought on by new legislation or program direction. Due to numerous amendments, the rules have become unwieldy, disorganized, and difficult to interpret and administer.

Alternatives and Evaluation

The Department considered and rejected the alternative of continuing present rules. This would necessitate continued amendments which would have contributed to the problem rather than reduce it.

The alternative selected early in 1979 was a complete rewrite and restructuring of the rules. The rewrite commenced in May 1979, and has been ongoing to date.

First, an outline for the new rules was developed. This was followed by a process of rearranging the present rules to conform to the new outline, to determine where overlaps and gaps existed. It then became necessary to eliminate overlaps and to fill gaps.



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Materials

An editing process was then undertaken. The intent was to clarify the rules, make them more readable and understandable as well as easier to administer, while making as few changes in basic standards as possible. During this process it became clear that some changes in standards as well as procedures were necessary.

Several draft rule packages were developed and reviewed by special committees, appointed for that purpose. These committees were made up of state and county employees and private consultants.

The draft rule package was discussed in September 1980 for two and one-half days, at a meeting of subsurface personnel from throughout the state. After notice publication in the Secretary of State's Bulletin and mailing to the Department's subsurface and land use mailing lists, public hearings were held in Oregon City, Eugene, Medford, Bend, and Pendleton during the week of November 17, 1980. The package of proposed rules (Attachment C) is the revised rule package developed after the November hearings. A hearings officer's report is attached (Attachment A).

During the first week of January 1981, the Director along with staff, attended public meetings in La Pine and Astoria, to discuss the proposed rules, and the rapid draining soils rule in particular. Residents from these areas voiced concerns as to how the proposed rules would affect their areas.

In addition to being easier to interpret and administer, the proposed rule package contains several significant new rules that should increase the approval rate for subsurface and alternative system applications.

Among others, the proposal contains the following:

1. Changes the maximum slope where a standard system can be approved from 25 percent to 30 percent.
2. Provides for two new alternative systems developed from the experimental systems program:
 - a. Steep slope systems.
 - b. Tile dewatering systems.
3. Establishes a "large" system category as one with 2500 gallons per day or larger sewage flow, with specific rules for such systems.
4. Puts systems with sewage flows of 5000 gallons per day and larger under a Water Pollution Control Facilities (WPCF) Permit, for better long-term operational control.
5. Establishes site evaluation procedures which are absent in present rules.

6. Provides rules for pressurized distribution systems which are absent in present rules.
7. Establishes statewide standards for rapid draining soils associated with groundwater aquifers such as those at La Pine, Clatsop Plains, North Florence Dunal Area.
8. Establishes a "Community" system category with specific rules for such systems.
9. Generally provides for greater contract county program responsibility.
10. Establishes an expanded fee schedule to better reflect a base level of program services for which fees should be charged.
11. Establishes a "Glossary of Terms" to replace much of the present definition section.
12. Changes the general descriptive term "subsurface" to "on-site" to better reflect current nationwide terminology.

It is proposed that all present rules pertaining to subsurface sewage disposal be rescinded and the new rule package be adopted as a replacement. It is proposed that the new rules become effective upon filing with the Secretary of State. As soon as possible after filing, rules will be printed and distributed to all contract county and Department personnel as well as licensed installers. Regional meetings will be held to familiarize Department and Contract County personnel with the rules.

Summation

1. The Commission is required to adopt rules it considers necessary for carrying out ORS 454.605 to 454.745.
2. Rules have been adopted and amended numerous times. Present rules are unwieldy, disorganized, and difficult to interpret and administer.
3. A new rule package has been developed to replace existing rules.
4. The Commission authorized public hearings on the new proposed rules at its October 17, 1980 meeting.
5. Notice of public hearings was given by publication in Secretary of State's Bulletin and by mailing to the Subsurface and Land Use mailing lists.
6. Hearings were held at five locations around the state during the week of November 17, 1980.

7. The revised rule package (Attachment C) was prepared after completion of public hearings.

Director's Recommendation

Based upon the summation, it is recommended that the Commission adopt Rules pertaining to On-site Sewage Disposal, OAR 340-71-100 to 340-71-600 and rescind Rules pertaining to Subsurface and Alternative Sewage Disposal OAR 340-71-005 to to 71-045, 340-72-005 to 72-030, 340-74-004 to 74-025, and 340-75-010 to 75-060; both actions to be effective upon filing with the Secretary of State.

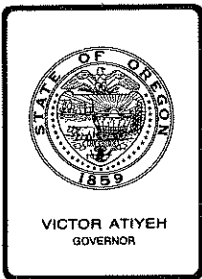


William H. Young

Attachments: 3

Attachment A	Hearings Officer's Report
Attachment B	Draft Statement of Need
Attachment C	Draft of Proposed Rules

T. Jack Osborne:l
229-6218
XL205 (1)
December 31, 1980



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission

FROM: Rhea W. Kessler, Hearings Officer

SUBJECT: Report on Public Hearings,
Held November 17, 18, 19 & 20, 1980, on
Proposed On-Site Sewage Disposal Rules

Summary of Procedure

Pursuant to Public Notice, Public Hearings were convened in Oregon City, Department of Environmental Services, on November 17, 1980, at 10 a.m., in Eugene, Lane County Courthouse, on November 18, 1980, at 10 a.m., in Medford, City Hall, on November 19, 1980, at 10:15 a.m., in Pendleton, State Office Building, on November 20, 1980, at 10:00 a.m., and in Bend, Deschutes County Courthouse, on November 20, 1980 at 10:00 a.m. The purpose of these meetings was to receive testimony regarding proposed rules for on-site sewage disposal.

Summary of Testimony

A. Oregon City

William Doak, Soil Consultant and Sanitarian, had a number of specific recommendations for changes in the rule package, but generally favors the adaptation of the proposed rules. His recommendations are as follows:

1. OAR 340-71-140(1)(a). Reduce fee for new site evaluation for large systems so that mobile homes, schools and restaurants would not be unduly burdened. He recommends one basic fee plus an additional fee of \$20 to \$25 per specified numbers of gallons of projected daily sewage flow. The fee for the evaluation denial review should be deleted. If not, the fee should be refundable if the reviewing decision reverses the denial.



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2. OAR 340-71-290(1)(a). The reduction of the dosing rate to 20% of the projected daily sewage flow was questioned. Mr. Doak recommends that the rate be kept at 25%-30%.
3. OAR 340-71-520(2)(a). Rather than pressure distribution for large systems, serial distribution was recommended. Mr. Doak expressed the opinion that pressure distributions may not work well on soils of variable permeability.
4. OAR 340-71-220(4)(c)(B). The necessity for anti-buoyancy devices in septic tanks located in high groundwater was challenged.

Richard L. Polson, Chief Soil Scientist, Development Services Division, Clackamas County. Mr. Polson made a series of suggestions for revision of the rule package. He addressed eleven areas of concern, including permit procedures, anti-buoyancy devices, set-backs, lot size, and responsibility for community systems. A written copy of his comments is attached to this report.

John L. Borge, Soil Scientist, Development Services Division, Clackamas County, read written comments into the record. He prepared a list of suggested amendments, which included changes in dosing tank construction standards, capping fill requirements, materials and construction standards, particularly as they relate to sand filter systems, and design requirements for large systems. A copy of his testimony is attached.

Lyle Parsons, Citizen of Clackamas County, expressed his concern that the proposed rules for large systems require pressure distribution and do not allow for serial distribution systems. He used a specific case as an example, the Clackamas County property of Mr. Eugene Fischer. Mr. Parsons questioned both the installation costs and effectiveness of pressure distribution systems.

Paul Caputo, Sand Trap Systems, Beaverton, wishes the amount of land required for sand filters to be reduced from one to one-half acre. He would also reduce the amount of land required for a replacement area. After the hearing he submitted a written statement, a copy of which is attached to this report.

B. Eugene

Stanley E. Petrasek, Lane County Department of Environmental Management, read his comments into the record. In general, he favored adoption of the proposed rules, but made a number of suggestions for revision. He addressed technical requirements for materials, WPCF permits and questioned the distinction between rural and formal variance procedures. A copy of his testimony is attached to this report.

A general question and answer period followed. Although participants declined to present formal testimony, a number of specific recommendations were made. The undersigned offered to incorporate these informal comments into the record, as it was apparent that a number of those in attendance had not had the opportunity to study the rule package in depth.

1. Appendix B, Page 1, B. Two unidentified people, representing septic tank manufacturers, spoke against the proposed liquid depth requirements of 42 inches for all compartments.
2. Appendix B, Page 1, A. One speaker criticized the 75-pound limit on manhole covers.
3. Appendix B, Pages 2-3, E. The proposed rules on fittings and openings was criticized. The speaker expressed the opinion that the system would be structurally weakened by the number of fittings and openings required.
4. Appendix B, Page 3, E8. Two people questioned the requirements for eight-inch access cover. If the access cover is for cleaning purposes only, most home owners would call a professional rather than do the job themselves. The use of a "snake" obviates the need for an 8-inch access cover.

C. Medford

Kenneth D. Cote, Sanitarian, Jackson County, submitted written comments for the record. He made a number of specific recommendations, questioning soil criteria requirements for standard disposal systems, ETA systems, and emphasized possible inconsistencies and inaccuracies in definitions, diagrams and basic standards. A copy is attached to this report.

Brad Prior, Supervising Sanitarian, Jackson County, made a statement concerning the relationship between DEQ and its contract counties. He perceives a trend away from DEQ coordination and administration, which is reflected in both the current rule package and current budget decisions. This trend is not a positive one, says Mr. Prior, because there is a corresponding lack of consistency as the role of DEQ is minimized. He stated that direction, supervision and technical support from the DEQ are all necessary if the quality of the program is to remain high.

Dean Yates, Dean Yates Septic Tanks, Medford, stated that the change from 38 inches to 42 inches for liquid depth of septic tank compartments is unnecessary. In addition, the change would put him out of business as his stock, valued at \$10,000, meets the present 38-inch liquid depth standard. Mr. Yates later submitted a written statement, which is attached.

A question and answer period followed.

D. Pendleton

Larry Lemkau presided at the Pendleton hearing. No formal testimony was offered, but a general question and answer session took place. The members of the public in attendance were interested in the practical application of the proposed rules.

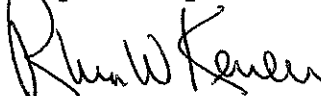
E. Bend

Dick Nichols presided at the Bend hearing. A number of people made formal presentations, and others chose to submit written statements in lieu of oral testimony. The written statements are incorporated into section "F" below. Mr. Nichols' separate hearings report is attached and made part of the official record.

F. Other Written Testimony

Many individuals submitted written statements, rather than attend one of the hearings to offer oral testimony. These written statements are attached and made a part of the official record.

Respectfully submitted,



Rhea W. Kessler
Hearings Officer

RK:d

HDD35 (2)

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The foregoing written testimony is on file at the Department of
Environmental Quality headquarters, 522 S. W. Fifth Avenue,
Portland, Oregon.

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the) Statutory Authority,
Adoption of Rule) Statement of Need,
340-71-100 to 71-600) Principal Documents Relied Upon,
On-Site Sewage Disposal) and Statement of Fiscal Impact

1. Citation of Statutory Authority: ORS 454.625, which requires the Environmental Quality Commission to adopt rules pertaining to subsurface and alternative sewage disposal.
2. Need for Rule: Present rules, adopted in August 1975, have been amended extensively and are now unwieldy, disorganized, and difficult to interpret and administer. The rules, if amended further, will only become more cumbersome.
3. Documents relied upon in proposal of the rule: None.
4. Fiscal and Economic Impact: Fiscal impact should be positive for several reasons. The rules should be more clear and easier to interpret, thus, less legal counsel time for interpretation should result. Local interpretation should be easier with less time required by Headquarters staff. Additional land can be developed with the new alternative systems proposed, providing a positive public fiscal impact. No additional staff will be needed as a result of the new rules.

Date: January 2, 1981



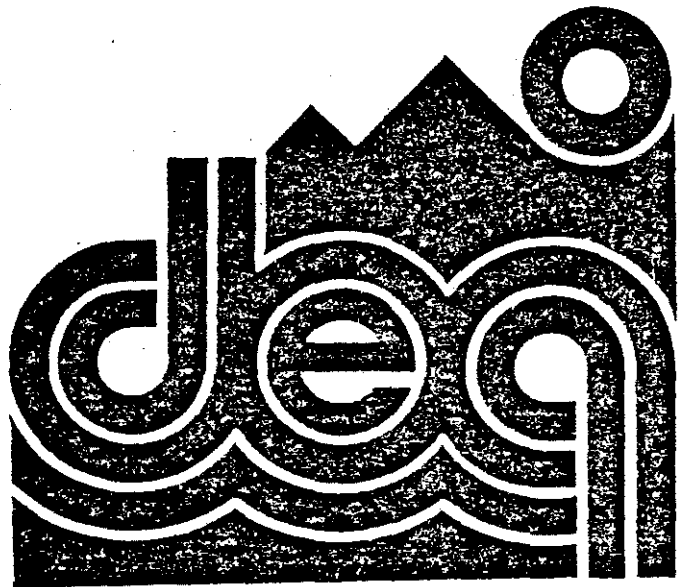
William H. Young, Director
Department of Environmental Quality

XL205.A (1)
12/31/80

ON-SITE SEWAGE DISPOSAL RULES

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

PROPOSED
OREGON ADMINISTRATIVE RULES
CHAPTER 340 - DIVISION 71



PROPOSED RULES
ON-SITE SEWAGE DISPOSAL

Individual On-site Systems

340-71-100 Definitions.

As used in these rules, unless otherwise specified:

(1) "Agent" means the Director or his authorized representative.

(2) "Alteration" means expansion and/or change in location of an existing system, or any part thereof.

(3) "Authorized Representative" means the staff of the Department of Environmental Quality or staff of the local governmental unit performing duties for and under agreement with the Department of Environmental Quality.

(4) "Commercial Facility" means any structure or building, or any portion thereof, other than a single-family dwelling.

(5) "Commission" means the Environmental Quality Commission.

(6) "Community System" means an on-site system which will serve more than one (1) lot or parcel or more than one (1) condominium unit or more than one (1) unit of a planned unit development.

(7) "Construction" means installation of a new system.

(8) "Department" means the Department of Environmental Quality.

(9) "Director" means the Director of the Department of Environmental Quality.

(10) " Dwelling " means any structure or building, or any portion thereof which is used, intended, or designed to be occupied for human living purposes including, but not limited to, houses, houseboats, boathouses, mobile homes, travel trailers, hotels, motels, and apartments.

(11) " Existing On-Site Sewage Disposal System " (existing system) means any installed on-site sewage disposal system constructed in conformance with the rules, laws and local ordinances in effect at the time of construction, or which would have conformed substantially with system design provided for in Commission, State Board of Health or State Health Division rules.

(12) " Failing System " means any system which discharges untreated or incompletely treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters.

(13) " Governmental unit " means the state or any county, municipality, or political subdivision, or any agency thereof.

(14) " Individual System " means a system that is not a community system.

(15) " Large System " means any on-site system with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons.

(16) " Occupant " means any person living or sleeping in a dwelling.

(17) " On-Site Sewage Disposal System (System) " means any installed or proposed sewage disposal facility including, but not limited to a standard subsurface, alternative, experimental

or non-water carried sewage disposal system, installed or proposed to be installed on land of the owner of the system or on other land as to which the owner of the system has the legal right to install the system.

(18) "Owner" means any person who:

(a) Has legal title to any single lot, dwelling, dwelling unit, or commercial facility; or

(b) Has care, charge, or control of any real property as agent, executor, executrix, administrator, administratrix, trustee, commercial lessee, or guardian of the estate of the holder of legal title; or

(c) Is the contract purchaser of real property.

Each such person as described in (b) and (c) above, thus representing the legal title holder, is bound to comply with the provisions of these rules as if he were the legal title holder.

(19) "Permit" means the written document issued and signed by the Agent which authorizes the permittee to install a system or any part thereof, which may also require operation and maintenance of the system.

(20) "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.

(21) "Public Health Hazard" means a condition whereby there are sufficient types and amounts of biological, chemical or physical, including radiological, agents relating to water

or sewage which are likely to cause human illness, disorders or disability. These include, but are not limited to, pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes.

(22) "Public waters" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

(23) "Repair" means installation of all portions of a system necessary to eliminate a public health hazard or pollution of public waters created by a failing system.

(24) "Sewage" means water-carried human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration, surface waters, or industrial waste as may be present.

(25) "System" - see "on-site sewage disposal system."

340-71-110 Purpose.

These rules, adopted pursuant to ORS 454.625, prescribe the requirements for the construction, alteration, repair, operation, and maintenance of on-site sewage disposal systems. Their purpose is to restore and maintain the quality of public waters and to protect the public health and general welfare of the people of the State of Oregon.

340-71-120 Jurisdiction and Policy.

(1) Prior to July 1, 1981, unless otherwise required within these rules, county agreements with the Department under ORS 454.725 shall be renegotiated to provide for county responsibility for receiving and processing applications, issuing permits and performing required inspections for all on-site systems. The Department shall assume those responsibilities in nonagreement counties. The division of responsibilities, by projected daily sewage flow, is set forth as follows:

✓ (a) Systems of twenty five hundred (2500) gallons or less shall have site evaluations, plan review, permits and inspections conducted or processed by the Agent. Plan review may be done by the Department at Agent's request.

✓ (b) Systems of twenty five hundred and one (2501) gallons to five thousand (5000) gallons shall have site evaluations, plan review, permits and inspections conducted or processed by the Department. Site evaluations, permit issuance and inspections may be delegated to the Agent.

✓ (c) Systems of five thousand and one (5001) gallons or larger shall have site evaluations, plan review, permits and inspection conducted or processed by the Department. The permit shall be a Water Pollution Control Facilities (WPCF) permit. For systems of this size, periodic inspections may be delegated to the Agent.

(2) Each and every owner of real property is jointly and severally responsible for:

(a) Disposing of sewage on that property in conformance with the rules of this Division; and

(b) Connecting all plumbing fixtures on that property, from which sewage is or may be discharged, to a sewerage or on-site sewage disposal system approved by the Department; and

(c) Maintaining, repairing, and/or replacing the system as necessary to assure proper operation of the system.

(3) Agreement counties may, by ordinance, adopt requirements for operation and maintenance of systems within that county. Such requirements must be approved by the Director.

(4) The Commission may, by rule impose operation and maintenance requirements on specified types and/or sizes of systems.

340-71-130 General Standards, Prohibitions and Requirements.

(1) Public Waters or Public Health Hazards. If, in the judgment of the Agent, proposed operation of a system would cause pollution of public waters or create a public health hazard, system installation or use shall not be authorized.

(2) Approved Disposal Required. All sewage shall be treated and disposed of in a manner approved by the Department.

(3) Discharge of Sewage Prohibited. Discharge of untreated or partially treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters constitutes a public health hazard and is prohibited.

(4) Discharges Prohibited. No cooling water, air conditioning water, water softener brine, ground water, oil, or roof drainage shall be discharged into any system.

(5) Increased Flows Prohibited. Except where specifically allowed within this Division, no person shall connect a dwelling or commercial facility to a system if the total projected sewage flow would be greater than that allowed under the original system construction permit.

(6) System Capacity. Each system shall have adequate capacity to properly treat and dispose of the maximum projected daily sewage flow. The quantity of sewage shall be determined from Table 2 or other information the Agent determines to be valid that may show different flows.

(7) Material Standards. All materials used in on-site systems shall comply with standards set forth in these rules.

(8) Encumbrances. A permit to install a new system can be issued only if each site has received an approved site

evaluation (OAR 340-71-150) and is free of encumbrances (i.e., easements, deed restrictions, etc.) which could prevent the installation or operation of the system from being in conformance with the rules of this Division.

(9) Future Connection to Sewerage System. In areas where a district has been formed to provide sewerage facilities placement of house plumbing to facilitate connection to the sewerage system shall be encouraged.

(10) Plumbing Fixtures Shall be Connected. All plumbing fixtures in dwellings and commercial facilities from which sewage is or may be discharged, shall be connected to, and shall discharge into an approved areawide sewerage system, or an approved on-site system which is not failing.

(11) Property Line Crossed. A recorded utility easement is required whenever a system crosses a property line separating properties under different ownership. The easement must accommodate that part of the system, including setbacks, which lies beyond the property line, and must allow entry to install, maintain and repair the system.

(12) Replacement Area. Except as provided in specific rules, system replacement area shall be kept vacant, free of vehicular traffic and soil modification.

(13) Operation and Maintenance. All systems shall be operated and maintained so as not to create a public health hazard or cause water pollution.

(14) Operating Permit Requirements. Systems with a projected daily sewage flow greater than five thousand (5,000) gallons shall be constructed and operated under a Water Pollution

Control Facilities (WPCF) Permit.

(15) No person shall dispose of sewage or septage (septic tank pumpings) in any location not authorized by the Department under applicable laws and rules for such disposal.

340-71-140 Fees-General.

(1) Except as provided in Section (3) of this rule, the following nonrefundable fees are required to accompany applications for site evaluations, permits, licenses and services:

ON-SITE	MAXIMUM
<u>SEWAGE DISPOSAL SYSTEMS</u>	<u>FEE</u>
(a) New Site Evaluation:	
First Lot	120
Each Additional Lot Evaluated while On-site	100
Commercial Facility System, for Each 1200 Gallons	
Projected Daily Sewage Flow or Part Thereof.....	120
Evaluation Denial Review	25

(A) Fees for site evaluation applications made to an agreement county shall be in accordance with that county's fee schedule.

(B) Each fee paid entitles the applicant to as many site inspections on a single parcel or lot as are necessary to determine site suitability for a single system. The applicant may request additional site inspections within 90 days of the initial site evaluation, at no extra cost.

(C) Separate fees shall be required if site inspections are to determine site suitability for more than one system on a single parcel of land.

ON-SITE

MAXIMUM

SEWAGE DISPOSAL SYSTEMS

FEE

(b) Construction Installation Permit	
Standard On-Site System	40
Commercial Facility System, Plan Review, for Each 1200	
Gallons Daily Sewage Flow, or Part Thereof	40
Commercial Facility System, Permit, for Each 1200	
Gallons Daily Sewage Flow, or Part Thereof	40
Alternative Systems	
Sand Filter	40
Capping Fill	40
Holding Tank	40
Other	40
Permit Denial Review	25
Construction-Installation Permit Renewal	
If Field Visit Required	25
No Field Visit Required	10
(c) Alteration Permit	40
(d) Repair Permit	25
(e) Authorization Notice	
If Field Visit Required	40
No Field Visit Required	10
(f) Annual Evaluation of Alternative System (Where Required).	40
(g) Annual Evaluation of Large System (2501 to 5000 GPD).....	40
(h) Annual Evaluation of Temporary Mobile Home	25
(i) Variance to On-Site System Rules	225

An applicant for a variance is not required to pay the application fee, if at the time of filing, the owner:

ON-SITE

MAXIMUM

SEWAGE DISPOSAL SYSTEMS

FEE

- a. Is 65 years of age or older; and
 - b. Is a resident of the State of Oregon; and
 - c. Has an annual household income, as defined in ORS 310.030, of \$15,000 or less.
- (j) Rural Area Variance to Standard Subsurface Rules
- Site Evaluation120
 - Permit 40
- In the event there is on file a site evaluation application for that parcel that is less than ninety (90) days old, the above site evaluation fee shall be waived.
- (k) Sewage Disposal Service
- Business License100
 - Pumper Truck Inspection, Each Vehicle 25
- (l) Experimental Systems
- Permit100

(2) Contract County Fee Schedules.

Pursuant to ORS 454.745(4), fee schedules which exceed maximum fees in ORS 454.745(1), are established for Contract Counties as follows:

(a) Lane County (set forth in Appendix K).

(3) The Agent may refund a fee accompanying an application for a construction-installation permit, site evaluation report, or variance, if the applicant withdraws the application before the agent has done any field work or other substantial review of the application.

ON-SITE

MAXIMUM

SEWAGE DISPOSAL SYSTEMS

FEE

- a. Is 65 years of age or older; and
- b. Is a resident of the State of Oregon; and
- c. Has an annual household income, as defined in ORS 310.030, of \$15,000 or less.

(j) Rural Area Variance to Standard Subsurface Rules

Site Evaluation	120
Permit	40

In the event there is on file a site evaluation application for that parcel that is less than ninety (90) days old, the above site evaluation fee shall be waived.

(k) Sewage Disposal Service

Business License	100
Pumper Truck Inspection, Each Vehicle	25

(l) Experimental Systems

Permit	100
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(2) Contract County Fee Schedules.

Pursuant to ORS 454.745(4), fee schedules which exceed maximum fees in ORS 454.745(1), are established for Contract Counties as follows:

- (a) Lane County (set forth in Appendix K).

340-71-150 Site Evaluation Procedures.

(1) A site evaluation is the first step in the process of obtaining a construction permit for an on-site System. Any person who wishes to install a new on-site sewage system shall first obtain a site evaluation report.

(2) Applications for site evaluations shall be made to the Agent, on forms approved by the Department. Each application must be completed in full, signed by the owner or his legally authorized representative, and be accompanied by all required exhibits and appropriate fee. Incomplete applications shall be returned to the applicant to be completed. Unless other procedures approved by the Department are provided within a contract county, applicants shall provide at least two (2) test pits with dimensions of at least two (2) feet wide by four (4) feet long by five (5) feet deep, and located approximately seventy-five (75) feet apart and within the area of the proposed system.

(3) Site Evaluation Report.

(a) The Agent shall evaluate the site of the proposed system, shall consider all system options, and shall provide a report of such evaluation.

(b) The site evaluation report shall be on a form approved by the Department.

(c) The report shall contain, at a minimum, a site diagram and observations of the following site characteristics, if present:

(A) Parcel size

(B) Slope--in disposal field and replacement areas (percent and direction)

(C) Surface streams--springs--other bodies of water

(D) Existing and proposed wells

(E) Escarpments

(F) Cuts and fills

(G) Unstable landforms

(H) Soil profiles--determined from test pits provided by applicant

(I) Water table levels (as indicated by conditions associated with saturation)

(J) Useable area for initial and replacement disposal areas

(K) Encumbrances (Applicant list on application)

(L) Sewerage availability

(M) Other observations as appropriate

(d) Site evaluation reports for subdivisions or other land divisions shall be based upon an evaluation of each lot.

(e) Specific conditions or limitations imposed on an approved site shall be listed on the evaluation report.

(f) An approved site evaluation report assures that the property owner will receive a permit to construct a system on that property provided procedures and conditions for permit issuance found in Rule 340-71-160 are met.

(4) Approval or Denial.

(a) In order to obtain an approved site evaluation report the following conditions shall be met:

(A) All criteria for approval as outlined in Rules 340-71-220 and/or 340-71-260 shall be met.

(B) Each lot or parcel must contain sufficient useable area to accommodate an initial and replacement system. Sites may be approved where the initial and replacement systems would be of different types, e.g., a standard subsurface system as the initial system and an alternative system as the replacement system. The site evaluation report shall indicate the type of the initial and type of replacement system for which the site is approved.

Exception. A replacement area is not required in areas under control of a legal entity such as a city, county, or sanitary district, provided the legal entity gives a written commitment that sewerage service will be provided within five (5) years.

(b) A site evaluation shall be denied where the above conditions are not met.

(c) Technical rule changes shall not invalidate a favorable site evaluation.

(5) Site Evaluation Denial Review. A site evaluation denied by the Agent shall be reviewed at the request of the applicant. The application for review shall be submitted to the Department in writing, and be accompanied by the denial review fee. The review shall be conducted by the Department.

340-71-160 Permit Application Procedures-General Requirements.

(1) No person shall cause or allow construction, alteration, or repair of a system, or any part thereof, without first applying for and obtaining a permit.

Exception: Emergency repairs as set forth in Rule 340-71-215.

(2) Applications for permits shall be made on forms provided by the Agent and approved by the Department.

(3) An application is complete only when the form, on its face, is completed in full, is signed by the owner or the owner's legally authorized representative, is accompanied by all required exhibits (including a site evaluation report) and fee, and includes, from the appropriate jurisdiction, a statement of compatibility with the acknowledged local comprehensive plan and zoning requirements or Land Conservation and Development Commission's goals.

(4) The application form shall be received by the Agent only when the form is complete, as detailed in section 340-71-160(3).

(5) Upon receipt of a completed application the Agent shall deny the permit if:

- (a) The application contains false information;
- (b) The application was wrongfully received by the Agent;
- (c) The proposed system would not comply with these rules;
- (d) The proposed system, if constructed, would violate a Commission moratorium as described in rule 340-71-460.

(e) The proposed system location is encumbered as described in section 340-71-130(8).

(f) A sewerage system which can serve the proposed sewage flow is both legally and physically available, as described below:

(A) Physical Availability. A sewerage system shall be deemed physically available if its nearest connection point from the property to be served is:

(i) For a single family dwelling, or other establishment with a maximum projected daily sewage flow of not more than four hundred fifty (450) gallons, within three hundred (300) feet;

(ii) For a proposed subdivision or group of two (2) to five (5) single family dwellings, or equivalent projected daily sewage flow, not further than two hundred (200) feet multiplied by the number of dwellings or dwelling equivalents.

(iii) For proposed subdivisions or other developments with more than five (5) single family dwellings, or equivalents, the Agent shall make a case-by-case determination of sewerage availability.

Exception: A sewerage system shall not be considered available if topographic or man-made features make connection physically impractical.

(B) Legal Availability. A sewerage system shall be deemed legally available if the system is not under a Department connection permit moratorium, and the sewerage system owner is willing or obligated to provide sewer service.

(6) A permit shall be issued only to a person licensed under ORS 454.695, or to the owner or easement holder of the land on which the system is to be installed.

(7) No person shall construct, alter or repair a system, or any part thereof, unless he is licensed under ORS 454.695, or he is the permittee.

(8) The Agent shall either issue or deny the permit within twenty (20) days after receipt of the completed application.

Exception: If weather conditions or distance and unavailability of transportation prevent the Agent from acting to either issue or deny the permit within twenty (20) days, the applicant shall be notified in writing. The notification shall state the reason for delay. The Agent shall either issue or deny the permit within sixty (60) days after the mailing date of such notification.

340-71-165 Permit Denial Review.

(1) A permit denied by the Agent shall be reviewed at the request of the applicant. The application for review shall be submitted to the Department in writing, and be accompanied by the denial review fee. The denial review shall be conducted and a report prepared by the Department.

(2) Permit denials for systems proposed to serve a commercial facility, intended to be used in a commercial activity, trade, occupation or profession, may be appealed through the contested case hearing procedure set forth in ORS 183 and OAR Chapter 340, Division 11.

(3) If the Agent intends to deny a permit for a parcel of ten (10) acres or larger in size, the Agent shall:

(a) Provide the applicant with a Notice of Intent to Deny;

(b) Specify reasons for the intended denial; and

(c) Offer a contested case hearing in accordance with ORS 183 and OAR Chapter 340, Division 11.

340-71-170 Pre-cover Inspections.

(1) When construction, alteration or repair of a system for which a permit has been issued is complete, except for backfill (cover), or as required by permit, the property owner or system installer shall notify the Agent. The Agent shall inspect the installation to determine if it complies with the rules of the Commission, unless the inspection is waived by the Agent in accordance with section 340-71-170(2).

(2) The Agent may, at his own election, waive the pre-cover inspection provided:

(a) The installation is a standard subsurface system installed by a sewage disposal service licensed pursuant to ORS 454.695; and

(b) The inspecting jurisdiction and the Department have developed an impartial method of identifying those installers who have a history of proper installations without excessive numbers of corrections; and

(c) Inspections waived are for installations made by installers identified as having a good history of proper installation; and

(d) A list of installers whose inspections may be waived is available to the public and the Department; and

(e) A representative number of each installer's systems has been inspected, regardless of installation history; and

(f) After system completion the installer certifies in writing that the system complies with the rules of the

Commission, and provides the Agent with a detailed as-built plan (drawn to scale) of the installation.

(3) Precover inspection details shall be recorded on a form approved by the Department.

340-71-175 Certificate of Satisfactory Completion.

(1) The Agent shall issue a Certificate of Satisfactory Completion, if, upon inspection of installation, the system complies with the rules of the Commission and the conditions of the permit.

(2) If inspected installation does not comply with the rules of the Commission and the conditions of the permit, the permittee shall be notified in writing or a Correction Notice shall be posted on the site. System deficiencies shall be explained and satisfactory completion required. Follow-up inspections may be waived by the Agent. After satisfactory completion a Certificate shall be issued.

(3) If the inspection is not made within seven (7) days after notification of completion, or the inspection is waived, a Certificate of Satisfactory Completion shall be deemed to have been issued by operation of law. In such cases, a modified Certificate shall be issued to the owner.

(4) A system, once installed, shall be backfilled (covered) only when:

(a) The permittee is notified by the Agent that inspection has been waived; or

(b) The inspection has been conducted by the Agent and a Certificate of Satisfactory Completion has been issued; or

(c) A Certificate of Satisfactory Completion has been issued by operation of law where the inspection has not been conducted within seven (7) days of notification of completed installation.

(5) Failure to meet requirements for satisfactory completion within thirty (30) days after written notification or posting of a Correction Notice on the site, constitutes a violation of ORS 454.605 to 454.745 and these rules.

(6) No person shall connect to or use any system, completed on or after January 1, 1974, unless a Certificate of Satisfactory Completion has been issued for the installation, or deemed issued by operation of law as provided in ORS 454.665(2).

(7) Unless otherwise required by the Agent the system installer shall backfill (cover) a system within ten (10) days after issuance of a Certificate of Satisfactory Completion for that system.

(8) A Certificate of Satisfactory Completion shall be valid for a period of one (1) year, for connection of the system to the facility for which it was constructed. After the one (1) year period, rules for Authorization Notices or Alteration Permits apply, as outlined in rules 340-71-205 and 340-71-210.

(9) Denial of a Certificate of Satisfactory Completion may be appealed in accordance with ORS 183.310 and OAR 340, Division 11.

340-71-185 Abandonment of Systems.

(1) The owner shall abandon a system when:

(a) A sewerage system becomes available and the building sewer has been connected thereto; or

(b) The source of sewage has been permanently eliminated;
or

(c) The system is failing and cannot be repaired; or

(d) The system has been constructed without a permit and cannot be brought into compliance with these rules; or

(e) The system has been used without a required Certificate of Satisfactory Completion, or Authorization Notice, and cannot be brought into conformance with these rules.

(2) Procedures for Abandonment:

(a) The septic tank, cesspool or seepage pit shall be pumped by a licensed sewage disposal service to remove all sludge;

(b) The septic tank, cesspool or seepage pit shall be filled with reject sand, bar run gravel, or other material approved by the Agent;

(c) The system building sewer shall be permanently capped.

340-71-195 Upgrading Disposal Systems.

When upgrading systems which approximate a pit privy and gray water discharge to the surface or to a pit, system repair rules (340-71-215) shall apply, provided:

- (1) The system serves an occupied dwelling; and
- (2) The system and dwelling were constructed prior to January 1, 1974.

340-71-200 Prior Construction Permits or Approvals.

(1) All construction permits and written approvals issued prior to January 1, 1974, expired by rule of the Commission on July 1, 1976, unless they met all requirements of OAR 340-71-015(8) and were converted to Department construction permits prior to that date.

(2) Converted permits required system construction prior to July 1, 1980. Any prior approvals or prior permits failing to meet the two (2) deadline dates above are void.

(3) All sites now proposed for on-site systems must meet appropriate requirements of these rules.

340-71-205 Authorization to Use Existing Systems

(1) For the purpose of these rules, "Authorization Notice" means a written document issued by the Agent which establishes that an on-site sewage disposal system appears adequate to serve the purpose for which a particular application is made.

(2) Authorization Notice Required. No Person shall place into service, change the use of, or increase the projected daily sewage flow into an existing on-site sewage disposal system without obtaining an Authorization Notice or Alteration Permit as appropriate.

Exceptions:

(a) An Authorization Notice is not required when there is a change in use (replacement of mobile homes or recreational vehicles with similar units) in mobile home parks or recreational vehicle facilities operated by a public entity or under a license or Certificate of Sanitation issued by the Oregon State Health Division or Oregon State Department of Commerce.

(b) An Authorization Notice is not required for use of a previously unused system for which a Certificate of Satisfactory Completion has been issued within one (1) year of the date such system is placed into service, providing the projected daily sewage flow does not exceed the design flow.

(3) For changes in the use of an existing on-site sewage disposal system where no increase in sewage flow is projected, or where the design flow is not exceeded; an Authorization Notice shall be issued if:

(a) The existing system is not failing; and

(b) All set-backs from the existing system can be maintained; and

(c) In the opinion of the Agent the proposed use would not create a public health hazard.

(d) If condition (a) or (b) of OAR 340-71-205(3) cannot be met, an Authorization Notice shall be withheld until such time as the necessary alterations and/or repairs to the system are made.

(4) For changes in the use of a system where projected daily sewage flow would be increased by not more than three hundred (300) gallons beyond the design capacity or by not more than fifty (50) percent of the design capacity for the system, whichever is less; an Authorization Notice shall be issued if:

(a) The existing system is shown not to be failing; and

(b) All set-backs from the existing system can be maintained; and

(c) Sufficient area exists so that a complete replacement area meeting all requirements of these rules (except those portions relating to soil conditions and groundwater) is available; and

(d) In the opinion of the Agent the proposed increase would not create a public health hazard or water pollution.

(e) Only one (1) Authorization Notice for an increase up to three hundred (300) gallons per system will be allowed.

(5) For changes in the use of a system where projected daily sewage flows would be increased by more than three hundred (300) gallons beyond the design capacity, or increased by more than fifty (50) percent of the design capacity of the system,

whichever is less, an Alteration Permit shall be obtained. Such permit may be issued only if the proposed installation will be in full compliance with these rules.

(6) Personal Hardship.

(a) The Agent may allow a mobile home to use an existing system serving another dwelling, in order to provide housing for a family member suffering hardship, by issuing an Authorization Notice, if:

(A) The Agent receives satisfactory evidence which indicates that the family member is suffering physical or mental impairment, infirmity, or is otherwise disabled (a hardship approval issued under local planning ordinances shall be accepted as satisfactory evidence); and

(B) The system is not failing; and

(C) The application is for a mobile home; and

(D) Evidence is provided that a hardship mobile home placement is allowed on the subject property by the governmental agency that regulates zoning, land use planning, and/or building.

(b) The Authorization Notice shall remain in effect for a specified period, not to exceed cessation of the hardship. The Authorization Notice is renewable on an annual or biennial basis. The Agent shall impose conditions in the Authorization Notice which are necessary to assure protection of public health.

(7) Temporary Placement.

(a) The Agent may allow a mobile home to use an existing system serving another dwelling in order to provide temporary housing for a family member in need, and may issue an

Authorization Notice provided:

- (A) The Agent receives evidence that the family member is in need of temporary housing; and
- (B) The system is not failing; and
- (C) A full system replacement area is available; and
- (D) Evidence is provided that a temporary mobile home placement is allowed on the subject property by the governmental agency that regulates zoning, land use planning, and/or building.

(b) The Authorization Notice shall authorize use for no more than two (2) years and is not renewable. The Agent shall impose conditions in the Authorization Notice necessary to assure protection of public health. If the system fails during the temporary placement and additional replacement area is no longer available, the mobile home shall be removed from the property.

340-71-210 Alteration of Existing On-Site Sewage Disposal Systems.

(1) Permit Required.

(a) No person shall alter an existing on-site sewage disposal system without first obtaining an Alteration Permit. See Rule 340-71-160.

(b) No person shall increase the projected daily sewage flow into an existing on-site sewage disposal system by more than three hundred (300) gallons beyond the design capacity or increase by more than fifty (50) percent of the design capacity of the system, whichever is less, until an Alteration Permit is obtained. Such permit may be issued only if the proposed installation will be in full compliance with these rules.

(2) Certificate of Satisfactory Completion Required. Upon completion of installation of that part of a system for which an Alteration Permit has been issued, the permittee shall obtain a Certificate of Satisfactory Completion from the Agent pursuant to Rule 340-71-175.

(3) Criteria for Permit Issuance. Except as provided in subsection 340-71-210(1)(b) the Agent may issue an Alteration Permit if:

(a) The existing system is not failing; and

(b) In the opinion of the Agent use of the on-site system would not create a public health hazard or water pollution.

340-71-215 Repair of Existing Systems.

(1) For the purpose of these rules, "Emergency Repair" means the repair of a system where sewage is backing up into a dwelling or commercial facility, or there is a broken pressure sewer pipe and immediate action is necessary to correct the situation.

(2) A failing system shall be immediately repaired.

(3) No person shall repair a failing system without first obtaining a Repair Permit. See OAR 340-71-160.

Exception. Emergency repairs may be made without first obtaining a permit provided that a permit is obtained within three (3) days after the emergency repairs are begun.

(4) Certificate of Satisfactory Completion. Upon completion of installation of that part of a system for which a repair permit has been issued, the permittee shall obtain a Certificate of Satisfactory Completion from the Agent pursuant to Rule 340-71-175.

(5) Criteria for Permit Issuance

(a) If the site characteristics and standards described in Rule 340-71-220 can be met, then the repair installation shall conform with them.

(b) If the site characteristics or standards described in Rule 340-71-220 cannot be met, the Agent may allow a reasonable repair installation in order to eliminate a public health hazard. Reasonable repairs may require the installation of an alternative system in order to eliminate a public health hazard.

(6) Failing systems which cannot be repaired shall be abandoned in accordance with Rule 340-71-185.

340-71-220 Standard Subsurface Systems.

(1) For the purpose of these rules:

(a) "Standard Subsurface System" means an on-site sewage disposal system consisting of a septic tank, distribution unit and subsurface drainfield.

(b) "Effective Soil Depth" means the depth of soil material above a layer that impedes movement of water, air, or growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depths are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite and clayey soil.

(c) "Large System" means any on-site system with a daily sewage flow greater than two thousand five hundred (2,500) gallons.

(d) "Conditions Associated with Saturation" means:

(A) Reddish brown or brown soil horizons with gray (chromas of two or less) and red or yellowish red mottles; or

(B) Gray soil horizons with red, yellowish red or brown mottles; or

(C) Dark colored highly organic soil horizons; or

(D) Soil profiles with concentrations of soluble salts at or near the ground surface.

(2) Criteria For Standard Subsurface System Approval.

In order to be approved for a standard subsurface system each site must meet all of the following conditions:

(a) Effective soil depth shall extend thirty (30) inches or more from the ground surface as shown in Table 3. A minimum six (6) inch separation shall be maintained between the layer that limits effective soil depth and the bottom of the disposal

trench.

(b) Water table levels shall be predicted using "conditions associated with saturation." If conditions associated with saturation do not occur in soil with rapid or very rapid permeability, predictions of the highest level of the water table shall be based on past recorded observations of the Agent. If such observations have not been made, or are inconclusive, the application shall be denied until observations can be made. Groundwater level determinations shall be made during the period of the year in which high groundwater normally occurs in that area.

(A) A permanent water table shall be four (4) feet or more from the bottom of the disposal trench.

Exception: In defined geographic areas where the Department has determined through a groundwater study that degradation of groundwater would not be caused nor public health hazards created. In the event this exception is allowed, the rule pertaining to a temporary water table shall apply.

(B) A temporary water table shall be twenty-four (24) inches or more below the ground surface. A disposal trench shall not be installed deeper than the level of the temporary water table.

(i) Curtain Drains. (Diagram 13) A curtain drain may be used to intercept and/or drain temporary water from a disposal area, however, it may be required to demonstrate that the site can be de-watered prior to issuing a construction installation permit. Curtain drains may be used only on sites with adequate slope to permit proper drainage. Where required, curtain drains

are an integral part of the disposal system.

(c) Soil with rapid or very rapid permeability shall be thirty six (36) inches or more below the ground surface. A minimum eighteen (18) inch separation shall be maintained between soil with rapid or very rapid permeability and the bottom of disposal trenches.

Exception: Sites may be approved with no separation between the bottom of disposal trenches and soil as defined in Appendix A, 107(a) and (b), with rapid or very rapid permeability, and disposal trenches may be placed into soil as defined in Appendix A, 107(a) and (b), with rapid or very rapid permeability if any of the following conditions occur:

(A) A confining layer occurs between the bottom of disposal trenches and the ground water table. A minimum six (6) inch separation shall be maintained between the bottom of disposal trenches and the top of the confining layer; or

(B) A layer of soil with sandy loam texture or finer at least eighteen (18) inches thick occurs between the bottom of the disposal trenches and the ground water table; or

(C) The projected daily sewage flow does not exceed a loading rate of four hundred fifty (450) gallons per acre per day.

(d) Slopes shall not exceed thirty (30) percent and the slope/depth relationship set forth in Table 3.

(e) The site has not been filled or the soil has not been modified in a way that would, in the opinion of the Agent, adversely affect functioning of the system.

(f) The site shall not be on an unstable land form, where operation of the system may be adversely affected.

(g) The site of the initial and replacement drainfield shall not be covered by asphalt or concrete, or subject to vehicular traffic, livestock, or other activity which would adversely affect the soil.

(h) The site of the initial and replacement drainfield will not be subjected to excessive saturation due to, but not limited to, artificial drainage of ground surfaces, driveways, roads, and roof drains.

(i) Setbacks in Table 1 can be met.

(3) Criteria For System Sizing.

(a) Disposal Fields. Disposal fields shall be designed and sized on the basis of information contained in:

(A) Table 2-Quantities of Sewage Flows; or other information determined by the Agent to be reliable.

Exceptions: Systems shall be sized on the basis of three hundred (300) gallons sewage flow per day, plus seventy five (75) gallons per day for the third bedroom when:

(i) Systems to serve single family dwellings on lots of record prior to March 1, 1978, which are inadequate in size to accommodate a system sized for a daily sewage flow of four hundred fifty (450) gallons.

(ii) Systems for specifically planned developments, with living units of three (3) or fewer bedrooms, where deed restrictions prohibit an increase in the number of bedrooms.

(B) Table 4 minimum length of disposal trench required
Soil Texture Versus Effective Soil Depth

(C) Table 5--minimum length of disposal trench required--
Soil Texture Versus Depth to Temporary Water

(4) Septic Tanks.

(a) For the purpose of these rules, "Septic Tank" means a watertight receptacle which receives sewage from a sanitary drainage system, is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil disposal system.

(b) Liquid Capacity. The minimum liquid capacity of any septic tank installed after July 1, 1981, shall be one thousand (1,000) gallons.

(A) For projected daily sewage flows up to fifteen hundred (1,500) gallons the septic tank shall have a liquid capacity equal to at least one and one-half (1-1/2) days sewage flow, or one thousand (1,000) gallons, whichever is greater.

(B) For projected daily sewage flows greater than fifteen hundred (1,500) gallons, the septic tank shall have a liquid capacity equal to eleven hundred twenty-five (1,125) gallons plus seventy-five (75) percent of the projected daily sewage flow.

(C) Additional volume may be required by the Agent for industrial or other special wastes.

(D) The quantity of daily sewage flow shall be estimated from Table 2. For structures not listed in Table 2, the Agent shall determine the projected daily sewage flow.

(E) Single Family Dwelling. Septic tanks to serve single family dwellings shall be sized on the number of bedrooms in the dwelling, as follows:

- 1 to 4 bedrooms.....1,000 gallons
- 5 bedrooms.....1,250 gallons
- More than 5 bedrooms.....1,500 gallons

(c) Installation Requirements.

(A) Septic tanks shall be installed on a level, stable base that will not settle.

(B) Septic tanks located in high groundwater areas shall be weighted or provided with an antibuoyancy device to prevent flotation.

(C) All septic tanks installed with the manhole access deeper than eighteen (18) inches or as part of a sand filter system shall be provided with a watertight riser extending to the ground surface or above. The riser shall have a minimum inside dimension equal to or greater than that of the tank manhole. The cover shall be securely fastened or weighted to prevent easy removal.

(D) Septic tanks shall be installed in a location that provides access for servicing and pumping.

(E) Where practicable, the sewage flow from any establishment shall be consolidated into one septic tank.

(d) Construction. Septic tank construction shall comply with minimum standards set forth in Appendix B.

(5) Distribution Techniques. Disposal trenches shall be constructed according to one of the following methods:

(a) Gravity Fed Equal Distribution (including Loop) System. (Diagrams 3, 4 and 5)

The equal distribution system shall be used on generally level ground. All trenches, and piping shall be level within a tolerance of plus or minus one (1) inch. All lateral piping shall be at the same elevation.

(b) Serial Distribution System. (Diagrams 1 and 2)

The serial distribution system is generally used on sloping ground. Each trench shall be level within a tolerance of plus or minus one (1) inch.

(c) Pressurized Distribution Systems. See Rule 340-71-275, for pressurized distribution requirements.

(6) Distribution Boxes and Drop Boxes.

(a) Construction. Construction of distribution boxes and drop boxes shall comply with minimum standards in Appendix C.

(b) Foundation. All distribution boxes and drop boxes shall be bedded on a stable, level base.

(7) Dosing Tanks

(a) Construction of dosing tanks shall comply with the minimum standards in Appendix D.

(b) Each dosing tank shall be installed on a stable level base.

(c) Each dosing tank shall be provided with a watertight riser extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access manhole. Provision shall be made for securely fastening the manhole cover.

(d) Dosing tanks located in high groundwater areas shall be weighted or provided with an antibuoyancy device to prevent flotation.

(8) Disposal Trenches. (Diagram 1, 2, 3, 4, 5, 11, 12)

(a) Disposal trenches shall be constructed in accordance with the standards contained in the following table, unless otherwise allowed or required within a specific rule of this division:

Maximum length of trench - - - - -	125 feet
Minimum bottom width of trench - - - - -	24 inches
Minimum depth of trench, using:	
Equal or loop distribution - - - - -	18 inches
Serial distribution - - - - -	24 inches
Pressure Distribution - - - - -	24 inches
Maximum depth of trench - - - - -	36 inches
Minimum distance of undisturbed earth between disposal trenches - - - - -	8 feet

(b) The bottom of the disposal trench shall be level within a tolerance of plus or minus one (1) inch.

(c) When the sidewall within the disposal trench has been smeared or compacted, sidewalls shall be raked to insure permeability.

(d) Trenches shall not be constructed in a manner that would allow septic tank effluent to flow backwards from the distribution pipe to undermine the distribution box, the septic tank, or any portion of the distribution unit.

(e) Filter material shall extend the full width and length of the disposal trench to a depth of not less than twelve (12) inches. There shall be at least six (6) inches of filter material under the distribution pipe and at least two (2) inches over the distribution pipe.

(f) Prior to backfilling the trench, the filter material shall be covered with filter fabric, untreated building paper, or other material approved by the Agent.

(g) Where trenches are installed in sandy loam or coarser soils, the filter material shall be covered with filter fabric or other non-degradable material approved by the Agent.

(9) Trench Backfill.

(a) The installer shall assume responsibility for backfilling the system. Backfill shall be carefully placed to prevent damage to the system.

(b) A minimum of six (6) inches of backfill is required, except in serial and pressure systems where twelve (12) inches is required.

(c) Backfill shall be free of large stones, frozen clumps of earth, masonry, stumps, or waste construction materials, or other materials that could damage the system.

(10) Header Pipe. (Appendix F) Header pipe shall be water-tight, have a minimum diameter of four (4) inches, and be bedded on undisturbed earth. Where distribution boxes or drop boxes are used, header pipe shall be at least four (4) feet in length.

(11) Distribution pipe. (Appendix F)

(a) Distribution pipes shall have a minimum diameter of four (4) inches.

(b) Each disposal trench shall have distribution piping that is centered in the trench and laid level within a tolerance of plus or minus one (1) inch.

(c) Distribution piping, which complies with standards in Appendix F, may consist of perforated bituminized fiber, perforated plastic, clay tile or concrete tile.

(d) All perforated pipe shall be installed with centerline markings up.

(e) Concrete tile and clay tile shall be laid with grade boards and with one-quarter (1/4) inch open joints. The top one-half (1/2) of the joints shall be covered with strips of treated building paper, tar paper, tile connectors, spacers, collars or clips, or other materials approved by the Agent.

(12) Effluent Sewer. The effluent sewer shall extend at least five (5) feet beyond the septic tank before connecting to the distribution unit. See Appendix F.

(13) Minimum Separation Distances.

(a) On-site systems or parts thereof shall not be installed closer than the indicated distances from the items in Table 1.

(b) Stream Setbacks. (Table 1) Setback from streams shall be measured from bank drop-off or mean yearly high water mark, whichever provides the greatest separation distance.

(c) Lots Created Prior to May 1, 1973. For lots or parcels legally created prior to May 1, 1973, the Agent may approve installation of a standard or alternative system with a setback from surface public waters of less than one hundred (100) feet but not less than fifty (50) feet, provided all other provisions of these rules can be met.

(d) Water Lines and Sewer Lines Cross. Where water lines and building or effluent sewer lines cross, separation distances shall be as required in the State Plumbing Code.

(e) Septic Tank Setbacks. (Table 1) The Agent shall encourage the placement of septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation in order to minimize clogging of the building sewer.

(14) Large Systems. Systems with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons shall be designed in accordance with requirements set forth in Rule 340-71-520.

340-71-260 Alternative Systems, General.

(1) For the purpose of these rules "Alternative system" means any Commission approved on-site sewage disposal system used in lieu of, including modifications of, the standard subsurface system.

(2) "Sewage Stabilization Ponds" and "Land Irrigation of Sewage" are alternative systems available through the Water Pollution Control Facilities (WPCF) permit program.

(3) Unless otherwise noted, all rules pertaining to the siting, construction, and maintenance of standard subsurface systems shall apply to alternative systems.

(4) General Requirements

(a) Periodic Inspection of Installed Systems. Where required by rule of the Commission, periodic inspections of installed alternative systems shall be performed by the Agent. An inspection fee may be charged.

(b) A report of each inspection shall be prepared by the Agent. The report shall list system deficiencies and correction requirements and timetables for correction. A copy of the report shall be provided promptly to the system owner. Necessary follow-up inspections shall be scheduled.

340-71-265 Capping Fills. (Diagram 10)

(1) For the purposes of this rule, "Capping Fill" means a system where the disposal trench effective sidewall is installed a minimum of twelve (12) inches into natural soil below a soil cap of specified depth and texture.

(2) Criteria for Approval. In order to be approved for a capping fill system, each site must meet all the following conditions:

(a) Slope does not exceed twelve (12) percent.

(b) Temporary water table is not closer than eighteen (18) inches to the ground surface at anytime during the year. A six (6) inch minimum separation must be maintained between the bottom of the disposal trench and the temporary water table.

(c) Where a permanent water table is present, a minimum four (4) feet separation shall be maintained between the bottom of the disposal trench and the water table.

(d) Where material with rapid or very rapid permeability is present, a minimum eighteen (18) inches separation shall be maintained between the bottom of the disposal trench and soil with rapid or very rapid permeability.

(e) Effective soil depth is eighteen (18) inches or more below the natural soil surface.

(f) Soil texture from the ground surface to the layer that limits effective soil depth is no finer than silty clay loam.

(g) A minimum six (6) inch separation shall be maintained between the bottom of the disposal trench and the layer that limits effective soil depth.

(h) The system can be sized according effective soil depth in Table 4.

(3) Installation Requirements. The cap shall be constructed pursuant to permit requirements. Unless otherwise required by the Agent, construction sequence shall be as follows:

(a) The soil shall be examined and approved by the Agent prior to placement. The texture of the soil used for the cap shall be of the same textural class, or of one textural class finer, as the natural topsoil.

(b) Construction of capping fills shall occur between June 1 and October 1 unless otherwise allowed by the Agent. The upper eighteen (18) inches of natural soil must not be saturated or at a moisture content which causes loss of soil structure and porosity when worked.

(c) The drainfield site and the borrow site shall be scarified to destroy the vegetative mat.

(d) Drainfield shall be installed as specified in the construction permit. There shall be a minimum ten (10) feet of separation between the edge of the fill and the nearest trench sidewall.

(e) Fill shall be applied to the fill site and worked in so that the two (2) contact layers (native soil and fill) are mixed. Fill material shall be evenly graded to a final depth of sixteen (16) inches over the gravel. Both initial cap and repair cap may be constructed at the same time.

(f) The site shall be landscaped according to permit conditions and be protected from livestock, automotive traffic or other activity that could damage the system.

(4) Required Inspections. The following minimum inspections shall be performed for each capping fill installed:

(a) Both the drainfield site and borrow material must be inspected for scarification, soil texture, and moisture content, prior to cap construction.

(b) Pre-cover inspection of the installed drainfield.

(c) After cap is placed, to determine that there is good contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.

(d) Final inspection, after landscaping. A Certificate of Satisfactory Completion may be issued at this point.

340-71-270 Evapotranspiration-Absorption (ETA) Systems.

(Diagram 6 and 7)

(1) For the purpose of these rules "Evapotranspiration-Absorption System" means an alternative system consisting of a septic tank or other treatment facility, effluent sewer and a disposal bed or disposal trenches, designed to distribute effluent for evaporation, transpiration by plants, and by absorption into the underlying soil.

(2) Criteria for Approval. Installation permits may be issued for evapotranspiration-absorption (ETA) systems on sites that meet all of the following conditions:

(a) Mean annual precipitation does not exceed twenty-five (25) inches.

(b) There exists a minimum of thirty (30) inches of moderately-well to well drained soil. The subsoil at a depth of twelve (12) inches and below shall be fine textured.

(c) Slope does not exceed fifteen (15) percent. Exposure may be taken into consideration.

(3) Criteria for System Design. ETA beds shall be designed under the following criteria:

(a) Beds shall be sized using a minimum eight hundred fifty (850) square feet of bottom surface area per one hundred fifty (150) gallons of projected daily sewage flow in areas where annual precipitation is fifteen (15) to twenty-five (25) inches, or six hundred (600) square feet of bottom surface area per one hundred fifty (150) gallons of projected daily sewage flow in areas where annual precipitation is less than fifteen (15) inches.

(b) Beds shall be installed not less than twelve (12) inches nor deeper than twenty-four (24) inches into natural fine textured soil on the downhill side and not more than thirty-six (36) inches deep on the uphill side.

(c) A minimum of one (1) distribution pipe shall be placed in each bed.

(d) The surface shall to be seeded according to permit conditions.

(e) Other bed construction standards contained in diagrams 6 and 7 shall apply.

340-71-275 Pressurized Distribution Systems.

(1) Pressurized distribution systems may be permitted on any site meeting requirements for installation of standard subsurface sewage disposal systems, or other sites where this method of effluent distribution is desired.

(2) Except as provided in OAR 340-71-220(2)(c), pressurized distribution systems shall be used where depth to soil as defined in Appendix A, 107(a) and (b) is less than thirty (36) inches and the minimum separation distance between the bottom of the disposal trench and soil as defined in Appendix A, 107(a) and (b) is less than eighteen (18) inches.

(3) Pressurized distribution systems installed in soil as defined in Appendix A, 107(a) and (b) in areas with permanent water tables shall not discharge more than four hundred fifty (450) gallons of effluent per one-half (1/2) acre per day except where:

(a) A gray water system is proposed for lots of record existing prior to January 1, 1974, which have sufficient area to accommodate a gray water pressurized distribution system, or

(b) Groundwater is degraded and designated as a nondevelopable resource by the State Department of Water Resources, or

(c) A detailed hydrogeological study discloses loading rates exceeding four hundred fifty (450) gallons per one-half (1/2) acre per day would not increase the nitrate-nitrogen concentration in the groundwater beneath the site, or at any down gradient location, above five (5) milligrams per liter.

(4) Materials and Construction.

(a) General.

(A) All materials used in pressurized systems shall be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation.

(B) Nothing in these rules shall be construed to set aside applicable building, electrical, or other codes. An electrical permit and inspection from the Department of Commerce or the municipality with jurisdiction [as defined in ORS 456.750(5)] is required for pump wiring installation.

(b) Pressurized Drainfield Piping. Piping, valves and fittings for pressurized systems shall meet the following minimum requirements:

(A) All pressure transport, manifold, lateral piping, and fittings shall meet or exceed the requirements for Class 160 PVC 1120 pressure pipe as identified in ASTM Specification D2241.

(B) Pressure transport piping shall be uniformly supported along the trench bottom, and at the discretion of the Agent, it shall be bedded in sand or other material approved by the Agent.

(C) Orifices shall be located on top of the pipe, except in areas of extended frozen soil conditions in which case the Agent may specify orifice orientation.

(D) The ends of lateral piping shall be provided with threaded plugs or caps.

(E) All joints in the manifold, lateral piping, and fittings shall be solvent welded, using the appropriate joint compound for the pipe material. Pressure transport piping may be solvent welded or rubber ring jointed.

(F) A gate valve shall be placed on the pressure transport pipe, in or near the dosing tank, when appropriate.

(G) A check valve shall be placed between the pump and the gate valve, when appropriate.

(c) Trench Construction.

(A) Minimum trench length required shall be not less than that specified in Tables 4 and 5.

(B) Drainfield trenches shall be constructed using the specifications for the standard drainfield trench unless otherwise allowed by the Department on a case-by-case basis.

(C) Pressure lateral piping shall have not less than eight (8) inches of filter material below, nor less than two (2) inches of filter material above the piping.

(D) The sides of the trench and top of the filter material shall be lined or covered with filter fabric, or other nondegradable material permeable to fluids that will not allow passage of soil particles. In soils finer textured than loamy sand, lining the sidewall may not be required.

(d) Seepage Bed Construction.

(A) Seepage beds may be used in soil as defined in Appendix A, 107(a) and (b) as an alternative to the use of disposal trenches.

(B) The effective seepage area shall be based on the bottom area of the seepage bed. The minimum area shall be not less than that specified in Table 9.

(C) Beds shall be installed not less than eighteen (18) inches [twelve (12) inches with a capping fill] nor deeper than thirty six (36) inches into the natural soil. The seepage bed

bottom shall be level.

(D) The top of the filter material shall be lined or covered with filter fabric, or other nondegradable material that is permeable to fluids but will not allow passage of soil particles.

(E) Pressurized distribution piping shall have not less than eight (8) inches of filter material below, nor less than two (2) inches of filter material above the piping.

(F) Pressurized distribution piping shall be horizontally spaced not more than four (4) feet apart, and not more than two (2) feet away from the seepage bed sidewall. At least two (2) parallel pressurized distribution pipes shall be placed in the seepage bed.

(G) A minimum of ten (10) feet of undisturbed earth shall be maintained between seepage beds.

(e) Notwithstanding other requirements of this rule, when the projected daily sewage flow is greater than two thousand five hundred (2500) gallons the Department may approve other design criteria and standards it deems appropriate.

(5) Hydraulic Design Criteria.

(a) Pressurized distribution systems shall be designed for appropriate head and capacity.

(A) Head calculations shall include maximum static lift, pipe friction and orifice head requirements.

(i) Static lift where pumps are used shall be measured from the minimum dosing tank level to the level of the perforated distribution piping.

(ii) Pipe friction shall be based upon a Hazen Williams coefficient of smoothness of 120. All pressure lateral piping and fittings shall have a minimum diameter of two (2) inches unless submitted plans and specifications show a smaller diameter pipe is adequate. The head loss across a lateral with multiple evenly spaced orifices may be considered equal to one-third (1/3) of the head loss that would result if the entrance flow were to pass through the length of the lateral.

(iii) There shall be a minimum head of five (5) feet at the remotest orifice and no more than a fifteen (15) percent head variation between nearest and remotest orifice in an individual unit.

(B) The capacity of a pressurized distribution system refers to the rate of flow given in gallons per minute (gpm).

(i) Lateral piping shall have discharge orifices drilled a minimum diameter of one-eighth (1/8) inch, and evenly spaced at a distance not greater than twenty four (24) inches in coarse textured soils or greater than four (4) feet in finer textured soils.

(ii) The system shall be dosed at a rate not to exceed twenty (20) percent of the projected daily sewage flow.

(iii) The affect of back drainage of the total volume of effluent within the pressure distribution system shall be evaluated for its impact upon the dosing tank and system operation.

340-71-280 Seepage Trench System.

(1) For the purpose of these rules "Seepage Trench System" means a system with disposal trenches with more than six (6) inches of filter material below the distribution pipe.

(2) Criteria for Approval. Construction permits may be issued by the Agent for seepage trench systems on lots created prior to January 1, 1974, for sites that meet all the following conditions:

(a) Groundwater degradation would not result.

(b) Lot or parcel is inadequate in size to accommodate standard subsurface system disposal trenches.

(c) All other requirements for standard subsurface systems can be met.

(3) Design Criteria. Seepage trench system dimensions shall be determined by the following formula:

Length of seepage trench = $(4) \text{ (length of disposal trench)}/(3 + 2D)$ where D = depth of filter material below distribution pipe in feet. Maximum depth of filter material (D) shall be two (2) feet.

340-71-285 Redundant Systems. (Diagram 11)

(1) For the purpose of these rules "Redundant Disposal Field System" means a system in which two (2) complete disposal systems are installed, the disposal trenches of each system alternate with each other and only one system operates at any given time.

(2) Criteria for Approval. Construction installation permits may be issued by the Agent for redundant disposal field systems to serve single family dwellings on sites that meet all the following conditions:

(a) The lot or parcel was created prior to January 1, 1974, and

(b) There is insufficient area to accommodate a standard system.

(3) Design Criteria.

(a) Each redundant disposal system shall contain two (2) complete disposal fields.

(b) Each disposal field shall be adequate in size to accommodate the projected daily sewage flow from the dwelling.

(c) A minimum separation of ten (10) feet [twelve (12) feet on centers] shall be maintained between disposal trenches designed to operate simultaneously, and a minimum separation of four (4) feet [six (6) feet on centers] shall be maintained between adjacent disposal trenches.

340-71-290 Sand Filter Systems.

(1) For the purpose of these rules:

(a) "Conventional sand filter" means a filter with two (2) feet of medium sand designed to filter and biologically treat septic tank or other treatment unit effluent from a pressure distribution system at an application rate not to exceed one and twenty-three hundredths (1.23) gallons per square foot sand surface area per day, applied at a dose not to exceed twenty (20) percent of the projected daily sewage flow.

(b) "Medium sand" means a mixture of sand with 100 percent passing the 3/8 inch sieve, 90 percent to 100 percent passing the No. 4 sieve, 62 percent to 100 percent passing the No. 10 sieve, 45 percent to 82 percent passing the No. 16 sieve, 25 percent to 55 percent passing the No. 30 sieve, 5 percent to 20 percent passing the No. 50 sieve, 10 percent or less passing the No. 60 sieve, and 4 percent or less passing the No. 100 sieve.

(c) "Sand filter system" means the combination of septic tank or other treatment unit, a dosing system with effluent pump(s) and controls or dosing siphon, piping and fittings, sand filter, absorption facility or effluent reuse method used to treat sewage.

(2) Inspection Requirements. Each sand filter system installed under this rule, and those filters installed under OAR 340-71-038, may be inspected annually. The Department may waive the annual evaluation fee during years when sand filter field evaluation work is not performed.

(3) Sites Approved for Sand Filter Systems. Sand filters may be permitted on any site meeting requirements for standard subsurface sewage disposal systems contained under OAR 340-71-220, or where disposal trenches (including shallow subsurface irrigation trenches) would be used, and all the following minimum site conditions can be met:

(a) The highest level attained by temporary water would be eighteen (18) inches or more below ground surface; or twelve (12) inches or more below the natural ground surface where slopes are twelve (12) percent or less, and either a pressurized distribution system or a capping fill constructed pursuant to Section 340-71-265(3) and Subsections 340-71-265(4)(a) through (c) is used. Temporary groundwater levels shall be determined pursuant to methods contained in Subsection 340-71-220(2)(b).

(b) The highest level attained by a permanent water table would be equal to or more than distances specified below:

<u>Soil Groups</u>	*Minimum Separation Distance from Bottom of <u>Effective Seepage Area</u>
Gravel, sand, loamy sand, sandy loam	24 inches
Loam, silt loam, sandy clay loam, clay loam	18 inches
Silty clay loam, silty clay, clay, sandy clay	12 inches

(c) Permanent water table levels shall be determined in accordance with methods contained in subsection 340-71-220(1)(d). Sand filters in areas with permanent water tables shall not discharge more than four hundred-fifty (450) gallons of effluent per one-half (1/2) acre per day except where:

(A) A gray water system is proposed for lots of record existing prior to January 1, 1974, which have sufficient area to accommodate a gray water sand filter system, or

(B) Groundwater is degraded and designated as a non-developable resource by the State Department of Water Resources, or

*FOOTNOTE:

Shallow disposal trenches (placed not less than twelve (12) inches into the original soil profile) may be used with a capping fill to achieve separation distances from permanent groundwater. The fill shall be placed in accordance to the provisions of OAR 340-71-265(3) and 340-71-265(4)(a) through (c). A construction-installation permit shall not be issued until the fill is in place and approved by the Agent.

(C) A detailed hydrogeological study discloses loading rates exceeding four hundred fifty (450) gallons per one-half (1/2) acre per day would not increase nitrate-nitrogen concentration in the groundwater beneath the site, or any down gradient location, above five (5) milligrams per liter.

(d) Soils, fractured bedrock or saprolite diggable with a backhoe occur such that a standard twenty-four (24) inch deep trench can be installed.

(e) Where slope is thirty (30) percent or less.

(4) Minimum Length Disposal Trench Required. The recommended and minimum seepage area required for sand filter absorption facilities is indicated in the following table:

<u>Soil Groups</u>	<u>Minimum Length (Linear Feet) Disposal Trench Per One Hundred Fifty (150) Gallons Projected Daily Sewage Flow</u>
Gravel, sand, loamy sand, sandy loam	35
Loam, silt loam, sandy clay loam, clay loam	45
Silty clay loam, silty clay, sandy clay, clay	50
Saprolite or fractured bedrock	50
High shrink-swell clays (Vertisols)	75

FOOTNOTES:

- (1) Sites with gravel or soil textures of sand, loamy sand, or sandy loam to the ground surface, that meet all other requirements of sections 340-71-290(3) and (4) and have the water table twenty-four (24) inches or more below ground surface, may utilize a sand filter without a bottom that discharges treated effluent directly into these materials. A minimum twenty-four (24) inch separation must be maintained between the water table and the bottom of the sand filter.

(2) Sites with saprolite or fractured bedrock where groundwater is six (6) feet or greater below ground surface may utilize a sand filter consisting of a trench four (4) feet deep with two (2) feet of medium sand to filter and biologically treat septic tank effluent from a pressure distribution system at an application rate not to exceed one and twenty-three hundredths (1.23) gallons per square foot sand surface area per day applied at a dose not to exceed twenty (20) percent of the projected daily sewage flow. A two (2) foot separation shall be maintained between the bottom of the sand filter and the upper surface of ground water. Slope shall not exceed thirty (30) percent.

(5) Materials and Construction.

(a) All materials used in sand filter system construction shall be structurally sound, durable and capable of withstanding normal installation and operation stresses. Component parts subject to malfunction or excessive wear shall be readily accessible for repair and replacement.

(b) All filter containers shall be placed over a stable level base.

(c) In areas of temporary groundwater at least twelve (12) inches of unsaturated soil shall be maintained between the bottom of the sand filter and top of the disposal trench.

(d) Piping and fittings for the sand filter distribution system shall be as required under pressure distribution systems, OAR 340-71-275.

340-71-295 Conventional Sand Filter Design.

(1) Flows.

(a) Conventional sand filter systems shall be designed to serve sewage flows of six hundred (600) gallons or less per day unless otherwise authorized by the Department.

(b) Flows of four hundred fifty (450) gallons per day shall be used in determining the minimum sand surface area required for a single-family dwelling.

(c) Flows of two hundred (200) gallons per day shall be used in determining minimum sand surface area required for individual residential gray-water filters.

(2) Minimum Filter Area. Sand filters shall be sized based on an application rate of no more than one and twenty-three hundredths (1.23) gallons septic tank effluent per square foot medium sand surface per day.

(3) General Details.

(a) Sand filter container, piping, medium sand, gravel, gravel cover, and soil crown material for a sand filter system discharging to disposal trenches shall meet minimum specifications indicated in Diagrams 8 and 9 unless otherwise authorized by the Department.

(b) Filter containers shall be constructed of reinforced concrete, a thirty (30) mil liner or other membrane liners acceptable to the Department which will effectively exclude groundwater and will contain the sand, gravel, septic tank effluent and soil crown cover for at least a twenty (20) year service life.

340-71-300 Other Sand Filter Designs.

(1) Other sand filters which vary in design from the conventional sand filter may be authorized by the Department if they can be demonstrated to produce comparable effluent quality.

(2) Pre-Application Submittal. Prior to applying for a construction permit for a variation to the conventional sand filter the Department must approve the design. To receive approval the applicant shall submit the following required information to the Department:

(a) Effluent quality data. Filter effluent quality samples shall be collected and analyzed by a testing agency acceptable to the Department using procedures identified in the latest edition of "Standard Methods for the Examination of Wastewater," published by the American Public Health Association, Inc. The duration of filter effluent testing shall be sufficient to ensure results are reliable and applicable to anticipated field operating conditions. The length of the evaluation period and number of data points shall be specified in the test report.

The following parameters shall be addressed:

(A) BOD₅

(B) Suspended solids

(C) Fecal coliform

(b) A description of unique technical features and process advantages.

(c) Design criteria, loading rates, etc.

(d) Filter media characteristics.

(e) A description of operation and maintenance details and requirements.

(f) Any additional information specifically requested by the Department.

(3) Construction Procedure. Following pre-application approval, a permit application shall be submitted in the usual manner. Applications shall include applicable drawings, details and written specifications to fully describe proposed construction and allow system construction by contractors. Included must be the specific site details peculiar to that application, including soils data, groundwater type and depth, slope, setbacks, existing structures, wells, roads, streams, etc. Applications shall include a manual for homeowner operation and maintenance of the system.

340-71-305 Sand Filter System Operation and Maintenance.

(1) Sand filter operation and maintenance tasks and requirements shall be as specified on the Certificate of Satisfactory Completion. Where a conventional sand filter system or other sand filter system with comparable operation and maintenance requirements is used, the system owner shall be responsible for the continuous operation and maintenance of the system.

(2) The owner of any sand filter system shall provide the Agent written verification that the system's septic tank has been pumped at least once each forty-eight (48) months by a licensed sewage disposal service business. Service start date shall be assumed to be the date of issuance of the Certificate of Satisfactory Completion. The owner shall provide the Agent certification of tank pumping within two (2) months of the date required for pumping.

(3) No permit shall be issued for the installation of any other sand filter which in the judgment of the Department would require operation and maintenance significantly greater than the conventional sand filter unless responsibility for system operation and maintenance is vested in a municipality as defined in ORS 454.010(3) which the Department determines to have adequate resources to carry out such responsibility, unless other arrangements meeting the approval of the Director have been made which will ensure adequate operation and maintenance of the system. Each permitted installation may be inspected by the Agent or responsible public entity at least every twelve (12) months and checked for necessary corrective maintenance. An annual system evaluation fee shall be assessed.

340-71-310 Steep Slope Systems

(1) General conditions for approval. On-site system construction permits may be issued by the Agent for steep slope systems on slopes in excess of thirty (30) percent provided all the following requirements can be met:

- (a) Slope does not exceed forty-five (45) percent.
- (b) The soil is well drained with no evidence of saturation.
- (c) The soil has a minimum effective soil depth of sixty (60) inches.

(2) Construction requirements.

(a) Seepage trenches shall be installed at a minimum depth of thirty (30) inches and at a maximum depth of thirty-six (36) inches below the natural soil surface on the downhill side of the trench, and contain a minimum of eighteen (18) inches of filter material and twelve (12) inches of native soil backfill.

(b) The system shall be sized at a minimum of one hundred (100) linear feet per one hundred fifty (150) gallons projected daily sewage flow.

340-71-315 Tile Dewatering System.

(1) General conditions for approval. On-site system construction permits may be issued by the Agent for tile dewatering systems provided the following requirements can be met:

(a) The site has a natural outlet that will allow a field tile [installed on a proper grade around the proposed drainfield area at a depth of not less than sixty-six (66) inches] to daylight above annual high water.

(b) Soils must be silty clay loam or coarser textured and be drainable, with a minimum effective soil depth of at least sixty-six (66) inches.

(c) Slope does not exceed three (3) percent.

(d) All other requirements for standard on-site systems, except depth to groundwater, can be met.

(2) Construction Requirements.

(a) Field collection drainage tile shall be installed a minimum of sixty-six (66) inches deep on a uniform grade of two-tenths to four-tenths (0.2-0.4) feet of fall per one hundred (100) feet.

(b) Maximum drainage tile spacing shall be seventy (70) feet center to center.

(c) Minimum horizontal separation distance of drainage tile from disposal trenches shall be twenty (20) feet center to center.

(d) Field collection drainage tile shall be rigid smooth wall perforated pipe with a minimum diameter of four (4) inches.

(e) Field collection drainage tile shall be enveloped in clean filter material to within thirty (30) inches of the soil surface. Filter material shall be covered with filter fabric, treated building paper or other nondegradable material approved by the Agent.

(f) Outlet tile shall be rigid smooth wall solid PVC pipe with a minimum diameter of four (4) inches. The outlet end shall be protected by a short section of Schedule 80 PVC or ABS or metal pipe, and a flap gate.

(g) A silt trap with a thirty (30) inch minimum diameter shall be installed between the field collection drainage tile and the outlet pipe. The bottom of the silt trap shall be a minimum twelve (12) inches below the invert of the drainage line outlet.

(h) The discharge pipe and dewatering system is an integral part of the system.

(i) The Agent has the discretion of requiring demonstration that a proposed tile dewatering site can be drained prior to issuing a construction installation permit.

340-71-320 Split Waste Systems.

(1) For the purpose of these rules:

(a) "Split waste system" means a system where "black waste" sewage and "gray water" sewage from the same dwelling or building are disposed of by separate methods.

(b) "Black waste" means human body wastes including feces, urine, other extraneous substances of body origin and toilet paper.

(c) "Gray water" means household sewage other than "black wastes", such as bath water, kitchen waste water and laundry wastes.

(2) Criteria for Approval. In split waste systems wastes may be disposed of as follows:

(a) Black wastes may be disposed of by the use of state Department of Commerce approved nonwater-carried plumbing units such as recirculating oil flush toilets or compost toilets.

(b) Gray water may be disposed of by discharge to:

(A) An existing on-site system which is not failing; or

(B) A new on-site system with a soil absorption system two-thirds (2/3) normal size. A full size initial drainfield area and replacement area of equal size are required; or

(C) A public sewerage system.

340-71-325 Gray Water Waste Disposal Sumps. (Diagrams 14 and 15)

(1) For the purpose of these rules "gray water waste disposal sump" means a series of receptacles designed to receive gray water for absorption into the soil.

(2) Criteria for Approval.

(a) Gray water may be disposed of in gray water waste disposal sumps which serve facilities such as recreation parks, camp sites, seasonal dwellings, or construction sites which do not have running water piped into the units.

(b) Gray water sumps may be used only where soil conditions are approved for such use by the Agent.

(3) In campgrounds or other public use areas, gray water waste disposal sumps shall be identified as "sink waste disposal" by placard or sign in letters not less than three (3) inches in height and in a color contrasting with the background.

340-71-330 Nonwater-Carried Systems.

(1) For the purpose of these rules:

(a) "Nonwater-carried waste disposal facility" means any toilet facility which has no direct water connection, including pit privies, vault privies and self-contained construction type chemical toilets.

(b) "Privy" means a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a pit or vault in the ground into which human waste falls.

(2) Criteria for Approval.

(a) Nonwater-carried waste disposal facilities shall not be installed or used without prior written approval of the Agent.

Exception: Temporary use pit privies used on farms for farm labor shall be exempt from approval requirements.

(b) Nonwater-carried waste disposal facilities may be approved for temporary or limited use areas, such as recreation parks, camp sites, seasonal dwellings, farm labor camps or construction sites, provided all liquid wastes can be handled in a manner to prevent a public health hazard and to protect public waters, provided further that the separation distances in Table 8 can be met.

(3) Pit Privy.

(a) Unsealed earth pit type privies may be approved where the highest level attained by groundwater shall not be closer than four (4) feet to the bottom of the privy pit.

(b) The privy shall be constructed to prevent surface water from running into the pit.

(c) When the pit becomes filled to within sixteen (16) inches of the ground surface, a new pit shall be excavated and the old pit shall be backfilled with at least two (2) feet of earth.

(4) Construction. Nonwater-carried waste disposal facilities shall be constructed in accordance with requirements contained in Appendix G.

(5) Maintenance. Nonwater-carried waste disposal facilities shall be maintained to prevent health hazards and pollution of public waters.

(6) General. No water-carried sewage shall be placed in nonwater-carried waste disposal facilities. Contents of nonwater-carried waste disposal facilities shall not be discharged into storm sewers, on the surface of the ground or into public waters.

340-71-335 Cesspools and Seepage Pits. (Diagrams 16 and 17)

(1) For the purpose of these rules:

(a) "Cesspool" means a lined pit which receives raw sewage, allows separation of solids and liquids, retains the solids and allows liquids to seep into the surrounding soil through perforations in the lining.

(b) "Seepage Pit" means a "cesspool" which has a pretreatment facility such as a septic tank ahead of it.

(2) Prohibitions. Cesspools and seepage pits shall not be used except in areas specifically authorized in writing by the Director. After March 1, 1981, the agent may not grant approvals or permits for cesspools or seepage pits to serve new structures without first receiving written authorization from the Director.

(a) Effective October 1, 1981:

(A) Installation of new cesspools is prohibited. Cesspools may be used only to replace existing failing cesspools.

(B) Seepage pits may be used only on lots created prior to adoption of these rules, which are inadequate in size to accommodate a standard subsurface system, unless the land use plan for the area anticipates division of existing lots to provide for more dense development and a program and timetable for providing sewerage service to the area has been approved by the Department.

(b) Effective January 1, 1987:

(A) Installation of cesspools is prohibited.

(B) Installation of new seepage pits is prohibited.

(C) Seepage pits may be used only to replace existing failing cesspools or seepage pits on lots that are inadequate in size to accommodate a standard subsurface system.

(3) Criteria for Approval. Except as provided for in Section 340-71-335(2) seepage pits and cesspools may be used for sewage disposal on sites that meet the following site criteria:

(a) The permanent water table is sixteen (16) feet or greater from the surface.

(b) Gravelly sand, gravelly loamy sand, or other equally porous material occurs in a continuous five (5) foot deep stratum within twelve (12) feet of the ground surface.

(c) A layer that limits effective soil depth does not overlay the gravel stratum.

(d) A community water supply is available.

(4) Construction Requirements.

(a) Each cesspool and seepage pit shall be installed in a location to facilitate future connection to a sewerage system when such facilities become available.

(b) Maximum depth of cesspools and seepage pits shall be thirty-five (35) feet below ground surface.

(c) The cesspool or seepage pit depth shall terminate at least four (4) feet above the water table.

(d) Construction of cesspools and seepage pits in limestone areas is prohibited.

(e) Other standards for cesspool and seepage pit construction are contained in Appendix H.

340-71-340 Holding Tanks.

(1) For the purpose of these rules "Holding tank" means a watertight receptacle designed to receive and store sewage to facilitate disposal at another location.

(2) Criteria for Approval. Installation permits may be issued by the Agent for holding tanks on sites that meet all the following conditions:

(a) Permanent Use.

(A) The site is not approvable for installation of a standard subsurface system; and

(B) No community or area-wide sewerage system is available or expected to be available within five (5) years; and

(C) The tank is intended to serve a small industrial or commercial building, or an occasional use facility such as a county fair or a rodeo; and

(D) Unless otherwise allowed by the Department, the projected daily sewage flow is not more than two hundred (200) gallons; and

(E) Setbacks as required for septic tanks can be met.

(b) Temporary Use.

(A) In an area under the control of a city or other legal entity authorized to construct, operate, and maintain a community or area-wide sewerage system, a holding tank may be installed provided the application for permit includes a copy of a legal commitment from the legal entity that within five (5) years from the date of the application the legal entity will extend to the property covered by the application a community or area-wide sewerage system meeting the requirements of the Commission, and

provided further that the proposed holding tank will otherwise comply with the requirements of these rules.

(B) Installation of an approved on-site system has been delayed by weather conditions; or

(C) The tank is to serve a temporary construction site.

(3) General.

(a) No building may be served by more than one (1) holding tank.

(b) A single tax lot may be served by no more than one (1) holding tank unless the holding tank is under control of a municipality as defined in ORS 454.010(3).

(4) Design and Construction Requirements.

(a) Plans and specifications for each holding tank proposed to be installed shall be submitted to the Agent for review and approval.

(b) Each tank shall have a minimum liquid capacity of fifteen hundred (1,500) gallons.

(c) Each tank shall:

(A) Comply with standards for septic tanks contained in Appendix B.

(B) Be located and designed to facilitate removal of contents by pumping.

(C) Be equipped with both an audible and visual alarm, placed in a location acceptable to the Agent, to indicate when the tank is seventy-five (75) percent of full. The audible alarm only may be user cancelable.

(D) Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served.

(E) Be designed for antibuoyancy if test hole examination or other observations indicate seasonally high groundwater may float the tank when empty.

(5) Special Requirements. The application for an installation permit shall contain:

(a) A copy of a contract with a licensed sewage disposal service company which shows the tank will be pumped periodically, at regular intervals or as needed, and the contents disposed of in a manner and at a facility approved by the Department.

(b) Evidence that the owner or operator of the proposed disposal facility will accept the pumpings for treatment and disposal.

(c) A record of pumping dates and amounts pumped shall be maintained by both the treatment facility owner and the sewage disposal service, and upon request, made available to the Agent.

(6) Inspection Requirements. Each holding tank installed under this rule, and those tanks installed under OAR 340-71-037(3), shall be inspected annually. An alternative system evaluation fee shall be charged for each annual inspection.

340-71-345 Aerobic Systems.

(1) For the purpose of these rules:

(a) "Aerobic Sewage Treatment Facility" means a sewage treatment plant which incorporates a means of introducing air (oxygen) into the sewage so as to provide aerobic biochemical stabilization during a detention period.

(b) "Mechanical Oxidation Sewage Treatment Facility" means an aerobic sewage treatment facility.

(2) Criteria For Approval. Aerobic sewage treatment facilities may be approved for a construction installation permit provided all the following criteria are met:

(a) The daily sewage flow to be treated is less than five thousand (5000) gallons.

(b) The aerobic sewage treatment facility (plant) is part of an approved on-site sewage disposal system.

(c) The plant conforms to Class I or Class II and other requirements of the current version of Standard No. 40, relating to Individual Aerobic Wastewater Treatment Plants, adopted by the National Sanitation Foundation (NSF). In lieu of NSF Class I or Class II certification, the Department may accept testing by another agency which it considers to be equivalent.

(d) The property owner records a Department approved affidavit which notifies prospective property purchasers of the existence of an aerobic sewage treatment facility.

(e) The owner acknowledges that proper operation and maintenance of the plant is essential to prevent failure of the entire sewage disposal system and agrees, in writing, to hold the State of Oregon, its officers, employees, and agents harmless

of any and all loss and damage caused by defective installation or operation of the system.

(f) The rules for Community System contained in OAR 340-71-500 shall apply where applicable.

(3) The plant shall:

(a) Have a visual and audible alarm, placed at a location acceptable to the Agent, which are activated upon an electrical or mechanical malfunction.

(b) Have a minimum rated hydraulic capacity equal to the daily sewage flow or five hundred (500) gallons per day, whichever is greater.

(c) Have aeration and settling compartments constructed of durable material not subject to excessive corrosion or decay.

(d) Have raw sewage screening or its equivalent.

(e) Have provisions to prevent surging of flow through the aeration and settling compartments.

(f) Have access to each compartment for inspection and maintenance.

(g) Have provisions for convenient removal of solids.

(h) Be designed to prevent:

(A) Short circuiting of flow.

(B) Deposition of sludge in the aeration compartment.

(C) Excessive accumulation of scum in the settling compartment.

(4) Drainfield Sizing. Drainfields serving systems employing aerobic sewage treatment facilities shall be sized according to Tables 4 and 5 of these rules. Where a NSF Class I plant is installed, the linear footage of drainfield installed
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may be reduced by twenty (20) percent, provided a full sized standard system replacement area is available.

(5) Operation and Maintenance.

(a) The supply of parts must be locally available for the expected life of the unit.

(b) The supplier of the plant shall be responsible for providing operation training to the owner.

(c) The supplier of the plant shall provide the owner with an operation and maintenance (O & M) manual for the specific plant installed.

(d) The owner shall remove excess solids from the plant at least once per year, or more frequently if recommended by the O & M manual.

(6) Inspection Requirements. Each aerobic sewage treatment facility installed under this rule shall be inspected by the Agent at least once per year (See OAR 340-71-260(4)(a)).

340-71-350 Low-Flush Toilets. Permits issued for installation of an on-site system shall allow a reduction of twenty-five (25) percent in the seepage area provided:

(1) The single family dwelling or commercial facility utilizes two (2) quarts or less low volume flush toilets approved by the State Department of Commerce; and

(2) A full sized initial and replacement drainfield area is available.

340-71-400 Geographic Area Special Considerations.

(1) River Road-Santa Clara Area, Lane County.

(a) Within the areas set forth in subsection 340-71-400(1)(b) the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

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

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

(b) Subsection 340-71-400(1)(a) shall apply to all of the following area generally known as River Road/Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the city of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T-16S, R-4W, Sections 33, 34, 35, 36; T-17S, R-4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T-17S, R-1E, Sections 6, 7, 18, Willamette Meridian.

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

(d) Subsections 340-71-400(1)(a) and 340-71-400(1)(b) shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) North Florence Dunal Aquifer Area, Lane County.

(a) Within the areas set forth in Subsection (b) below the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single system on lots that were lots of record prior to October 1, 1980; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and septic tank approval after January 1, 1974 and prior to October 1, 1980 under the following circumstances:

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

(B) Pressure distribution shall be used in system construction.

(C) Sewage flows shall be limited to six hundred (600) gallons per day (GPD) per lot unless a higher flow was specifically approved by the Lane County Department of Environmental Management prior to October 1, 1980.

(b) Subsection (a) above shall apply to all of the following area generally known as the Lands Overlaying and/or Providing Immediate Recharge to the North Florence Dunal Aquifer and is defined by the boundary submitted by the Environmental Management Department for Lane County which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, R12W, Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County.

(c) Within the areas set forth in Subsection (d) below, which are hereby referred to as Priority 1 Control Areas, the Agent may not issue either construction permits or favorable reports of evaluation of site suitability for new partitions or subdivision proposals that would depend on on-site sewage disposal systems to accommodate sanitary waste disposal needs. For these areas, only qualified municipal collection, treatment, and disposal facilities shall be approved.

(d) Subsection (c) above shall apply to Priority 1 Control Areas. Priority 1 Control Areas are defined by the boundaries submitted by the Environmental Management Department for Lane County which are:

(A) The areas east of Highway 101 starting at the intersection of Highway 101 and Mercer Lake Road; thence easterly along Mercer Lake Road to the intersection of Collard Lake Road; thence easterly and southerly along Collard Lake Road to the ridge line at the approximate elevation of four hundred (400) feet above mean sea level; thence easterly along the ridge crest to its intersection with the ridge crest that runs generally north-south on the east side of the Collard-Clear-Munsel Lake systems; thence southerly along the aforementioned ridge line until its closest approach to Munsel Lake; thence westerly to the county boat landing on Munsel Lake Road; thence westerly along Munsel Lake Road to its intersection with Highway 101; thence northerly along Highway 101 to the point of beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11, 12, 13, and 14; W.M., Lane County.

(B) The areas west of Highway 101 which are held in public ownership that are north of Heceta Beach Road; west of Highway 101; south of Sutton Creek; and east of the mean higher high water mark of the Pacific Ocean; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34 and 35; and T18S, R12W, Sections 2 and 3; W.M., Lane County.

(e) Within the areas set forth in Subsection (f) below, which are hereby referred to as Priority II Control Areas, the
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Agent may issue either construction permits or favorable reports of evaluation of site suitability for new partitions or subdivision proposals that would depend on on-site sewage disposal systems under the following circumstances:

(A) Sewage loading rates shall be limited to one (1) dwelling unit equivalent (d.u.) per acre.

(B) Each proposed lot shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued.

(C) Pressure distribution shall be used in on-site sewage disposal system construction.

(f) Subsection (e) above shall apply to Priority II Control Areas. Priority II Control Areas are defined by the boundaries submitted by the Environmental Management Department for Lane County which is the area beginning at the western terminus of Sutton Creek Road; thence easterly along Sutton Creek Road to Highway 101; thence southerly along Highway 101 to its intersection with Munsel Lake Road; thence easterly and southerly along Munsel Lake Road to North Fork Road; thence southerly along North Fork Road to its intersection with Highway 36; thence westerly along Highway 36 to the City Limits of Florence; thence northerly and westerly along the City Limits of Florence to a point one thousand (1000) feet east of Rhododendron Drive; thence northerly along a line one thousand (1000) feet east of Rhododendron Drive and 4th Street in Heceta Beach to the southerly line of T17S, R12W, thence westerly along the southerly line of T17S, R12W, to the mean higher high water mark of the Pacific Ocean; thence northerly along the mean higher high water

mark of the Pacific Ocean to the mouth of Sutton Creek; thence westerly along Sutton Creek to the point of beginning at the westerly terminus of Sutton Creek Road; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, and 35; and T18S, R12W, Sections 2, 3, 4, 10, 11, 14, 15, 23, 24, and 26; W.M., Lane County.

(g) Within the areas set forth in Subsection (h) below, which are hereby referred to as Priority III Control Areas, the Agent may issue either construction permits or favorable reports of evaluation of site suitability for new partitions or subdivision proposals that would depend on on-site sewage disposal systems under the following circumstances:

(A) Sewage loading rates shall be limited to one (1) dwelling unit equivalent (d.u.) per one-half (1/2) acre.

(B) Each proposed lot shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued.

(C) Pressure distribution will be used in on-site sewage disposal system construction.

(h) Subsection (g) above shall apply to Priority III Control Areas. Priority III Control Areas are defined by the boundary submitted by the Environmental Management Department for Lane County which consists of those remaining areas inside the boundary defined in Subsection (b) above and which are not located within Priority I Control Areas defined in Subsection (d) above or within Priority II Control Areas defined in Subsection (f) above; and contain portions of T17S, R12W, Sections 27, 34, 35 and 36; and T18S, R12W, Sections 4, 9, 10,

13, 14, 15, 16, 22, 23, 24 and 25; W.M., Lane County.

(i) For each lot that was a lot of record prior to October 1, 1980, which is contained in more than one priority control area, the Agent may determine which priority control area designation shall apply.

(j) The completed 208 North Florence Dunal Aquifer Study shall be the technical basis for ultimate sewage loading rates and protective control strategies over the various geographic areas of the North Florence Dunal Aquifer.

340-71-410 Rural Area Variances.

(1) Variances from any standard contained in Subsections 340-71-220(2)(a) through 340-71-220(2)(h) may be granted by the Agent in certain rural zones provided:

(a) The County designates and the Department accepts specific rural zoning classifications for purposes of this rule.

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

(c) The parcel is an existing parcel that does not have an accessible area approvable for a standard on-site system.

(d) The permit is for an on-site system designed to serve a single family dwelling, or for a commercial facility with an equivalent or less sewage flow permitted by the zone.

(e) The on-site sewage disposal system will function in a satisfactory manner so as not to create a public health hazard, or cause pollution of public waters.

(f) Requiring strict compliance with the standards contained in subsections 340-71-220(2)(a) through 340-71-220(2)(h), would in the judgment of the Agent, be unreasonable, burdensome, or impractical due to special physical conditions or cause.

(2) The conditions for rural area variances shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

340-71-415 Formal Variances.

(1) Variances from any rule or standard for on-site sewage systems, contained in these rules, may be granted to applicants for permits by the Commission after a hearing before a special variance officer. The variance officer shall make a recommendation to the Commission for or against the variance.

(2) Variances from any standard contained in Rules 340-71-220 and 340-71-260 through 340-71-315 may be granted to applicants for permits by special variance officers appointed by the Director.

(3) No variance may be granted unless the special variance officer finds, or in the case of an appeal to the Commission, the Commission finds that:

(a) Strict compliance with the rule or standard is inappropriate for cause; or

(b) Special physical conditions render strict compliance unreasonable, burdensome, or impractical.

(3) Applications.

(a) Applications shall be made to the Department or Agreement County as appropriate. A separate application must be filed for each site considered for a variance.

(b) Each application shall be accompanied by:

(A) A site evaluation denial, if the parcel has been denied, (unless waived by the variance officer); and

(B) Plans and specifications for the proposed system; and

(C) The appropriate fee; and

(D) Other information necessary for rendering a proper decision; and

(E) The application shall be signed by the property owner.

(4) An applicant for a variance under this rule is not required to pay the application fee, if at the time of filing, the applicant:

(a) Is sixty-five (65) years of age or older; and

(b) Is a resident of the State of Oregon; and

(c) Has an annual household income, as defined in ORS 310.030, of \$15,000 or less.

340-71-420 Hardship Variances.

(1) The Commission may grant variances from rules or standards pertaining to on-site sewage disposal systems in cases of extreme and unusual hardship.

(2) The Commission may consider the following factors in reviewing an application for a variance based on hardship:

(a) Advanced age or bad health of applicant.

(b) Need of applicant to care for aged, incapacitated or disabled relatives.

(c) Relative insignificance of the environmental impact of granting a variance.

(3) Hardship variances granted by the Commission may contain conditions such as:

(a) Permits for the life of the applicant.

(b) Limiting the number of permanent residents using the system.

(c) Use of experimental systems for specified periods of time.

(4) Before an application is considered for a hardship variance it must be denied for a standard variance on the basis of technical rule considerations. At the time of application, the applicant must designate on the application whether it is to be considered for a hardship variance.

(5) Documentation of hardship must be provided before the application is referred to the Commission for action.

(6) Department personnel shall strive to aid and accommodate the needs of applicants for variances due to hardship.

340-71-425 Variance Officers.

(1) To qualify for appointment as a special variance officer after the effective date of these rules an individual must:

(a) Have three (3) years full time experience in subsurface sewage disposal methods since January 1, 1974; one (1) year of which shall have been in Oregon; and

(b) Have attended one (1) or more seminars, workshops, or short courses pertaining soils and their relationship to subsurface sewage disposal.

(2) Agreement (contract) counties may request that a county staff member, meeting the above qualifications, be appointed special variance officer. That staff member, if appointed, would perform the Department's variance duties within that county.

340-71-430 Variance Hearings.

(1) The variance officer shall hold a public information type hearing on each variance application.

(2) The hearing shall be held in the county where the property described in the application is located.

(3) Each variance shall be heard within thirty (30) days after receipt of a completed application.

(4) A decision to grant or deny the variance shall be made in writing within thirty (30) days after completion of the hearing. If the variance is granted, the variance officer shall set forth in writing the specifications, conditions and location of the system.

(5) The burden of presenting the supportive facts shall be the responsibility of the applicant.

(6) The variance officer shall visit the site of the proposed system prior to conducting the hearing.

(7) Except for hardship variances, granted variances shall run with the land.

340-71-435 Variance Permit Issuance, Inspections, Certificate of Satisfactory Completion.

(1) After a variance is granted the appropriate Agent shall be notified in writing.

(2) In nonagreement counties the Department shall issue system construction installation permits, perform necessary inspections and issue Certificates of Satisfactory Completion.

(3) In agreement counties, the county shall issue system construction installation permits, perform necessary inspections and issue Certificates of Satisfactory Completion.

(4) The Department shall disburse forty (40) dollars of the variance fee per granted variance to the agreement county, in which the property is located, to defray costs of permit and certificate issuance and inspections.

340-71-440 Variance Appeals. Decisions of variance officers to grant or deny a variance may be appealed to the Commission.

340-71-445 Variance Administrative Review. The Department may review all records and files of variance officers to determine compliance or noncompliance with these rules.

340-71-450 Experimental Systems.

(1) Policy. Alternative technologies to standard on-site sewage systems are needed in areas planned for rural or low density development. It is the policy of the Commission to allow the Department to pursue a program of experimentation for the purpose of obtaining sufficient data for the development of alternative sewage disposal systems, which may benefit significant numbers of people within Oregon.

(2) Permit Required. Without first obtaining a permit from the Department, no person shall construct an experimental on-site sewage treatment and disposal system.

(3) Application Procedures.

(a) Application for experimental systems shall be made on Department forms.

(b) The application shall be complete, signed by the owner and be accompanied by the required fee.

(c) The application shall include detailed system design specifications and plans and any additional information the Department considers necessary.

(d) The owner shall agree, in writing, to hold the State of Oregon, its officers, employees, and agents harmless of any and all loss and damage caused by defective installation or operation of the proposed system.

(4) Criteria For Approval. Sites may be considered for experimental system permits where:

(a) Soils, climate, groundwater, or topographical conditions are common enough to benefit large numbers of people.

(b) A specific acceptable backup alternative is available in the event of system failure.

(c) For absorption systems, soils in both original and system replacement areas are similar.

(d) Installation of a particular system is necessary to provide a sufficient data sampling base.

(e) Zoning, planning, and building requirements allow system installation.

(f) A single family dwelling will be served.

(g) The system will be used on a continuous basis during the life of the test project.

(h) Resources for monitoring, sample collection, and laboratory testing are available.

(i) Legal and physical access by easement for construction inspections and monitoring are available.

(j) The property owner records a Department approved affidavit which notifies prospective property purchasers of the existence of an experimental system.

(k) The parcel size is at least one (1) acre.

(5) Permit Conditions. The system installation permit shall:

(a) Specify method and manner of system installation, operation, and maintenance.

(b) Specify method, manner, and duration of system testing and monitoring.

(c) Identify when and where system is to be inspected.

(d) Require that permit not be transferable.

(e) Require system construction and use within one (1) year of permit issuance.

(6) Denial Appeal. The decision of staff to either issue or deny a permit may be reviewed by the Director. The Director may affirm or reverse the decision.

(7) Inspection of Installed System.

(a) Upon completing construction for each inspection phase required under the permit, the permit holder shall notify the Department.

(b) The Department shall inspect construction to determine whether it complies with permit conditions and requirements.

(c) After system installation is complete and complies with permit conditions, a Certificate of Satisfactory Completion shall be issued.

(8) Repair or Replacement of System. If the Department finds the operation of the system is unsatisfactory, the owner upon written notification, shall promptly repair or modify the system, replace it with another acceptable system, or as a last resort, abandon the system.

(9) System Monitoring. The system shall be monitored by the Department in accordance with a schedule contained in the permit.

340-71-460 Moratorium Areas.

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

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

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

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

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

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

- (a) Benton County--Kingston Heights Subdivision
- (b) Benton County--Kingston Heights Subdivision, First Addition
- (c) Benton County--Princeton Heights Subdivision
- (d) Benton County--Princeton Heights Subdivision, First Addition

(e) Clatsop County--Clatsop Plains, as set forth in Appendix J.

(f) Lane County--Community of Dexter, as follows:

The area generally know as Dexter, and defined by the Boundary submitted by the Board of County Commissioners for Lane, which is bounded on the Northeast by Willamette Highway No. 58, and contains those properties Southwesterly of Highway No. 58 in the following tax assessment maps of Lane County. T. 19 S., R. 1 W., Sec-16.2, T. 19 S., R. 1 W., Sec-16.32, T. 19 S., R. 1 W., Sec-16.31, T. 19 S., R. 1 W., Sec-16.42, and T. 19 S., R. 1 W., Sec-16 and index located totally within Lane County.

340-71-500 Community Systems

(1) For the purpose of these rules:

(a) "Community System" means an on-site system which will serve more than one (1) lot or parcel; or more than one (1) condominium unit; or more than one (1) unit of a planned unit development.

(b) "Person" means 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.

(2) Without first applying for and obtaining a construction installation permit, no person shall install a community on-site system.

(3) Proposed community systems with projected sewage flows greater than two thousand five hundred (2,500) gallons per day shall have plans reviewed and approved by the Department prior to construction permit issuance.

(4) Plans for all community systems shall include operation and maintenance details including details for financing system operation and maintenance.

(5) The site criteria for approval of community systems shall be the same as required for standard subsurface systems contained in section 340-71-220(2), or in the case of community alternative systems, the specific site conditions for that system contained in rules 340-71-260 through 340-71-345.

(6) Operation Responsibility.

(a) Responsibility for operation and maintenance of community systems shall be vested in a municipality as defined (January 2, 1981)

in ORS 454.010(3), or an Association of Unit Owners as defined in ORS 91.500 and ORS 91.527.

(b) Unless otherwise required by permit, community systems shall be inspected at least annually by the responsible entity

(7) Denial of construction installation permits for community systems may be appealed through the contested case procedure set forth in ORS 183.

340-71-520 Large Systems.

(1) For the purpose of these rules "large system" means any system with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons.

(2) Special Design Requirements. Unless otherwise authorized by the Department, large systems shall comply with the following requirements:

(a) Large system drainfields shall be designed with pressure distribution.

(b) Drainfields shall be divided into units with a maximum of six hundred (600) linear feet of drainfield per unit.

(c) Drainfield replacement (repair) area shall be divided into units with a replacement area unit located adjacent to an initial drainfield area unit.

(d) Effluent distribution shall alternate between the drainfield units.

(e) Each distribution system shall have at least two (2) pumps or siphons.

(f) The applicant shall provide a written assessment of the impact of the proposed system upon the quality of public waters and public health.

(3) Plans and specifications for large systems shall be prepared by any competent professional with education or experience in the specific technical field involved. The professional may accept an assignment requiring education or experience outside of his/her own field of competence provided he/she retains competent and legally qualified services to perform that part of the assignment outside his/her own field of

competence, his/her client or employer approves this procedure, and he/she retains responsibility to his/her client or employer for the competent performance of the whole assignment.

(4) Construction Requirements.

(a) Construction shall be in substantial conformance with approved plans and specifications and any terms of the permit issued by the Agent.

(b) After completion of the system the professional shall certify that the system was installed in accordance with approved plans and specifications.

340-71-600 Sewage Disposal Service

(1) For the purpose of these rules "Sewage Disposal Service" means:

(a) The installation of on-site sewage disposal systems, or any part thereof; or

(b) The pumping out or cleaning of on-site sewage disposal systems, or any part thereof; or

(c) The disposal of material derived from the pumping out or cleaning of on-site sewage disposal systems; or

(d) Grading, excavating, and earth-moving work connected with the operations described in paragraph (a) of this subsection, except streets, highways, dams, airports or other heavy construction projects and except earth-moving work performed under the supervision of a builder or contractor in connection with and at the time of the construction of a building or structure; or

(e) The construction of drain and sewage lines from five (5) feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage.

(2) No person shall perform sewage disposal services or advertise or represent himself/herself as being in the business of performing such services without first obtaining a license from the Department. Licenses are not transferable.

(3) Those persons making application for a sewage disposal service license shall:

(a) Complete an application form supplied by the Department; and

(b) Execute a surety bond in the penal sum of two thousand five hundred (\$2500) dollars in favor of the State of Oregon, on forms supplied by the Department. Bonds shall be written to coincide with the licensing period; and

(c) Shall have pumping equipment inspected by the Agent annually if intending to pump out or clean systems and shall complete the "Sewage Pumping Equipment Description/Inspection" form supplied by the Department. An inspection performed after January 1st shall be accepted for licensing the following July 1st; and

(d) Provide evidence of registration of business name with State Department of Commerce.

(e) Submit the appropriate fee as set forth in Subsection 340-71-140 (1) (k).

(4) Each licensee shall:

(a) Be responsible for any violation of any statute, rule, or order of the Commission or Department pertaining to his licensed business.

(b) Be responsible for any act or omission of any servant, agent, employee, or representative of such licensee in violation of any statute, rule, or order pertaining to his license privileges.

(c) Deliver to each person for whom he performs services requiring such license, prior to completion of services, a written notice which contains:

(A) Name and address of his bonding company; and

(B) A list of rights of the recipient of such services

which are contained in ORS 454.705(2).

(d) Keep the Department informed on company changes that affect the license, such as, name change, change from individual to partnership, change from partnership to corporation, etc.

(5) Misuse of License.

(a) No licensee shall permit anyone to operate under his license, except a person who is working under supervision of the licensee.

(b) No person shall:

(A) Display or cause or permit to be displayed, or have in his possession any license, knowing it to be fictitious, revoked, suspended or fraudulently altered.

(B) Fail or refuse to surrender to the Department, upon demand, any license which has been suspended or revoked.

(C) Give false or fictitious information or knowingly conceal a material fact or otherwise commit a fraud in any license application.

(6) Personnel Responsibilities.

(a) Persons performing the service of pumping or cleaning of sewage disposal facilities shall avoid spilling of sewage while pumping or while in transport for disposal.

(b) Any accidental spillage of sewage shall be immediately cleaned up by the operator and the spill area shall be disinfected.

(7) License Suspension or Revocation.

(a) The Department may suspend, revoke, or refuse to grant, or refuse to renew, any sewage disposal service license if it finds:

(A) A material misrepresentation or false statement in connection with a license application; or

(B) Failure to comply with any provisions of ORS 454.605 through 454.785, the rules of this Division, or an order of the Commission or Department; or

(C) Failure to maintain in effect at all times the required bond in the full amount specified in ORS 454.705; or

(D) Nonpayment by drawee of any instrument tendered by applicant as payment of license fee.

(b) Whenever a license is revoked or expires, the operator shall remove the license from display and remove all Department identifying labels from equipment.

(c) A sewage disposal service may not be considered for re-licensure for a period of at least one (1) year after revocation of its license.

(8) Equipment Minimum Specifications.

(a) Tanks for pumping out of sewage disposal facilities shall comply with the following:

(A) Have a liquid capacity of at least five hundred fifty (550) gallons.

Exception; Tanks for equipment used exclusively for pumping chemical toilets not exceeding fifty (50) gallons capacity, shall have a liquid capacity of at least one hundred fifty (150) gallons.

(B) Be of watertight metal construction;

(C) Be fully enclosed;

(D) Have suitable covers to prevent spillage;

(b) The vehicle shall be equipped with either a vacuum or other type pump which will not allow seepage from the diaphragm or other packing glands and which is self priming.

(c) The sewage hose on vehicles shall be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.

(d) The discharge nozzle shall be:

(A) Provided with either a camlock quick coupling or threaded screw cap.

(B) Sealed by threaded cap or quick coupling when not in use.

(C) Located so that there is no flow or drip onto any portion of the vehicle.

(D) Protected from accidental damage or breakage.

(e) No pumping equipment shall have spreader gates.

(f) Each vehicle shall at all times be supplied with a pressurized wash water tank, disinfectant, and implements for cleanup.

(g) Pumping equipment shall be used for pumping sewage disposal facilities exclusively unless otherwise authorized in writing by the Agent.

(h) Chemical toilet cleaning equipment shall not be used for any other purpose.

(9) Equipment Operation and Maintenance.

(a) When in use, pumping equipment shall be operated in a manner so as not to create public health hazards or nuisances.

(b) Equipment shall be maintained in a reasonably clean condition at all times.

(10) Vehicles shall be identified as follows:

(a) Display the name or assumed business name on each vehicle cab and on each side of a tank trailer:

(A) In letters at least three (3) inches in height; and

(B) In a color contrasting with the background.

(b) Tank capacity shall be printed on both sides of the tank:

(A) In letters at least three (3) inches in height; and

(B) In a color contrasting with the background.

(c) Labels issued by the Department for each current license period shall be displayed at all times at the front, rear, and on each side of the "motor vehicle" as defined by United States Department of Transportation Regulations, Title 49 U.S.C.

(11) Disposal of Pumpings.

(a) Each licensee shall:

(A) Discharge no part of the pumpings upon the surface of the ground unless approved by the Department in writing.

(B) Dispose of pumpings only in disposal facilities approved by the Department.

(C) Possess at all times during pumping, transport or disposal of pumpings, origin-destination records for sewage disposal services rendered.

(D) Maintain on file complete origin-destination records for sewage disposal services rendered. Origin-Destination records shall include:

(i) Source of pumpings on each occurrence, including name and address.

- (ii) Specific type of material pumped on each occurrence.
- (iii) Quantity of material pumped on each occurrence.
- (iv) Name and location of authorized disposal site, where pumpings were deposited on each occurrence.
- (v) Quantity of material deposited on each occurrence.
- (E) Transport pumpings in a manner that will not create a public health hazard or nuisance.

Table 1

Items Requiring Setback	From Sewage Disposal Area Including Replacement Area	From Septic Tank And Other Treatment Units, Effluent Sewer and Distribution Units
1. Groundwater Supplies	100'	50'
2. Temporarily Abandoned Wells	100'	50'
3. Springs:		
--Upslope from Effective Sidewall	50'	50'
--Downslope from Effective Sidewall	100'	50'
*4. Surface Public Waters	100'	50'
5. Intermittent Streams	50'	50'
6. Groundwater Interceptors, Agricultural Drainage, Ditches (Except in the Dewatering Systems)	50'	50'
7. Curtain Drains:		
--Upslope from Effective Sidewall	10'	5'
--Downslope from Effective Sidewall	50'	25'
8. Irrigation Canals:		
--Upslope from Effective Sidewall	25'	25'
--Downslope from Effective Sidewall	50'	50'
9. Cuts Manmade in Excess of 30 Inches (Top of Downslope Cut):		
--Which Intersect Layers that Limit Effective Soil Depth Within 48 Inches of Surface	50'	25'
--Which Do Not Intersect Layers that Limit Effective Soil Depth	25'	10'
10. Escarpments:		
--Which Intersect Layers That Limit Effective Soil Depth	50'	10'
--Which Do Not Intersect Layers That Limit Effective Soil Depth	25'	10'
11. Property Lines	10'	10'
12. Water Lines	10'	10'
13. Foundation Lines of Any Building, Including Garages and Out Buildings	10'	5'

*This does not prevent stream crossings of pressure effluent sewers.
(December 15, 1980) TABLES-1 SSRULE.A

TABLE 2

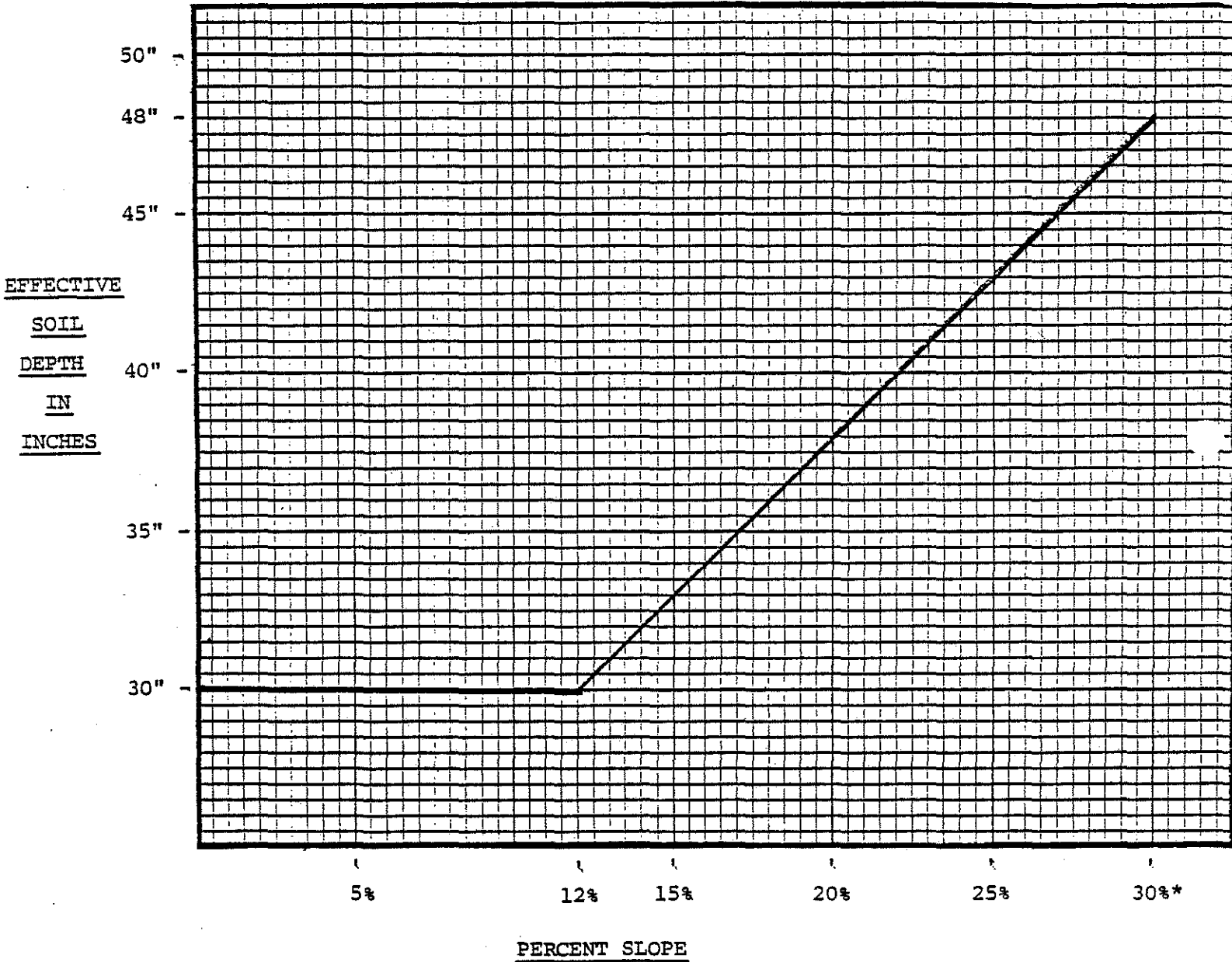
Quantities of Sewage Flows

Type of Establishment	Column 1	Column 2
	Gallons Per Day	Minimum Gallons Per Establishment Per Day
Airports	5 (per passenger)	150
Bathhouses and swimming pools	10 (per person)	300
Camps: (4 persons per campsite, where applicable)		
Campground with central comfort stations	35 (per person)	700
With flush toilets, no showers	25 (per person)	500
Construction camps (semi-permanent)	50 (per person)	1000
Day camps (no meals served)	15 (per person)	300
Resort camps (night and day) with limited plumbing	50 (per person)	1000
Luxury camps	100 (per person)	2000
Churches	5 (per seat)	150
Country clubs	100 (per resident member)	2000
Country clubs	25 (per non-resident member present)	—
Dwellings:		
Boarding houses	150 (per bedroom)	600
Additional for non-residential boarders	10 (per person)	—
Rooming houses	80 (per person)	500
Condominiums, Multiple family dwellings (Including apartments)	300 (per unit)	900
Single family dwellings	300 (not exceeding 2 bedrooms)	450*
With more than 2 bedrooms	75 (for third & each succeeding bedroom)	450
Factories (exclusive of industrial wastes, with shower facilities)	35 (per person per shift)	300
Factories (exclusive of industrial wastes, without shower facilities)	15 (per person per shift)	150
Hospitals	250 (per bed space)	2500
Hotels with private baths	120 (per room)	600
Hotels without private baths	100 (per room)	500
Institutions other than hospitals	125 (per bed space)	1250
Laundries, self-service	500 (per machine)	2500
Mobile home parks	250 (per space)	750
Motels (with bath, toilet, and kitchen wastes)	100 (per bedroom)	500
Motels (without kitchens)	80 (per bedroom)	400
Picnic Parks (toilet wastes only)	5 (per picnicker)	150
Picnic Parks (with bathhouses, showers and flush toilets)	10 (per picnicker)	300
Restaurants	40 (per seat)	800
Restaurants (single-service)	2 (per customer)	300
Restaurants (with bars and/or lounges)	50 (per seat)	1000
Schools:		
Boarding	100 (per person)	3000
Day, without gyms, cafeterias or showers	15 (per person)	450
Day, with gyms, cafeterias and showers	25 (per person)	750
Day, with cafeteria, but without gyms or showers	20 (per person)	600
Service Stations	10 (per vehicle served)	500
Swimming pools and bathhouses	10 (per person)	300
Theaters:		
Movie	5 (per seat)	300
Drive-In	20 (per car space)	1000
Travel trailer parks (without individual water and sewer hookups)	50 (per space)	300
Travel trailer parks (with individual water and sewer hookups)	100 (per space)	500
Workers:		
Construction (as semi-permanent camps)	50 (per person)	1000
Day, at schools and offices	15 (per shift)	150

* Except as otherwise provided in these rules.

TABLE 3

SLOPE, EFFECTIVE SOIL DEPTH RELATIONSHIP



* When slope exceeds 30 percent, rules on steep slope systems apply.
(Refer to OAR 340-71-310)

TABLE 4

Minimum length of disposal trench (linear feet) required per one hundred fifty (150) gallons projected daily sewage flow determined from soil texture versus effective soil depth.

		A	B	C
<u>EFFECTIVE</u> <u>SOIL</u> <u>DEPTH</u>	18" to Less than 24"	125	150	175
	24" to Less than 36"	100	125	150
	36" to less than 48"	75	100	125
	48" or more	75	75	125
		<u>SOIL GROUP *</u>		

- * Soil Group A Sand, Loamy Sand, Sandy Loam
- Soil Group B Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam
- Soil Group C Silty Clay Loam, Sandy Clay, Silty Clay, Clay

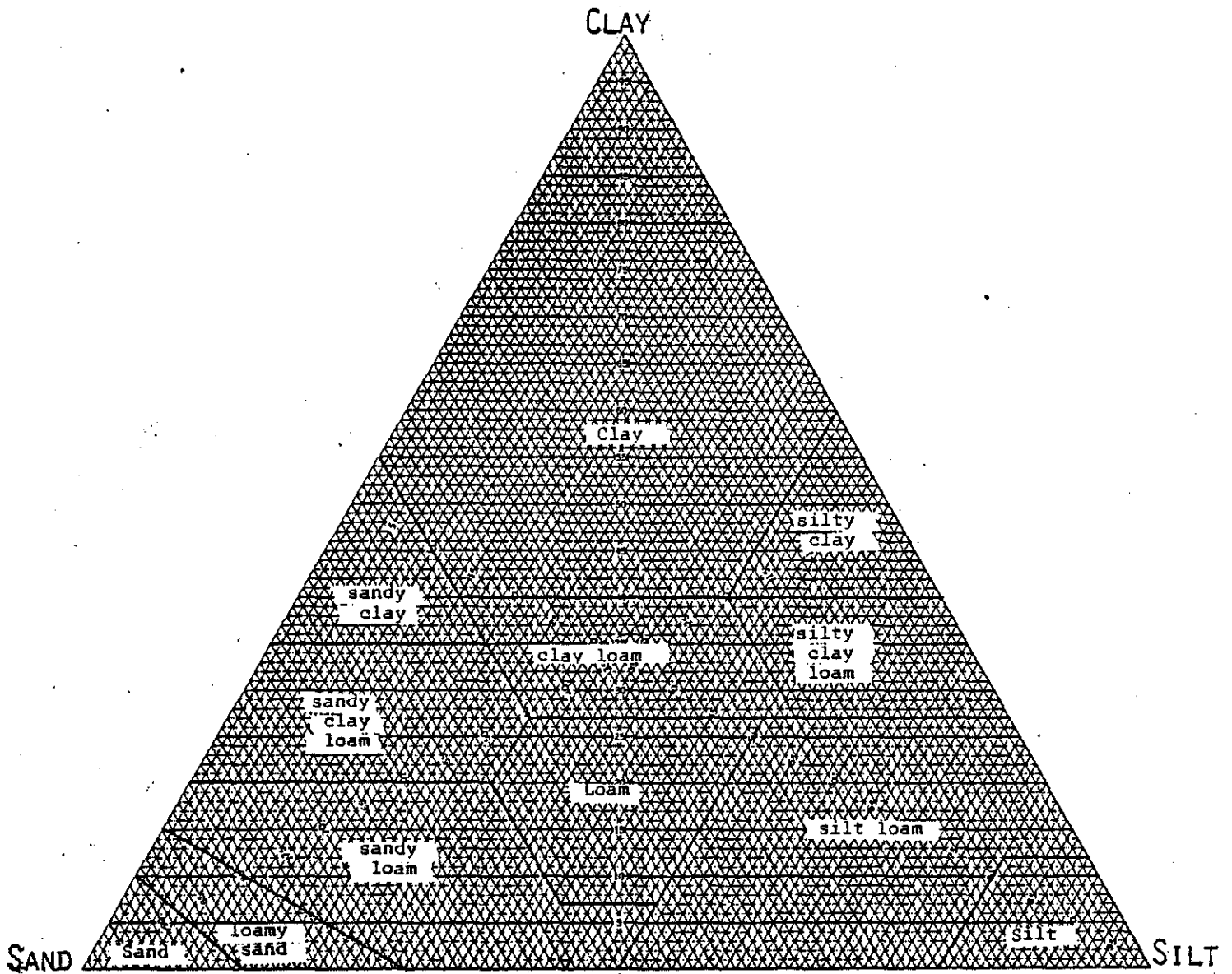
TABLE 5

Minimum length of disposal trench (linear feet) required per one hundred fifty (150) gallons projected daily sewage flow determined from soil texture versus depth to temporary groundwater.

<u>DEPTH</u> <u>TO</u> <u>TEMPORARY</u> <u>GROUNDWATER</u>	24"			
	To Less Than 48"		100	125
48" or More		75	100	125
		A	B	C
		<u>SOIL GROUP</u> *		

- * Soil Group A Sand, Loamy Sand, Sandy Loam
- Soil Group B Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam
- Soil Group C Silty Clay Loam, Sandy Clay, Silty Clay, Clay

TABLE 6



SOIL TEXTURAL CLASSIFICATION CHART

TABLE 7

	Sieve Sizes	Millimeters
Clay		.002
Silt		
Very fine sand	270	.050
	200	.075
Fine sand	140	.1
	60	.25
Medium sand	35	.5
Coarse sand		
	18	1.0
Very coarse sand	10	2.0
Fine gravel	4	4.75
	3/8"	9.5
	1/2	12.5
Coarse gravel		
	3"	76.2
Cobbles		

USDA SOIL CLASSIFICATION SIZES OF SOIL SEPARATES

TABLE 8

MINIMUM SEPARATION DISTANCESFORNONWATER-CARRIED WASTE DISPOSAL FACILITIES

	Self-Contained Nonwater-Carried Waste Disposal Facility	Unsealed Earth Type Privies, Gray Water Waste Disposal Sump and Seepage Chambers
Groundwater supplies including springs and cisterns	50'	100'
Surface public waters, excluding intermittent streams	50'	100'
Intermittent streams	50'	50'
Property line	25'	25'

TABLE 9

Minimum effective seepage area required for seepage beds per one hundred fifty (150) gallons projected daily sewage flow.

EFFECTIVE SOIL DEPTH	SEEPAGE AREA REQUIRED
30" to 54"	300 square feet
More than 54"	200 square feet

DEPTH TO TEMPORARY GROUNDWATER	SEEPAGE AREA REQUIRED
24" to 48"	300 square feet
More than 48"	200 square feet

DIAGRAM 1

TYPICAL SERIAL DISTRIBUTION SYSTEM
(With Drop Boxes)

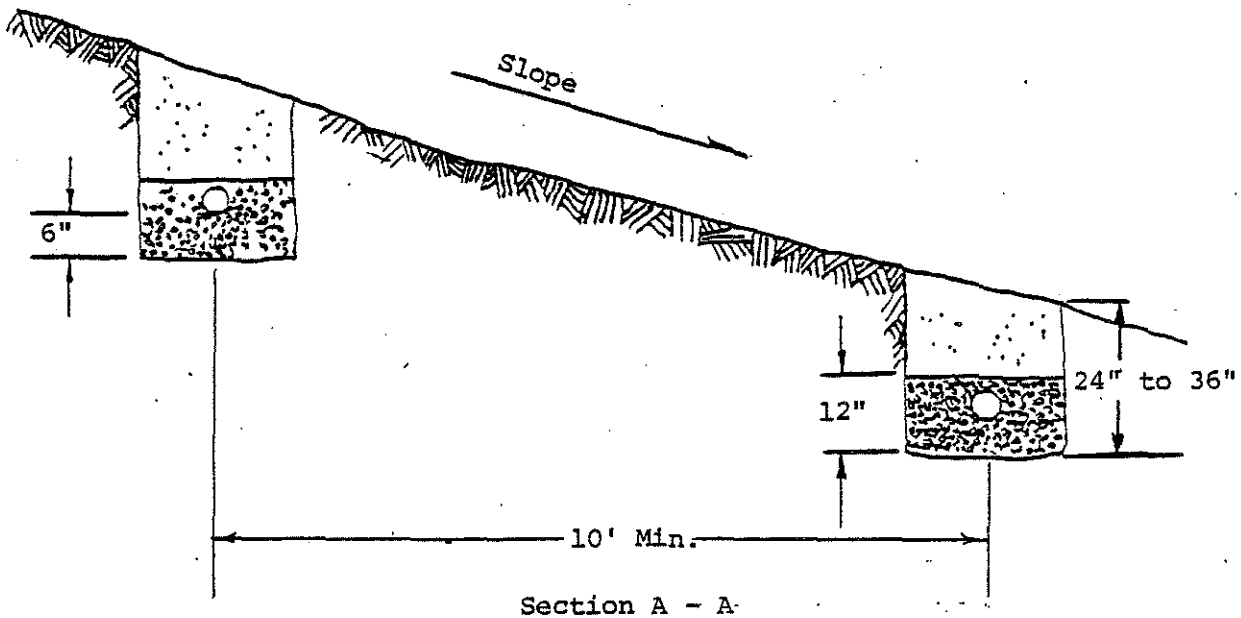
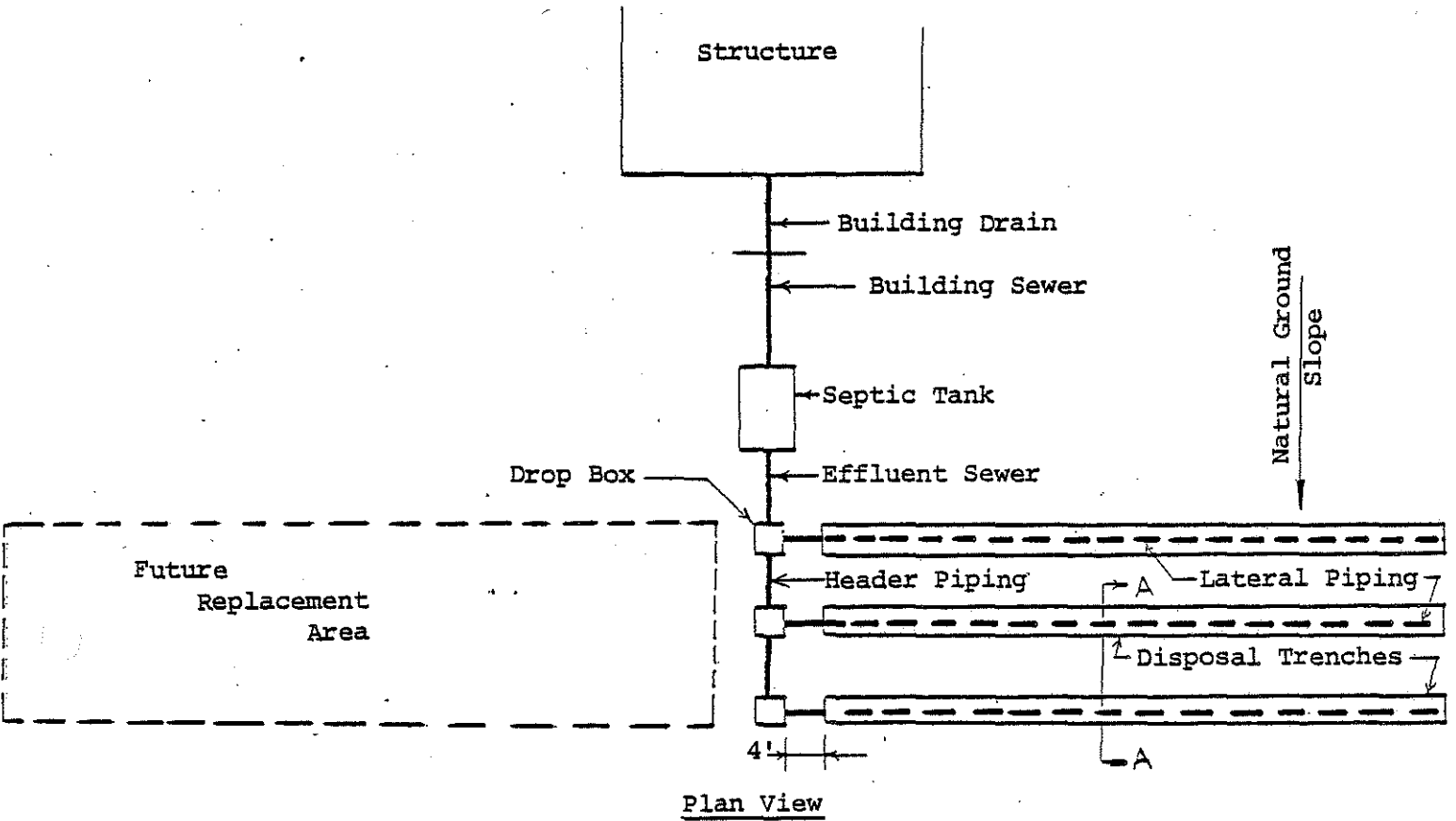


DIAGRAM 2

TYPICAL SERIAL DISTRIBUTION SYSTEM
(Without Drop Boxes)

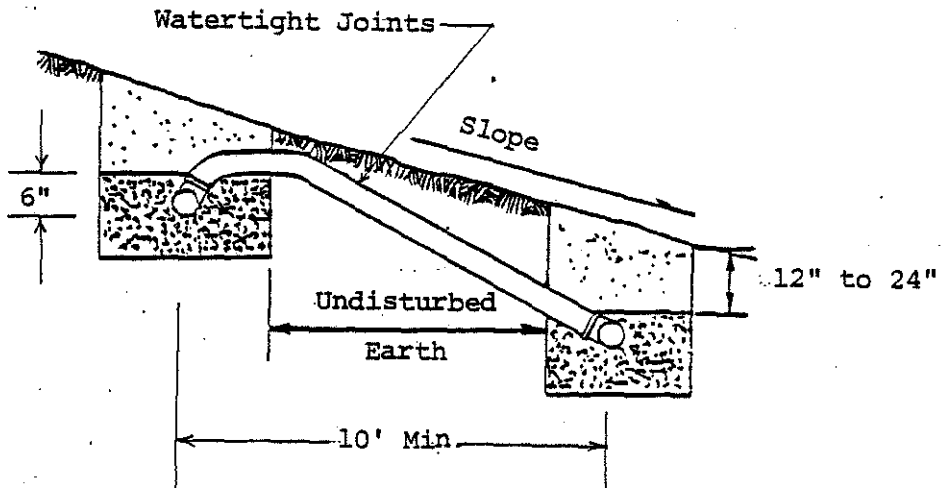
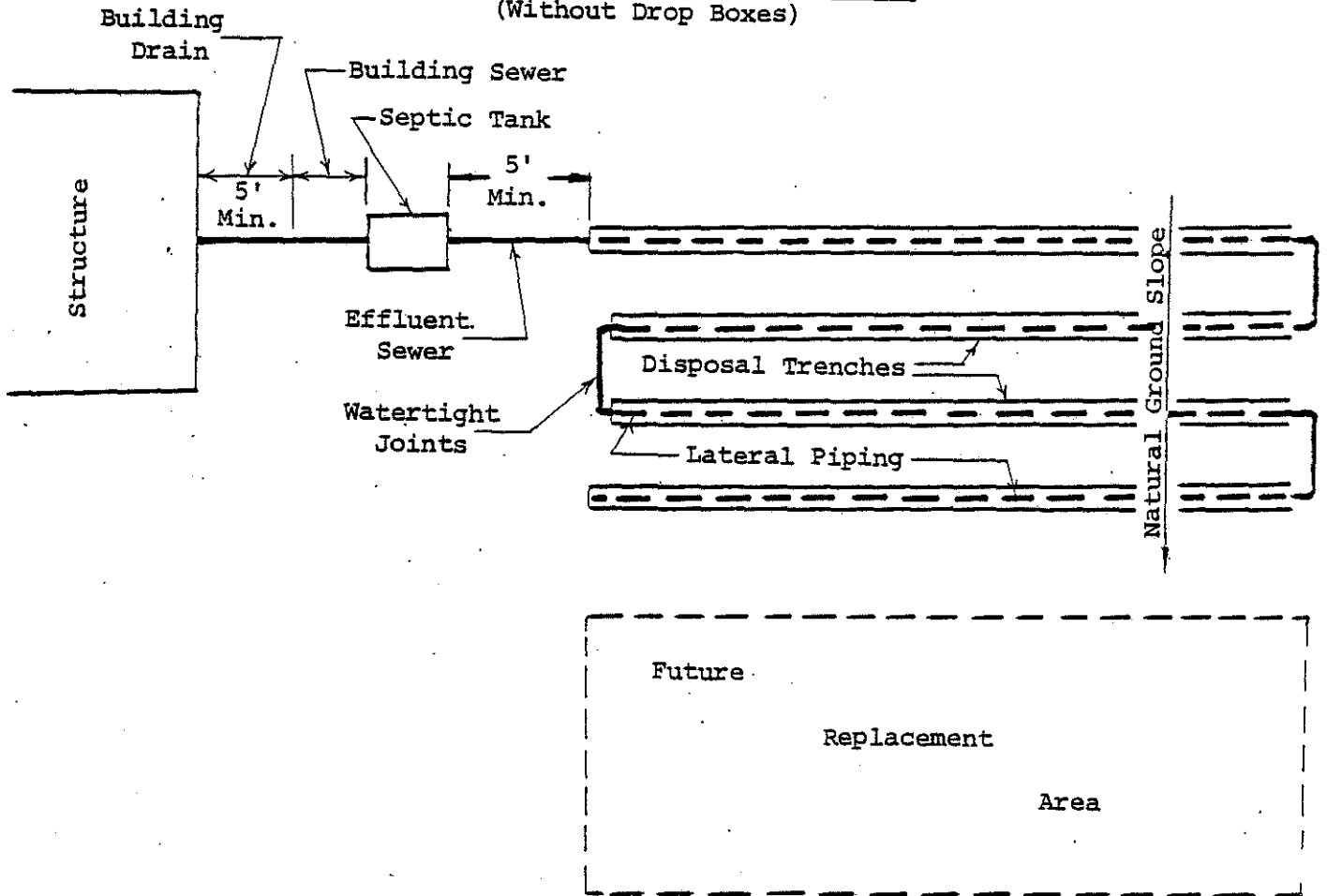
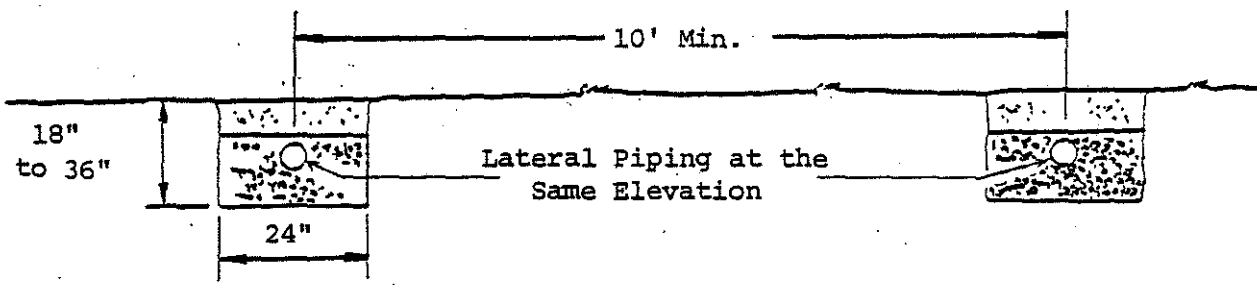
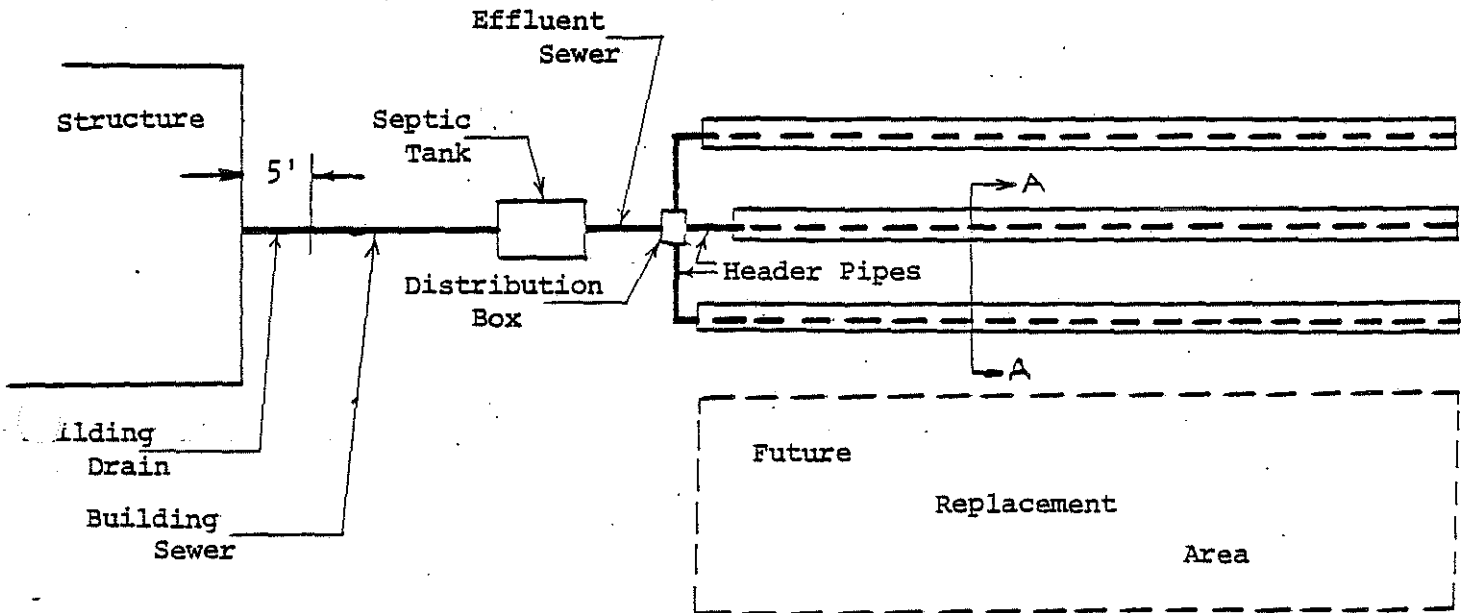


DIAGRAM 3

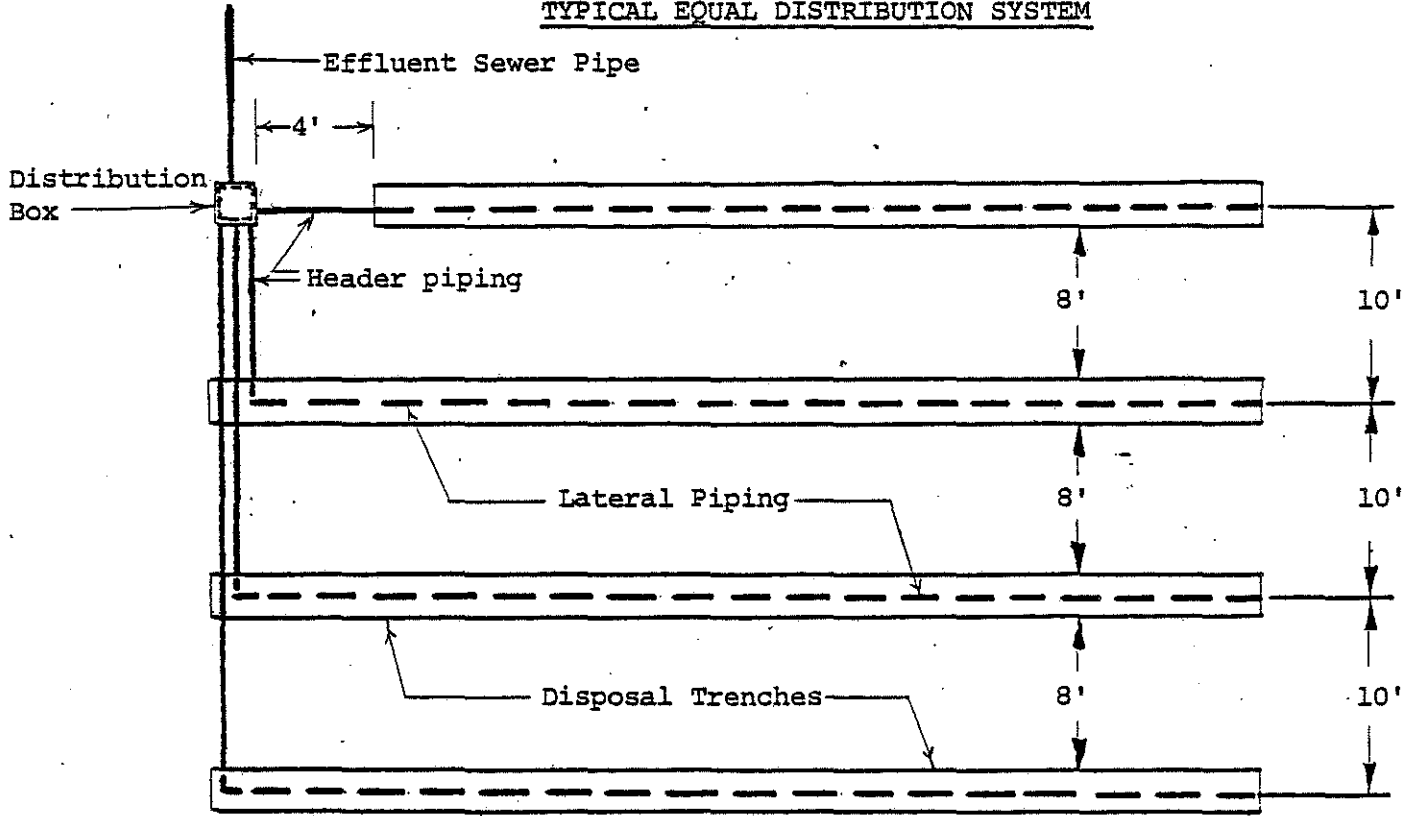
TYPICAL EQUAL DISTRIBUTION SYSTEM
(With Distribution Box)



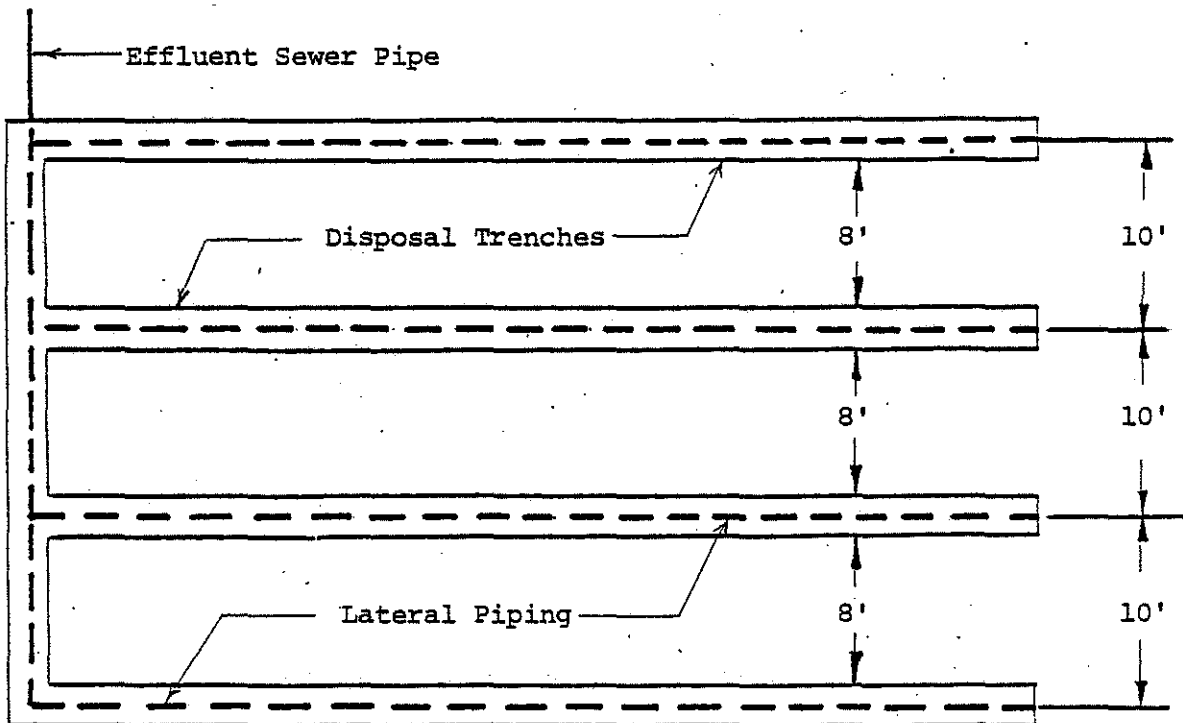
Section A - A

DIAGRAM 4

TYPICAL EQUAL DISTRIBUTION SYSTEM



With Distribution Box



Without Distribution Box

DIAGRAM 5

TYPICAL LOOP EQUAL DISTRIBUTION SYSTEMS

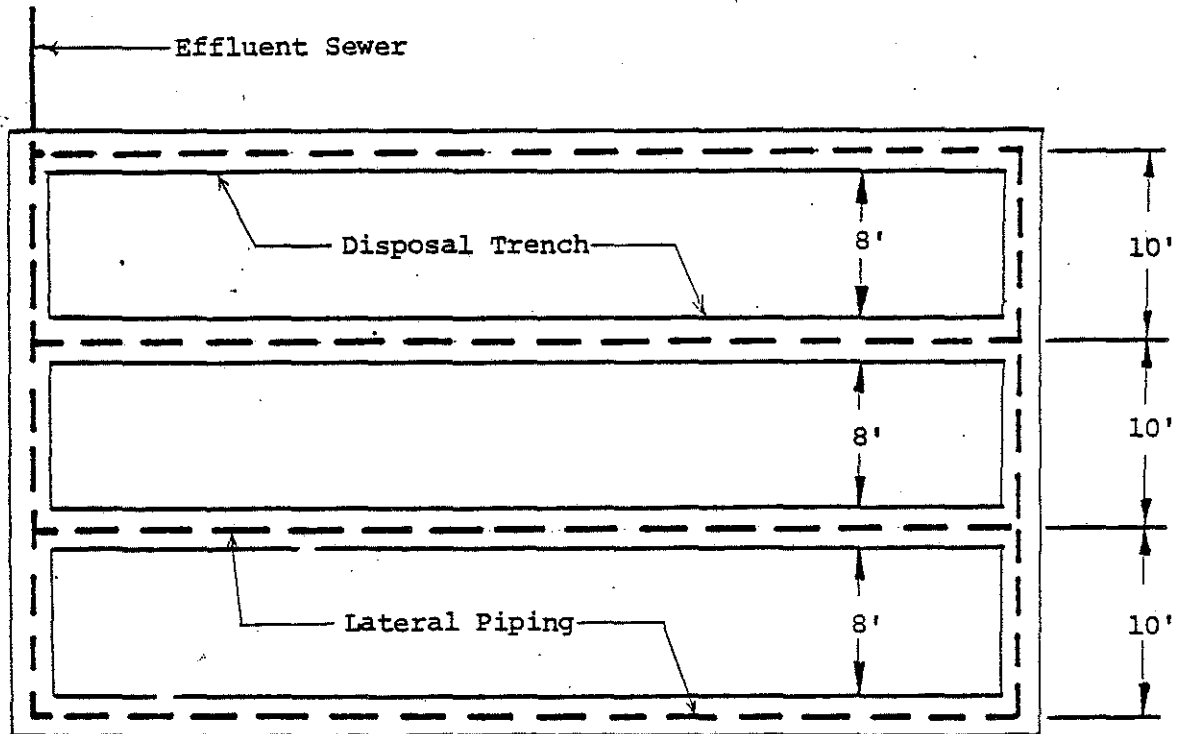
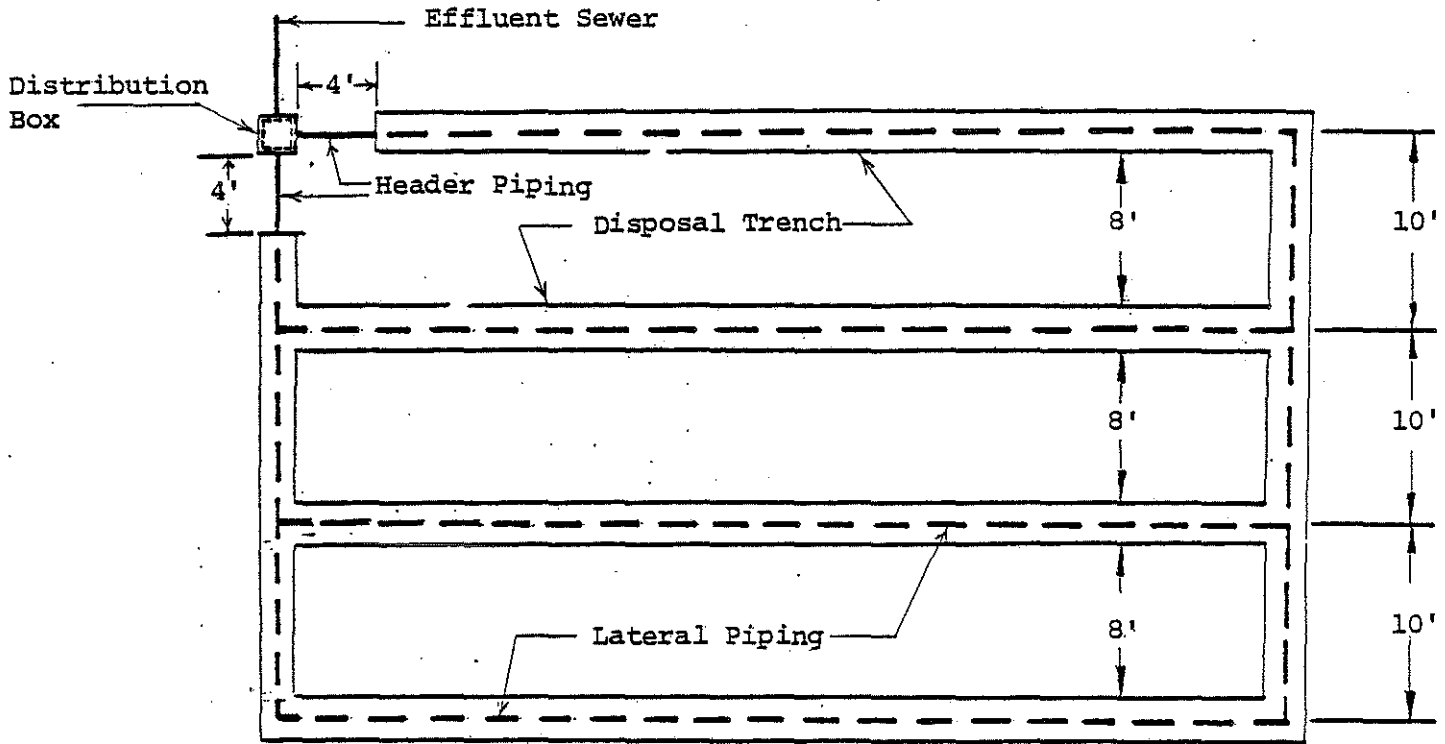
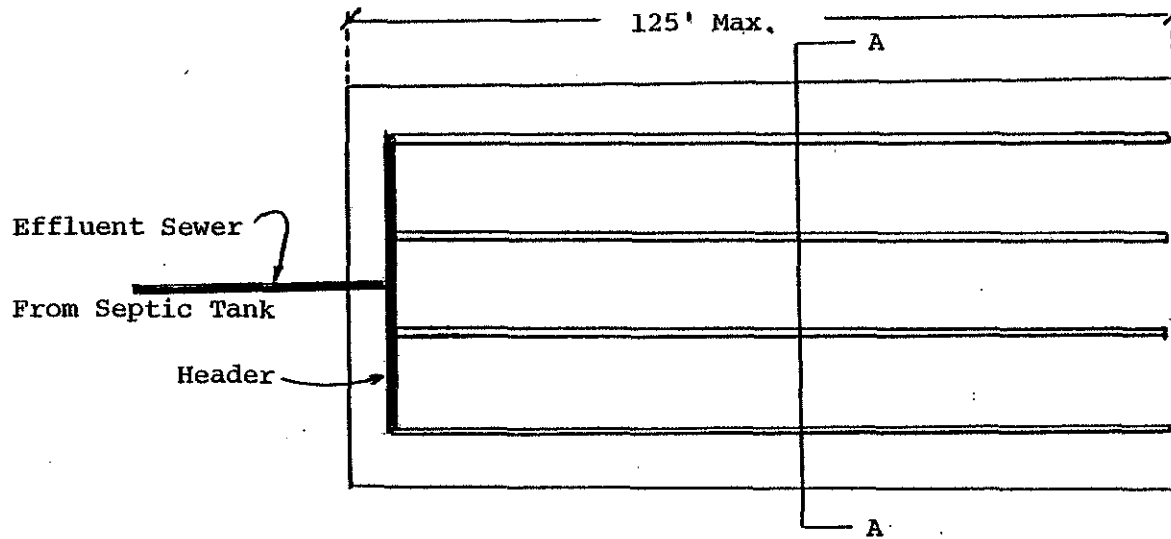
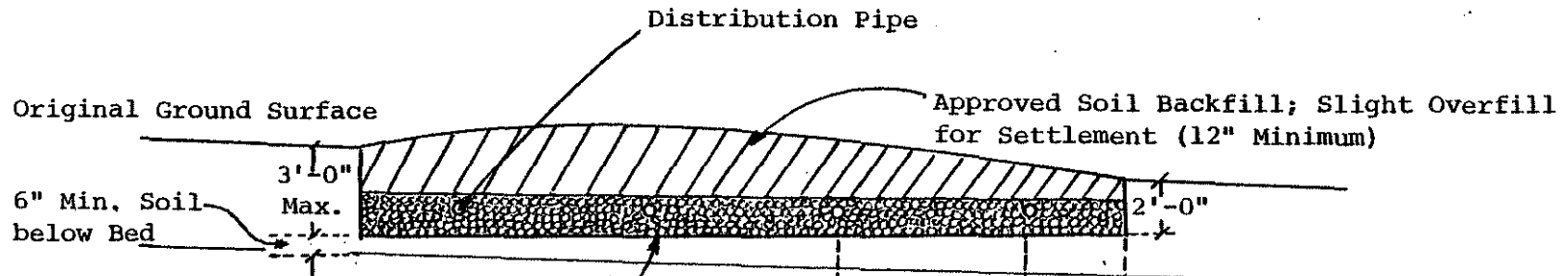


Diagram 6

ETA BED ON GENTLY SLOPING SITE



Plan View

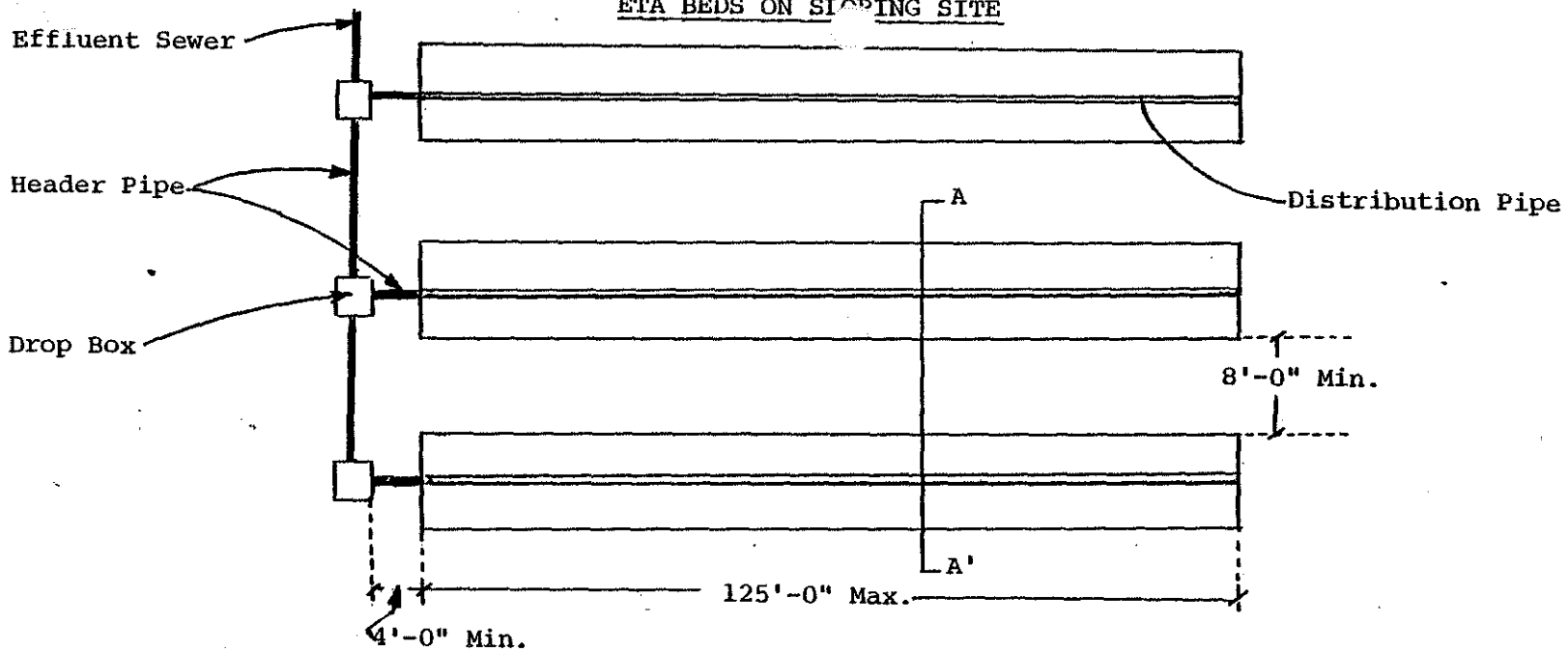


Section A-A

Filter Material Covered By Untreated Building Paper, Filter Fabric, Or Other Material Approved By The Agent,

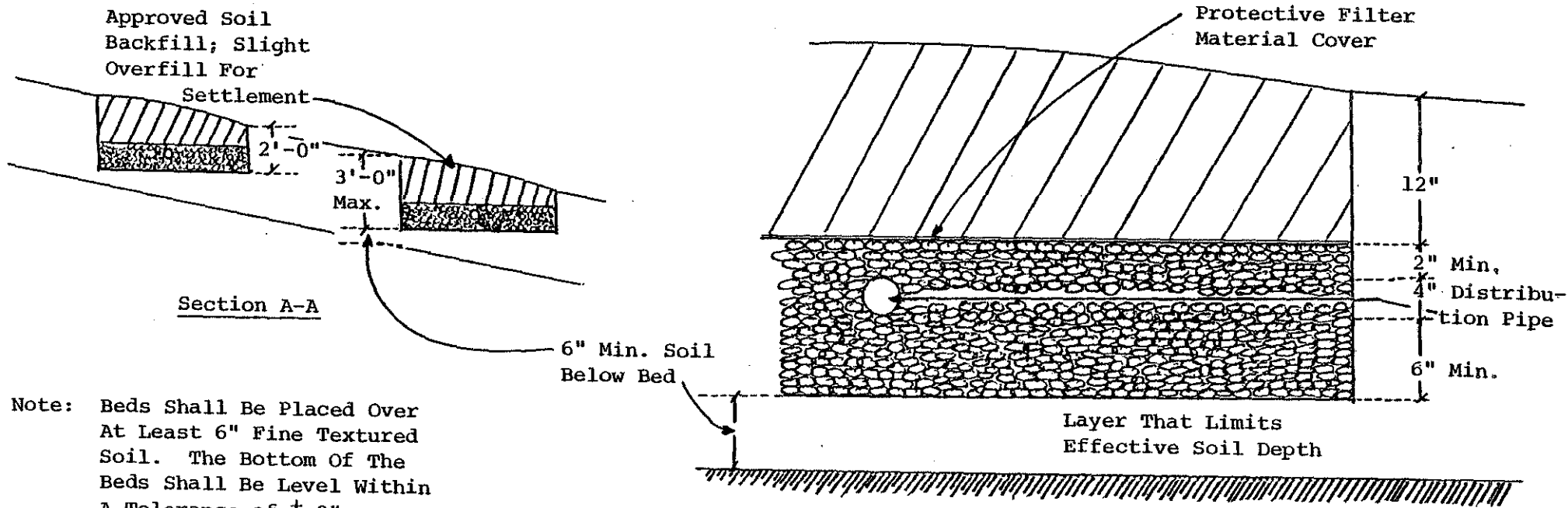
Note: The Bed Shall Be Placed Over At Least 6" Fine Textured Soil. The Bottom Of The Bed Shall Be Level Within A Tolerance Of $\pm 2"$.

Diagram 7
ETA BEDS ON SLOPING SITE



Plan View

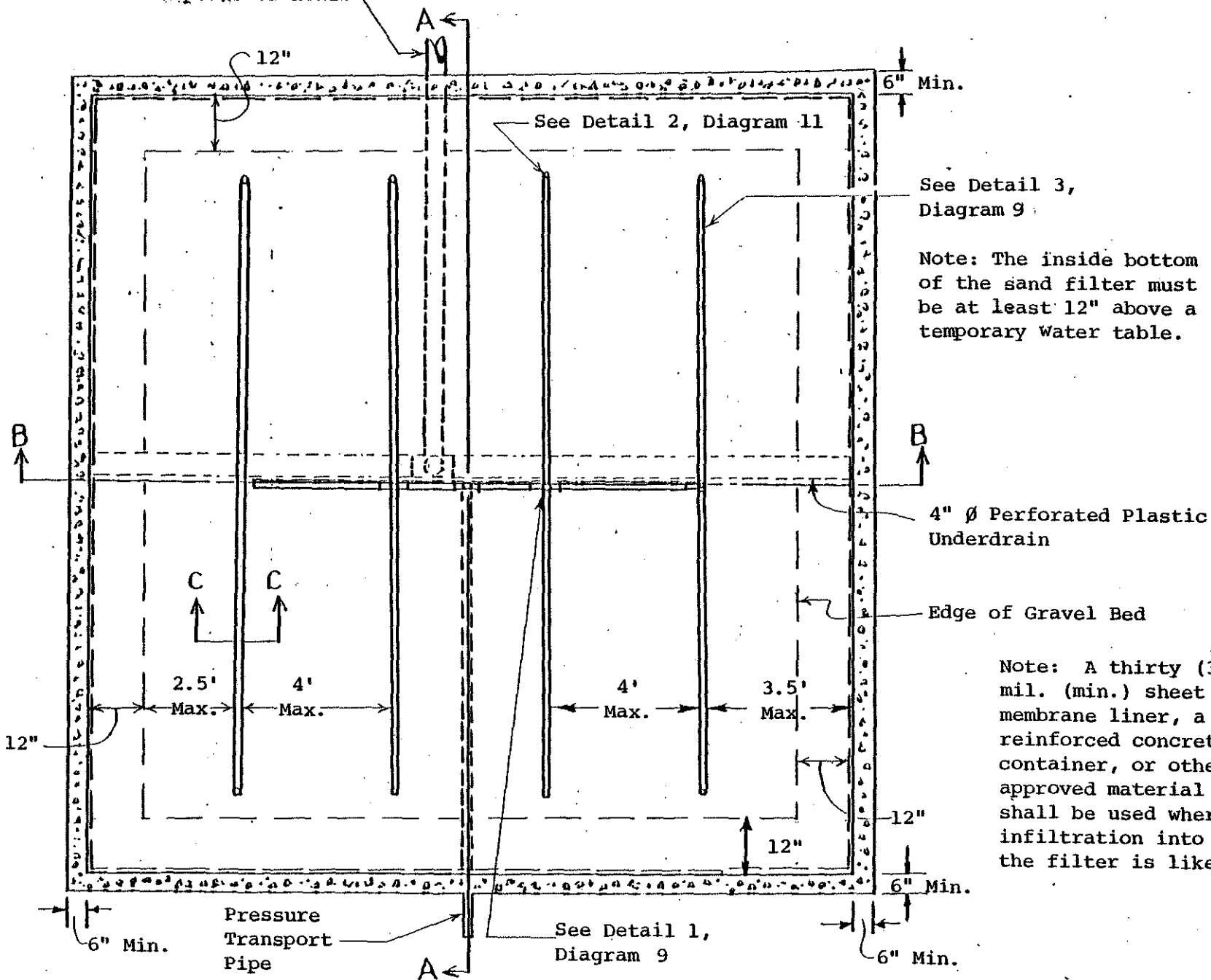
Ground Surface



Note: Beds Shall Be Placed Over At Least 6" Fine Textured Soil. The Bottom Of The Beds Shall Be Level Within A Tolerance of $\pm 2"$.

4" Smooth-wall Pipe
under Drain to
Disposal Trenches

DIAGRAM 8
SAND FILTERS



See Detail 3,
Diagram 9

Note: The inside bottom
of the sand filter must
be at least 12" above a
temporary water table.

4" ϕ Perforated Plastic
Underdrain

Edge of Gravel Bed

Note: A thirty (30)
mil. (min.) sheet
membrane liner, a
reinforced concrete
container, or other
approved material
shall be used where
infiltration into
the filter is likely.

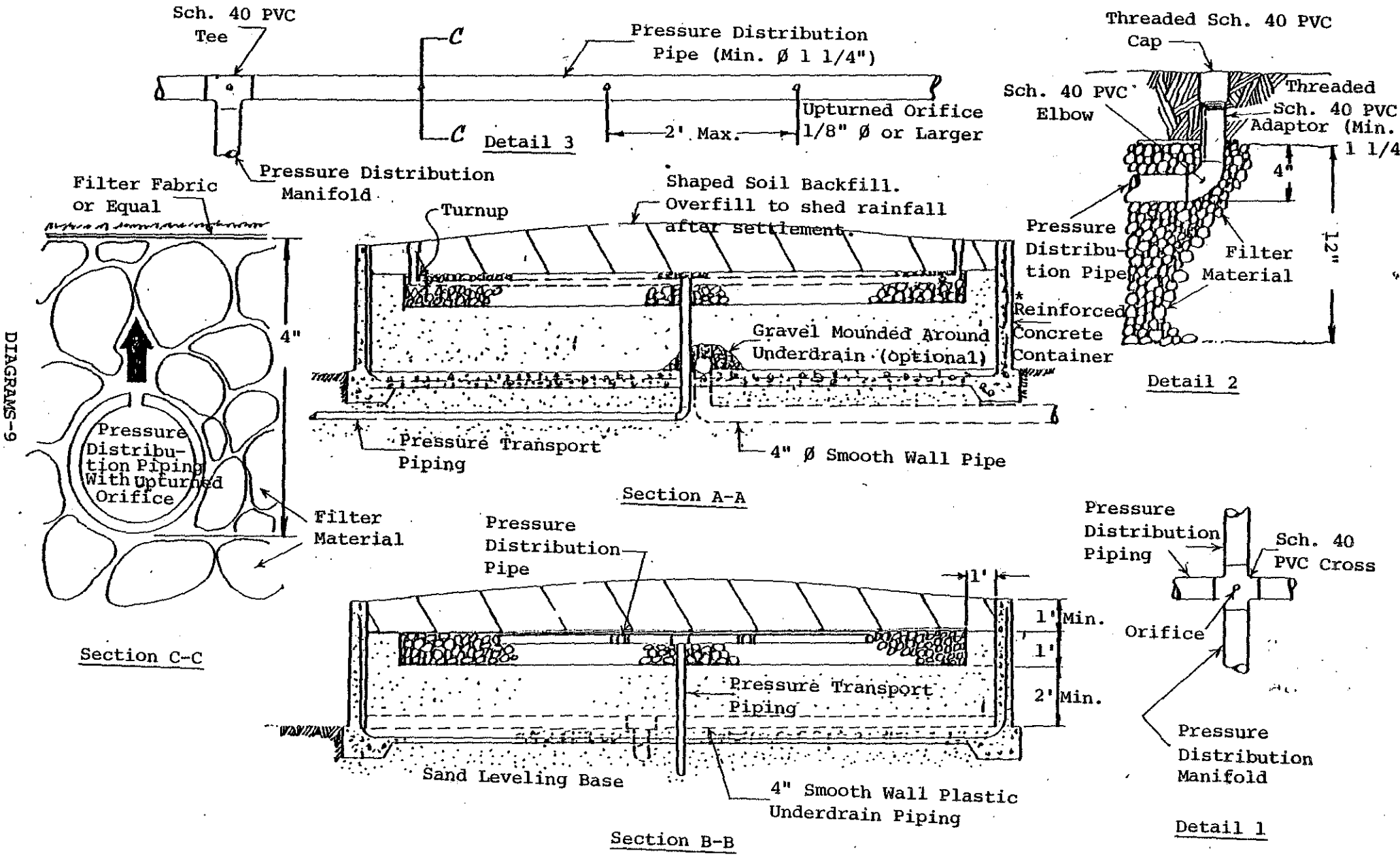
Pressure
Transport
Pipe

See Detail 1,
Diagram 9

DIAGRAMS-8

DIAGRAM 9

SAND FILTERS

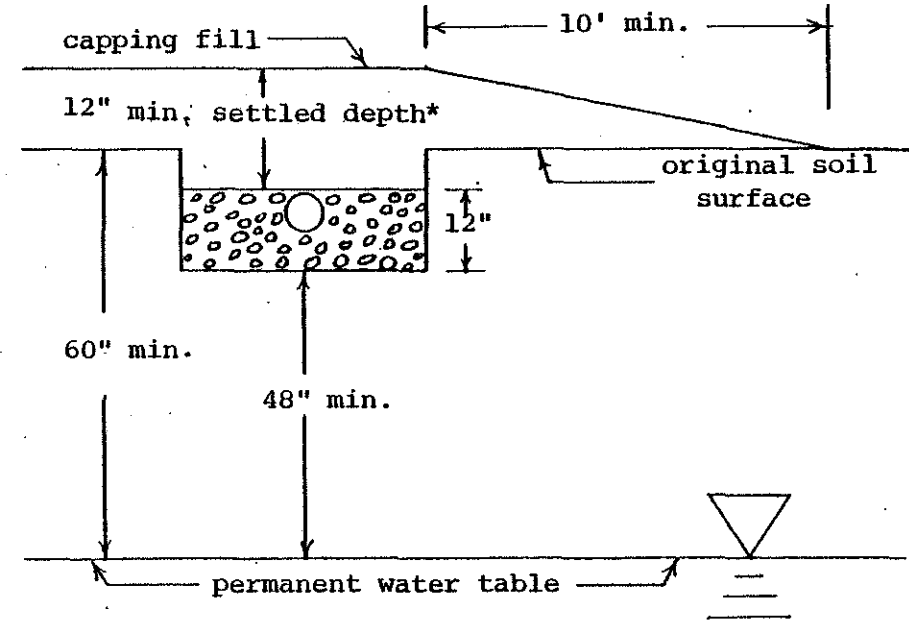
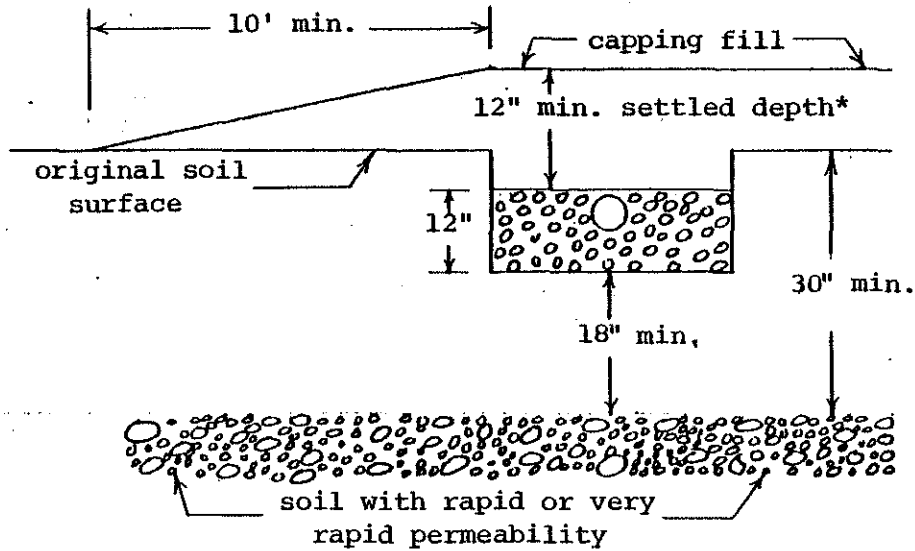
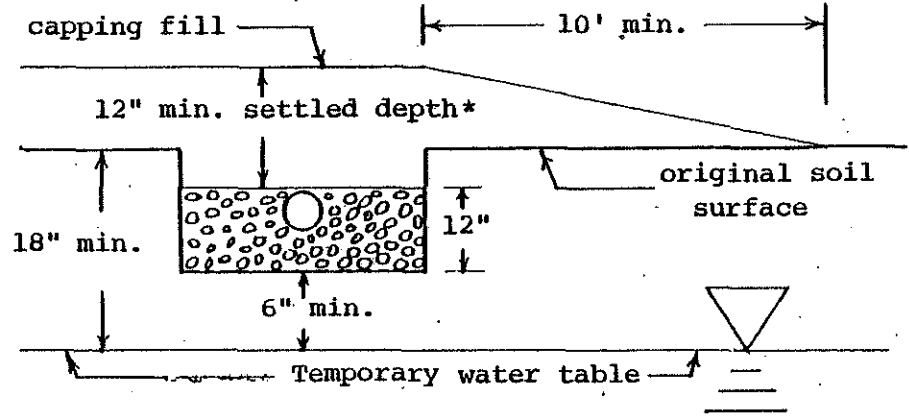
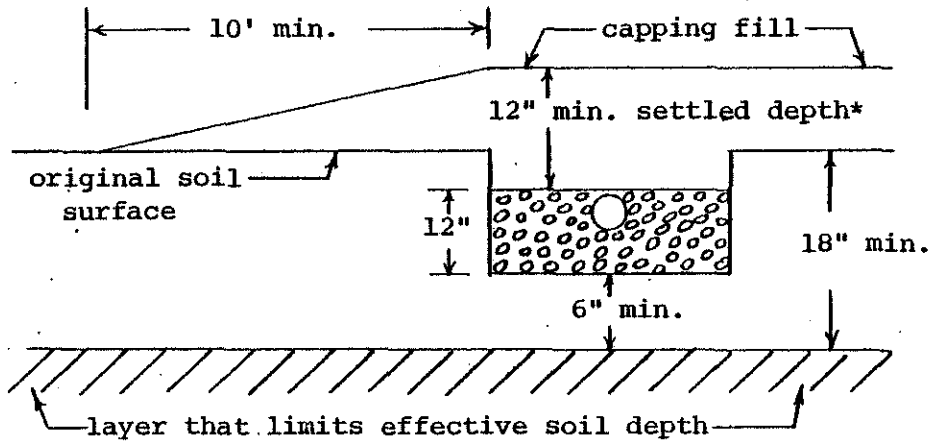


DIAGRAMS-9

Notes: Not in scale

DIAGRAM 10

CAPPING FILL



* Depth before Settling

DIAGRAM 11

REDUNDANT SYSTEM

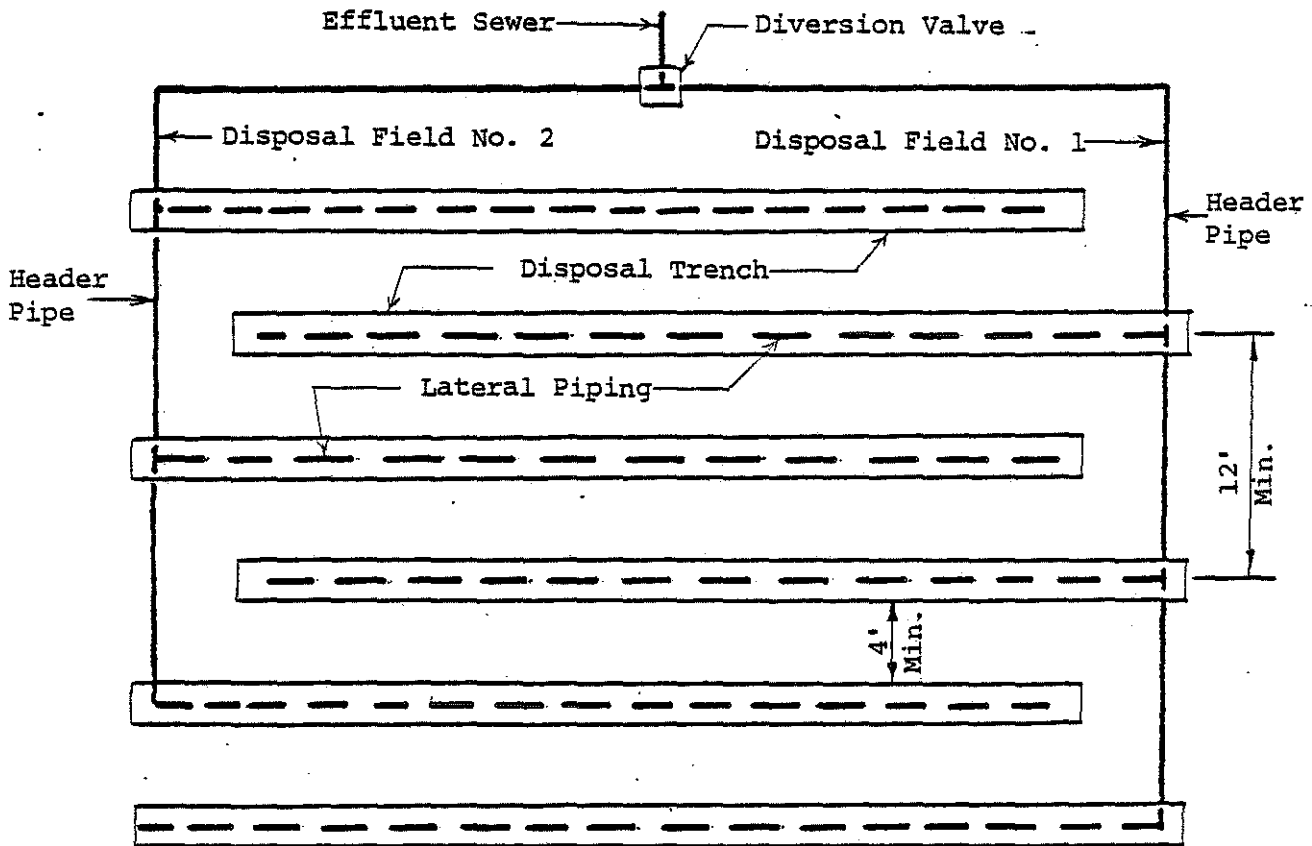


DIAGRAM 12

DISPOSAL TRENCH CROSS SECTION

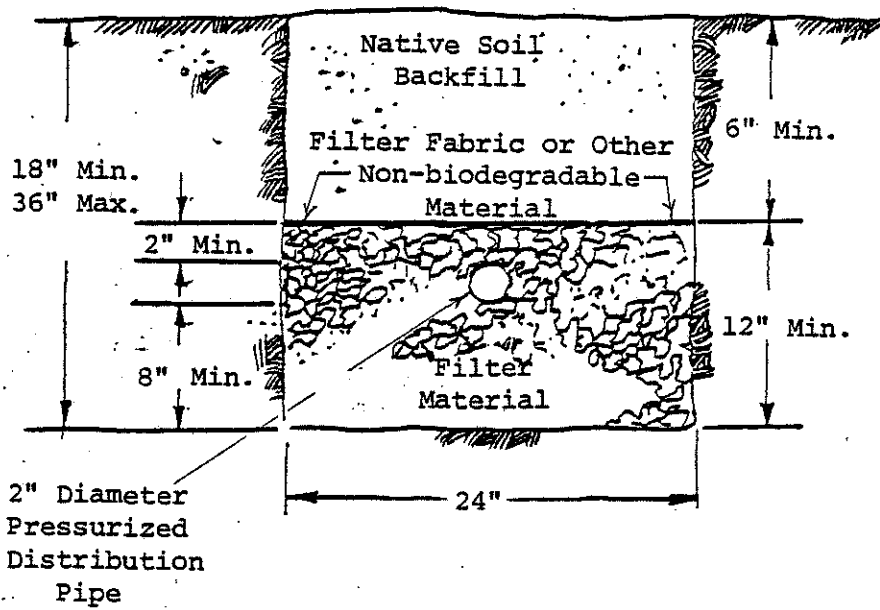
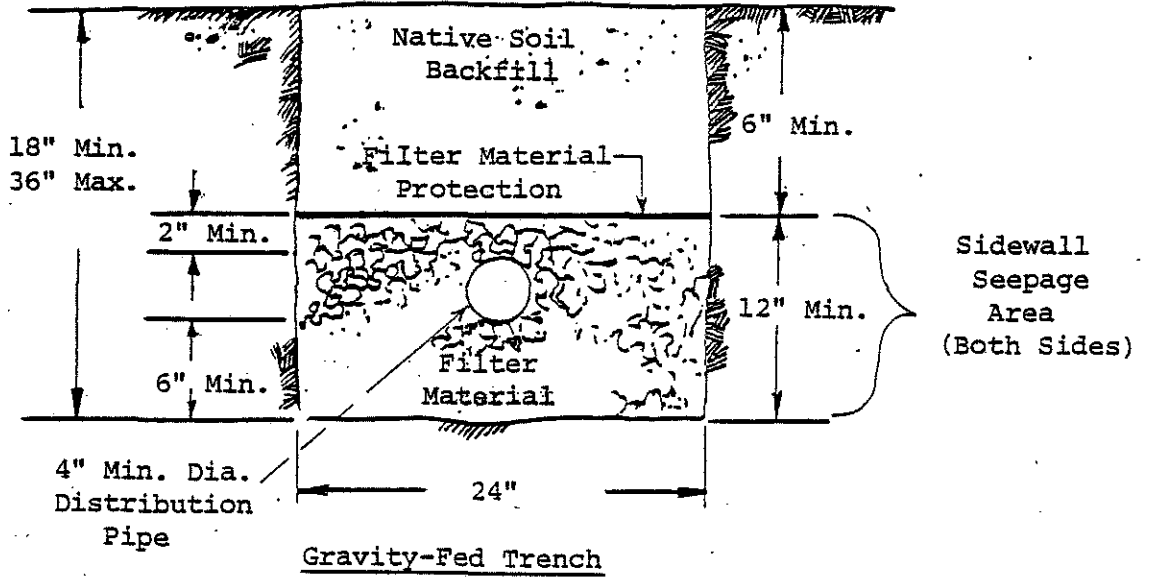


DIAGRAM 13

TYPICAL CURTAIN DRAIN

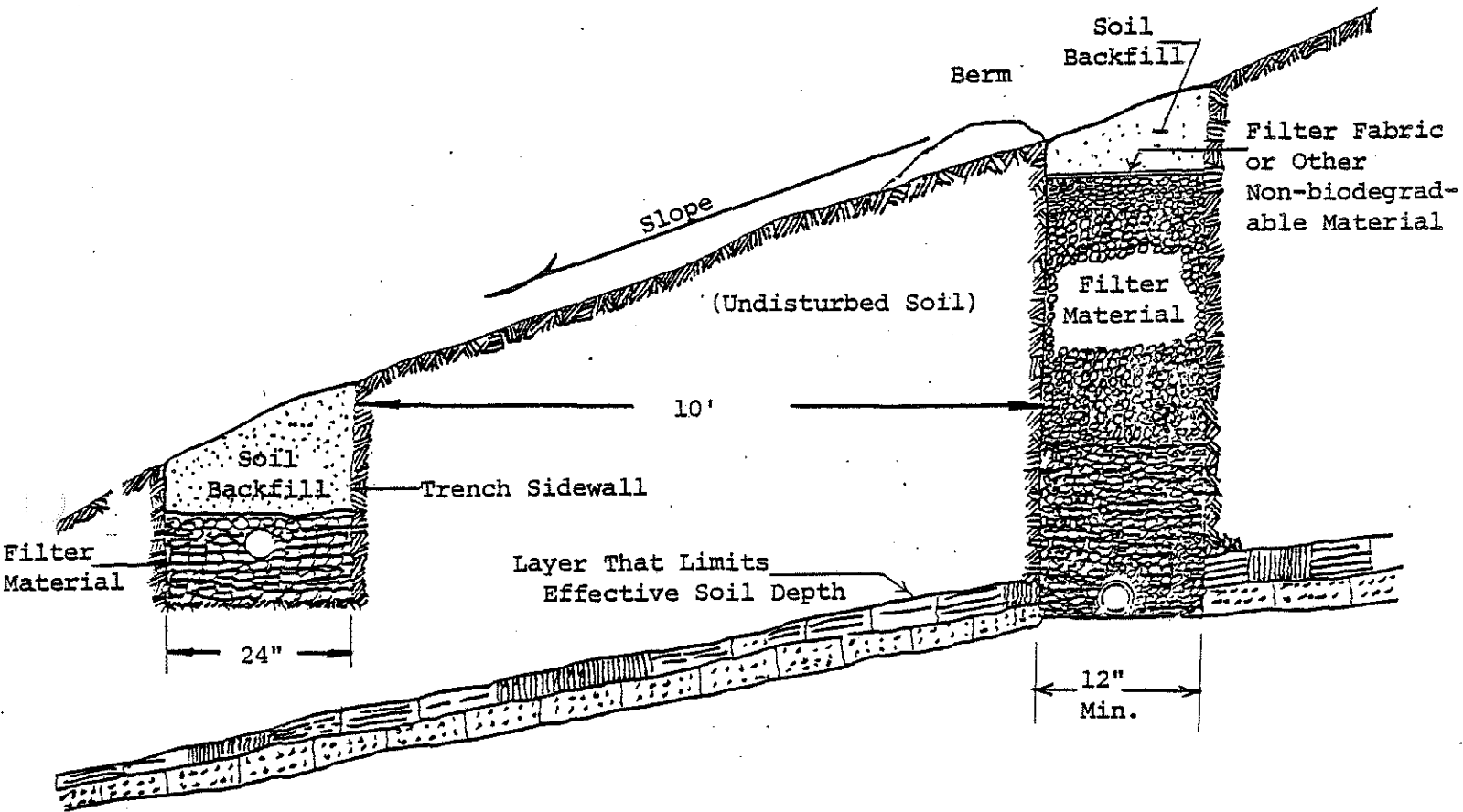
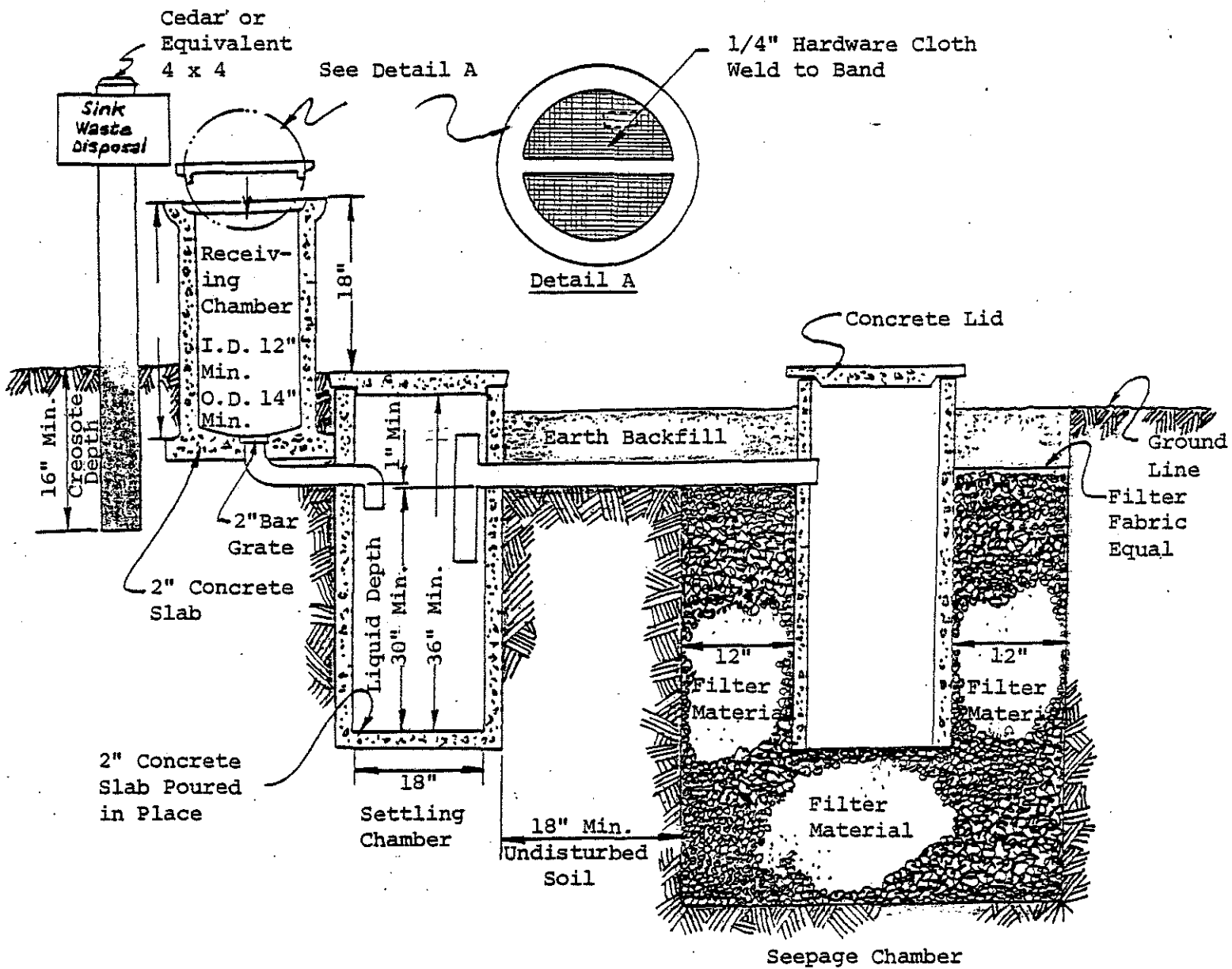
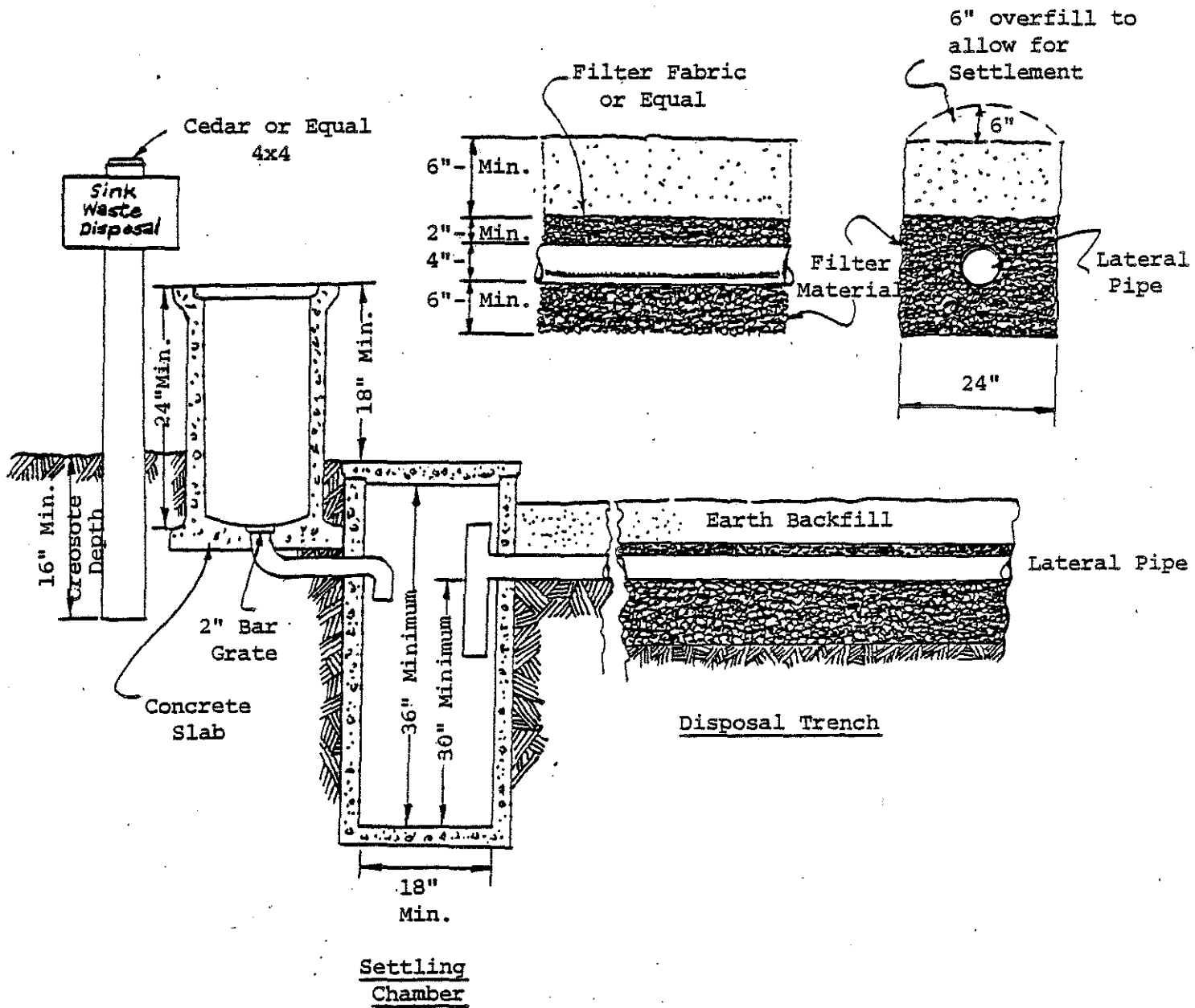


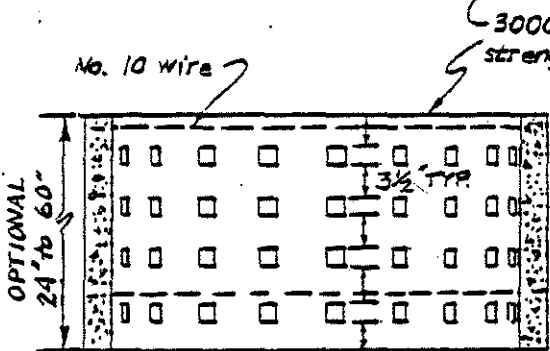
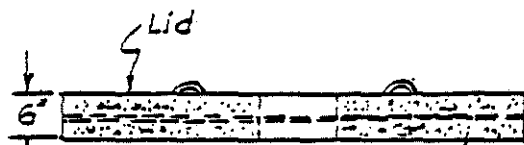
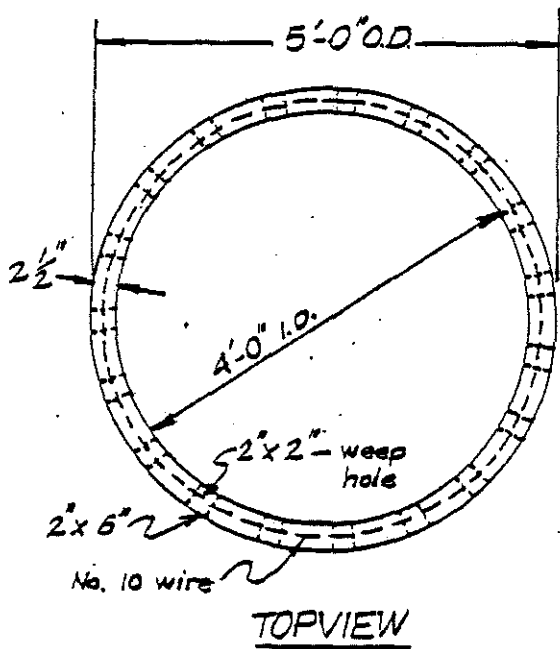
DIAGRAM 14

TYPICAL GRAY WATER WASTE DISPOSAL SUMP
(Using Seepage Chamber)



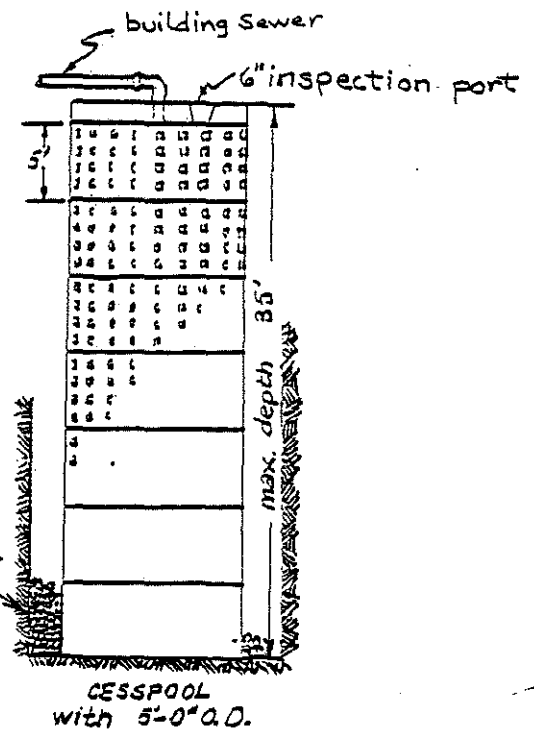
TYPICAL GREY WATER WASTE DISPOSAL SUMP
(Using Disposal Trench)





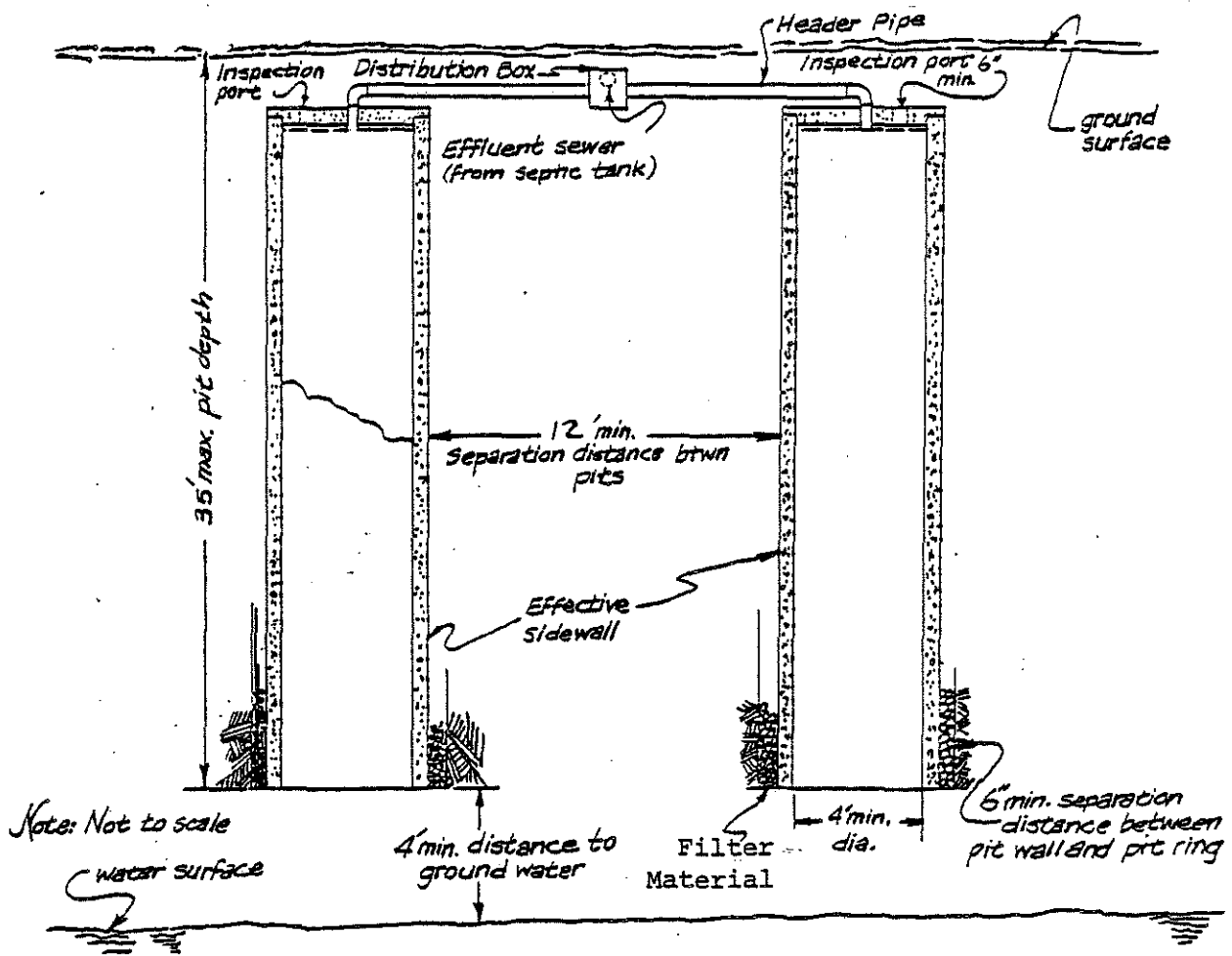
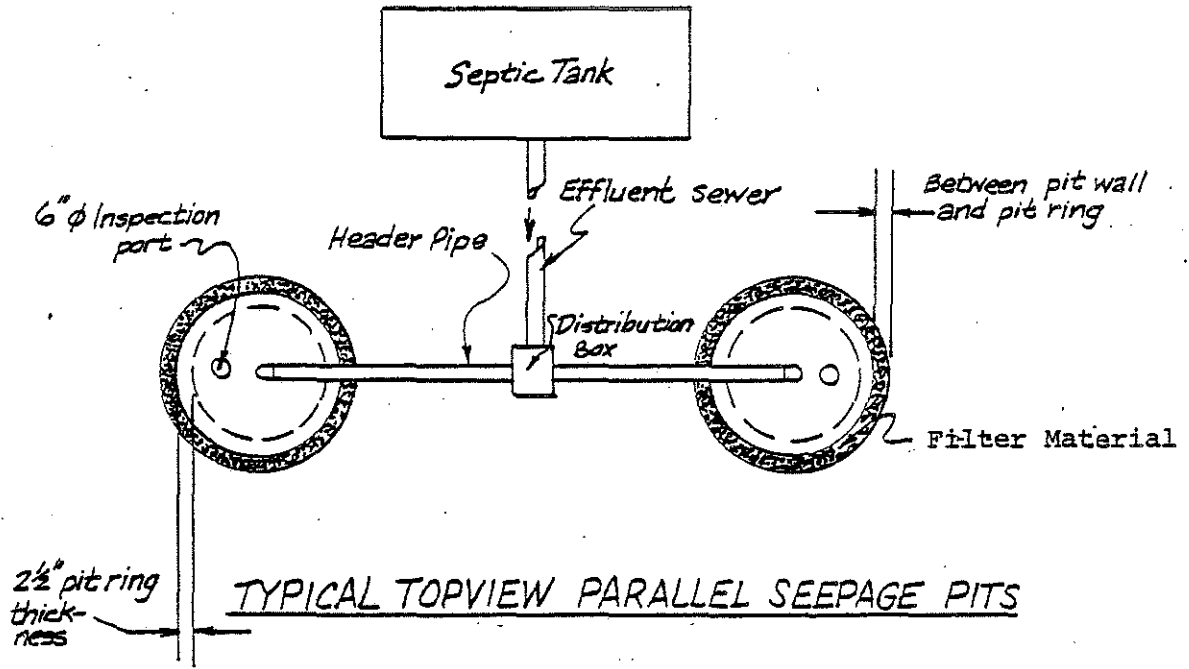
76 or 114 weep holes per liner
2x2 inside and 2x6 outside

CROSS SECTION



Note: Not to Scale.

PRE-CAST CONCRETE LINER DETAILS



Note: Not to scale

DIAGRAM 18

IDEALIZED CROSS SECTION OF ESCARPMENT OR MAN-MADE CUT
(Without a Layer That Limits Effective Soil Depth)

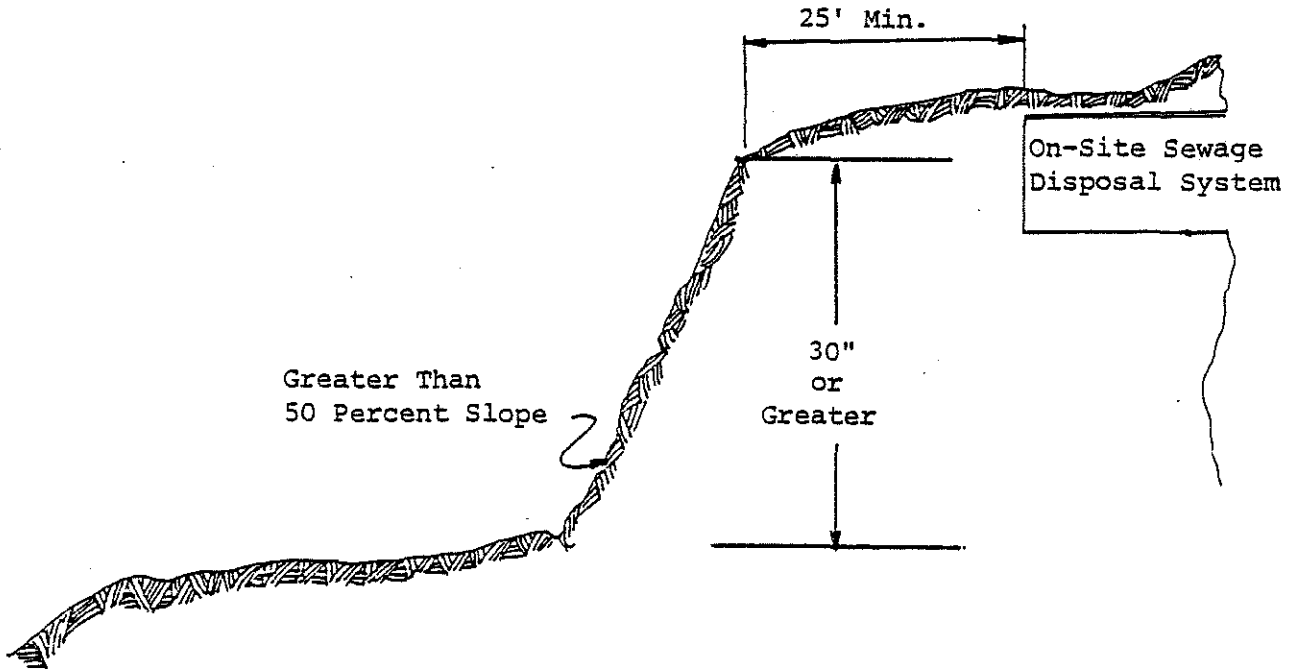


DIAGRAM 19

IDEALIZED CROSS SECTION OF ESCARPMENT OR MAN-MADE CUT
(With a Layer That Limits Effective Soil Depth)

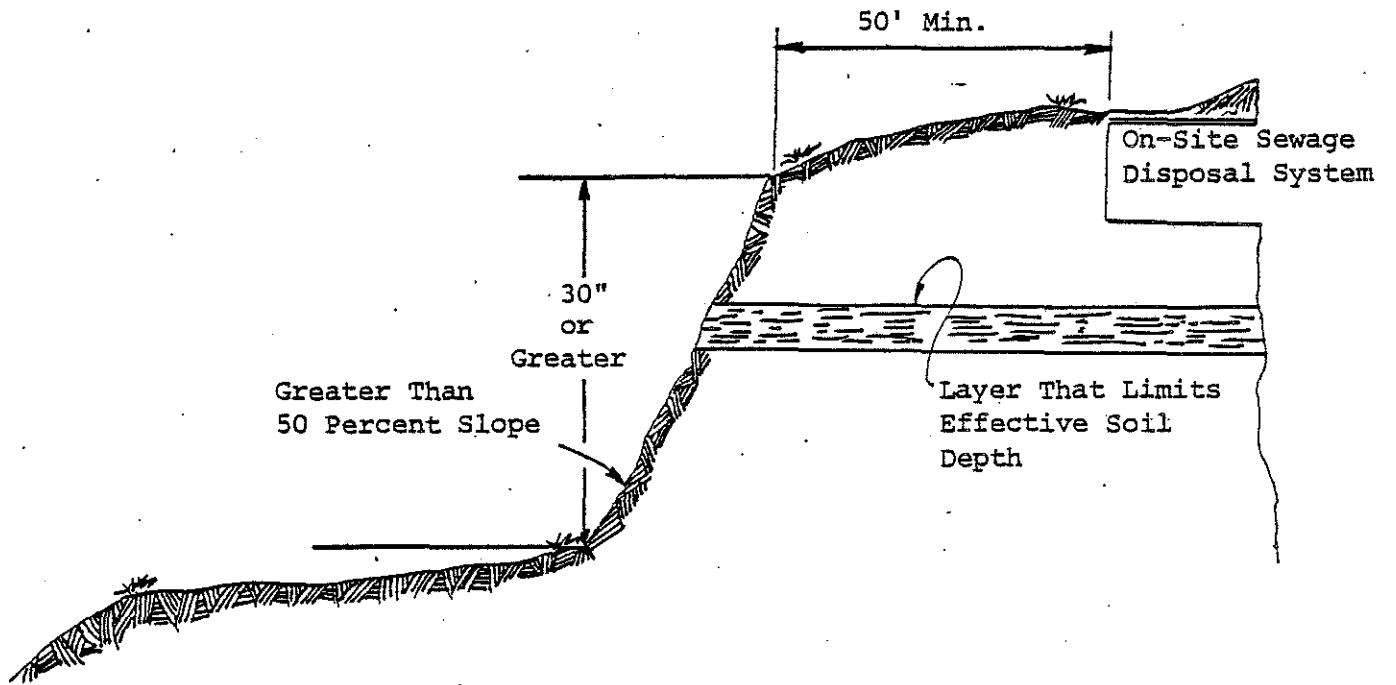


DIAGRAM 20

IDEALIZED CROSS SECTION OF A SOIL COLUMN

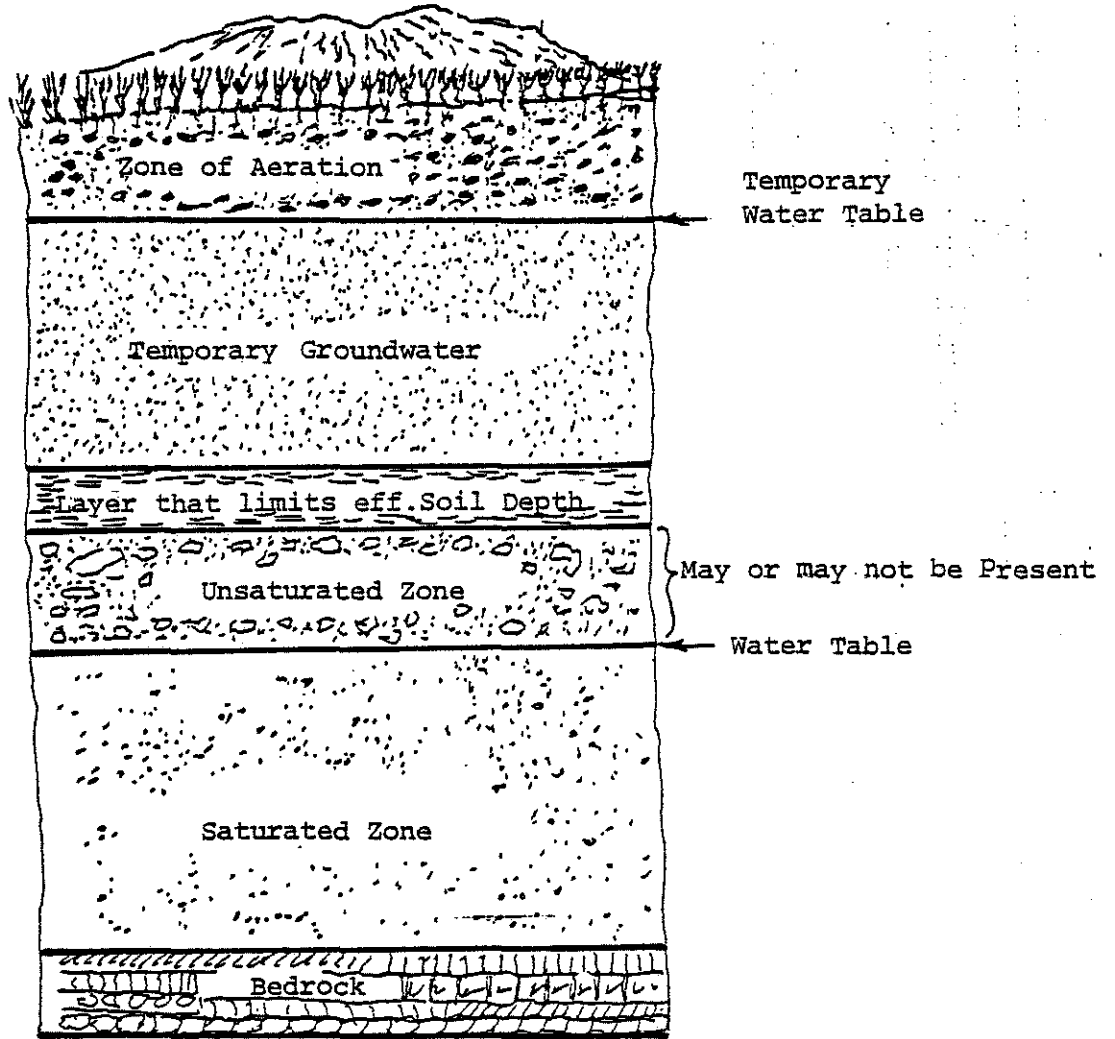


DIAGRAM 21

IDEALIZED ILLUSTRATION OF UNSTABLE LANDFORMS


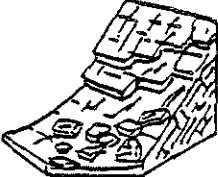
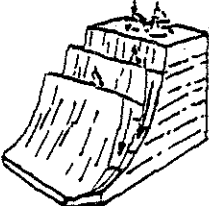

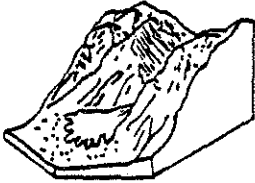
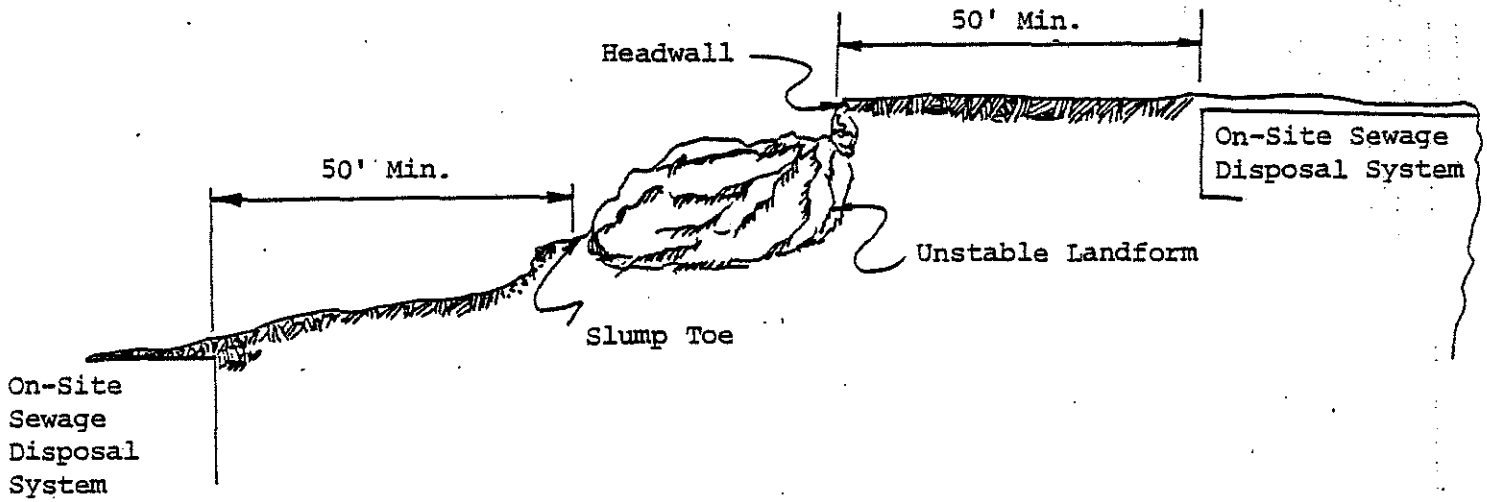
Process	Definition and Characteristics	Illustration
Rockfall and debris fall	The rapid descent of a rock mass, vertically from a cliff or by leaps down a slope. The chief means by which taluses are maintained.	
Rockslide and debris slide	The rapid, sliding descent of a rock mass down a slope. Commonly forms heaps and confused, irregular masses of rubble.	
Slump	The downward slipping of a coherent body of rock or regolith along a curved surface of the slumped mass, and any flat-lying planes in it, become rotated as they slide downward. The movement creates a sharp facing downslope.	
Debris Flow	The rapid downslope plastic flow of a mass of debris. Commonly forms an apron-like or tongue-like area, with a very irregular surface. In some cases, begins with slump at head, and concentric ridges and transverse furrows in surface of the tongue-like part.	
Variety: Mudflow	A debris flow in which the consistency of the substance is that of mud; generally contains a large proportion of fine particles, and a large amount of water.	

DIAGRAM 22

IDEALIZED CROSS SECTION OF UNSTABLE LANDFORM

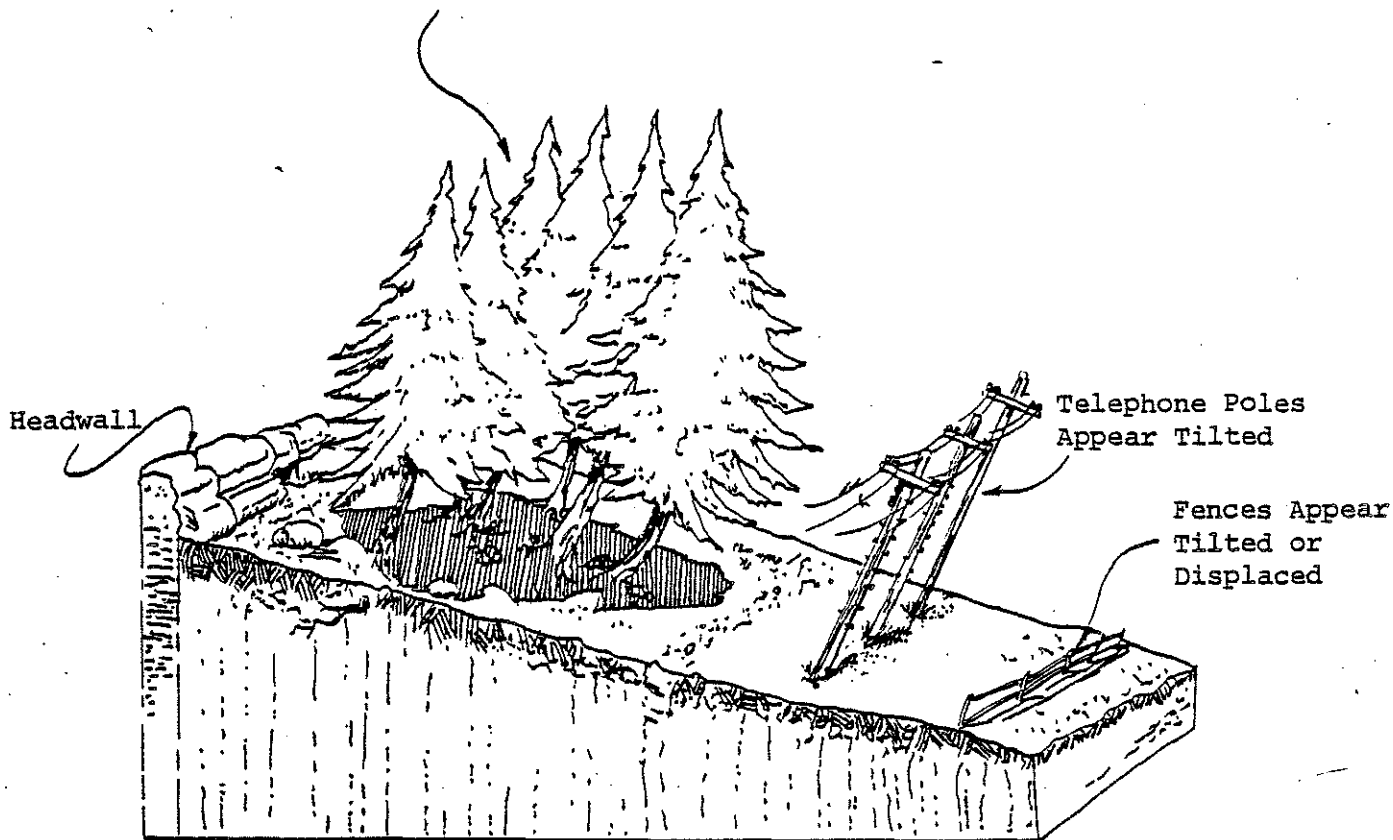


Note: Not to scale

DIAGRAM 23

IDEALIZED CROSS SECTION OF UNSTABLE LANDFORM

Trees Appear Tilted.
Tree Trunks Bend Uniformly
as They Enter the Ground.



APPENDIX A

GLOSSARY OF TERMS

OAR 71-100 to 600

(1) "Absorption facility" means a system of open-jointed or perforated piping, alternative distribution units, or other seepage systems for receiving the flow from septic tanks or other treatment facilities and designed to distribute effluent for oxidation and absorption by the soil within the zone of aeration.

(See Diagrams 1 through 7 and 14 through 17)

(2) "Aerobic sewage treatment facility" means a sewage treatment plant which incorporates a means of introducing air and oxygen into the sewage so as to provide aerobic biochemical stabilization during a detention period.

(3) "Agent" means the Director or his authorized representative.

(4) "Alteration" means expansion and/or change in location of an existing system, or any part thereof.

(5) "Alternative system" means any Commission approved on-site sewage disposal system used in lieu of, including modifications of, the standard subsurface system.

(6) "Authorization Notice" means a written document issued by the Agent which establishes that an on-site sewage disposal system appears adequate to serve the purpose for which a particular application is made.

(7) "Authorized representative" means the staff of the Department of Environmental Quality or the staff of the local unit of government performing duties for and under agreement with the Department of Environmental Quality.

(8) "Automatic siphon" means a hydraulic device designed to rapidly discharge the contents of a dosing tank between predetermined water or sewage levels.

(9) "Bedroom" means any room within a dwelling which is accepted as such by the State of Oregon Department of Commerce building codes representative or the local authorized building official having jurisdiction.

(10) "Black waste" means human body wastes including feces, urine, other extraneous substances of body origin and toilet paper.

(11) "Building sewer" means that part of the system of drainage piping which conveys sewage into a septic tank, cesspool or other treatment facility that begins five feet (5) outside the building or structure within which the sewage originates. (See Diagrams 1, 2, 3, and 16)

(12) "Cesspool" means a lined pit which receives raw sewage, allows separation of solids and liquids, retains the solids and allows liquids to seep into the surrounding soil through perforations in the lining. (See Diagram 16)

(13) "Chemical recirculating toilet facility" means a toilet facility wherein black wastes are deposited and carried from the bowl by a combination of liquid waste and water which has been chemically treated and filtered.

(14) "Chemical toilet facility" means a non-flushing non-recirculating toilet facility wherein black wastes are deposited directly into a chamber containing a solution of water and chemical.

(15) "Clayey Soil" means mineral soil that is over forty (40) percent clay that shrinks and develops wide cracks when dry and swells and shears when rewet forming slickensides and wedge-shaped structure. Clayey soil is very hard or extremely hard when dry, very firm when moist, and very sticky and very plastic when wet.

(16) "Claypan" means a dense, compact clay layer in the subsoil. It has a much higher clay content than the overlying soil horizon from which it is separated by an abrupt boundary. Claypans are hard when dry and very sticky and very plastic when wet. They impede movement of water and air and growth of plant roots.

(17) "Combustion or incineration toilet facility" means a toilet facility wherein black wastes are deposited directly into a combustion chamber for incineration.

(18) "Commercial Facility" means any structure or building, or any portion thereof, other than a single family dwelling.

(19) "Commission" means the Environmental Quality Commission.

(20) "Community System" means an on-site system which will serve more than one (1) lot or parcel, or more than one (1) condominium unit; or more than one (1) unit of a planned unit development.

(21) "Completed Application" means one in which the application form is completed in full, is signed by the owner, is accompanied by all required exhibits and required fee, and is correct.

(22) "Conditions associated with saturation" means:

(a) Reddish brown or brown soil horizons with gray (chrom as of 2 or less) and red or yellowish red mottles; or

(b) Gray soil horizons with red, yellowish red, or brown mottles; or

(c) Dark colored highly organic soil horizons; or

(d) Soil profiles with concentrations of soluble salt at or near the ground surface.

(23) "Confining Layer" means a layer associated with an aquifer that because of its low permeability does not allow water to move through it perceptibly under head differences occurring in the groundwater system.

(24) "Construction" means installation of a new system.

(25) "Conventional sand filter" means a filter with two(2) feet of medium sand designed to filter and biologically treat septic tank or other treatment unit effluent from a pressure distribution system at an application rate not to exceed one and twenty-three hundredths (1.23) gallons per square foot sand surface area per day applied at a dose not to exceed twenty (20) percent of the projected daily sewage flow per cycle.

(26) "Curtain drain" [in excess of thirty (30) inches] means a groundwater interceptor introduced upslope from a disposal field to intercept and divert ground water or surface water from the absorption facility, which may be required to be installed as a condition for approval of a system.

(27) "Cut-manmade" [in excess of thirty (30) inches] means a land surface resulting from mechanical land shaping operations where one (1) or more layer that limit effective soil depth intersect the cut surface and where the modified slope is greater

than fifty (50) percent, or any other man formed slopes in excess of fifty (50) percent which do not intersect one or more layers that limit effective soil depth. (See Diagrams 18 and 19).

(28) "Department" means the Department of Environmental Quality.

(29) "Director" means the Director of the Department of Environmental Quality.

(30) "Disposal area" means the entire area used for underground dispersion of the liquid portion of sewage. It may consist of a seepage pit or of a disposal field or of a combination of the two. It may also consist of a cesspool or evapotranspiration system.

(31) "Disposal field" means a system of disposal trenches or a seepage trench or system of seepage trenches.

(32) "Disposal trench" means a ditch or trench with vertical sides and substantially flat bottom with a minimum of twelve (12) inches of clean, coarse filter material into which a single distribution line has been laid, the trench then being backfilled with a minimum of six (6) inches of soil. (See Diagram 12)

(33) "Distribution box" means a watertight structure which receives septic tank or other treatment facility effluent and distributes it concurrently into two (2) or more header pipes leading to the disposal area. (See Appendix C)

(34) "Distribution pipe or lateral pipe" means an open-jointed or perforated pipe used in the dispersion of septic tank or other treatment facility effluent into disposal trenches, seepage trenches, or seepage beds. (See Diagrams 1 through 7 and 11)

(35) "Distribution unit" means a distribution box, dosing tank, diversion valve or box, header pipe, or other means of transmitting septic tank or other treatment unit effluent from the effluent sewer to the distribution pipes. (See Diagrams 1 through 7 and 11)

(36) "Diversion valve" means a watertight structure which receives septic tank or other treatment facility effluent through one (1) inlet, distributes it to two (2) outlets, only one (1) of which is utilized at a given time (See Diagram 11 and Appendix C)

(37) "Dosing tank" means a watertight receptacle placed after a septic tank or other treatment facility equipped with an automatic siphon or pump designed to discharge treated effluent at a rate not to exceed twenty (20) percent of the projected daily sewage flow.

(38) "Dosing Septic Tank" means as unitized device performing functions of both a septic tank and a dosing tank.

(39) "Dwelling" means any structure or building, or any portion thereof which is used, intended, or designed to be occupied for human living purposes including, but not limited to, houses, houseboats, boathouses, float houses, mobile homes, hotels, motels, and apartments.

(40) "Effective seepage area" means the sidewall area within a disposal trench or a seepage trench from the bottom of the trench to a level two (2) inches above the distribution pipes, or the sidewall area of any cesspool, seepage pit, unsealed earth pit privy, or gray water waste disposal sump seepage chamber; or the bottom area of a seepage bed. (See Diagrams 12, 14, 15, 16, and 17)

(41) "Effective soil depth" means the depth of soil material above a layer that impedes movement of water, air, and growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depth are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite, and clayey soil.

(42) "Effluent lift pump" means a pump used to lift septic tank or other treatment facility effluent to a higher elevation. (See Appendix E)

(43) "Effluent sewer" means that part of the system of drainage piping that conveys treated sewage from a septic tank or other treatment facility into a distribution unit or an absorption facility. (See Diagrams 1 through 7, 11, and 17, and Appendix F)

(44) "Emergency repairs" means repair of a failing system where immediate action is necessary to relieve a situation in which sewage is backing up into a dwelling or building, or repair of a broken pressure sewer line.

(45) "Escarpment" means any naturally occurring slope greater than fifty (50) percent which extends vertically six (6) feet or more as measured from toe to top, and which is characterized by a long cliff or steep slope which separates two (2) or more comparatively level or gently sloping surfaces, and may intercept one (1) or more layers that limit effective soil depth. (See Diagrams 18 and 19)

(46) "Evapotranspiration-Absorption (ETA) system" means an alternative system consisting of a septic tank or other treatment facility, effluent sewer and a disposal bed or disposal trenches, designed to distribute effluent for evaporation,

transpiration by plants, and by absorption into the underlying soil. (See Diagrams 6 and 7)

(47) "Existing on-site sewage disposal system" (existing system) means any installed on-site sewage disposal systems constructed in conformance with the rules, laws and local ordinances in effect at the time of construction, or which would have conformed substantially with system design provided for in Commission, State Health Division, or State Board of Health Rules.

(48) "Failing System" means any system which discharges untreated or incompletely treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters.

(49) "Filter material" means clean, washed gravel ranging from three quarters ($3/4$) to two and one-half ($2\ 1/2$) inches in size, or clean crushed rock ranging in size from one and one-half ($1-1/2$) to two and one-half ($2-1/2$) inches. (See Diagrams 6, 7, 9, 12, 14, 15, 16, and 17)

(50) "Five-day biochemical oxygen demand" (5 day BOD) means the quantity of oxygen used in the biochemical oxidation of organic matter in five days at twenty (20) degrees centigrade under specified conditions and reported as milligrams per liter (mg/l).

(51) "Fragipan" means a loamy subsurface horizon with high bulk density relative to the horizon above, seemingly cemented when dry, and weakly to moderately brittle when moist. Fragipans are mottled and low in organic matter. They impede movement of water, air, and growth of plant roots.

(52) "Governmental unit" means the state or any county, municipality, or political subdivision, or any agency thereof.

(53) "Grade" means the rate of fall or drop in inches per foot or percentage of fall of a pipe.

(54) "Gray water" means household sewage other than "black wastes", such as bath water, kitchen waste water and laundry wastes.

(55) "Groundwater interceptor" means any natural or artificial groundwater drainage system including agricultural drain tile, cut banks, and ditches. (See Diagram 13)

(56) "Hardpan" means a hardened layer in soil caused by cementation of soil particles with either silica, calcium carbonate, magnesium carbonate, or iron and/or organic matter. The hardness does not change appreciably with changes in moisture content. Hardpans impede movement of water and air and growth of plant roots.

(57) "Header pipe" means a tight jointed part of the sewage drainage conduit which receives septic tank effluent from the distribution box, or drop box, or effluent sewer and conveys it to the disposal area. (See Diagrams 1 through 5, 7, 11, and 17)

(58) "Headwall" means a steep slope at the head or upper end of a land slump block or unstable landform. (See Diagrams 22 and 23)

(59) "Holding tank" means a watertight receptacle designed to receive and store sewage to facilitate disposal at another location.

(60) "Individual system" means system that is not a community system.

(61) "Individual water supply" means a source of water and a distribution system which serves a single residence or user for the purpose of supplying water for drinking, culinary, or household uses and which is not a public water supply system.

(62) "Industrial waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business, or from the development or recovery of any natural resources.

(63) "Intermittent stream" means any surface public water or groundwater interceptor that continuously flows water for a period of greater than two months in any one year, but not continuously for that year.

(64) "Invert" is the lowest portion of the internal cross section of a pipe or fitting. (See Diagram 12)

(65) "Large system" means any on-site system with a daily sewage flow greater than two thousand five hundred (2,500) gallons.

(66) "Mechanical oxidation sewage treatment facility" means an aerobic sewage treatment facility.

(67) "Medium sand" means a mixture of sand with 100 percent passing the 3/8 inch sieve, 90 percent to 100 percent passing the No. 4 sieve, 62 percent to 100 percent passing the No. 10 sieve, 45 percent to 82 percent passing the No. 16 sieve, 25 percent to 55 percent passing the No. 30 sieve, 5 percent to 20 percent passing the No. 50 sieve, 10 percent or less passing the No. 60

sieve, and 4 percent or less passing the No. 100 sieve.

(68) "Nonwater-carried waste disposal facility" means any toilet facility which has no direct water connection, including pit privies, vault privies and self-contained construction type chemical toilets.

(69) "Occupant" means any person living or sleeping in a dwelling.

(70) "On-site sewage disposal system (system)" means any installed or proposed sewage disposal facility including, but not limited to a standard subsurface, alternative, experimental or non-water carried sewage disposal system, installed or proposed to be installed on land of the owner of the system or on other land as to which the owner of the system has the legal right to install the system.

(71) "Owner" means any person who alone, or jointly, or severally with others:

(a) Has legal title to any lot, dwelling, or dwelling unit;
or

(b) Has care, charge, or control of any real property as agent, executor, executrix, administrator, administratrix, trustee, leasee, or guardian of the estate of the holder of legal title; or

(c) Is the contract purchaser of real property.

(72) "Permanent ground water table" means the upper surface of a saturated zone that exists year-round. The thickness of the saturated zone, and, as a result, the evaluation of the permanent ground water table may fluctuate as much as twenty (20) feet or more annually; but the saturated zone and associated

permanent ground water table will be present at some depth beneath land surface throughout the year.

(73) "Permit" means the written permit issued by the Agent bearing the signature of the Agent which by its conditions authorizes the permittee to construct, install, alter, repair, or extend a subsurface or alternative sewage disposal system.

(74) "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.

(75) "Pollution" or "water pollution" means such alteration of the physical, chemical or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state, which will or tends to, either by itself or in connection with any other substance, create a public nuisance or which will or tends to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish or other aquatic life or the habitat thereof.

(76) "Portable toilet shelter" means any readily relocatable structure built to house a toilet facility.

(77) "Pressure distribution lateral" means piping and fittings in pressure distribution systems which distribute septic tank or other treatment unit effluent to filter material through

small diameter orifices. (See Diagrams 8, 9, and 12)

(78) "Pressure distribution manifold" means piping and fittings in a pressure distribution system which supply effluent from pressure transport piping to pressure distribution laterals. (See Diagrams 8 and 9)

(79) "Pressure distribution system" means any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or sand filter. (See Diagrams 8 and 9)

(80) "Pressure transport piping" means piping which conveys septic tank or other treatment unit effluent to a pressure distribution manifold by means of a pump. (See Diagrams 8 and 9)

(81) "Prior approval" means a written approval for on-site sewage disposal, for a specific lot, issued prior to January 1, 1974.

(82) "Prior construction permit" means a subsurface sewage disposal system construction permit issued prior to January 1, 1974, by a county that had an ordinance requiring construction permits for subsurface sewage disposal systems.

(83) "Privy" means a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a pit or vault in the ground into which human waste falls.

(84) "Public health hazard" means a condition whereby there are sufficient types and amounts of biological, chemical, or physical, including radiological, agents relating to water or sewage which are likely to cause human illness, disorders, or disability. These include, but are not limited to, pathogenic

viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes.

(85) "Public waters" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the State or within its jurisdiction.

(86) "Repair" means installation of all portions of a system necessary to eliminate a public health hazard or pollution of public waters created by a failing system.

(87) "Redundant disposal field system" means a system in which two complete disposal systems are installed, the disposal trenches of each system alternate with each other and only one system operates at a given time. (See Diagram 11)

(88) "Sand filter system" means the combination of septic tank or other treatment unit, dosing system with effluent pump(s) and controls, or dosing siphons piping and fittings, sand filter, absorption facility or effluent reuse method used to treat sewage. (See Diagrams 8 and 9)

(89) "Sanitary drainage system" means that part of the system of drainage piping that conveys untreated sewage from a building or structure to a septic tank or other treatment facility, service lateral at the curb or in the street or alley, or other disposal terminal holding human or domestic sewage.

The sanitary drainage system consists of a building drain or building drain and building sewer. (See Diagrams 1, 2, 3, and 16)

(90) "Saprolite" means weathered material underlying the soil that grades from soft thoroughly decomposed rock to rock that has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It does not include hard bedrock or hard fractured bedrock. It has rock structure instead of soil structure.

(91) "Saturated zone" means a three (3) dimensional layer, lens, or other section of the subsurface in which all open spaces including joints, fractures, interstitial voids, pores, etc. are filled with ground water. The thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of ground water recharge or discharge. (See Diagram 20)

(92) "Scum" means a mass of sewage solids floating at the surface of sewage which is buoyed up by entrained gas, grease, or other substances.

(93) "Seepage area" see effective seepage area.

(94) "Seepage bed" means an absorption system having disposal trenches wider than three (3) feet.

(95) "Seepage pit" means a "cesspool" which has a treatment facility such as a septic tank ahead of it. (See Diagram 17)

(96) "Seepage trench system" means a system with disposal trenches with more than six (6) inches of filter material below the distribution pipe.

(97) "Self-contained nonwater-carried waste disposal

facility" includes, but is not limited to, vault privies, chemical toilets, combustion toilets, recirculating toilets, and portable toilets, in which all waste is contained in a watertight receptacle.

(98) "Septic tank" means a watertight receptacle which receives sewage from a sanitary drainage system, is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil disposal system. (See Appendix B)

(99) "Septic tank effluent" means partially treated sewage which is discharged from a septic tank.

(100) "Sewage" means water-carried human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration, surface waters, or industrial waste as may be present.

(101) "Sewage disposal service" means:

(a) The installation of on-site sewage disposal systems, or any part thereof; or

(b) The pumping out or cleaning of on-site sewage disposal systems, or any part thereof; or

(c) The disposal of material derived from the pumping out or cleaning of on-site sewage disposal systems.

(d) Grading, excavating, and earth-moving work connected with the operations described in paragraph (a) of this subsection, except streets, highways, dams, airports or other heavy construction projects and except earth-moving work

performed under the supervision of a builder or contractor in connection with and at the time of the construction of a building or structure.

(e) The construction of drain and sewage lines from five (5) feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage.

(102) "Sewage stabilization pond" means a pond designed to receive the raw sewage flow from a dwelling or other building and retain that flow for treatment without discharge.

(103) "Slope" means the rate of fall or drop in feet per one hundred (100) feet of the ground surface. It is expressed as percent of grade.

(104) "Soil permeability rating" refers to that quality of the soil that enables it to transmit water or air, as outlined in the United States Department of Agriculture Handbook, Number 18, entitled Soil Survey Manual.

(105) "Soil separate" means the size of soil particles according to Table 7.

(106) "Soil texture" means the amount of each soil separate in a soil mixture. Field methods for judging the texture of a soil consist of forming a cast of soil, both dry and moist, in the hand and pressing a ball of moist soil between thumb and finger. The major textural classifications are defined as follows: (See Table 6.)

(a) Sand: Individual grains can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released. Squeezed when moist, it will form

a cast that will hold its shape when the pressure is released, but will crumble when touched.

(b) Sandy loam: Consists largely of sand, but has enough silt and clay present to give it a small amount of stability. Individual sand grains can be readily seen and felt. Squeezed in the hand when dry, this soil will readily fall apart when the pressure is released. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released, but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.

(c) Loam: Consists of an even mixture of sand and of silt and a small amount of clay. It is easily crumbled when dry and has a slightly gritty yet fairly smooth feel. It is slightly plastic. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released, but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.

(d) Silt loam: Consists of a moderate amount of fine grades of sand, a small amount of clay, and a large quantity of silt particles. Lumps in a dry, undisturbed state appear quite cloddy, but they can be pulverized readily; the soil then feels soft and floury. When wet, silt loam runs together in puddles. Either dry or moist, casts can be handled freely without breaking. When a ball of moist soil is pressed between thumb and finger, it will not press out into a smooth, unbroken ribbon, but will have a broken appearance.

(e) Clay loam: Consists of an even mixture of sand, silt, and clay, which breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form a cast that will withstand considerable handling.

(f) Silty clay loam: Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumps when dry. When moist, a thin ribbon or one-eighth (1/8) inch wire can be formed between thumb and finger that will sustain its weight and will withstand gentle movement.

(g) Silty clay: Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or one-eighth (1/8) inch or less sized wire formed between thumb and finger will withstand considerable movement and deformation.

(h) Clay: Consists of large amounts of clay and moderate to small amounts of sand. It breaks into very hard clods or lumps when dry. When moist, a thin, long ribbon or one-sixteenth (1/16) inch wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.

These and other soil textural characteristics are also defined as shown in the United States Department of Agriculture Textural Classification Chart which is hereby adopted as part of these rules. This textural classification chart is based on the Standard Pipette Analysis as defined in the United States (January 2, 1981)

Department of Agriculture, Soil Conservation Service Soil Survey
Investigations Report No. 1. (See Table 6)

(107) "Soil with rapid or very rapid permeability" means:

(a) Soil which contains thirty-five (35) percent or more of coarse fragments two (2) millimeters in diameter, or larger by volume with interstitial soil of sandy loam texture or coarser as defined in Appendix A, (106) (b) and as classified in Soil Textural Classification Chart Table 6, or

(b) Coarse textured soil [loamy sand or sand] as defined in Appendix A (106) and as classified in Soil Textural Classification Chart, Table 6], or

(c) Stones, cobbles, gravel, and rock fragments with too little soil material to fill interstices larger than one (1) millimeter in diameter.

(108) "Standard subsurface system" means an on-site sewage disposal system consisting of a septic tank, distribution unit and subsurface drainfield.

(109) "Subsurface sewage disposal" means the physical, chemical or bacteriological breakdown and aerobic treatment of sewage in the unsaturated zone of the soil above any temporarily perched groundwater body.

(110) "Subsurface disposal system" means a cesspool or the combination of a septic tank or other treatment unit and effluent sewer and absorption facility. (See Diagrams 1, through 6, 11, 16, and 17)

(111) "Suspended solids" means solids in sewage that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/l).

(112) "System" see "On-site Sewage Disposal System"

(113) "Temporary ground water table" means the upper surface of a saturated zone that exists only on a seasonal or periodic basis. Like a permanent ground water table, the elevation of a temporary ground water table may fluctuate. However, a temporary ground water table and associated saturated zone will dissipate (dry up) for a period of at least three (3) months each year.

(114) "Test pit" means an open pit dug to sufficient size and depth to permit thorough examination of the soil to evaluate its suitability for subsurface sewage disposal.

(115) "Toilet facility" means a fixture housed within a toilet room or shelter for the purpose of receiving black waste.

(116) "Unstable landforms" means areas showing evidence of mass downslope movement such as debris flow, landslides, rockfalls, and hummocky hillslopes with undrained depressions upslope. Unstable landforms may exhibit slip surfaces roughly parallel to the hillside; landslide scars and curving debris ridges; fences, trees, and telephone poles which appear tilted; or tree trunks which bend uniformly as they enter the ground. Active sand dunes are unstable landforms. (See Diagrams 21, 22, and 23)

(117) "Zone of aeration" means the unsaturated zone that occurs below the ground surface and above the point at which the upper limit of the water table exists. (See Diagram 20)

APPENDIX B

STANDARDS FOR SEPTIC TANK AND DOSING SEPTIC TANK CONSTRUCTION

- I. The following requirements shall apply to all septic tanks manufactured for use in Oregon unless specifically exempted by other portions of these rules:
- A. Compartments: Septic tanks shall have single or multiple compartments. Multiple compartment tanks shall comply with the following:
1. The first compartment shall have a minimum liquid capacity of at least two-thirds ($2/3$) of the total required liquid capacity, as measured from the invert of the outlet fitting.
 2. The second and succeeding compartments shall each have a minimum liquid capacity equal to or greater than one-half ($1/2$) of the liquid capacity of the first compartment.
 3. Each compartment shall have access provided by a manhole having not less than eighteen (18) inches across its shortest dimension unless otherwise approved by the Department. The manhole cover shall not weigh more than seventy-five (75) pounds.
 4. No compartment shall have an inside horizontal dimension of less than twenty-four (24) inches.
- B. Liquid Depth: The liquid depth of any compartment shall be at least thirty (30) inches. Liquid depths greater than seventy-two (72) inches shall not be considered in

determining the working liquid capacity.

- C. Septic tanks shall be water tight.
- D. Septic tanks shall be capable of supporting an earth load of at least three hundred (300) pounds per square foot when the maximum coverage does not exceed three (3) feet. Tanks installed with more than three (3) feet of cover shall be reinforced to support the additional load.
- E. The inlet and outlet fittings shall be of cast iron, Schedule 40 P.V.C. plastic, Schedule 40 ABS plastic, or other materials approved by the Department, with a minimum diameter of four (4) inches.
 - 1. The distance between the inlet and outlet fittings shall be equal to, or greater than, the liquid depth of the tank.
 - 2. The inlet and outlet fittings shall be located at opposite ends of the tank. They shall be attached in a water tight manner approved by the Department.
 - 3. The inlet fitting shall be a "sanitary tee" extending at least six (6) inches above and below the liquid level.
 - 4. The outlet fitting shall be a "tee" extending below liquid level a distance equal to not less than thirty-five (35) percent nor greater than fifty (50) percent of the liquid depth, and at least six (6) inches above the liquid depth in order to provide scum storage. When the tank is used as a holding tank, the outlet fitting shall be provided with a water tight plug.

5. Ventilation shall be provided through the fittings by means of a two (2) inch minimum space between the underside of the top of the tank and the top of the "tee" fitting.
 6. The invert of the inlet fitting shall be not less than one (1) inch and preferably three (3) inches above the invert of the outlet fitting.
 7. The septic tank manufacturer shall provide with each fitting a rubber or neoprene rubber gasket meeting ASTM Specification C-564, or an appropriate coupler which the Department determines will provide a water tight connection between the fittings and the building and effluent sewer pipes.
 8. An access cover of not less than eight (8) inches across shall be provided above each fitting.
- F. At least ten (10) percent of the inside volume of the tank shall be above liquid level to provide scum storage.
- G. In tanks with more than one (1) compartment, a four (4) inch diameter (minimum) "tee" fitting shall be placed in each common compartment wall, using the same specifications as required for the outlet fitting. The invert of this "tee" fitting shall be at the same elevation as the outlet "tee."
- H. Septic tanks shall be constructed of concrete, not less than twelve (12) gauge or thicker steel, or other materials approved by the Department.
1. Steel tanks shall be coated inside and out with asphalt or other protective coatings, meeting the most current

U.S. Department of Commerce Commercial Standard CS 177, Sections 5.3.1 through 5.3.4.4, or other coatings of equal performance approved by the Department.

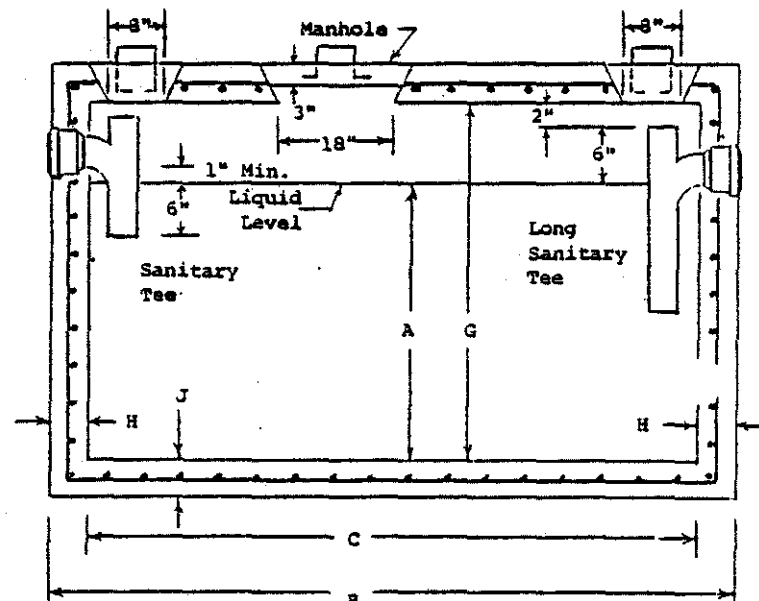
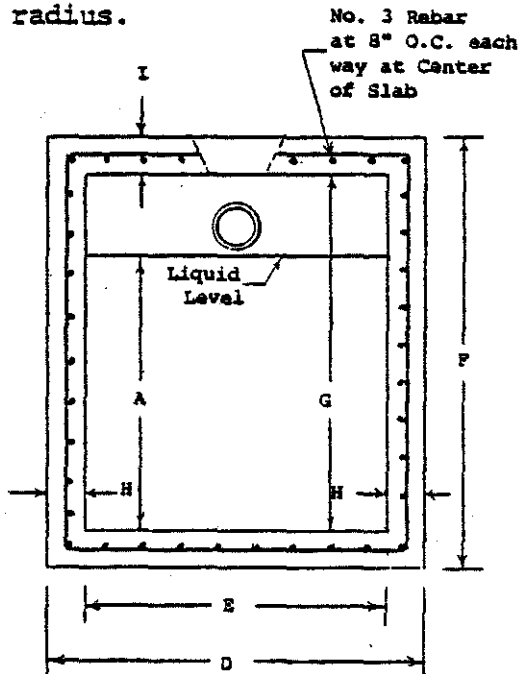
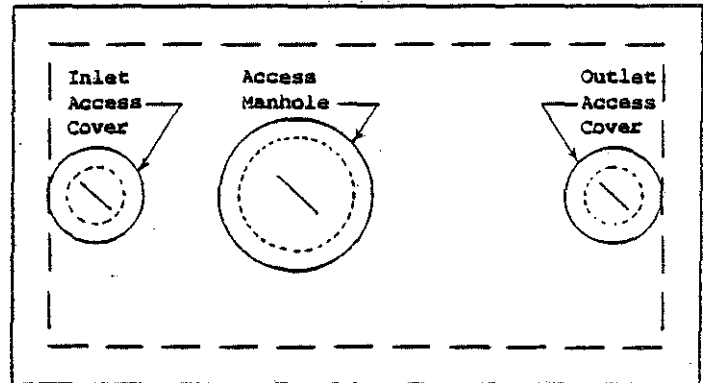
2. Precast concrete tanks shall have a minimum wall, compartment, and bottom thickness of two and one-half (2 1/2) inches, and shall be adequately reinforced. The top shall be at least four (4) inches thick.
3. Where concrete block tanks are permitted by the Agent, the tanks shall be constructed of heavyweight concrete block, eight (8) inch minimum thickness, laid on a six (6) inch (minimum) poured foundation slab. The mortared joints shall be well filled. All block holes or cells shall be filled with mortar or concrete. "k" webbing shall be installed at every third row of block. Number three (3) re-bar shall be installed vertically in every block. Tank interiors shall be surfaced with at least two (2) one-eighth (1/8) inch thick coats of corrosion resistant water-proof sealant. The first row of blocks shall be keyed or doweled to the concrete foundation.
4. Cast-in-place concrete tanks shall be constructed using the minimum sidewall thickness, bottom thickness, top thickness, and reinforcing shown in the following diagram and table. All other requirements contained herein shall also be met. A structural permit is required from the Department of Commerce or the municipality with jurisdiction as defined in [ORS 456.750(5)1.

TYPICAL CAST-IN-PLACE CONCRETE SEPTIC TANK SPECIFICATIONS

Working Capacity (gallons)		Working Capacity (cubic feet)	Liquid Depth	Tank Length		Tank Width		Tank Depth		Concrete Thickness		
Min. Required	Calculated		A	Outside	Inside	Outside	Inside	Outside	Inside	Side	Top	Bottom
				B	C	D	E	F	G			
1000	1017	136	4'-3"	9'	8'	5'	4'	5'-11"	4'-11"	6"	6"	6"
1250	1256	168	4'-8"	9'	8'	5'-5"	4'-6"	6'-4"	5'-4"	6"	6"	6"
1500	1503	201	5'-7"	9'	8'	5'-6"	4'-6"	7'-3"	6'-3"	8"	6"	6"

Notes:

- Mix shall be at least 5 1/2 sacks cement per cubic yard.
- Mix shall be vibrated or tamped to fill all voids.
- Work shall be continuously wet cured for seven days after placement.
- All reinforcing steel mats shall be centered in respective slabs and walls.
- Reinforcing steel shall be lapped 12 inches minimum at all corners and splices.
- Bar shall be cold-bent with not less than a 2 1/4 inch radius.



5. For cast-in-place septic tanks with dimensions different from those shown in the table, or when the septic tank is to be located under a road or driveway, two (2) copies of detailed plans and specifications, prepared by a registered professional engineer licensed to practice in Oregon shall be provided to the Agent for review and approval.
- I. All prefabricated septic tanks shall be marked on the uppermost tank surface with the liquid capacity of the tank and either the manufacturers full business name or the number assigned by the Department.
- J. Each commercial manufacturer of prefabricated septic tanks shall provide two (2) complete sets of plans and specifications, prepared by a registered professional engineer licensed to practice in Oregon, to the Department for review and approval.
- K. Each commercial manufacturer of prefabricated septic tanks shall provide the Department with written certification that septic tanks for use in on-site sewage disposal systems in the State of Oregon will comply with all requirements of this section.

II. STANDARDS FOR DOSING SEPTIC TANK ASSEMBLIES

A. Introduction:

A dosing septic tank combines the functions of a septic tank and dosing tank into one unitized assembly by withdrawing septic tank effluent with a pump or dosing siphon from the clear zone at the outlet end of the tank. These may be considered by the Department for equipment approval for installations where the design flow does not exceed 450 gallons per day.

B. Structural:

Dosing septic tanks shall comply with applicable standards for septic tanks and for dosing tanks. Each tank shall be water tested by filling to the soffit for period of one hour. During the test there shall be no measurable drop in water level, and no visible leakage. Each tank shall be certified watertight.

C. Configuration:

1. A typical design is shown in Figure 1.
2. The minimum total volume of the tank shall be 1,100 gallons.
3. The minimum submerged volume at the lowest operating liquid level shall be 900 gallons.
4. Unless otherwise authorized by the Department, liquid levels shall be controlled so that twenty (20) percent of the projected daily sewage flow is discharged each cycle.
5. The invert of the inlet tee shall be not less than one inch above the high operating liquid level.

6. Ports, or holes provided in a vault or outlet device shall be located to withdraw effluent horizontally at an elevation measured from the inside bottom of the tank of 65 to 75 percent of the lowest operating liquid depth. The net area of the ports shall be not less than 20 square inches.
7. A convenient means of monitoring sludge and scum accumulation shall be provided, with access extending to ground level.

D. Features:

1. Design and equipment shall emphasize ease of maintenance and longevity and reliability of components, and shall be proven suitable by operational experience, test, or analysis suitable to the Department.
2. An easy means of electrical and plumbing disconnect shall be provided, preventing the need for a repairman to be more than briefly exposed to the sewerage atmosphere.
3. Component materials shall be durable and corrosion resistant such as Type 316 stainless steel, suitable plastics, or 85-5-5-5 bronze.

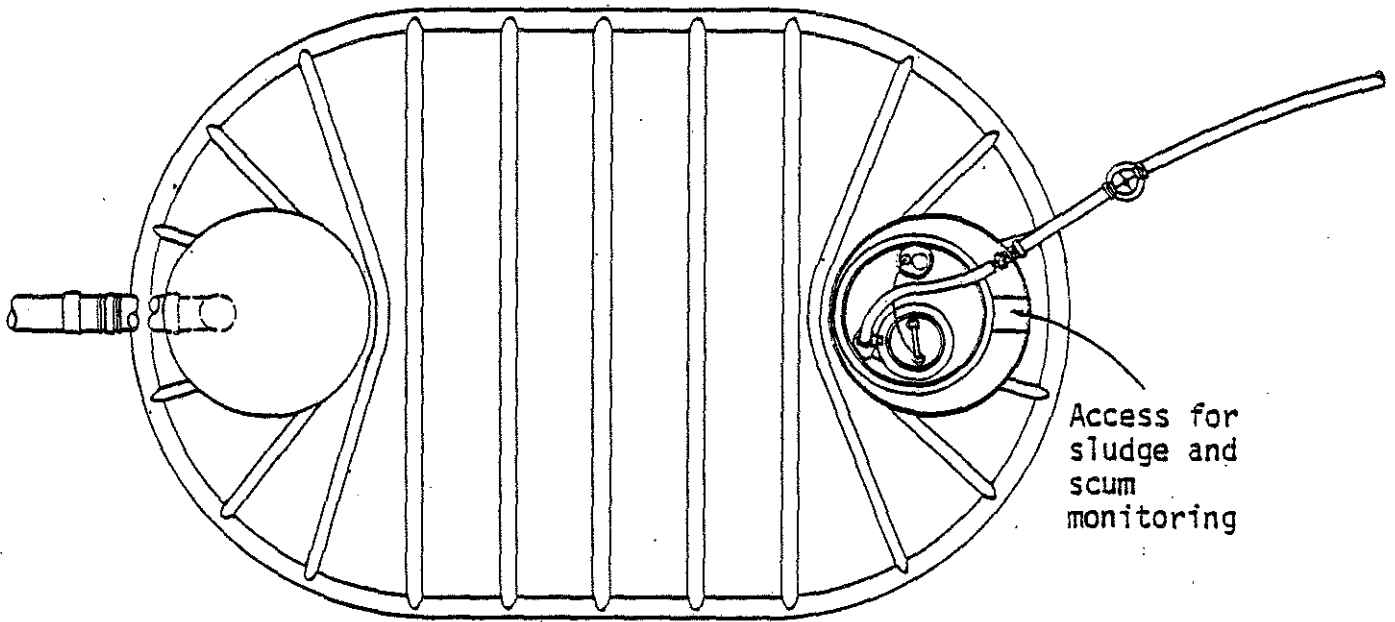
E. Approvals:

Each commercial manufacturer of prefabricated dosing septic tanks shall provide two (2) complete sets of plans and specifications, prepared by a registered professional engineer licensed to practice in Oregon, to the Department for review and approval. Each manufacturer must also provide written

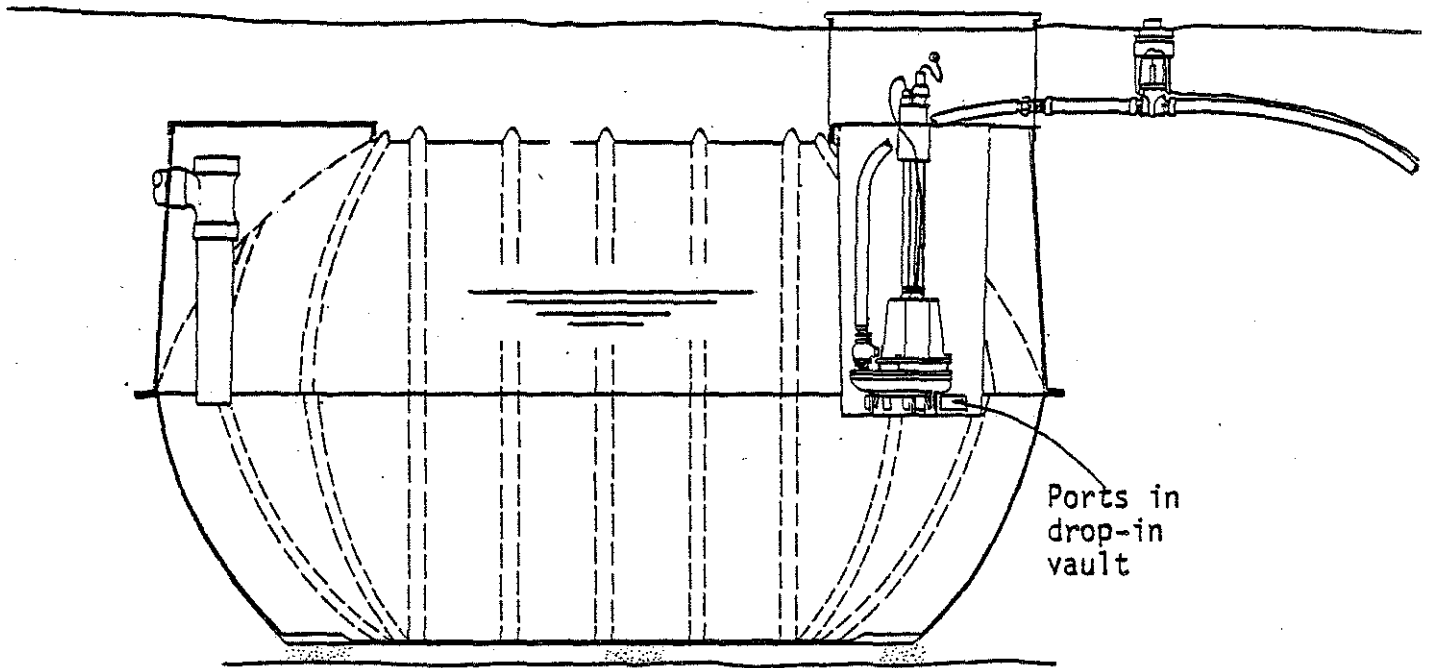
certification to the Department that such assemblies distributed for use in on-site sewage disposal systems in Oregon will comply with all requirements of this section.

TYPICAL DOSING TANK

Figure 1



PLAN



SECTION

APPENDIX C

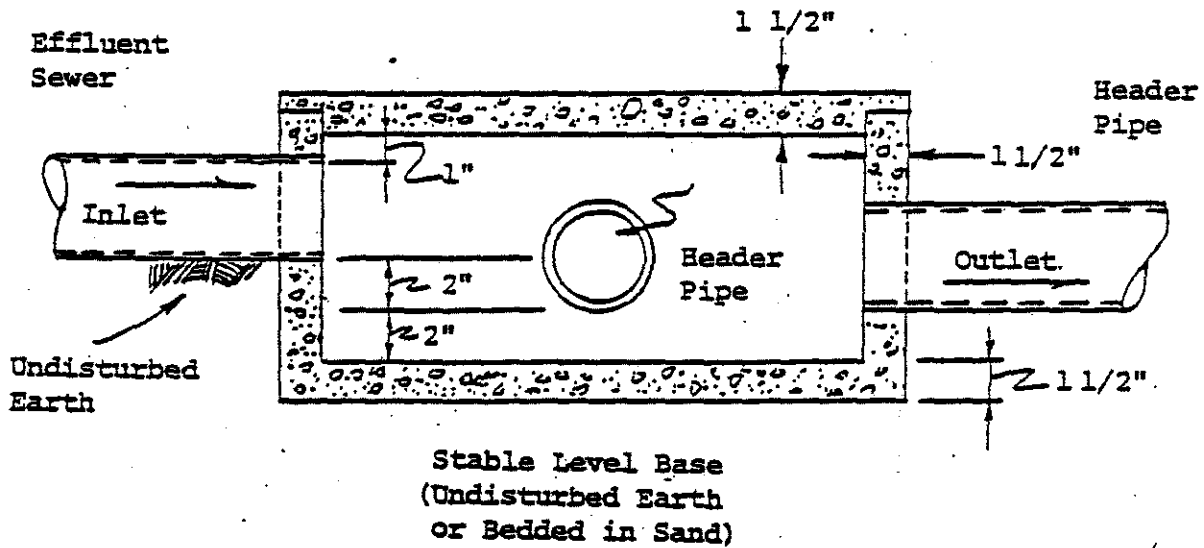
STANDARDS FOR DISTRIBUTION BOXES, DROP BOXES, AND DIVERSION VALVES

I. DISTRIBUTION BOXES:

- A. Distribution Boxes shall be constructed of concrete, fiberglass, or other materials acceptable to the Department.
- B. Distribution boxes shall be watertight, and designed to accomodate the necessary distribution laterals. The top, walls, and bottom of concrete distribution boxes shall be at least one and one-half (1 1/2) inches thick.
- C. The invert elevation of all outlets shall be the same, and shall be at least two (2) inches below the inlet invert.
- D. Each distribution box shall be provided with a sump extending two (2) inches below the invert of the outlet.
- E. The minimum inside horizontal dimension measured at the bottom shall be eight (8) inches, with a minimum bottom inside surface area of one hundred sixty (160) square inches. The bottom outside surface area shall be equal to or greater than the top outside surface area.

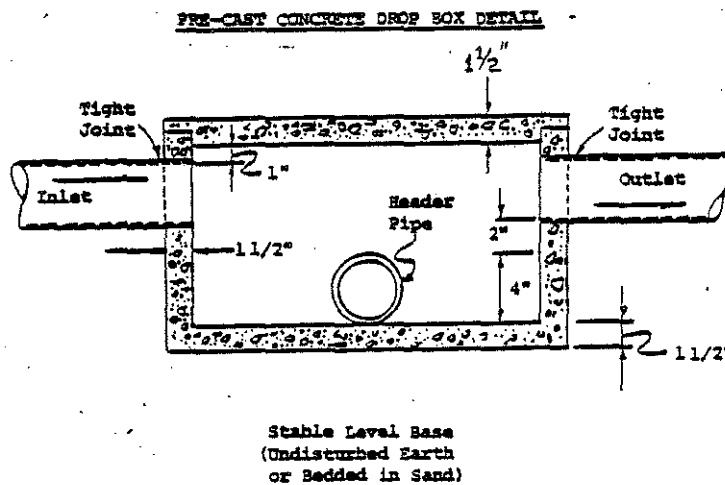
- F. Distribution box covers shall be marked with the manufacturer's full business name, or number assigned by the Department.
- G. Each manufacturer shall provide the Department with complete, detailed plans and specifications of the distribution box, and shall certify, in writing, that distribution boxes manufactured for use in on-site sewage systems in Oregon will comply with all requirements of this section.

PRE-CAST CONCRETE DISTRIBUTION BOX DETAIL



II. DROP BOXES:

- A. Drop boxes shall be constructed of concrete, fiberglass, or other materials acceptable to the Department.
- B. Drop boxes shall be watertight, and designed to accommodate the necessary piping. The top, walls, and bottom of concrete drop boxes shall be at least one and one-half (1 1/2) inches thick.
- C. The inverts of the inlet and overflow port shall be at the same elevation. The invert of the header pipe port(s) leading to the disposal trench(es) shall be six (6) inches below the inlet invert.
- D. Drop box covers shall be marked with the manufacturer's full business name, or number assigned by the Department.
- E. Each manufacturer shall provide the Department with complete, detailed plans and specifications of the drop box, and shall certify, in writing, that drop boxes manufactured for use in on-site sewage disposal systems in Oregon will comply will all requirements of this section.



III. DIVERSION VALVES:

- A. Diversion valves shall be constructed of durable material and be of a design approved by the Department. They shall be corrosion-resistant, watertight, and designed to accomodate the inlet and outlet pipes.
- B. The manufacturer's name or number assigned by the Department shall be marked on the cover.
- C. Each manufacturer shall provide the Department with complete, detailed plans and specifications of the diversion valve, and shall certify, in writing, that diversion valves manufacuted for use in on-site sewage disposal systems in Oregon will comply with all requirements of this section.

APPENDIX D

STANDARDS FOR DOSING TANK CONSTRUCTION

- A. Dosing tanks used in on-site sewage disposal systems in Oregon shall be watertight. They may be constructed of concrete, fiberglass, or other noncorrosive materials approved by the Department.
1. Fiberglass dosing tanks shall be a minimum three sixteens ($3/16$) inch thick and constructed with a glass fiber content of 40 percent and a resin content of 60 percent, with no exposed non-resin-covered glass fibers.
 2. Precast concrete dosing tanks shall have a minimum wall and bottom thickness of two and one-half ($2\ 1/2$) inches. The top shall be not less than four (4) inches thick. There shall be no seams in the walls or bottom.
 3. Cast-in-place concrete dosing tanks shall have a minimum wall, top, and bottom thickness of six (6) inches when the liquid capacity is twelve hundred (1200) gallons or less. A structural permit from the Department of Commerce or the municipality with jurisdiction [as defined in ORS 456.750(5)] is required when cast-in-place concrete dosing tanks are used. Cast-in-place concrete dosing tanks with a liquid capacity greater than twelve hundred (1200) gallons shall require submittal of detailed plans and specifications, prepared by a registered professional engineer licensed to practice in Oregon.

- B. Each dosing tank shall be constructed and reinforced to withstand the loads imposed upon the walls and bottom.
- C. Each dosing tank, except those employing siphons shall have a minimum liquid capacity equal to the projected daily sewage flow or four hundred fifty (450) gallons, whichever is greater, for projected flows up to twelve hundred (1200) gallons per day. The Department may use its discretion in sizing dosing tanks when the projected daily sewage flow is greater than twelve hundred (1200) gallons per day. The liquid capacity shall be as measured from the invert elevation of the inlet fitting.
- D. The inlet fitting shall be of hubbed cast iron soil pipe or other materials approved by the Department, with a minimum diameter of four (4) inches. The dosing tank manufacturer shall supply a rubber or neoprene rubber compression gasket meeting the minimum requirements of ASTM Specification C-564 with each fitting, or an appropriate coupler which the Department determines will provide for a water-tight connection.
- E. Each dosing tank shall be provided with an access manhole with a minimum inside horizontal measurement of eighteen (18) inches where entry is necessary for operation and maintenance.
- F. Each prefabricated dosing tank shall be marked on the uppermost surface with the liquid capacity and the manufacturer's full business name, or number assigned by the Department.

- G. Each commercial manufacturer of prefabricated dosing tanks shall provide two (2) complete sets of plans and specifications, prepared by a registered professional engineer, licensed to practice in Oregon, to the Department for review and approval. Each manufacturer must also provide written certification to the Department that such tanks distributed for use in on-site sewage disposal systems in Oregon will comply with all requirements of this section.
- H. Dosing tanks with siphons shall be designed and sized for each specific project and shall allow sufficient clearance above the siphon dome to allow removal of the dome.

APPENDIX E

STANDARDS FOR EFFLUENT PUMPS, CONTROLS & ALARMS, AND DOSING
SIPHONS

- I. Pumps, Controls, and Alarms: Electrical components used in on-site sewage disposal systems shall comply with State of Oregon Electrical Code, and the following provisions:
- A. Motors shall be continuous-duty, single-phase with built-in automatic reset-overload protection on a separate starting winding.
 - B. Pumps shall have durable impellers of bronze, cast iron, or other materials approved by the Department.
 - C. Submersible pumps shall be provided with an easy, readily accessible means of electrical and plumbing disconnect, and a noncorrosive lifting device as a means of removal for servicing.
 - D. Pumps shall be capable of passing a three-quarter (3/4) inch solid sphere, and have a minimum one and one-quarter (1 1/4) inch discharge.
 - E. Pumps shall be placed a minimum of six (6) inches above the dosing tank bottom.
 - F. Pumps shall be automatically controlled by sealed mercury float switches with a minimum mercury tube rating of twelve (12) amps at one hundred fifteen (115) volts A.C. The switches shall be installed so that twenty (20) percent of the projected daily sewage flow is discharged each cycle.

- G. An audible, high water level alarm with manual silence switch shall be located near the building served by the pump. Alarm and pump controls shall be on separate circuits. If the alarm is located inside the building it shall be an audio-visual type with silence switch. The mercury float switch controlling the high water level alarm shall be located so that at time of activation the dosing tank has at least one-third (1/3) of its capacity remaining for effluent storage.
 - H. An electrical permit is required for all electrical connections and components.
 - I. When the projected sewage flow for the system exceeds twelve hundred (1200) gallons per day, or when the static lift is greater than one hundred (100) feet, the Department may exercise reasonable judgment in varying from the minimum pump requirements identified in this section.
- II. Dosing Siphons. Dosing siphons used in on-site sewage disposal systems shall comply with all of the following minimum requirements:
- A. Shall be constructed of corrosion-resistant materials.
 - B. Shall be installed in accordance with the manufacturer's recommendations.

APPENDIX F

STANDARDS FOR PIPE MATERIALS AND CONSTRUCTION

I. EFFLUENT SEWER PIPE:

The effluent sewer shall be constructed with materials in conformance to building sewer standards, as identified in the Oregon State Plumbing Laws and Administrative Rules. The effluent sewer pipe shall have a minimum diameter of three (3) inches and extend not less than five (5) feet beyond the septic tank. It shall be installed with a minimum fall of four (4) inches per one hundred (100) feet (slope equals 0.0050), but in no instance shall there be less than two (2) inches of fall from one end of the pipe to the other.

II. DISTRIBUTION AND HEADER PIPE AND FITTINGS:

A. Plastic Pipe and Fittings

1. Styrene-rubber plastic distribution and header pipe and fittings shall meet the most current ASTM (American Society for Testing and Materials) Specification D 2852 and Sections 5.5 and 7.8 of Commercial Standard 228, published by the U.S. Department of Commerce. Pipe and fittings shall also pass a deflection test withstanding three hundred-fifty (350) pounds/foot without cracking by using the method found in ASTM 2412. In addition to the markings required by ASTM 2852, each manufacturer of styrene-rubber plastic pipe shall certify, in writing to the Department, that

the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.

2. Polyethylene distribution pipe in ten (10) foot lengths and header pipe in lengths of ten (10) feet or greater of which pipe and fitting shall meet the current ASTM Specification F405. Pipe and fittings shall also pass a deflection test withstanding three hundred-fifty (350) pounds per foot without cracking or collapsing by using the method found in ASTM 2412. Pipe used in absorption facilities shall be heavy duty. In addition to the markings required by ASTM F405, each manufacturer of polyethylene pipe shall certify, in writing to the Department that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.
3. Polyvinyl chloride (PVC) distribution and header pipe and fittings shall meet the most current ASTM Specification D-2729. Pipe and fittings shall pass a deflection test withstanding three hundred-fifty (350) pounds per foot without cracking or collapsing by using the method found in ASTM 2412. Markings shall meet requirements established in ASTM Specification D-2729, subsections 9.1.1., 9.1.2 and 9.1.4. Each manufacturer of polyvinyl chloride pipe shall

certify, in writing to the Department, that pipe and fittings to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.

4. High density polyethylene smooth wall distribution and header pipe [ten (10) foot lengths] and fittings shall meet the specifications designated as Appendix I. Each manufacturer of high density polyethylene smooth wall pipe shall certify, in writing to the Department that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.
5. The four types of plastic pipe described above shall have two (2) rows of holes spaced one hundred-twenty (120) degrees apart and sixty (60) degrees on either side of a center line. For distribution pipe, a line of contrasting color shall be provided on the outside of the pipe along the line furthest away and parallel to the two (2) rows of perforations. Markings, consisting of durable ink, shall cover at least fifty (50) percent of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings shall not exceed twelve (12) inches. The holes of each row shall be not more than five (5) inches on center and

shall have a minimum diameter of one-half (1/2) inch.

- B. Concrete tile in twelve (12) inch lengths shall meet the current ASTM Specification C 412. Each manufacturer of concrete tile shall certify, in writing to the Department, that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all of the requirements of this section.
- C. Clay drain tile in twelve (12) inch lengths shall meet the current ASTM Specification C 4. Tile used as part of an absorption facility shall bear the ASTM number above and some identification as to which quality standard it meets (Standard, Extra-Quality, Heavy-Duty). In addition to the markings required above, each manufacturer of clay tile shall certify, in writing to the Department, that the pipe to be distributed for use in absorption facilities within the State of Oregon shall comply with all of the requirements of this section.
- D. Bituminized fiber solid pipe and fittings shall meet the current ASTM Specification D 1861. Perforated bituminized fiber pipe shall meet the current ASTM Specification D 2312. Each length of pipe and each fitting shall be marked with the nominal size, the manufacturer's name or trademark, or other symbol which clearly identifies the manufacturer and the appropriate ASTM specification number above. Markings on pipe

shall be spaced at intervals not greater than two (2) feet. In addition to the markings required above, each manufacturer of bituminized pipe shall certify, in writing to the Department, that the pipe to be distributed for use in absorption facilities within the State of Oregon shall comply with all requirements of this section. In addition, all bituminized pipe that is to be installed as part of an absorption facility shall comply with the following requirements. The pipe shall have two rows of holes spaced one hundred-twenty (120) degrees apart and sixty (60) degrees on either side of a center line. For distribution pipe, a line of contrasting color shall be provided on the outside of the pipe along the line furthest away and parallel to the two (2) rows of perforations. Markings, consisting of durable ink, shall cover at least fifty (50) percent of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings shall not exceed twelve (12) inches. The holes of each row shall not be more than five (5) inches in center and shall have a minimum diameter of one-half (1/2) inch.

- E. Polyvinyl chloride (PVC) pressure transport pipe, pressure manifolds, and pressure lateral pipe and fittings shall meet the current requirements for Class 160 PVC 1120 pressure pipe as identified in ASTM Specification D-2241. The pipe and fittings shall marked be as required by ASTM Specification D-2241.

APPENDIX G

STANDARDS FOR NONWATER-CARRIED WASTE DISPOSAL FACILITIES, MATERIALS, AND CONSTRUCTION

I. PRIVIES AND PORTABLE TOILET SHELTERS:

- A. Privies and portable toilet shelters shall comply with the following general requirements:
1. Structures shall be free of hostile surface features, such as exposed nail points, sharp edges, and rough or broken boards, and shall provide privacy and protection from the elements.
 2. Building ventilation shall be equally divided between the bottom and top halves of the room. All vents shall be screened with sixteen (16) mesh screen of durable material.
 3. Buildings shall be of fly-tight construction and shall have self-closing doors with an inside latch.
 4. Pits, tanks or vaults shall be vented to the outside atmosphere by a flue or vent stack having a minimum inside diameter of four (4) inches. Vents shall extend not less than twelve (12) inches above the roof.
 5. Interior floors, walls, ceilings, partitions, and doors shall be finished with readily cleanable impervious materials resistant to wastes, cleansers and chemicals. Floors and risers shall

be constructed of impervious material and in a manner which will prevent entry of vermin.

6. Seat tops shall be not less than twelve (12) inches nor more than sixteen (16) inches above the floor. The seat openings shall be covered with attached, open-front toilet seats with lids, both of which can be raised to allow use as a urinal.
7. The distance between the front of the riser and the building wall shall be not less than twenty-one (21) inches.

B. Privies: In addition to complying with the requirements specified in Section I-A of this Appendix, privies shall be provided with:

1. Vents equal in area to not less than one-fifth (1/5) the floor area or a minimum of three (3) square feet, whichever is greater.
2. A minimum clear space of twenty-four (24) inches between seats in multiple-unit installations and a clear space of twelve (12) inches from the seat opening to the building wall in both single and multiple units.

C. Portable Toilet Shelters: Portable toilet shelters may be prefabricated, skid mounted, or mobile. In addition to complying with the requirements specified in Section I-A of this Appendix, portable toilet shelters shall:

1. Provide screened ventilation to the outside atmosphere having a minimum area of one (1) square foot per seat.
2. Provide a minimum floor space outside of the riser of nine (9) square feet per seat.
3. Be furnished with a toilet tissue holder for each seat.
4. Be located in areas readily accessible to users and to pumping/cleaning services.
5. Provide separate compartments with doors and partitions or walls of sufficient height to insure privacy in multiple-unit shelters except that separate compartments are not required for urinals.

II. UNSEALED EARTH PITS FOR PRIVIES:

- A. The pit shall be constructed of such material and in such a manner as to prevent rapid deterioration, provide adequate capacity, and facilitate maintenance in a satisfactory manner under ordinary conditions of usage.
- B. The pit shall provide a capacity of fifty (50) cubic feet for each seat installed in the privy and shall be at least five (5) feet deep. The area within sixteen (16) inches of the surface grade shall not be counted as part of the fifty (50) cubic-foot capacity.

- C. Pit cribbing shall fit firmly and be in uniform contact with the earth walls on all sides, and shall rise at least six (6) inches above the original ground line and descend to the full depth of the pit. However, pit cribbing below the soil line may be omitted in rock formations.

III. SELF-CONTAINED NONWATER-CARRIED TOILET FACILITIES:

- A. General Standards. All self-contained nonwater-carried toilet facilities shall comply with the following requirements:
1. They shall have water-tight chambers constructed of reinforced concrete, plastic, fiberglass, metal, or of other material of acceptable durability and corrosion resistance, approved by the Department, and designed to facilitate the removal of the wastes.
 2. Black wastes shall be stored in an appropriate chamber until removal for final disposal elsewhere. Wastes shall be removed from the chamber whenever necessary to prevent overflow.
 3. Chemicals containing heavy metals, including but not limited to copper, cadmium and zinc, shall not be used in self-contained toilet facilities.
 4. All surfaces subject to soiling shall be impervious, easily cleanable, and readily accessible.

B. Vault Toilet Facilities:

1. The minimum capacity of vaults shall be three hundred-fifty (350) gallons or, in places of employment, one hundred (100) gallons per seat.
2. Caustic shall be added routinely to vault chambers to control odors.

C. Chemical Toilet Facilities:

1. Toilet bowls shall be constructed of stainless steel, plastic, fiberglass, ceramic or of other material approved by the Department.
2. Waste passages shall have smooth surfaces and be free of obstructions, recesses or cross braces which would restrict or interfere with flow of black wastes.
3. Biocides and oxidants shall be added to waste detention chambers at rates and intervals recommended by the chemical manufacturer and approved by the Department.
4. Chambers and receptacles shall provide a minimum storage capacity of fifty (50) gallons per seat.
5. Portable shelters housing chemical toilets shall display the business name of the licensed sewage disposal service that owns and is responsible for servicing them.

APPENDIX H

STANDARDS FOR CONSTRUCTION OF SEEPAGE PITS, CESSPOOLS, AND GRAY WATER WASTE DISPOSAL SUMPS

I. SEEPAGE PITS OR CESSPOOLS:

- A. The liquid capacity of a seepage pit or cesspool shall be at least equal to the calculated volume of the required septic tank capacity for the dwelling or establishment served.
- B. The minimum inside diameter of the lining shall be four (4) feet.
- C. Two or more seepage pits shall be separated from each other by a distance equal to twelve (12) feet of undisturbed earth, minimum. Whenever a pit with inside diameter greater than four (4) feet is used, pits shall be separated by a distance equal to three (3) times the diameter of the largest pit. For pits over twenty (20) feet in depth, the minimum space between pits shall be twenty (20) feet.
- D. Maximum depth of seepage pits and cesspools shall be thirty-five (35) feet below the ground surface.
- E. The seepage pit or cesspool shall be lined with stone, fired clay brick, building tile, adequately reinforced perforated precast concrete rings at least two and one-half (2 1/2) inches thick, or other materials approved by the Department. A six (6) inch space shall be required between the lining of the pit and the soil,

and it shall be backfilled with clean, coarse filter material.

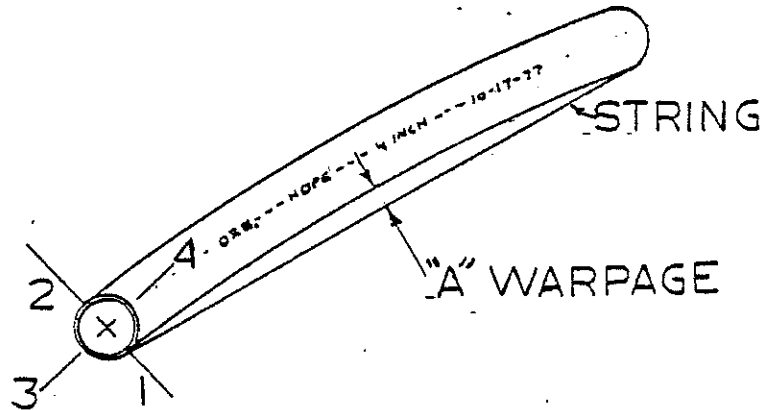
- F. The inlet pipe of the seepage pit or cesspool shall be an elbow constructed of cast-iron or other material approved by the Department.
 - G. Pits shall be covered with reinforced concrete tops equivalent in strength to septic tank covers required under Appendix B.
 - H. An inspection port, not less than six (6) inches across its shortest dimension shall provide access at the top of the seepage pit over the inlet. (See Diagrams 14 and 15).
 - I. Connecting building and/or effluent sewer lines shall be laid on a firm bed of undisturbed earth throughout their length.
 - J. When multiple pits are used, or in the event new pits are added to an existing system, they should be connected in parallel.
- II. GRAY WATER WASTE DISPOSAL SUMPS:
- A. A gray water waste disposal sump shall consist of a receiving chamber, settling chamber, and either a seepage chamber or disposal trench. Gray water waste disposal sumps shall be constructed of materials approved by the Department. (See Diagrams 13 and 14).

SPECIFICATIONS FOR:
FOUR INCH HIGH DENSITY POLYETHYLENE SMOOTH WALL TUBING
October 5, 1977

Note: All specifications are assumed to be for tubing cured at $72^{\circ} \pm 2^{\circ}\text{F}$.

1. Outside diameter $4.215'' \pm 0.009''$.
2. Permissible deviation 0.050" from roundness.
3. Die center, a maximum of no more than 0.007" between readings for all measurable points.
4. Pipe and fittings shall pass a deflection test withstanding three hundred fifty (350) pounds per foot without cracking or collapsing by using the method found in ASTM 2412.
5. Flattening, no splitting or cracking at 20 percent deflection.
6. Smooth Wall High Density Polyethylene Tubing shall have two rows of holes spaced one hundred twenty (120) degrees apart and sixty (60) degrees on either side of a center line. For distribution pipe, a line of contrasting color shall be provided on the outside of the pipe along the line farthest away and parallel to the two rows of perforations. Markings, consisting of durable ink, shall cover at least fifty (50) percent of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings shall not exceed twelve (12) inches. The holes of each row shall be not more than five (5) inches on center and shall have a minimum diameter of one-half (1/2) inch.
7. The pipe shall have a belled end, and have a length of 10 feet 3 inches $\pm 1/4$ inch.
8. The pipe shall be white in color with a UV stabilizer.
9. The following coding sequence shall be used:
(Manufacturer's Name) - - - HDPE - - - Leachfield - - -
4 INCH - - - (proper date and plant coding).
10. Appearance, pipe must have smooth I.D. and O.D. with a minimum amount of streaks, lines and pits on O.D., and must be free of any splits or blow holes. (Any questionable product must be approved through Quality Control.)

11. Belling depth (after 30 minute cure) 4.215 plug gauge depth one and three-quarters (1-3/4) inches minimum.
12. The maximum allowable warpage is one-quarter (1/4) inch (Dimension A). To measure warpage, place pipe on a flat floor with markings up (position No. 4, see sketch). Check warpage first at positions 1 and 2 by stretching a string the full length of the pipe and measuring warpage (Dimension A, see sketch), then rotate pipe 90° and repeat procedure for positions 3 and 4.



13. The minimum wall thickness 0.110 inches.

$$\text{SDR Number} = \frac{4.215}{0.110} = 38.3$$

14. The polyethylene plastic pipe compounds shall be found to conform to the following cell classification limits by the appropriate ASTM test method listed:

<u>Property</u>	<u>Test Method</u>	<u>Cell Classification</u>	<u>Limits</u>
Density (g/cm ³)	D 1505	greater than 0.941	
Melt Index	D 1238	less than 0.4	
Flexural Modulus (PSI)	D 790	greater than 160,000	
Tensile Strength at Yield (PSI)	D 638	greater than 4,000	
Environmental Stress Crack Resistance	D 1693	no cracking	

15. Each manufacturer of high density polyethylene smooth wall tubing shall certify, in writing to the Department, that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.

CLATSOP PLAINS MORATORIUM AREA

[340-71-460(6)(e)]

Pursuant to ORS 454.685, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of Clatsop County:

(A) That area bounded on the South by the North line at that certain right-of-way reserved by Frank L. Hurlburt, et al, in a deed to Charles V. Brown as recorded in Book 65, Page 527, Clatsop County Record of Deeds; Bounded on the West by the high tide line of the Pacific Ocean; Bounded on the North and East by a line extending from the Pacific Ocean Easterly to the Southwest corner of that certain tract conveyed to the State of Oregon as recorded in Book 230, Page 485, Clatsop County Record of Deeds; thence Easterly and Southerly along the South line of said tract to the Southeast corner thereof; thence running Easterly to the Westerly right-of-way line of the Fort Stevens — Camp Clatsop Highway, commonly referred to as "Ridge Road," said point being the Easterly terminus of the North boundary of tract herein described; thence Southerly along the Westerly right-of-way line of said Ridge Road to its intersection with the South line of the Hobson D.L.C.; thence West along the South line of said Hobson D.L.C. to the Northwest corner of that certain tract conveyed to Stanley I. and Elvira M. Guild as recorded in Book 260, Page 161, Clatsop County Record of Deeds; thence Southerly along the West boundary line of the said Guild tract and the extension thereof to the South right-of-way line of County Road #34, commonly known as DeLaura Beach Road; thence East along the Southerly right-of-way line of said County Road a distance of 2275' more or less to the Easterly right-of-way line of Clark Boulevard as platted in DeLaura Subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian; thence Southeasterly along the Easterly right-of-way line of said Clark Boulevard to its intersection with the East bank of the West branch of Neacoxie Creek; thence Southerly along the East bank of the said West branch of Neacoxie Creek to an intersection with the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian; thence East along the South line of said Neacoxie Subdivision to the Westerly right-of-way line of aforesaid Ridge Road; thence South and East along the Westerly right-of-way line of said Ridge Road to its intersection with the West bank of the East branch of Neacoxie Creek; thence Southerly along the West bank of the East branch of said Neacoxie Creek to the Northeast corner of that certain tract conveyed to Ben D. and Muriel Hayes by deed recorded

in Book 213, Page 446, Clatsop County Record of Deeds; thence West along the North line of said Hayes property to the Northwest corner thereof; thence South-easterly along the Westerly line of the said Hayes property to the Southwest corner thereof, said point being the Northwest corner of property conveyed to Donald R. and Helen A. Falleur by deed recorded in Book 364, Page 282-83, Clatsop County Record of Deeds; thence continuing Southeasterly along the Westerly line of said Falleur property to the North Boundary line of the Platted Ivyloo Subdivision in Section 9, Township 7 North, Range 10 West, Willamette Meridian; thence West along the North line of said Ivyloo Subdivision to the Northwest corner thereof; thence South 13° 32' East along the Westerly line of said Ivyloo Subdivision and the extension thereof to the North line of that certain right-of-way reserved by Frank L. Huriburt as aforesaid.

(B) The Del Rey Beach Subdivision located in Section 33, Township 7 North, Range 10 West, Willamette Meridian, as shown on Plate 7-10-33A, Clatsop County, Oregon.

(C) That area beginning at the intersection of Clark Boulevard with County Road #34 in DeLaura Beach Subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence Southerly along the center line of Clark Boulevard to the South right-of-way line of College Avenue; thence West along the South right-of-way line of said College Avenue to the East bank of the West branch of Neacoxie Creek; thence Southerly along the East bank of said creek to the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian; thence East along the South line of said Neacoxie Subdivision and the extension thereof to the West line of Ridge Road; thence Southerly along the West line of said Ridge Road and East along the Southerly right-of-way line of Columbia Beach Road to its intersection with the East right-of-way line of Oregon Coast Highway 101; thence South along the East right-of-way of said Hwy 101 to its intersection with the North right-of-way line of Perkins Road; thence East along the North right-of-way line of said Perkins Road to its intersection with the West right-of-way line of Rodney Acres Road; thence Northerly along the West line of Rodney Acres Road to the center line of Skipanon Creek; thence Northwesterly along the needle of Skipanon Creek to the South line of Warrenton City limits; thence following the Warrenton City limits boundary in a Northwesterly direction to the point of beginning.

(D) That area beginning at a point where the North line of that certain tract conveyed to Michael Palmer by deed recorded in Book 400, Page 576-587, Clatsop County Record of Deeds, intersects the East right-of-way line of the Burlington Northern Railroad in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence East along the North line of the said Palmer tract to the Northeast corner thereof; thence South along the East boundary of said tract to the Southeast corner thereof; thence West along the south boundary of said tract to its intersection with the East line of the Burlington Northern Railroad right-of-way as aforesaid; thence North along the East line of said right-of-way to the point of beginning. Said parcel being located in Sections 9 and 10, Township 7 North, Range 10 West, Willamette Meridian.

(E) That area beginning at the Southwest corner of Ivyloo Acres Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence South 13° 32' East a distance of 370' more or less to the North line of that certain right-of-way reserved by Frank L. Huriburt in his conveyance to Charles V. Brown as recorded in Book 65, Page 527, said point being the true point of beginning of parcel herein described; thence continuing South 13° 32' East a distance of more or less to its intersection

with the South line of the John Hobson D.L.C.; thence West along the South line of said Hobson D.L.C. to the East bank of Neacoxie Creek; thence Southerly along the East bank of Neacoxie Creek to the South right-of-way line of Sunset Beach Road; thence East along the Southerly right-of-way line of said Sunset Beach Road to the Northeast corner of Sunset Terrace Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian; thence Southeasterly along the Easterly line of said Sunset Terrace and its extension thereof to the North line of Loch Haven Highlands Subdivision as platted in Section 16, Township 7 North, Range 10 West, Willamette Meridian; thence East along the North line of said Loch Haven Highlands Subdivision to the Northeast corner thereof; thence Southeasterly to the Southeast corner thereof; thence following the Loch Haven Highlands Subdivision boundaries as platted Westerly, Southerly, Southwesterly, and Westerly to where the South line of Loch Haven Highlands Subdivision intersects the East bank of Neacoxie Lake; thence Southerly along the East bank of said Neacoxie Lake to a point East of the Southeast corner of that tract conveyed to Anthony M. and Alberta M. Stramiello by deed recorded in Book 333, Page 523; thence West to the Southeast corner of said Stramiello tract; thence West along the South line of said tract and the extension thereof a distance of 718.8' to a point; thence South 389.7' to a point; thence West 400' to a point; thence North 00° 02' West to the Northwest corner of D.L.C. #42, said point being in the South line of the Sunset Beach Subdivision, as platted in Section 9, Township 7 North, thence West along the South line of said subdivision to the Westerly right-of-way line of Columbia Boulevard in said subdivision; thence Northerly along the Westerly right-of-way line of said Columbia Boulevard to the North line of said Sunset Beach Subdivision; thence West along the North line of said subdivision to the Pacific Ocean; thence North along the Pacific Ocean to its intersection with the North line of that certain right-of-way reserved by Frank L. Huriburt as aforesaid; thence East along the North line of said right-of-way to the point of beginning. Excepting therefrom, however, the following described parcel. Beginning at the Southwest corner of Ivyloo Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian; thence South 19° 32' East a distance of 375' more or less to the Northerly line of that certain 60' strip reserved as a right-of-way by Frank L. Huriburt in his conveyance to Charles V. Brown and recorded in Book 65, Page 527, Clatsop County Record of Deeds; said point being the true point of beginning of tract herein described; thence West along the North line of said right-of-way to the Pacific Ocean; thence Southerly along the high tide line of the Pacific Ocean to an intersection with the South boundary line of the John Hobson D.L.C. extended; thence East along the South boundary line of the said Hobson D.L.C. to a point 339.1' East of the East bank of Neacoxie Lake; thence North 19° 32' West a distance of 1290' more or less to the point of beginning.

(F) That area bounded on the North by the North line of the Gearhart Donation Land Claim; bounded on the East by Burlington Northern Railroad; bounded on the South by the North boundary of the Gearhart City limits; bounded on the West by the Pacific Ocean. Excepting therefrom, however, the following described parcel. Beginning at the intersection of the North line of the Gearhart City limits with the Westerly right-of-way line of Marion Avenue; thence North and East along the said Westerly right-of-way to its intersection with the East Boundary of the platted Gearhart Green Subdivision; thence North along the East line of said subdivision and the extension thereof to the North boundary of the Gearhart Donation Land Claim; thence East along the North line of said Donation Land Claim to the center line of Neacoxie Cr. thence Southerly along the needle of said creek to the North line of the Gearhart City limits; thence West along the North

line of said city limits to the point of beginning. All above described property being in Sections 3 and 4, Township 6 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon.

(G) That area bounded on the West and North by the South boundary of the Gearhart City limits; on the East by Burlington Northern Railroad and on the South by Seaside City limits.

(H) The Cities of Gearhart, Hammond, and Warrenton except as described in subsection (g).

(I) Fort Stevens State Park.

(b) Pursuant to ORS 454.685, within the areas set forth in subsection (c) below, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability, except to construct systems to be used under the following circumstances:

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

(B) The system is not to be installed within any of the areas subject to the prohibition set forth in subsection (a) above; and

(C) The system is to be installed on an undivided parcel of one acre or more in size upon which the dwellings or buildings to be served by the system are located and which is owned fully or fully subject to a contract of purchase by the same person or persons who own or are contract purchasers of the dwellings or buildings to be served by the system; except that, in a single planned unit development or single subdivision tract having enclosed boundaries and with open space land owned in common by all land owners, permits may be issued where the lot area upon which a dwelling is to be constructed is less than one acre but where each owner holds an undivided interest, in common with all other owners, in open space land of sufficient acreage within the boundaries of the development so that the density of the entire parcel shall not exceed one dwelling per acre when considered as a whole and where the requirements of subdivisions (A), (B), and (C) of this subsection are met; and

(D) The dwellings or buildings to be constructed or existing on the land parcel when fully occupied or used allow for no more than the equivalent of sewage flow for one single family per acre of the land parcel; and

No construction permit shall be issued under this subsection for any parcel of land where the parcel is created out of an existing parcel or parcels and where the creation of the new parcel results in a reduction of size of the original parcel or parcels to less than one acre and where the original parcel or parcels so reduced serve or are occupied by a dwelling unit or by dwelling units or by any other subsurface sewage generating facility or thing.

(c) The minimum parcel size requirement of subsection (b) above shall apply to all of the following areas (which are not subject to the complete prohibition set forth in subsection (a) above) of Clatsop County where there are unconsolidated loamy sands:

(A) All areas located south of the Columbia River, west of the Skipanon River (or Skipanon Waterway), and north of the southernmost part of Cullaby Lake;

(B) All areas within the Shoreline Estates Sanitary District; and

(C) All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one-half mile due East of U.S. Highway 11.

(d) The restrictions set forth in this rule are subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development

using subsurface sewage disposal systems in accordance with single family unit equivalent densities specified in the local land use plan for the area will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal.

(e) The restrictions set forth in paragraphs (B) through (D) of subsection (b) and in subsection (c) above shall not apply to prohibit permits for systems to serve one single family dwelling per parcel of land of less than one acre if such parcel's legal description was on file in the deed records of Clatsop County prior to October 28, 1977, either as a result of conveyance or as part of a platted subdivision.

(f) The restrictions set forth in subsections (a), (b), and (c) above shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Director or his authorized representative pursuant to ORS 454.755 (1)(b) where such report was issued prior to the effective date of this section (7).

(g) Pursuant to ORS 454.695, the Director and his authorized representative shall issue construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability, in accordance with Oregon Administrative Rules, Chapter 340, Division 7 under the following conditions: In the City of Gearhart a maximum of 57 single family equivalent units shall be permitted on subsurface sewage disposal systems. The subsurface sewage disposal permits or reports shall be issued in accordance with procedures developed by the City of Gearhart and the Department of Environmental Quality.

LANE COUNTY FEE SCHEDULE

(A) New Site Evaluation.(i) Residential.

-1st Lot \$120.00

-Each Additional Lot Evaluated While On Site 90.00

-Shared System

Fee shall be based on single family
equivalency load by number of units times

\$90.00 + \$20.00 filing.

(ii) Commercial/Industrial.

-Fees for Commercial/Industrial evaluations shall
be based upon the following formula:

Daily Sewage Load

450 X \$25.00 + \$90.00

(B) Construction Installation Permits.

(With Favorable Evaluation Report)

-New Subsurface-Residential 65.00

-Commercial/Industrial

Fees for Commercial/Industrial permits shall
be based upon the following formula:

Daily Sewage Load

450 X \$15.00 + \$65.00

(C) New Alternative Systems.

Plans review only 35.00

-Holding Tank		100.00
-Sand Filters		125.00
Other Fees for Commercial/Industrial Alternative Systems permits shall be based on the following formula:		
<u>Daily Sewage Load</u>		
450	X \$20.00 + \$90.00	
-Capping Fill - No Plan Review Required		90.00
(D) <u>Alteration/Extension of Existing System Permits.</u>		75.00
(E) <u>Repair Permits.</u>	<u>Standard</u>	25.00
	<u>Special*</u>	1.00
(F) <u>Evaluation of Existing System Adequacy.</u>		50.00
(G) <u>Annual Evaluations.</u>		
-Office Only		20.00
-Alternative System		25.00
-Temporary Mobile Home - Biannual		10.00
-Pumper Trucks **		25.00
(H) <u>Septic Tank Abandonment Compliance Inspection.</u>		35.00
(I) <u>Renewal Expired Permits.</u>		37.00
-Office Action Only		22.00

*Special repair permits shall be issued upon application therefor to the owner (or contract purchaser) to repair the system serving the owner (or contract purchaser) occupied housing unit located within the boundaries of any area which has been formally declared by the Lane County Board of Commissioners ("Board") or the Oregon State Health Division to be a health hazard area, or applicants receiving assistance through the (January 2, 1981)

Farmers Home Administration Section 502 or 504 loan and grant programs or within an area defined in sewer plan adopted by the Board recommending correction of individual systems: provided that a repair permit application and fee is filed not later than 30 days after the date of written notification that the applicant's system has failed.

** Pumper trucks inspected during the same field visit shall be charged at a rate of \$5 per additional truck.

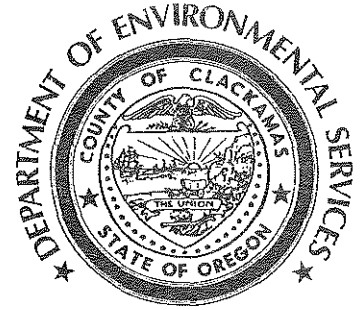
(3) The Agent may refund a fee accompanying an application for a construction-installation permit, site evaluation report, or variance, if the applicant withdraws the application before the agent has done any field work or other substantial review of the application.

AGENDA ITEM T

January 30, 1981

WRITTEN TESTIMONY

November 17, 1980



Hearings Officer
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

902 ABERNETHY ROAD WINSTON W. KURTH
OREGON CITY, OREGON 97045 Assistant Director
(503) 655-8521 DON D. BROADSWORD
Operations Director
DAVID J. ABRAHAM
Utilities Director
DAVID R. SEIGNEUR
Planning Director
JOHN C. McINTYRE RICHARD L. DOPP
Director Development
Services
Administrator

SUBJ: October 20, 1980 Draft of the Proposed Rules for
On-Site Sewage Disposal

I have just completed an extensive review of the proposed rule package dated as indicated above. The results of this review indicate that there are about 11 areas where I have major concerns that these rules do not meet the intent of the proposed regulations. These changes are referred to by page and section number in the following paragraphs. In my opinion, if the changes indicated below are followed, the rule package will be significantly improved and clarified. It is my sincere hope that the changes indicated below are worked into the rule package.

1. Page 7, Section 340-71-120(5) - In my opinion, the matter of personnel and staffing should be internal and, therefore, handled through administrative channels not through these regulations. I would recommend that this section be dropped from the regulations as proposed. Employment policies could be then arranged separately through Civil Service or other appropriate channels.
2. Page 17, Section 340-71-150(2) and Page 20, Section 340-71-160(3) Both of these sections state that only a property owner or his legally authorized representative may take out a permit for septic tank and drainfield construction. This is contrary to past practices in most counties and is definitely a step in the wrong direction. The property owner, his legally authorized representative or an Oregon licensed installer should be entitled to take out a permit. This would accomplish two things. First, the installer who does the construction work would be directly responsible to make sure the system is put in in the appropriate manner. Secondly, that would make our permit process essentially similar to that used to obtain a building permit. Building permits may be taken out by licensed Oregon general contractors without the owners signature.

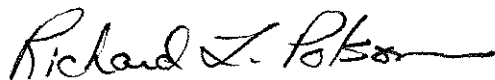


3. Page 28, Section 340-71-190 - This section is unnecessary. All provisions of this section are covered in previous sections, so there is no point in wasting additional space in the regulations to say this again.
4. Page 39, Section 340-71-220(4)(c)(B) - I do not believe that any buoyancy devices are essential for most septic tanks. To the best of my knowledge, we have had no problems in this County with septic tanks floating during the winter months. The use of such devices does not appear to be called for, except perhaps in very special cases. Also, as I have indicated in previous correspondence on this matter, the remainder of this section is also flawed. Literally interpreted, it would mean that all septic tanks would require risers to ground surface. Since I am sure that that is not your real intent, some rephrasing of this sentence is necessary.
5. Page 45, Section 340-71-220(13)(c) - The language in this section implies that any lot created prior to May 1, 1973 is eligible for a 50 foot stream setback. I believe that the current rule was designed to allow 50 foot setbacks where the Health Department or other authorizing agency had approved the plat of some subdivision with that particular setback stipulation. In these cases, assuming all other rules can be met, the use of a 50 foot setback appears to be appropriate. However, it does not appear to be appropriate to allow 50 foot setbacks on any lot simply because of its age alone. Therefore, I would favor a return to the language in use with the current regulations for this section.
6. Page 52, Section 340-71-275(3) - This regulation will do two things, neither of which appears to be positive. First it would void approvals on smaller lots that have already been approved for standard systems. Secondly, it would make development on existing lots in such populated areas as the Oregon Coast or the Mt. Hood River Valleys extremely difficult, since most lots in this area are far less than one acre in size, are located in areas with coarse grain materials, and where permanent water tables are a concern. Instead of adopting the rule as currently written, I would recommend inclusion of a paragraph that would grandfather all old lots that met all criteria except size, and requiring that all lots created after adoption of these rules must meet the current code.
7. Page 61, Section 340-71-290(4), footnote 2 - Saprolitic materials may not have the rapid or very rapid permeability associated with other soils included in this footnote. I would recommend changing to say that only materials with rapid to very rapid permeability would qualify.
8. Page 69, Section 340-71-315 - This entire section does not establish a performance standard by which to evaluate the effectiveness of any tile dewatering system. There should be some standard by which to evaluate whether or not a tile dewatering system is suitable on any

particular piece of property. This standard should be related to the rules for establishment of other standard and alternative systems.

9. Page 85, Section 340-71-410(c) - As I have indicated in previous discussions, this rule does not allow any flexibility on the part of the agent. An approvable site may not be at all practical. We feel that some latitude needs to be given here. I would rather stay with the language in Section (f) which states that construction under Rural Density Consideration may be permitted if following the current rules is considered "unreasonable, burdensome, or impractical". Thus, I feel that some latitude should be given to the agent in this regard.
10. Page 88, Section 340-71-425(2) - A County Agent/Variance Officer may be faced with a conflict of interest if he has denied the property previously, but now must act as a Variance Officer for some particular case. Therefore, the indiscriminate choice of Variance Officers at the County level must be guarded against as much as possible. Since a Variance Officer is supposed to approach any project with a minimum amount of bias, there may be some serious problems with this proposal.
11. Page 96, Section 340-71-500(6)(a) - It is the opinion of myself and the entirety of the staff here with Clackamas County that responsibility for community systems should be solely in the hands of a municipality. Homeowner Associations or Condominium Associations are not likely to provide the necessary controls or appropriate responsibility in caring for large drainfield systems. Since repair of such systems may involve an expenditure of very large sums of money, and since such groups must essentially tax themselves for such repairs, it may be extremely difficult to create a workable system out of this kind of regulation. Therefore, we strongly recommend that responsibility for community systems be left in the hands of a municipality only.

The above recommended changes are principally my own. Other staff members of the Clackamas County Soils Section also have directions they feel are essential. It is hoped that the changes that I and the remainder of my staff have presented are considered seriously and acted upon in an appropriate manner. All of us would welcome any comments or questions you might have with respect to these proposed changes. Please feel free to contact us at any time if you have any questions. Thank you for your time and cooperation.



RICHARD L. POLSON - Chief Soil Scientist
Development Services Division

/rn

November 12, 1980

Suggested Amendments to the Proposed Rules for On-Site Sewage Disposal

The following is a list of suggested amendments with regard to the proposed rule change for on-site sewage disposal:

1. O.A.R. 340-71-130 - General Standards, Provisions and Requirements - (11) - Property Line Cross PAGE 9

The proposed rule change requires utility easements whenever a system would cross a property line under different ownership. In my opinion this rule should address separate tax lots and not properties of different ownership. This is because many land developers and homebuilders will partition a parcel of ground into a number of separate tax lots, but still retain total ownership for construction purposes. Since the purpose of this rule is to provide consumer protection by tying the drainfield to the property which is being served, it will fall substantially short of its objective should it address ownership only. Another example is the situation where a judge would award tax lots of same ownership to separate parties through either a divorce court or perhaps a will. If the rule addressed easements were necessary for tax lots, then a title search would disclose any encumbrances that may effect the parcels. As the rule stands now, a common title search would be ineffective.

2. O.A.R. 340-71-160 - Permit Application Procedures - General Requirements - (3) PAGE 20

This proposed rule change eliminates the opportunity for licensed and bonded septic tank installers to apply for septic permits. Oregon Revised Statute 454.695 specifically references a license is required for an individual to perform sewage disposal services. If an individual is a licensed, professional installer, it is not very likely he would spend time and money pursuing construction permits if he was not expecting compensation from the owner.

Standard practices for accepting building permit applications allows the licensed contractor to both apply and receive a building permit. My suggestion is to allow the subsurface sewage disposal contractor to be allowed to operate within that same frame work. The implications of the Oregon Administrative Rules certainly, in my opinion, encourage this type of consistency.

3. O.A.R. 340-71-160 - Permit Application Procedures - General Requirements (5) ²⁰ PAGE 20

This rule references completed applications upon denial of a permit if certain conditions exist. I suggest they add with these conditions "conflict with zoning ordinances". It appears consistent with prementioned rules that we shall deny a permit if it conflicts with the local zoning ordinances.

4. O.A.R. 340-71-~~200~~²²⁰ - Standard Subsurface Systems - (7) ²⁰ PAGE 40

This rule specifically address the construction of dosing tanks. To be consistent with septic tank construction I suggest they also make these dosing tanks equipped with an anti-buoyancy device. Considering these dosing tanks will be much more vulnerable to floatation than septic tanks, it appears consistent to require anti-buoyancy devices.

Also, something that has me concerned in the construction of these dosing tanks is access. The current rules address a minimum access portal of 22 inches in diameter. The proposed rules reduce this to 18 inches in diameter for reasons of consistency because septic tank portals are 18 inches in diameter. In my opinion consistency is not the issue here, but rather the ease of construction and accessibility to the pumps, controls and other various components that would be installed inside of this dosing tank. It is extremely difficult to place pumps, controls and other pumping equipment inside a wet well that will only allow you 18 inches clearance. With the minimum size of dosing tanks being increased to a 450 gallon capacity, septic tanks will be substituted for this purpose quite often. Should a riser be necessary, the issue is further complicated because of a lack of freedom of movement near the portal. Because of this difficulty, installers will set the pumping components inside the dosing tank prior to attaching the riser. Their problem may be solved but, for the homeowner who needs to service the pump, theirs are just beginning.

If consistency is an issue, then let's make the septic tank portals 22 inches in diameter to be consistent with the dozing tank specifications.

5. O.A.R. 340-71-265 - Capping Fills - (3) ²⁰ PAGE 48

Under these installation requirments where these regulations address the capping of the fill material under (e), the Department has indicated the repair cap may be constructed at the same time of the initial cap. I suggest the "may" to be changed to "shall" so as to assure there is a viable code repair area. A capping fill is only installed in substandard soil conditions and the purpose of this cap is to bring the substandard conditions into code compliance. Neglecting to place the cap over the repair area does not constitute the consumer protection of providing for a full code repair area. A building site will not be approved on a parcel for standard construction if there is not enough room of acceptable soil for both a primary and repair drainfield. Therefore, it seems ludicrous not to require the cap on the repair area to be consistent with these original requirements.

6. O.A.R. 340-71-290 - Sand Filter Systems - (5) *PAGE 62*

This rule addresses materials and construction and I would like to specify (c).

The department addresses a minimum of 12 inches of unsaturated soil between the bottom of the sand filter and the top of the disposal trench. The specific conditions of equal distribution are not addressed in this rule package. Standard construction requirements specify there must be a minimum 12 inches backfill over the top of disposal trenches utilizing serial distribution. However, standard construction practice indicates an allowance of 6 inches of unsaturated soil will be permissible over disposal trenches utilizing equal distribution. There is no basis in my opinion for penalizing equal distribution in conjunction with sand filter systems. If this rule is allowed to go in effect it would require in some cases that the disposal trench be placed in saturated conditions where, if the 6 inch backfill is allowed additional treatment could occur through a substantial part of the year. Practical construction techniques should provide for this allowance.

7. O.A.R. 340-71-305 - Sand Filter System Operation and Maintenance (1)
PAGE 67

The department specifies "sand filter operation and maintenance tasks and requirements shall be as specified on the permit". In my opinion, considering the owner very rarely sees the actual septic permit, these maintenance tasks would be more appropriately placed on the actual Certificate of Adequacy. These Certificates of Adequacy are mailed to the homeowner upon completion of their septic system. However, the actual septic permit is not mailed to the owner, but rather is used only for construction purposes. Therefore, if the purpose of this rule is to inform the owner of maintenance procedures necessary with the sand filter system, it seems appropriate to include them with this certificate that allows connection and use.

8. O.A.R. 340-71-315 - Tile Dewatering System *PAGE 69*

Included under this section are a number of conditions of construction that are required for tile dewatering systems. However, there is no performance criteria as to how deep the water table must be reduced by this tile to allow for construction of a septic system. Surely there are intentions of reducing the water table through the use of agricultural tile. Therefore, it seems appropriate there must be a set standard with regard to how well this water table is reduced. The way the rule is currently written, as long as the tile is placed and the construction criteria is followed, a system can be installed regardless of the site conditions after installation of the tile. I would like to encourage a performance criteria, suggesting a minimum depth to the water table for subsurface sewage disposal systems.

9. O.A.R. 340-71-520 - Large Systems (2) page 98

Addressing special design requirements for large systems, the proposed rules require low pressure distribution for all systems over 2500 gallons waste flow a day. The cost to schools, churches, mobile home parks, restaurants and other establishments of similar waste flow would be extremely expensive for purposes unknown. To my knowledge low pressure design is a viable alternative in rapid and very rapidly drained soil. However, this office has never received any type of information that would allow an individual to conclude the same is true with fine textured soils. On the contrary, there exists some background material that indicates saturation in disposal trenches may be necessary for the operation of an on-site sewage disposal system in these fine, textured soils. Economically this would have disastrous results with respect to developing new parcels of ground in the future for large waste flows. I would like to encourage the department to submit evidence that would necessitate this rule going into effect.

10. Diagram 10 in the Appendixes

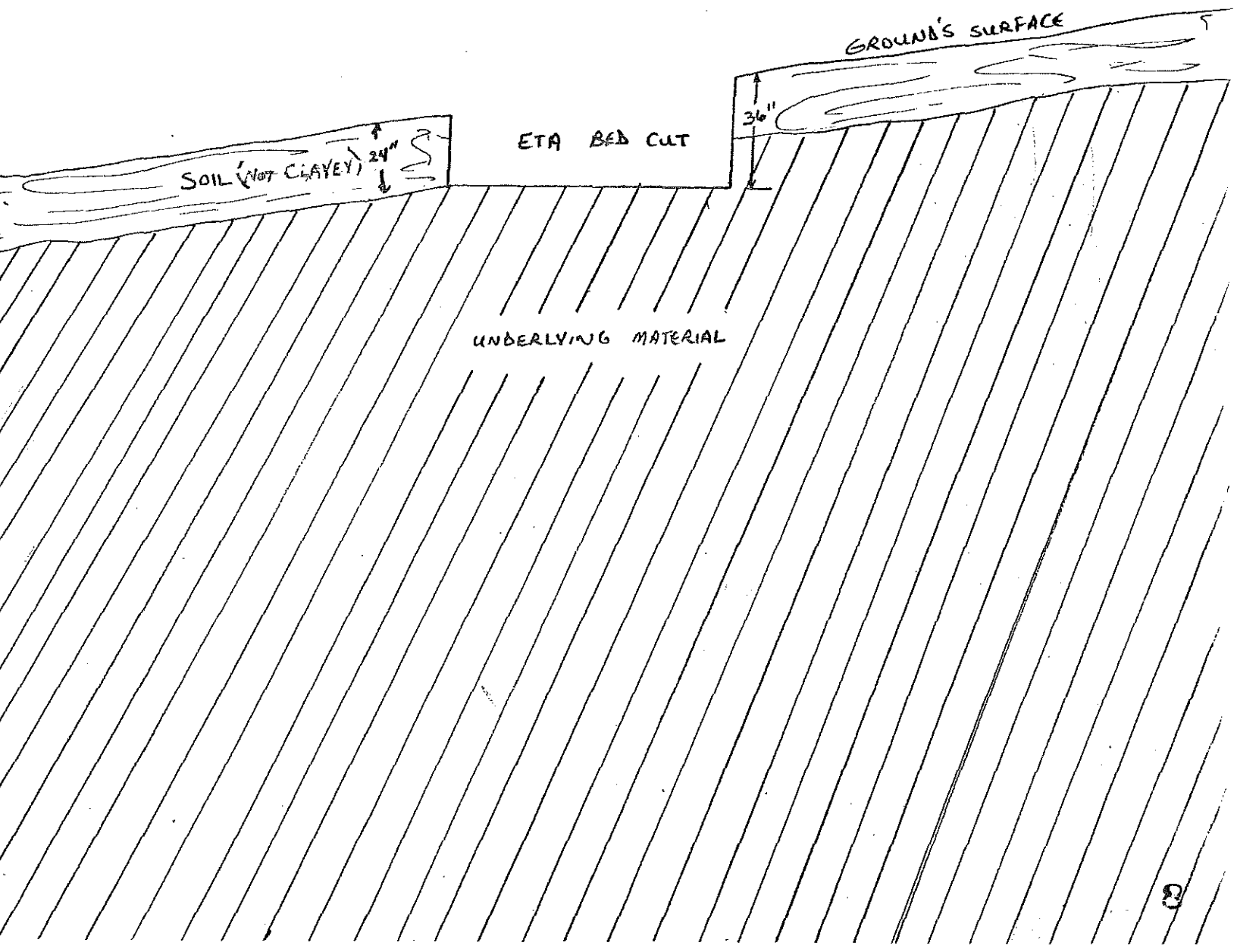
I would like to encourage the department to revise the capping fill diagram showing 16 inches of minimum capping fill material over the drain rock in place of "12 inch minimum settled depth". This diagram opens discussion as to what is "settled". Considering the department addresses "16 inches minimum" in the text under capping fill systems, it would seem consistent to show this also in that diagram. It would surely eliminate discussion and hard feelings as to the difference between the two.

The purpose of the proposed rules is to bring consistency and address new disposal techniques that should be allowed for construction of on-site sewage disposal systems. At this day and age we should be directing our efforts to be moving in a progressive manner toward workable construction techniques, viable disposal methods with respect to documented site criteria. These proposed rules create an opportunity to provide a straight forward approach to on-site sewage disposal in a context that both administrators and construction personnel can understand. I feel the rule should be adopted based on evaluation and conclusions and not because "it seemed like a good idea".

Respectfully Submitted,

JOHN L. BORGE - Soil Scientist
Development Services Division
Clackamas County Soils Section
902 Abernethy Road
Oregon City, Oregon 97045
622-4512

PROPOSED DAR 340-71-270 WOULD ALLOW ETA INSTALLATION LIKE THIS. SATURATED FLOWS CAN OCCUR AT THE INTERFACE OF THE SOIL AND THE UNDERLYING MATERIAL OR INTO FRACTURES AND CREVICES.





SAND TRAP SYSTEMS INC.

13980 S.W. Tualatin Valley Hwy., Unit 3
Beaverton, Oregon 97005

Phone (503)643-4300

SIRS:

Per my testimony, 11-17-80, at the DEQ rules hearing, at Clackamas County Bldg., Oregon City, Oregon, I am submitting this information. ORS 340-71-290 Sand Filter Systems (3) (C), states; A detailed flow net analysis and hydrogeological study disclose loading rates exceeding four hundred fifty (450) gallons per acre per day would not increase nitrate-nitrogen concentration in the groundwater above five (5) milligrams per liter.

According to recent DEQ tests on existing sand filter systems in various counties, the nitrate-nitrogen levels are testing at 2.5 milligrams per liter. With this in mind we would like to see this section to read; A detailed flow net analysis and hydrogeological study disclose loading rates exceeding four hundred fifty (450) gallons per 1/2 acre per day would not increase nitrate-nitrogen concentration in the groundwater above two point five (2.5) milligrams per liter.

Repair Areas

We would like to see the physical size of the repair areas to be commensurate with the size of the actual drainfield or bottomless sand filter. It would seem only natural that the repair area need only to be the size of the working drainfield or bottomless sand filter that is designed to handle the effluent for each site. It does not appear necessary to set aside a repair area for "overkill" when the system is designed to handle the maximum effluent from a given site.

Failing Systems

When an existing system begins to fail, creating a public health hazard, we feel that the governing body should compel the property owner to correct the problem. This would only require enforcement of existing rules. The problem should be approached to provide adequate waste disposal, be it either activation of the repair area or installation of an alternative system. These problems should be corrected at the earliest date upon detection of failure. Put a little "Bite to your Bark".

Sincerley

Paul D. Caputo
president
Sand Trap Systems Inc.

MEMORANDUM

#1 Retracek

lane county



TO Environmental Quality Commission
Hearings Official
FROM Roy Burns-Building and Sanitation Division
Environmental Management Division
SUBJECT Testimony On Proposed Adoption of On-site
Sewage Disposal Rules

DATE November 17, 1980

We have reviewed the proposed rules regarding On-site Sewage Disposal. The rules appear to be reasonable and are formulated in a logical sequence. We do feel however that certain ammendments and clarifications should be considered before adoption. We respectfully submit the following for your consideration:

1. Issue: 340-71-160 (2)

Discussion: We feel that some consistency is needed in the forms used throughout the State.

Proposal: Add the words "and approved by the Department" after the word agent.

2. Issue: 340-71-220 (2) (g)

Discussion: We feel that livestock have the potential of causing damage to the drainfield area.

Proposal: (g) should read. "The site of the initial and replacement drainfield shall not be covered by asphalt or concrete, or subject to damage by livestock or vehicular traffic.

3. Issue: 340-71-260 (2)

Discussion: We feel that aerobic systems should also be available through WPCF permit.

Proposal: Add "aerobic systems" to 340-71-260 (2) remove all of 340-71-345.

4. Issue: 340-71-310 (2) a

Discussion: A) For clarity we would suggest that the downhill side of the trench should be mentioned as to where the 30 inch measurement be made.
B) We also question the technical reasoning for requiring 18 inches of filler material.

Proposal: Change this section to read: a) seepage trenches shall be installed at a minimum depth of thirty (30) inches and at a maximum depth of thirty-six (36) inches below the natural soil surface, as measured on the downhill side of the trench, and contain a minimum of twelve (12) inches of filter material and twelve (12) inches of native soil backfill.

5. Issue: 340-71-310 (2) (b)

Discussion: We feel that as long as the provisions of 340-71-310 (1) (b) are met that the sizing requirements as stated in table (4) would be adequate.

Proposal: Change 340-71-310 (2) (b) to read: b) The system shall be sized in accordance with table (4).

6. Issue: 340-71-410 (1)

Discussion: We feel that there should be no distinction between rural area variances and formal variances. If a standard or alternative system can not be approved by the department or the agent within the guidelines of these rules, then no matter what land use designation that parcel might have, a formal variance would be necessary to vary the rules.

Proposal: Delete the entire section 340-71-410.

7. Issue: Appendix F I.

Discussion: In certain instances the Oregon State Plumbing Laws allow dwellings to be plumbed with 3" pipe therefore we feel that for consistency the minimum size should be three (3) inches in these rules.

Action: The second sentence in paragraph I, should read: "The effluent sewer pipe shall have a minimum diameter of three (3) inches unless otherwise stated in the Oregon State Plumbing Laws and Administrative Rules and extend not less than five (5) feet beyond the septic tank.

RLB/jbw

DEPARTMENT OF PLANNING & DEVELOPMENT

JACKSON COUNTY

November 14, 1980

RECEIVED
NOV 23 1980Water Quality Division
Dept. of Environmental QualityJack Osborne
Dept. of Environmental Quality
P. O. Box 1760
Portland, OR 97207

RE: Proposed Rule Changes

Dear Jack:

These are my comments to the most recent set of proposed rules changes. Please read them carefully. Definition 11 "Existing on-site sewage disposal system" and Definition 17 "on-site sewage disposal system" seem to describe the same thing. Once a new system is installed it immediately becomes an "existing system" under these definitions. This hardly seems appropriate. It totally contradicts the present and proposed O.A.R.'s by allowing individuals to expand beyond the design requirements (using O.A.R. 340-71-220) for a particular site immediately after completing installation of the required system. This is ridiculous. Why then should we concern ourselves with sizing of systems at all if we then turn around and allow further expansion using the proposed O.A.R. 340-71-205. It is also discriminatory against the individual who applies for a larger system use to begin with, since he will be required to put in a larger system than he would have, had he applied for a lesser use to begin with and then requested an expansion of use once the smaller system is installed.

This whole problem can be solved by a simple change in wording of these definitions and then appropriate changes in the section dealing with authorization notices (O.A.R. 340-71-205) Definition 11 should read: "... means any on-site sewage disposal systems constructed before January 1, 1974 in conformance with the rules, laws and local ordinances in effect at the time of construction, or which would have conformed substantially with system design provided for in Commission, State Board of Health, or State Health Division Rules."

Using this simple change (adding a date) solves the difficulties. Definition 17 would not need any changes. Section 340 71-205 would then just need appropriate changes to reflect what's stated in these two definitions.

What you are effectively saying by the presently proposed Definition 11 is that our design criteria for new systems is too high and, therefore, it is justifiable to allow expansion beyond the design. This is not a

340-71-110 Purpose). D.E.Q. has stressed this point in the past and even now as can be seen in the requirements for the standard disposal system. This is included in the definition of an ETA where it states "..., and by absorption into the underlying soil".

However, in the subsection (2) for criteria soil does not seem to be an important part of the system. The way it is written now, most ETA's can and will be installed into the underlying material (at 24-36 inches) which is going to be anything but soil. The bottom of the beds will be installed in fractured rock, saphrolite, sandstone, hard bedrock, etc. but not underlying and protective soil! (See attached illustration).

If it is D.E.Q.'s belief that soil is no longer required to effectively treat sewage effluent, why are standard drainfield systems not being allowed in similar conditions? I can see a great discrepancy which must be answered. I'm sure it will also be obvious to others. Installations cannot be allowed in this manner. I can not see how we can expect satisfactory treatment where there is no soil and where we can expect saturated flows in fractures or along effective soil depth boundaries.

I believe the wording in Subsection (2) (b) should be changed to the following:

"There exists a minimum of twenty-four (24) inches of moderately-well to well drained clay soil. A minimum six (6) inch separation distance shall be maintained between the bottom of the ETA bed and the underlying saprolite or geologic material."

This will eliminate the problem mentioned above by containing the effluent within the clay walls thus not allowing saturated flows along the effective soil depth limiting layer boundary or into fractures or other crevices of the underlying material.

Unless D.E.Q. can produce information of experimental evidence to convince me otherwise, I believe we can expect problems in the near future from those ETA systems installed using the present proposed site criteria. Until now, they have chosen not to or have been unable to provide this information.

340-71-270 (3) (e) Mentions Diagrams 6 and 7 and they do not appear to have been included in this copy of the proposed O.A.R.'s. This, I believe, makes this an incomplete copy.

340-71-290 Footnote (2) would allow a bottomless sand filter to be installed in an area with saprolite to the ground's surface. In many cases saprolite is restrictive to water movement and thus would cause failure of this type of installation. The "saprolite" should be permanently removed from this footnote.

Diagram 9 contains a typographic error in the lower sectional view showing a one (1) inch perimeter of sand around the gravel bed. This should be one (1) foot.

responsible method of regulation. If this is your belief, then you should decrease the design requirements and stop forcing people to install over design systems. If this is not your belief you should change your present proposals. I think my recommendations are fair and justifiable.

340-71-120 (5) is an employment policy/practice of the D.E.Q. and does not belong in the regulations governing subsurface sewage disposal. This subsection should be deleted entirely. It may be kept in the policy and contract requirements of D.E.Q. if it so desires. This is where it belongs.

340-71-0120 (4) Discharges prohibited should include the words "or existing system" after the last word "system".

340-71-175 (7) The words "... unless prohibited by the agent due to poor weather or other deleterious conditions." Should be added after the last word "...system".

340-71-175 (6) Protects us from having to issue "authorization" under 340-71-205 for illegal systems.

340-71-175 (8) The same argument applies here as in the preceding for definition II. This will not need changing if my suggestions are taken for definition III!

340-71-205 (4) Contradicts with the present proposed definition II concerning design flow. This also will not need changes if my suggestions are taken for definition II.

340-71-205 (6) (a) The words "... or system" should be inserted after the word "system" to include newly installed systems as would apply to my other preceding recommendations pertaining to definitions II and 17.

340-71-205 (7) (a) Same as for 340-71-205 (6) (a) preceding.

340-71-265 (2) (h) Makes reference to "Table 10" but I can not find such a table. Perhaps this should be Table 4.

340-71-270 (1)&(2) (b) ETA systems. The criteria from approval in Subsection (2) and the definition in Subsection (1) are conflicting with each other. I have brought this issue up before on several occasions but D.E.Q. seems to be persistently determined to ignore comments from those people in the State (myself and others in Jackson County) whom are most experienced with and most affected by the ETA system.

As I understand, most people are in agreement that unsaturated soil is a necessary item for effective treatment of sewage effluent and thus protection of the Public Waters of the State and to "restore and maintain the Quality of Public Waters and to protect the public health and general welfare of the People of the State of Oregon." (As stated in proposed O.A.R.

Jack Osborne
November 14, 1980
Page 4

340-71-315 (1) A Subsection (e) should be added as follows: (e) It can be demonstrated that the dewatering tiles have effectively lowered the highest level of the water table in the area immediately below the proposed drainfield trenches to a level of 66 inches or greater from the ground's surface.

This will prevent installations of trenches where separation from the bottom of the trench to the water table would be less than 48 inches as is very likely to happen where the dewatering tiles are installed only 66 inches deep and 70 feet apart!

340-71-600 5 (a) It is not clear if this would exclude subcontractors who are not licensed from working under the supervision of a licensee. The wording should be changed to more clearly state "Yes" or "No" for licensing requirements for subcontractees. I feel that they should be allowed to operate as long as they are under the supervision of a licensed operator.

Table 4. In an attempt to simplify sizing and depth requirements, the results in Table 4 are to require increased square footage, and therefore costs, in most cases. This may or may not be justifiable although I support the increase.

Diagram 1 The arrow identifying "Header piping" has been omitted and should be included.

Diagram 12 Gravity-Fed Trench: Specifying "Filter Fabric or Equal" is unclear. This should remain as straw, newspaper, or building paper (treated or untreated as required by soil texture as determined by agent).

Diagrams 18 and 19. Cuts and excarpments have been combined and raised to 50% slope. Why was this change needed?

If you have any questions, please contact me at this office.

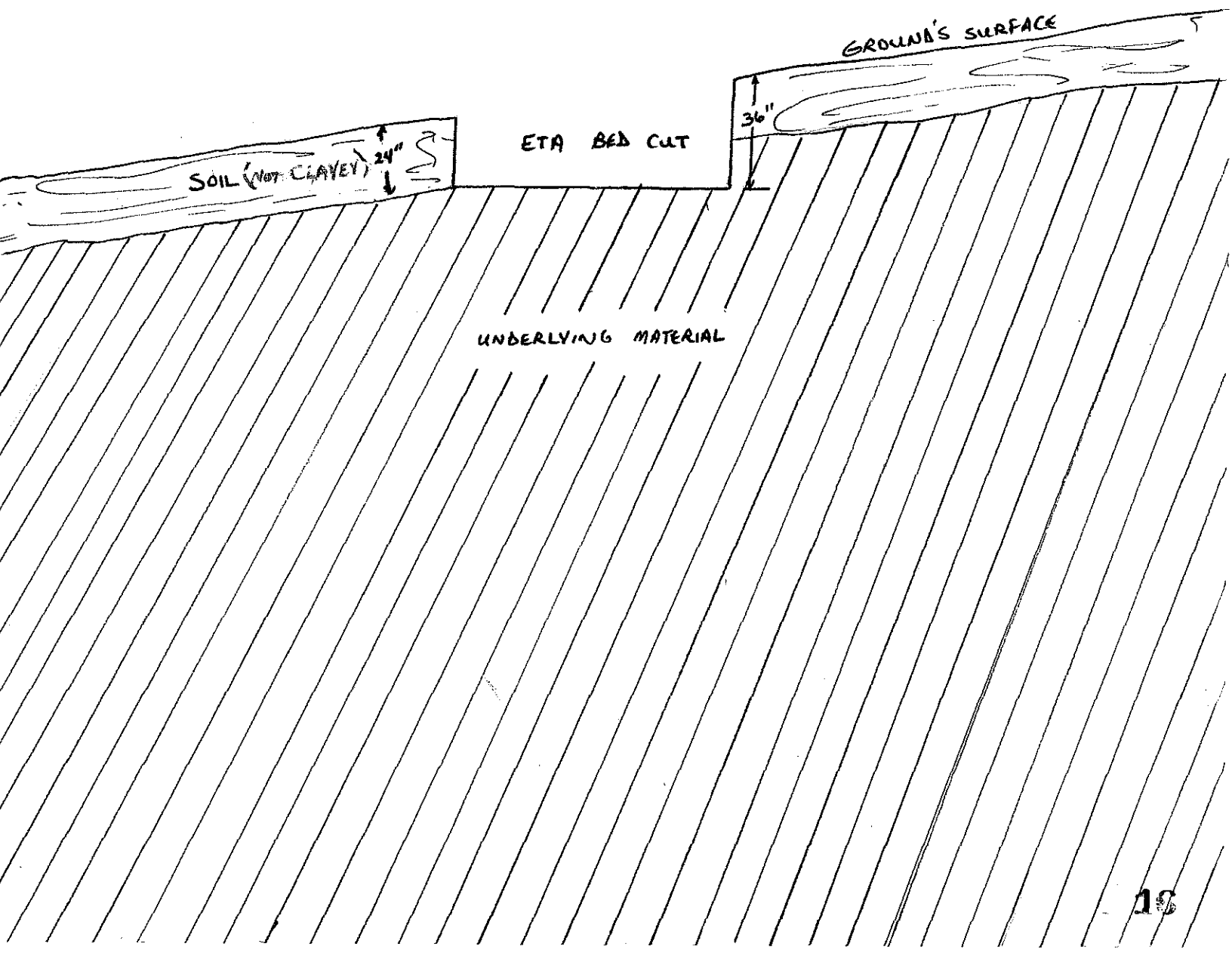
Sincerely,



Kenneth D. Cote, R.S.
County Sanitarian

kc

PROPOSED DAR 340-71-270 WOULD ALLOW ETA INSTALLATION LIKE THIS. SATURATED FLOWS CAN OCCUR AT THE INTERFACE OF THE SOIL AND THE UNDERLYING MATERIAL OR INTO FRACTURES AND CREVICES.



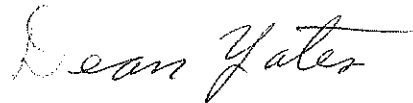
NOV 24 1980

Concerned Parties

Written comments for proposed rule changes concerning septic tank changes.

If you make the change to a 42 inch liquid depth my two new 1250 gallon tank forms are obsolete, also we have hard rock in our area and the consumer will pay more for installing a deeper tank.

Sincerely,



Dean Yates
Dean Yates Septic Tanks
5800 So. Pac. Hwy.
Medford, Or. 97501



NOV 21 1980

DEPARTMENT OF PLANNING & DEVELOPMENT

JACKSON COUNTY

November 18, 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 21 1980

WATER QUALITY CONTROL

Jack Osborne
P. O. Box 1760
Portland, OR 97207

RE: Comments on Proposed Rule Changes

Dear Jack:

I am writing this letter to briefly comment on only several sections of the proposed subsurface sewage disposal rules. I do not have enough time to completely dissect and criticize each section of this document, a lengthy process indeed!

My first point is that this office and my fellow employees have submitted numerous comments and suggestions; re: the proposed ETA rules. Apparently these have, as usual, fallen upon deaf ears as no real revisions have been made. Specifically, there is no provision that limits ETA installations to clay soils or a provision to require that six (6) inches of soil underlie the ETA bed. As we have asked before - if you can put ETA sewage effluent in non-soil material, how come standard system effluent can not go into the same material? I would not find this desirable, but at least it would be consistent! If you want Eastern Oregon to be able to utilize the ETA system in non-clay soil, write a geographic region rule for arid sites East of the Cascade Range!

Another point I cannot resist commenting upon is the combination of a slope break and/or escarpment or "cut man-made" being combined. I have felt that a setback to a 25% slope as the rule currently reads, was sometimes too conservation, however, I feel also that 50% is far too liberal. Cuts man-made are in a different category than natural landscape position changes and should always require a hefty setback. Obviously, an "escarpment" or cliff with bedrock outcrops would require a hefty setback as well. But to throw that out so you can get a little closer to a slope or position change is absurd! Setbacks to all of these items should also vary depending on the type of system being installed.

In closing I would like to point out that you have never shown us hard, scientific data to support the conclusions you have made. If such data exists, it would be nice to review if before such substantial rule change, are made.

Sincerely,



Pat Acklin
County Sanitarian

kc

BHW
Engineering & Surveying, Inc.

1205 S.E. Court
Roseburg, Oregon 97470
Telephone 673-0165

EAC
Hearing Section

NOV 21 1980

November 19, 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 21 1980

WATER QUALITY CONTROL

Mr. Jack Osborn
P.O. Box 1760
522 SE Fitch
The Yeon Building
Portland, Oregon 97207

This is written in regard to your revised Proposed Rules for On-Site Sewage Disposal, which was received yesterday as being the most current issue. We wish to address two issues:

- o Septic tank - dosing tank standards
- o Dosing siphon standards

Septic tank - dosing tank standards

It has been our observation that dosing tank - effluent pump arrangements are usually poorly accomplished, and inordinately expensive. This situation is understandable considering that little design time investment is normally justified, resulting in improvised, makeshift installations.

Typically:

- o Arguments ensue as to whether the tanks are water tight. The manufacturer may claim that the concrete is soaking up the water, but not leaking. Or, the claim is made that the leak will "heal" with time.
- o Rigid discharge piping is field assembled, often either without unions or using unions that cannot be reached for maintenance.
- o Check valves are used that are not intended for this application. Some use springs, which become fouled. Others are made of non-corrosion resistant material.
- o Level controls are often taped onto the discharge piping making pump or level control removal even more difficult.

We propose to assemble a component package similar in design to the interceptor tank - pump assembly unit used on the Glide pressure sewer project. A tremendous amount of time was spent in developing this unit, to provide high quality, reliability, and ease of maintenance:

- o The tanks are thicker and more carefully constructed and inspected than conventional septic tanks. A guarantee is given for the lifetime of the original owner.
- o By unitizing the septic tank and pump vault, high quality is affordable.
- o The flexible discharge piping is connected with a corrosion resistant pinlug coupling, easily removed.
- o Bronze check valves (85-5-5-5) are used. These have been selected as best from a broad examination of available valves. Field experience at Glide demonstrates their reliability.
- o Level controls lift out for maintenance above ground. It is unsafe for a workman to have to breathe sewer gases while struggling with connections that don't lift out. Electrical quick disconnects facilitate replacement.

Depending on interpretation, there may be problems meeting the Proposed Rules:

- o Appendix D (dosing tank standards), paragraph C: "... shall have a minimum inside bottom surface area of twelve and one-half (12 ½) square feet".

Irrespective of the Glide design, we see no reason for this requirement and RECOMMEND IT BE DELETED.

- o Appendix D, paragraph D: Dosing tanks shall have a minimum liquid capacity of 450 gallons.

Tanks used at Glide contain 1205 gallons when filled. If "pump off" is at the 1,000 gallons capacity level, and if 20% (page 54) of projected daily flow is assumed (90 gallons), "pump on" is at 1,090 gallons liquid capacity. It seems to us that the remaining 115 gallons is sufficient reserve space. IT MAY BE SUBJECT TO DEQ INTERPRETATION WHETHER INTERCEPTOR TANK DESIGN IS APPROVABLE WITH REGARD TO THIS RULE

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
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WATER QUALITY CONTROL

A copy of the Glide design is enclosed for your review, showing modifications for on-site applications. We believe it would be advantageous if interceptor tanks were allowed to be used for on-site installations.

Dosing siphon standards

The value of dosing sand filters and drainfields is well known. Dosing siphons are non mechanical and widely recognized for near absolute reliability. Yet, they are seldom used in Oregon. We would like to use dosing siphons, but the rules present an obstacle:

- o Appendix E, paragraph II-B: ". . . a minimum siphon diameter of four (4) inches".

Dosing siphons of 4 inch diameter will discharge 160 gpm under only a 1 foot head. Smaller siphons are well applied to single family residences, and have been used for many years. We recommend DELETION OF PARAGRAPH II-B, APPENDIX E, bearing in mind that dosing siphons must be approved on an equipment basis. The smaller size will allow economical dosing provisions and make this practice more common in Oregon.

Your consideration of these suggestions is appreciated. Please understand that we expect, and endorse that equipment approvals are done on an individual basis.

Our concern is: THAT THESE RULES PERMIT THE CONSIDERATION OF INTERCEPTOR TANK - PUMP ASSEMBLIES, AND OF VARIOUS SIZE DOSING SIPHONS.

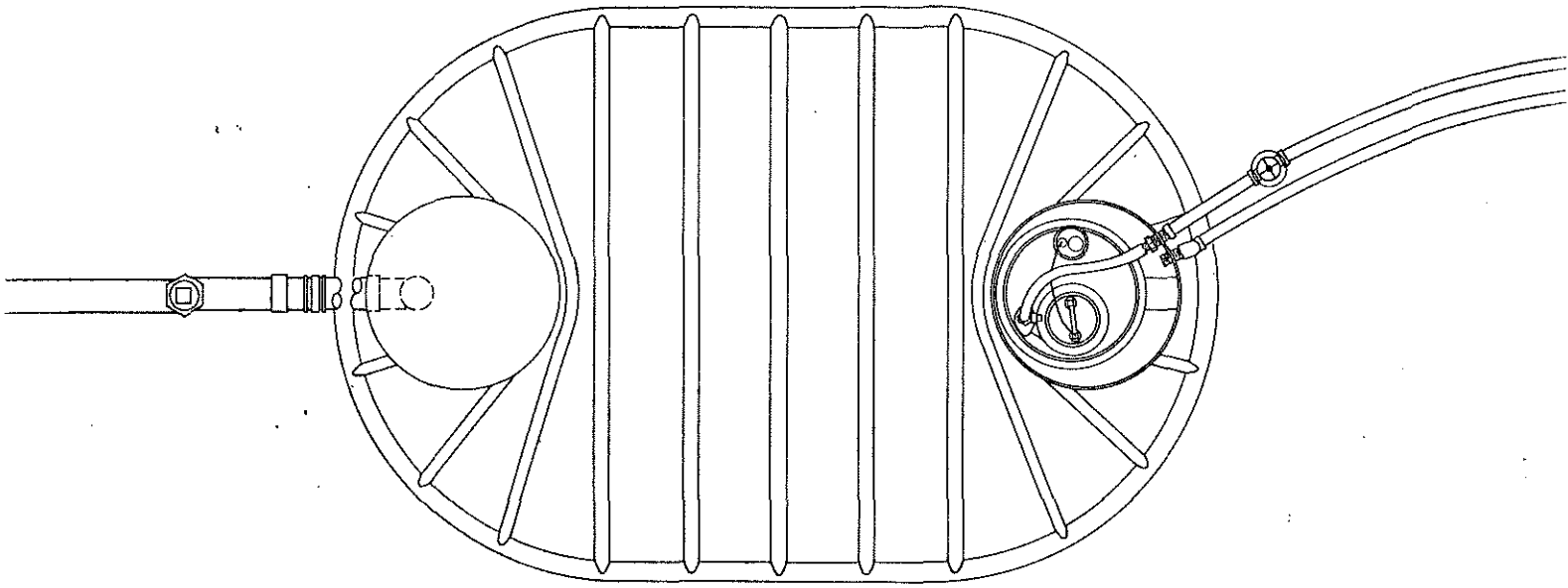
Thank you.

Harold L. Ball
Harold L. Ball

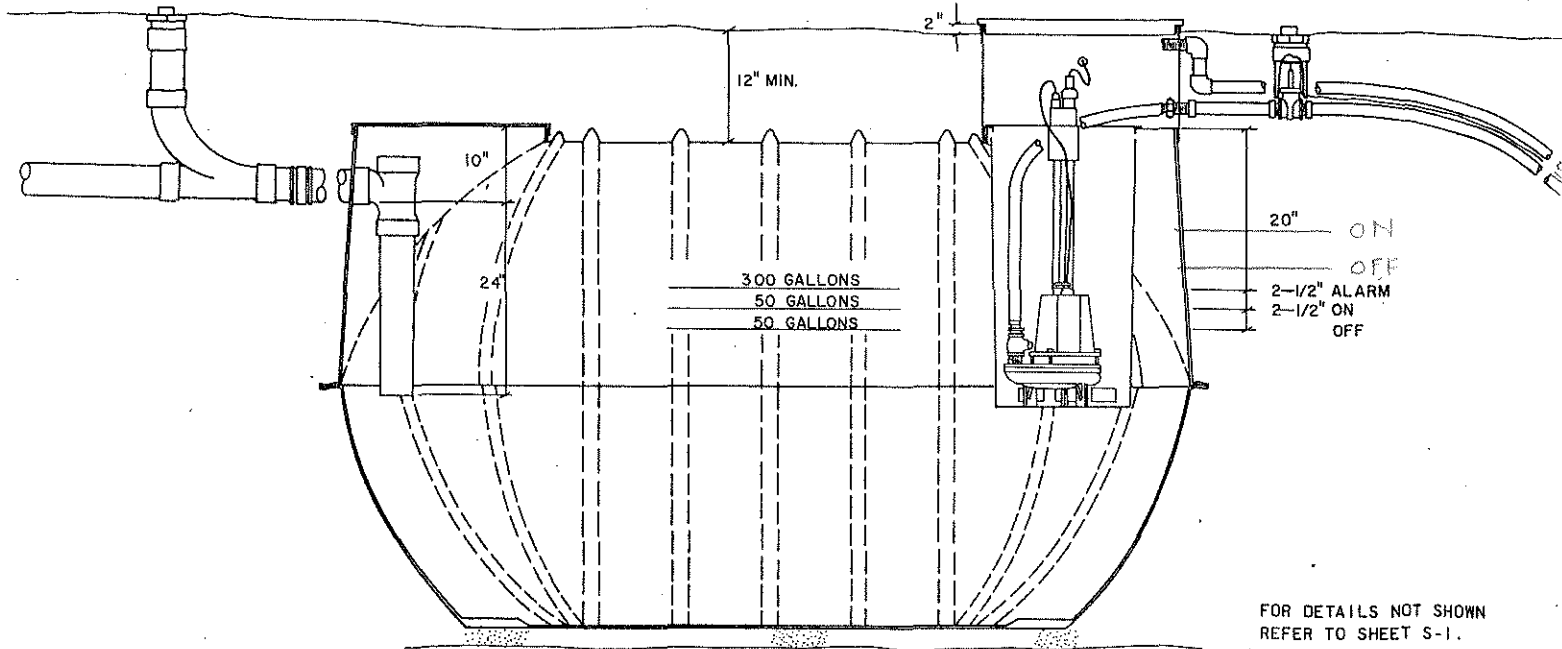
/js
xc/ Interceptor tank dwg w/ revisions.
cc. Jim Van Domelin
Bob Paeth
Mark Romaine
Sherman Olson
Greg Pettit

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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WATER QUALITY CONTROL



PLAN



SECTION

FOR DETAILS NOT SHOWN
REFER TO SHEET S-1.



State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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NOV 21 1980

WATER QUALITY CONTROL



STATE OF OREGON

INTEROFFICE MEMO

TO: Jack Osborne

DATE: November 24, 1980

FROM: Don Bramhall

SUBJECT: SS - General
Comments on Proposed Rules

The following are my comments concerning the proposed rewrite of the Subsurface Rules. Reference is made to the October 30, 1980 public hearing draft of the Rules, and is made by proposed Rule number.

Rule Number 340-71-320(5)

I still feel that this requirement belongs in the contract with the individual counties. The purpose of the Rules is to establish procedures for issuing or denying permits. Employee qualifications belong in the contracts.

340-71-140

The permit fees (site evaluation, plan review, permit) for large systems are unjustifiably excessive. For example, I worked on a 15,000 gpd system for a local school district. Utilizing the proposed formula, the site evaluation would cost \$3999, plan review would be \$500 and the permit fee would be \$500. The site evaluation appears to be the most excessive fee.

340-71-150(3) (e)

This needs to be rewritten in a positive manner. Past policy has been that technical rule changes would not affect a favorable site evaluation. This section reverses that policy. I would suggest something like "An approved site evaluation report assures that the property owner will receive a permit to construct a system on that property unless the approval was obtained through misrepresentation of the property, the approved site is destroyed or modified in a manner unacceptable to the agent."

340-71-160(4) (c)

Add the following: "Technical rule changes shall not invalidate a favorable site evaluation."

340-71-180

This section should be placed with the other permit application procedures under 340-71-160.

Contains
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Materials

81-125-1387

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340-71-220(2) (c)

Rewrite using existing 18-inch separation from trench bottom.

340-71-220(2) (g)

Add the following after the word "traffic." ". . . or other activity which would adversely compact the soil."

340-71-220(5) (c)

Eliminate.

340-71-265(4) (d)

Eliminate planting requirement before issuance of certificate. It is a waste of money to plant a cap during the winter.

340-71-275

I strongly urge that this section be eliminated. This proposal is totally unacceptable to the people affected unless the need can be shown. This proposal should be adopted as a geographic region rule after we can demonstrate the need to protect shallow water tables. It makes no sense to require low pressure systems where there are no water tables to protect. If the rule is adopted in the future, sections (c) and (d), page 53, should not be written to eliminate flexibility in system design. 340-71-275(f)(d)(C), if adopted, is this necessary? We appear to continually add cost to septic systems which far exceed any perceived value. Sand in the drainfield trenches is not a significant contribution to drainfield failures in Terrebonne. It does make sense to put a longer lasting material over the gravel, but we don't need to line the trenches. We don't need to force people to buy Cadillacs when Volkswagens will do an adequate job.

340-71-275(4) (c)

Eliminate the low pressure requirement and lining the sides of the bed.

Table 4

This table needs to be further subdivided in the 24" to less than 54". The proposal requires a twofold increase in drainfield size over present requirements. To my knowledge, the vast majority of systems as presently sized work quite well. Where is the need to double their size? I would suggest something like the attached chart.

Table 5

See attached chart and above .

Definition (105) Page 125

Eliminate Section (b).

Appendix B, Part B

Change minimum liquid depth back to 30". We have a tank manufacturer who is trying to make a "low profile tank" which would reduce installation costs by reducing the excavation depth required. A 42-inch minimum liquid depth would not allow this tank.

Appendix B

Add a section requiring an 18-inch access manhole for every 10 feet of tank length to allow for cleaning.

Appendix D

Do we want to eliminate steel dosing tanks that are properly coated? It doesn't seem equitable if steel septic tanks are allowed.

Proposed Table 4

18" to less than 24"	1.66	2.00	2.33
24" to less than 30"	1.33	1.66	2.00
30" to less than 42"	1.20	1.33	1.83
42" to less than 54"	1.00	1.20	1.66
54" or more	0.83	1.00	1.33
	A	B	C

Proposed Table 5

24" to less than 30"	1.33	1.66	2.00
30" to less than 42"	1.00	1.33	1.66
42" or more	0.83	1.00	1.33
	A	B	C



Brooks Resources Corporation

Post Office Box 6119
416 N.E. Greenwood
Bend, Oregon 97701
Phone: (503)382-1662

November 20, 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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NOV 24 1980

WATER QUALITY CONTROL

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

Re: Proposed On-Site Sewage Disposal Rules - Written Testimony
#0001.704.A9

Gentlemen:

Brooks Resources offers the following testimony in response to the Department's proposed On-Site Sewage Disposal Rules.

In summary, Brooks Resources could generally support the intent of the proposed Rules, however, there are inconsistencies which should be resolved. There also appears to be an effort to address the issue of "treatment" versus "disposal" of septic tank effluent. By not defining the result of "treatment" and of "disposal", the intent of some sections of the Proposed Rules becomes unclear. Specifically, the 48 inch separation requirement to a material with rapid permeability clearly seems to address the concept of "treatment", but without a minimum separation distance established to groundwater, the need for a high level of treatment must be questioned. A similar argument could be made concerning the need for a "special" distribution system in areas not subject to groundwater contamination. Consideration of economic burden on property owners versus environmental protection needed and attainable should be very carefully weighed before requiring "improved" systems in areas where they may have no significant advantage.

Specific consideration should be given to the following items:

- 1) 340-71-140-(1)(a) The large system fee of \$120 per 450 gallons is disproportionately high and should be reduced. The single lot site evaluation fee of \$120 covers mobilization, transportation, and site reconnaissance, in addition to examination of test pits. The large system fee should not reflect the complete duplication of efforts involved in making several single site evaluations at different locations.

Department of Environmental Quality
November 20, 1980
Page Two

- 2) 340-71-170 Specific checklists should be used for all precover inspections and should address and verify proper sizing, grade of lines, proper materials used, and unusual or unpredicted conditions encountered during installation such as shallow rock or groundwater not seen in the initial site inspection. In addition to better precover inspection requirements, installer licensing should include training and examination. This becomes more important as the Rules are revised to allow more complex systems.
- 3) 340-71-220-(2)(c) This requirement to maintain separation from rapid or very rapid permeable materials does not make allowance for the presence of relatively restrictive material between the trench bottom and the permeable material, which would effectively prohibit downward water movement and/or provide treatment as effluent water passed through it. Neither is provision made for minimum depth to water. In areas where groundwater exists tens to hundreds of feet below the ground surface, this Rule is needlessly restrictive. We recommend this condition be revised so that (1) it does not apply in areas where a natural physical feature exists between the trench and the permeable materials, which will provide additional treatment and (2) it does not apply in areas not subject to groundwater contamination as shown by a geologic and/or hydrologic study.

It appears that the emphasis of the Rules is toward site selection. We would urge more attention to be given to construction standards and practices. Improper installation historically has been the major problem in subsurface disposal systems.

We would hope that you would give serious consideration to our comments on your Proposed Rules.

Very truly yours,

BROOKS RESOURCES CORPORATION



James E. Bussard, P. E.
Vice President-Development

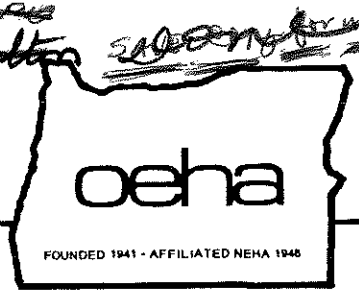
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oregon environmental health association



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WATER QUALITY CONTROL

October 20, 1980

Oregon Environmental Health Assoc.
Board of Directors
c/o Barbara Cripe, Vice President
P.O. Box 1192
Gold Beach, Oregon 97444

Environmental Quality Commission
c/o Director of Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Re: Proposed Subsurface Rules Change

We, the Board of Directors of the Oregon Environmental Health Association, understand that registration is one of the requirements of the Waste Management Specialists. We strongly support the opportunity for Sanitarians to obtain education in addition to the basic requirements for registration.

In addition to supporting the requirements for the special soils education, we feel that it is of paramount importance to mandate in the Memorandum of Agreement between the Department of Environmental Quality and the participating counties that all personnel employed to perform the services under the contract shall obtain the additional education.

Since the existing access to this education is completely inadequate, we feel that the soils courses should be made available to all other Sanitarians throughout Oregon. These courses should be offered regionally in convenient locations for this educational requirement to be effective. Without this provision, this particular education requirement could preclude the active Sanitarian from participating in the present subsurface program.

Sincerely,
Barbara Cripe
Barbara Cripe, O.E.H.A. Vice President
Chairman of the Legislative Committee

OPERATIONS DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY
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DEPARTMENT OF PLANNING & DEVELOPMENT

JACKSON COUNTY

November 19, 1980

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Jack Osborne
P. O. Box 1760
Portland, OR 97207

Water Quality Division
Dept. of Environmental Quality
RE: Comments on Proposed Rule Changes

Dear Jack:

This letter is written in regard to the most recent proposed rule changes and is perhaps somewhat redundant to the other letters written by my co-workers. I feel its essential to voice my opinions about the general direction that the program is heading as a result some of the drastic, lenient, and scientifically unsubstantiated decisions that have been made concerning the subsurface rules. As professionals working in the field of sanitation, I would think that it would be desirable to feel confident that the approvals one makes, based on the rules, are a result of knowledge based on sound scientific principals. At this point in time, it would be very difficult for me to justify some of the new rule changes because I do not see any evidence that any process involved is based on any real scientific data, but more a result of political pressure. If credible people are to be kept in the professional positions in the field of sanitation, it is essential that the foundation they are working from (the rules) be something they can support. I feel this is your responsibility!

The following comments are points in the rules which I feel need to be changed.

On 340-71-270 ETA systems: The rules should specify that a minimum of 24 inches of clay soil with six (6) inch separating the bottom of the bed from saprolite or geologic material (porous material is poor terminology). If the rule were as written effluent would be placed in rock with almost any soil texture of topsoil being present on site. With this sort of rational, I am at a loss as to why a standard system would need a minimum of 30 inches to the same material that a ETA bed is placed directly into. Does experimental data support this?

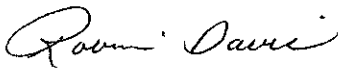
Under the Sand Filter systems 340-71-220 Footnote (2). Saprolite should be omitted as a acceptable material to place a bottomless sand filter into. The nature of this material is often times restrictive and I do not feel a bottomless sand filter would accomplish proper treatment and disposal as a result.

Jack Osborne
November 19, 1980
Page 2

Under setback requirements it is evident that an escarpment or man made cut greater than 50% now only requires a 25 foot setback. This is very liberal and will probably result in outcrops where restrictive layers intersect road cuts and/or steep slope breaks. I feel at least a 50 foot setback should be maintained.

These are only a few of the more important problems I find with the rules. If you have any questions about my comments, please feel free to call me.

Sincerely,



Robin Davis
Soil Scientist

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Water Quality Division
Dept. of Environmental Quality

CANDY RAYBURN
Chairman

MARK KELLENBECK
Vice-Chairman

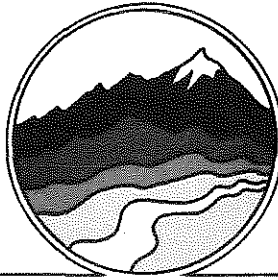
JOHN HALLETT
Secretary

DENNIS G. LEWIS, AICP
Executive Director

Mailing Address:
P. O. Box 3275
Central Point, OR
97502

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CITY & RURAL FIRE DISTRICTS
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ROGUE VALLEY TRANSPORTATION DISTRICT
SOIL & WATER CONSERVATION DISTRICTS
WATER DISTRICTS

ROGUE VALLEY COUNCIL OF GOVERNMENTS

November 21, 1980

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NOV 24 1980

Jack Osborne
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Water Quality Division
Dept. of Environmental Quality

Subject: Comments on the DEQ-Proposed Changes
Regulating On-Site Sewage Disposal

Dear Mr. Osborne:

I would like to respond briefly with preliminary reactions to the proposed changes in DEQ regulations governing on-site sewage disposal in Oregon. The brief response is necessitated by the fact that Rogue Valley Council of Governments and at least two other affected agencies (Jackson County Health Department and Bear Creek Valley Sanitary Authority) were not aware of the proposed changes to the regulations until after the local public hearing November 19. In fact, my first concern is the apparent lack of local notification for such a critical and sensitive issue in Jackson County. I understand only five people attended the hearing which indicates to me the need for more widespread notification. The Rogue Valley Council of Governments, the designated 208 Agency for Jackson County, is becoming more involved in the problem of septic tank management both in regard to significant water quality impacts and in selection of alternatives because of increasing failures of conventional systems. Please include us on your mailing list for any issues which could affect us in the future.

The significance of this issue is described in the 1981 208 Septic Tank Work Plan which includes data related to septic system failures in Jackson County. These have resulted from decades of on-site system installation with no formal permit activity until the mid-1970's. Age, cumulative impacts, incompatible soils, and lack of adequate maintenance have now resulted in unusually high failure rates and localized soil impacts often precluding other on-site solutions.

As I review the proposed DEQ regulations, I get the impression that many more on-site systems will be allowed and the approval criteria made more liberal. At the same time, it appears that more responsibility and discretion is given Jackson County for implementation. This would place tremendous pressure on

the County for approvals when long-term performance of many of the new alternatives are not adequately proven.

I will be preparing a more complete response to the proposed regulations with assistance from local sanitarians and others before requesting Rogue Valley Council of Governments authorization to forward official comments to you and the Environmental Quality Commission. I would appreciate time being reserved for a presentation from Jackson County and/or the Rogue Valley Council of Governments at the December 19, 1980 EQC meeting.

Sincerely,



Eric Dittmer, Coordinator
Water Quality Planning

Dittmer:kf

cc: Brad Prior, Jackson County Planning
Gary Stevens, Jackson County Health
Dick Miller, Bear Creek Valley Sanitary Authority
Gary Grimes, Department of Environmental Quality

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Water Quality Division
Dept. of Environmental Quality

PRECAST CONCRETE SPECIALTIES

2870 CRATER LAKE HIGHWAY

PHONE (503) 773-8233

MEDFORD, OREGON 97501

R

November 20, 1980

W. E. Osborne
Dept. G

Jack Osborne,
Department of Environmental Quality
Sub-Surface Sewage
P.O. Box 1760
Portland, OR 97207

Dear Mr. Osborne,

We are sorry we could not attend the public hearing in Medford on November 19, 1980, as business demanded our presence elsewhere.

We have some concern over your proposed septic tank standards. First, we fully endorse the D.E.Q. to require two compartment septic tanks in Oregon. We have been a long time advocate of two compartment tanks, by statements I have made while serving on the technical advisory committee on materials for the D.E.Q. in 1975 and 1976.

We were very disappointed that the D.E.Q. did not require two compartment septic tanks after all these meetings. We feel you are doing a disservice to the public in not requiring two compartment tanks.

We have reservations as to your requirements of a minimum liquid depth of 42" in a septic tank. In 1976, in anticipation of your requiring a two compartment septic tank, we completely re-designed and constructed our septic tank forms as per your requirements of two compartment septic tanks. At that time, the minimum liquid depth was 30". We designed a low profile tank because of high water tables and shallow soil depths in Southern Oregon. Our 1000 gallon tank has a liquid depth of 31 3/8" and our 1250 gallon tank had a liquid depth of 38 3/8". The only tank we have that would comply with your new rules would be the 1500 gallon tank, which has a liquid depth of 49".

Please review your copy of our plans to verify this.

To change this over, it would cost us approximately \$40,000.00 to make the adjustment, plus the costs of re-engineering and re-submitting the plans.

We feel this would put such a financial burden on us, we would be forced to close our doors on future operations.

PRECAST CONCRETE SPECIALTIES

2870 CRATER LAKE HIGHWAY

PHONE (503) 773-8233

MEDFORD, OREGON 97501

-2-

Therefore, we can see no practical reason for changing the minimum liquid depth to 42".

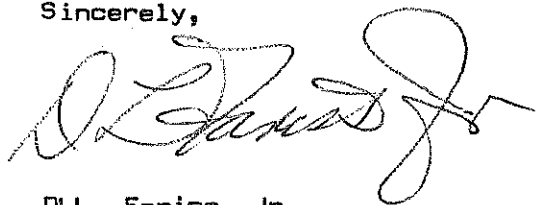
The last time there was a change in the rules, we were one of the first ones to comply with engineered drawings to your department.

Two years later I was told by Van Koliass of the D.E.Q. that he had less than 40% compliance as to manufacturers meeting the requirements. This is very upsetting to me, and still is, as I have a competitor in the area (Mr. Dean Yates) who, according to Mike Ebeling, that he still has, to this date, approximately 6 years later, not submitted plans and has been selling tanks in direct competition with me.

I feel that we, by acting promptly, probably acted hastily.

Please reconsider the 42" minimum liquid depth requirement. Again, we would prefer to see this rule left unchanged.

Sincerely,



D.L.L. Fariss, Jr.
President

DLF/cb

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DEPARTMENT OF PLANNING & DEVELOPMENT

JACKSON COUNTY

November 21, 1980

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Water Quality Division
Dept. of Environmental Quality

Jack Osborne
Portland DEQ
P. O. Box 1760
Portland, OR 97207

Dear Jack:

I am writing in regards to the proposed septic system rules to be effective January 1, 1981. Please consider the following:

Sand Filters. I feel the failing system definition (#12) will need to be changed to exclude the partially treated effluent from a sand filter treatment system as the new rules will, in many cases, result in "incompletely treated sewage" being discharged "onto the ground surface or into public waters". This is due to the new proposed regulation, which will allow bottomless sand filters to be installed in saprolite. I feel we will need this change to show the public their systems are not failing when there is partially treated effluent surfacing around or from their sand filter.

This will also require a change in 71-130 (3) Discharge of Sewage Prohibited, which deals with the same problem. Therefore, I recommend that the partially treated sand filter effluent be used for irrigation and other domestic uses except drinking. I feel this way because sand filter effluent in many cases will be at the surface anyway, so the public may as well put it to good use. Now, since this will be the most common practice, I recommend eliminating drainfields altogether if the applicant uses a sand filter. This will allow a cheaper method of disposal of partially treated effluent, for example, road side ditches, intermittent streams, irrigation ditches.

Since this can now be done, we do not need the highly restrictive regulations pertaining to setbacks. If a person is using a sand filter without a drainfield, there is no need to be 50 foot from a cutbank or intermittent stream. Also, no need to be 100 feet from a year round creek, just two feet as in the proposed separation distance from a permanent water table.

All effluent discharging from a bottomless sand filter should be done in a manner to minimize erosion.

Jack Osborne
November 21, 1980
Page 2

Standard and related systems. The new proposed ETA regulations allow discharge of effluent into the underlying material. I feel that to be consistent with the rules, and in talking with the applicants, realtors, installers, and other interested parties, that the standard system rules be changed as follows:

Eliminate the six inch separation between the trench bottom and "the layer that limits effective soil depth". This would be a major breakthrough in system design. We would not have to worry about the soil depth/slope relation chart any more. We would only need 24 inches of "soil" as is required for the ETA. If you guys think we need the slope/soil relation chart so it would look scientific, then it would start at 15% with 24 inches of soil and increase one inch per one percent similar to the one we have now. This way, at 25% slope, we would only need 34 inches of soil, thereby obtaining many more standard approvals.

This should also carry over to the steep slope alternate systems (which, by the way is a decent proposal). On slopes of 45%, we would need 54 inches of soil. If you felt it necessary to continue the scale past mother nature's limit of 45%, we could approve systems on 51% slopes having 60 inches of soil. I feel this to be much more credible in the public's eye.

From the above, this should carry over to the capping fill system. We would only need 12 inches of soil up to 12%, then they could qualify for either a ETA system or a standard system for slopes between 12 and 15%. The only inconsistency I see here is that one would have to jump from 12 inches of soil to 24 inches of soil immediately at 12%. We could justify this, however, as just an oversight in the rules that can be worked out in the future. This simple rule adjustment would help cut down on sand filter approvals.

In areas where a loop type standard septic system can be installed, the depth to temporary water tables should be changed from 24 inches to 18 inches, so that it can contact the bottom of the trench as it is allowed to do on systems requiring a serial type system.

Since temporary water is allowed to the trench bottom in other "standard type" systems, we should change the capping fill temporary water table requirement from 18 inches to 12 inches for consistency.

ETA systems. The last word in the first paragraph of 71-020 (1) on page 50 of the proposed rules should be changed from soil to underlying material.

Since the political climate now favors disposal only with scant regards for treatment, the new ETA rules should work. I hope you will consider my attitude on the other system types even though some of my comments are a wee bit facetious. The big problem we are facing is consistency. If

Jack Osborne
November 21, 1980
Page 3

ETA systems can be put in rock so should other systems. I personally feel we should be more concerned with final treatment of the effluent, but if your people want to answer to the problems of the future so be it.

On a personal note, I feel the DEQ is losing a great deal of credibility with the proposed rules package and I find it difficult if not impossible to explain the reasons behind some of these new decisions to the public.

If you have questions concerning my comments, please contact me at this office.

Sincerely,



Dick Florey
Soil Scientist

kc

*Rid-Waste
Environmental Systems, Inc.*

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E
NOV 65 1980

WATER QUALITY CONTROL



4005 Auburn - Folsom Road

Bus. (916) 652-7200 • Res. (916) 652-6383

Loomis, California 95650

November 19, 1980

William H. Young, Director
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Mr. Young:

Thank you for sending me Oregon's proposed Rules for On-Site Disposal. My staff and I have reviewed each page, and wish to compliment you and your Department for a job well done. The rules are generally clear, concise and easily understood. They reflect a tremendous effort and a great deal of thought on behalf of your Department.

We have some questions about parts of the rules and some suggestions which we hope will contribute to the preservation of the environmental quality of the State of Oregon:

340-71-130, Paragraph #3 - Would you consider defining "Discharge of untreated or partially treated sewage", correlated to "Standards of Performance" established by the Federal Cleanwater Act?

#340-71-150, Paragraph #4B - If a replacement area could be considered for an alternative field, can the alternative field be built first and allow the replacement area for possible conventional field?

340-71-220, Paragraph #2(A) - With Class I effluent plus disinfection, does this rule allow less than four feet separation between Permanent Water Table from the bottom of the disposal trench?

Paragraph #(i) - Setbacks on Table #1, Item #7, why does there have to be a 20-foot uphill space between the disposal laterals and the downhill edge of the curtain drain? If the curtain drain is properly installed, it will be uphill from the leach lines. Water does not generally run uphill. Since the 1979 Edition of the Uniform Plumbing Code, Page 182, Paragraph #(i) specifies the minimum distance

is four feet, is it necessary to be that far from the curtain drain?

Paragraph #8(a) - "Minimum bottom width of trench is 24" - Is it possible to allow a pressure distribution system in a 6" wide x 18" deep trench?
Reference: #6, NSF Conference notes, Chapter 21, page 245.

Paragraph #8(a) - Minimum distance of undisturbed earth between disposal trenches 8 feet". Is it possible to allow a Class I effluent pressure dosed with 18" minimum between trenches? Ibid. Page #252.

340-71-260, Paragraph #3 - Shouldn't site specific engineering plus manufacturer's specifications be allowed here? If a pressure dosing system must cover the same total footage with 8' between trenches as a standard non-pressure system, we are losing the years of experience by several different states documented by the design studies submitted to DEQ and Mr. Osborn in January, 1980. These states' studies each indicate that the drip irrigation method requires only 18" between trenches. For example, with the Rid-Waste System, if the design engineer calls for 1000' of 1 1/4" Od PVC, with 1/8" holes on 5" centers, there are about 2400 holes for distribution/absorption, which (at a 50-gallon dosing of field) would require only .02 gallons per hole for absorption per dose.

1000' of trench with 8' centers = 7200 sq. ft.
1000' of trench with 18" centers = 1350 sq. ft.

(quite a difference in lots with minimum requirements.)

340-71-260, Paragraph #4(b) - I would like to propose, to organize, and administrate, an on-site Operation, Maintenance, Reporting & Repair Public Agency. What are your views on a self-supporting (paid for by users) agency like this to relieve your Department of the actual physical inspections of alternative systems and focus your Department's efforts on administrative review?
Reference: The Georgetown Divide Public Utility District formation articles that I provided Mr. Osborn.

340-71-275, Paragraph 4(O) - "Orifices shall be located on top of the pipe." In our ten years of pressure dosing, the upward orientation of these holes created the following problems: 1) anarobic conditions in pipe, 2) erosion of backfill material because (when pipe remains full) each time the pump ignites, a "squirt gun" results in each hole, 3) root infiltration (eliminated when holes are oriented down), 4) with holes facing down, the poor perc areas within the field can store water in the level lines for the perculative parts of the field to absorb. Therefore, I submit that the rules should allow the drain field holes to face downward, at least for the Rid-Waste System.

340-71-275 - "Minimum head of 5 feet at remotest orifice". Again, our experience has been that over 3 psi has eroded the backfill. The pressure loss to our remotest orifice is 1.5-2.0 psi.

Reference: 6th NSF Conference, page 254

340-71-280, Paragraph #2(a&c) - With a Class I disinfected effluent, what ground water degradation could result if the trenches were closer together than 8'? [Your standard spacing Ref. #340-71-220, Paragraph #8(a)]
Reference: Uniform Plumbing Code, 1979 Edition, Appendix I, I-6(i).

#340-71-285, Paragraph #2(c) - With a Class I disinfected effluent, can the minimum separation between adjacent disposal trenches be 4 feet where site conditions permit?

#340-71-350 - If low flush toilets, (i.e. 2 qt./flush), and limited flow showerheads can cut the daily hydraulic volume of a home as much as 60%, why is a full-sized initial and replacement drainfield necessary when such devices are installed? Shouldn't these flow reduction controls, monitored by a flow meter, determine the footage actually required for the drain field?

340-71-410, Paragraph (e) - What consideration can be given here for a Class I effluent with disinfection?

340-71-450, Paragraph (4k) - Why 1 acre minimum?
(9) Could the monitoring be done by the Agency I proposed earlier in this letter and be administratively controlled by your Department?

340-71-600, Paragraph 5(B) - Should this read "failure" instead of "fail"?

Our staff has spent a great deal of time reviewing the proposed rules, and are generally impressed. We sincerely hope that you and your staff will carefully consider these suggestions and the cited references before finalizing your proposal. We would also appreciate your comments after you have had time to study these proposals further.

Respectfully submitted,



THOMAS S. GRAHAM
President

cc: Governor Atiyeh
Senator Charles Hanlon
Senator Dick Groener
Representative Carolyn Magruder
Representative Ted Bugas
Dr. Keith Knutson
Burton Lowe

Mr. Jack Cox
Mr. Marvin Peters
James F. Nimms
Mr. Jack Osborne
Del Isham
Jack Ripper



STATE OF OREGON

INTEROFFICE MEMO

DEQ

DEPT.

TELEPHONE

TO: Jack Osborne
WQ/SS

FROM: Gil Hargreaves, Randy Rees, Dave Bussen
KFBO

SUBJECT: Rule Changes

DATE: November 26, 1980

This is our written testimony concerning the rule changes. We commented on the changes we thought would affect us directly. These are what we are most familiar with due to our daily implementations of them. We sincerely hope that this testimony and that of other professional field personnel throughout the state will be considered in the final draft, as it will affect our day to day work, both in the field and in dealing with the public.

- ✓ Page 7 (5): This section does not need to be stated within these rules. Past sets of the subsurface disposal rules never referred to this topic.
- ✓ Page 12 (6) reads: "Large system, plan review, for each 1200 gallons daily sewage flow, or part there of \$40.00
Large system, permit, for each 1200 gallons daily sewage flow, or part there of \$40.00"

The fees for large systems should be charged in smaller increments, such as every 300 gallons, rather than for a 1200 gallon increment.

- ✓ Page 36(b) reads: "...with rapid or very rapid permeability, predictions of the highest level of the water table shall be based on past recorded observations of the Agent..."

This should not be limited to just "rapid or very rapid permeability," but should be considered under all soil conditions when predictions of the highest water table level are based.

- ✓ Page 40(7): Dosing tanks should require antibuoyancy devices similar to the septic tanks in high water areas. The sumps will be more likely to float because there is less material in them when they have been pumped down.
- ✓ Page 50(2): This rule leaves no room for exemptions where you might have pumice or loamy sand where the water tables are not a factor (i.e. 100' to water or bedrock below the loamy sand). It should have more flexibility where water pollution will not be a factor.

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WATER QUALITY CONTROL

Jack Osborne
November 26, 1980
Page 2

Page 55(D) reads: "The sides of the seepage bed and top of the filter material shall be lined or covered with filter fabric, treated building paper (15 lb. felt)..."

We feel there is no need for the filter fabric to line the sides of the seepage bed or trench. The filter fabric or equivalent should be continued to be used over the top of the gravel, as is standard in drainfields located in coastal sands. The standard systems along the coastal areas have been functioning satisfactorily without the filter fabric or equivalent along the sidewalls. We also feel that there is not adequate data to support this change.

Page 85(d) reads: "The permit is for an on-site system designed to serve a single family dwelling, or for a commercial facility with an equivalent or less sewage flow permitted by the zone."

The wording should specify the limiting factor of one and only one single family dwelling or commercial facility to prevent additional units being added each year or so.

Page 88(1)(a)&(b) (340-71-425): It seems strange that a position of this authority and responsibility should at least meet the minimal requirements of a Waste Management Specialist.

Page 118(73): Please make sure that this will allow for not only "actual proven" conditions, but also potential pollution. This would keep from having the Department wait until there was a problem to be able to take action.

If you have any specific questions on our comments, please contact any one of us at 883-5603.

GH/RR/DB:dr

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WATER QUALITY CONTROL

The County of Malheur



OFFICE OF
COUNTY HEALTH DEPARTMENT

VALE, OREGON 97918

November 17, 1980

TO: Department of Environmental Quality
FROM: Malheur County Health Department
SUBJECT: Testimony Regarding Proposed On-Site Sewage Disposal System - Table 4 (Texture vs Effective Soil Depth)

These rules as proposed would increase the most common disposal trench length in Malheur County from the current 200 to 240 to 300 to 375 feet. Observation of existing sewage disposal systems in Malheur County by the Health Department staff indicates that there is no observable failure of systems with 200 feet of drainfield in soil groups A and B with limited effective soil depths.

We believe that due to our low average precipitation (approximately 9 to 12 inches per year) and high pan evaporation rates that increasing the length or total effective sidewall area of subsurface systems is unnecessary.

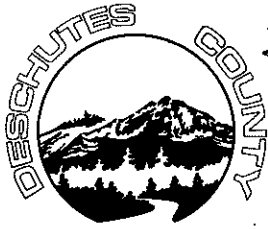
We therefore propose that in areas with 15 inches or less rainfall that the square footage of drainfield per gallon of daily sewage flow be reduced by 30% on Table 4.

Also on Table 2 (Quantity of Sewage Flow) Mobile Home Parks - requires a minimum flow of 250 gallons/day/space. Because mobile homes are becoming larger and with more convenience appliances standard, and are able to house larger families and are also becoming less mobile due to being moved less often when installed; I do not feel that 250 gallons/day is adequate. I recommend that this figure be increased to 400 gallons per day/sapce.

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Paul E. King
R.S.



Deschutes County Planning Department

COURTHOUSE ANNEX, ROOM 102 • PHONE 382-4000, EXT. 207 & 208
BEND, OREGON 97701

November 20, 1980

TO: Dick Nichols,
Department of Environmental Quality

FROM: Bruce E. Knowlton, Associate Planner

RE: PROPOSED RULES CHANGES FOR SEPTIC SYSTEMS


This letter is in regards to proposed rule changes for septic systems. It appears that a specific area where revision of existing requirements are necessary pertaining to the required setback of a drainfield line to a property line. The present rule requires a ten (10) foot setback from the near edge of the trench to the property line with the remaining drainfield lines to be located a minimum of ten (10) feet on center. The requirement of a ten (10) foot setback to the near edge of the trench can be a substantial limitation to the efficient development of a piece of property, particularly in the cases of commercial and industrial development.

Because of the high cost of commercial and industrial land, developers must make optimum use of a given site. In these types of projects, considerable space must also be allocated for parking and loading areas, thereby limiting that portion of the property which may be used for drainfield purposes. Additionally, it should be pointed out that building setbacks for these uses are typically specified in 10 foot increments. Because of space limitations, building setback areas become critically important areas for the location of drainfields. However, because of the rule requiring a ten foot setback to the near edge of a drainfield trench rather than to the centerline of the trench, the efficient use of building setback areas for drainfield location is precluded.

The Deschutes County Planning Department would support modification of the existing rule to permit a ten foot setback from a property line to the centerline of the drainfield trench. This minor modification would promote a more efficient development of these types of properties.

Thank you for the opportunity to comment.

Respectfully submitted,


Bruce E. Knowlton, Associate Planner



STATE OF OREGON

INTEROFFICE MEMO

TO: Jack Osborne, Sherm Olson, SSD,WQ

DATE: 11/12/80

FROM: Van Kollias *JK*

SUBJECT: Testimony on proposed subsurface sewage rules

I recommend you amend 340-71-175 as follows (additions are underlined):

(1) The Agent shall issue a Certificate of Satisfactory Completion, if, upon inspection of installation, the system complies with the rules of the Commission and the conditions of the permit.

(2) If inspected installation does not comply with the rules of the Commission and the conditions of the permit, the permittee shall be notified in writing or a Correction Notice shall be posted on the site....

VK:hk



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81-125-1387

47

SP*75683-125

By Jay Langley, Deschutes County

The following comments are made regarding the proposed rules for On-Site Sewage Disposal. The items will be referred to by page no. and paragraph no. and letter.

Page 11 - 1(a) To base the fee on each 450 gallons sewage flow is totally unfair. On most large drainfields, the area can be evaluated with test holes spaced throughout the proposed sewage disposal area. This usually will not require two test holes for each 450 gallons flow. Let me give an example of the inequity of this rule. Recently I spent 4 hours evaluating 30 test holes for a proposed 24,000 gallon community drainfield. The fee was \$120.00 and this fee is indeed too low for the amount of my time required. Under the new fee structure, the fee would have been almost \$6,400.00. That is an exorbitant charge for my services. Let me suggest a fee of \$120.00 plus \$10.00 for each additional 450 gallons flow or part thereof.

The department is proposing to charge for plan review. If this is done, the department should be required to have the plans evaluated within 20 days just as septic tank permits are.

If a denial review fee of \$25.00 is charged and the denial is reversed, the applicant should receive a \$25.00 refund from the agency if an error was made.

Page 12 -1(b) The fee of \$40.00 is too low to provide the service required to adequately inspect sand filters and capping fill systems. The fact that these fees are too low has been well documented by Lane County. I suggest you adopt a fee of \$75.00 for both of these systems.

Page 17 - 3(p) (A) (C) (D) (K) & (L) These items should be submitted by the developer at the time of application for a site evaluation. The developer should know this information and provide it for us rather than having us certify certain conditions on the property which would take hours to verify.

Added
6

Page 19 (4) (B) Some replacement area should be provided. True, the system shouldn't fail this quickly but some do fail and what do you do for the next 4 years with no sewer available. I suggest you require 50% replacement area when the sewer will be provided within 5 years.

Page 20 (3) Is the builder considered a legally authorized representative? He should be allowed to sign the septic permit since he has been authorized by the lot owner to obtain necessary permits to build a house.

Page 39 (4) (c) (b) There is no logical reason to require a water-tight riser on a septic tank as part of a sand filter system unless the water table is high enough to require it.

Page 52 (2) To logically require pressure distribution with coarse grained soils, one must consider the potential of contaminating the water table. This rule would require pressurized distribution when it is 1000 ft. to water if loamy sand or sand is encountered within four feet of the ground surface. Some provision in this rule must be made to account for depth to water as well as restrictive layers found in the soil.

Page 52 (3) There are thousands of one half acre lots in LaPine. These lots will become unapprovable regardless of water table unless this one acre requirement is removed. If the DEQ is really concerned about nitrate-nitrogen loading they would address this rule where the major problem is, namely, the existence of any septic system whether it is a standard septic tank and drainfield, pressure drainfield or sand filter, ~~is~~. This rule should grandfather all lots of record prior to the adoption of these rules in regard to lot size.

Page 54 (3) (b) (E) This rule should specify that the caps be solvent welded.

Page 60 (3) (c) Once again you are trying to control the nitrate-nitrogen problem without addressing the real problem. This is simply one more obstacle for a person with a problem lot. Considering the number of these systems to be installed, the value of this requirement will be insignificant other than as a stumbling block.

Page 63 (2) (c) Reinforced concrete boxes should not be required. Upon consulting with the building department, I have been informed that there are no structural stresses of enough significance to require reinforcing of the concrete walls. This would be nothing more than added expense for the property owner.

Page 66 (3) The required manual for homeowner use and maintenance should be provided by DEQ for the homeowner.

Table 1 - following Page 106, #11 & #13 require a ten foot setback. With a two foot wide trench this requires 22' between house and property line to install a drainfield line. Planning departments require 10, 20, 30 and 50 foot setbacks. The DEQ always wants an extra two feet to utilize the property fully. The two departments should get together with their requirements. I suggest you require a 9' setback from buildings and property lines to allow full utilization of property.

In addition, I would like to suggest a different setback for outbuildings with a concrete slab floor. Outbuildings are usually an afterthought and not included on the original plan. I would like to suggest a 4 ft. setback for outbuildings with slab floor construction. This should not create a health or functional problem from the drainfield but will allow better utilization of real estate.

Table 2 - Mobile Home Parks - To say that mobile homes in a mobile home park use half of the water that a stick built house does is wrong. Both dwellings have the same plumbing fixtures and occupancy. Either the flow for a house is too high or the flow for a mobile home is too low. I suggest you split the difference and assume a flow of 350 gallons/day on each type of residence. This would be reasonable since Table 4 requires more sq. ft. for drainfield per gallon of sewage. The end result of allowing 350 gallons flow at an application rate of 1.33 gallons/sq. ft./day would be 465 sq. ft. of drainfield. Considering that 450 sq. ft. is currently being used and appears to be adequate, it would be reasonable to use Table 4.

Table 4 - If Table 4 is adopted, assuming 450 gallons sewage flow per residence, this will increase the size of drainfields with 30-54 inches of acceptable soil by 33%. The current failure rate in this county is too low to justify this increase in drainfield size.

Table 5 - This will require 300 lineal feet of drainfield to be installed on most of the lots in the LaPine area. This will be on top of the requirement for pressure distribution systems. Between these two items the cost of a drainfield in the LaPine area will at least triple. To date, the people in this area have been given no evidence to justify these types of requirements.

Page 108 (a) The Oregon Department of Commerce does not have a definition of the word "bedroom". The building official also does not care about our need to define this. We should define "bedroom" ourselves.

Appendix D-A. 3. - The Building Department will not issue a permit for a concrete structure which will not be occupied. I suggest you drop this requirement.

Appendix D-D. The proposed rules will require that 90 gallons of sewage be pumped on each cycle. Yet you want to require a dosing tank which is 5 times that size. If the pump fails, this tank as well as the septic tank will have to be pumped to make repairs. The owner will then have 1000 gallons of water use while repairs are being made. The large capacity of the proposed sump will not save money at the time of installation. I suggest a 100 gallon sump requirement.

In addition to these remarks on this rules package, I have the following comments, the DEQ has a credibility problem with the public in the State of Oregon. Many of these rules are bringing about an increase in the price of housing without providing an adequate benefit in terms of pollution control or reliability of the system. I suggest that the DEQ carefully weigh increased costs with the benefits to be provided to the public. After all, the DEQ is supposed to be working for the benefit of the public, not against it.

DEPARTMENT OF PLANNING & DEVELOPMENT

JACKSON COUNTY

November 21, 1980

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Mr. T. J. Osborne
P.O. Box 1760
Portland, Oregon 97207

Water Quality Division
Dept. of Environmental Quality

Dear Jack:

The following are my comments concerning the "Proposed Rules On-Site Sewage Disposal:"

<u>Page #</u>	<u>Code</u>	<u>Comments</u>
9	340-71-150	(5) Why only denials subject to review? Either decision should be reviewable. Also, technical corrections should be the only factor to be reviewed!
30	340-71-205	(4) Expansion made easy.....Apply for a two bedroom system on an old lot and get two additional bedrooms without expanding the system. This doesn't make sense to me.
	340-71-220	(2) (b) This rule eliminates other factors that may assist the evaluator in determining high water table levels. Other factors include landform(s), vegetation, and previous observations in the immediate vicinity. Taking all factors into consideration will give the experienced observer a more complete picture of high water table levels. Using only mottling will give, in many instances, a false impression. I am concerned about relic mottling, mottles due to irrigation where irrigation can be controlled, sites where no mottling is present but strong evidence shows that water table is there. These kinds of cases are not uncommon in Jackson County.

I agree that water table monitoring has its limitations, but please don't eliminate observation tools that can be very helpful in identifying an extremely complex and elusive "creature."

<u>Page #</u>	<u>Code</u>	<u>Comments</u>
47	340-71-265	I feel that capping fills can work on slope up to 15 percent, but 18 inch effective depth is too shallow. The minimum should be 24 inches or six inches less than the required effective depth (13 to 15 percent slope).
50	340-71-270	<p>(2) (b) This allows ETA systems to be installed in any moderate to fine textured soil, providing depth is 24 inches or more, and a few other standard conditions (slope and precipitation) are met. ETA sites should be restricted to moderately well to well drained, slowly to very slowly permeable, fine textured soil with sufficient depth to provide six inches under the bottom of the projected bed(s) for the following reasons:</p> <ol style="list-style-type: none">1) The original intent of ETA systems was to provide a workable system(s) in clay soils of known properties in areas of surplus evaporation over precipitation. These soils are not suitable for a standard drainfield due to low permeabilities. The new rule does not follow the original intent. It simply allows, for whatever reason, ETA systems to be installed in more permeable soil. The ETA system is designed to function primarily through evapo-transpiration; the new rule would allow systems to be installed in soils where infiltration could become the more dominant factor.2) According to the new rule, ETA beds could be placed in material underlying the soil because the bottom is level and the site can be sloping. Material underlying the soil, saprolite, fractured rock, cemented pan, etc., will vary in water-transmitting characteristics. Some of the underlying materials will have water-transmitting characteristics that are identifiable, others will not. In short, under the new rules, we would not have a handle on how well or in what manner the system would actually work.3) Under the new rule, conflicts would arise between the capping fill system and the ETA system. Some sites will be suitable for both.

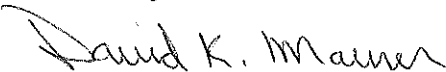
<u>Page #</u>	<u>Code</u>	<u>Comments</u>
56	340-71-280	If one of your goals is to allow flexibility within system design, here is a good place to start. Using seepage trench design criteria ($L = 4 \times \text{Length of Disposal Trench} / 3 + 2D$), you could conceivably allow seepage trenches with capping fills for sites where usable area is a problem. Need for capping fill and depth of drain rock (filter material) below the distribution pipe could vary (maximum of 24 inches) according to effective depth of soil, extent of usable area, and slope.
61	340-71-290	Under Footnote "(2)," I object to placing bottomless sand filters into saprolite. I have observed this kind of material behaving in substantially different ways in relation to ground water. I have seen water standing in test pits for substantial periods of time and I have seen no water collect in other test pits. In both cases, the saprolites could not be distinguished from one another.

Until we are given observation tools based on research that will allow us to separate rapidly permeable saprolite from lesser permeable saprolite, it would be a mistake to allow bottomless sand filters set into saprolite.

My time is limited, and I feel my review of the rules is incomplete. I am also hard pressed to make comments because I feel ignored due to past experiences. Many of the above comments have already been stated by others as well as myself with no resulting change in the proposed rules or explanation of why no changes were made.

As you know, we in Jackson County are deeply concerned about significant rule changes simply because we are most deeply affected compared to other counties throughout Oregon. The bulk of alternative systems will be installed in Jackson County. We must know that they will function properly for many years to come!

Sincerely,



David K. Maurer
Senior Soil Scientist

DKM:bs

cc: Brad Prior
Dave Couch



TO: Jack Osborne, Sherm Olson

DATE: November 12, 1980

FROM: Gary Messer

SUBJECT: Proposed Rules for On-Site Sewage Disposal

Based on our 11/6/80 rules review meeting, the following comments are offered:

Page 11, 340-71-140 (1)(a) Fees for Large Systems.

I feel there should be a \$120 fee for flows up to 1200 gallons. After 1200 gallons, the fee should increase in increments of \$10 for each additional 100 gallons.

Page 30, 340-71-025 (4) Recommend changing to allow 1 additional bedroom for single family residences and a 10% increase for all other existing systems.

Page 36, 340-71-220 (2)(b)(B)(i) Recommend requiring demonstration of the curtain drain's effectiveness only when the temporary water table is higher than 18 inches. Reason: we may want to use curtain drains when the water table varies from 18" - 23" but don't want to hold the people up.

Page 52, 340-71-275 (3)(c) This specifies a "study" may be done to show increased densities may be allowed, but does not specify what an acceptable study method is. If this option is available, a defined, uniform study method must be stated. As a starting point, you can refer to the study method we are proposing in the North Florence Dunal Geographic Regional Rule. Recommend you touch base with Kent Mathiot on this one.

Page 61, 340-71-290 (3)(c)(C) Same comment as offered above on defining a study method.

Page 61, 340-71-290 (4) System sizing is based on seepage area per 150 gallons sewage flow; where later on in the rules standard systems (Table 4) base system sizing on seepage area per 1 gallon of sewage flow. Recommend standardizing sizing uniformly throughout the rules; i.e., seepage area per 1 gallon.

✓ Page 61, 340-71-290 Footnotes: No provisions are made for using a pressurized sand filter trench; i.e., 4'x4'x100' sand filled trench. We would have much application for this type of system in fractured bedrock. Bob Paeth indicated this option should, or would, be included in the new rules, and I support this option.

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Page 70, 340-71-315 (2)(g) There are no specifications for inlet and outlet pipe elevations, requirement for a sump, accessible manhole for cleaning out sump, etc. Recommend these provisions be added.

Page 88, 34071-425 (2) This provision allows for contract counties to appoint their own variance officers. To qualify, they need only 3 years' subsurface experience (only 1 in Oregon!) and attend a soils workshop. Big deal! All DEQ subsurface staff and eventually all contract county staff (incoming) will be required to meet the educational requirements of a waste management specialist. At a minimum, any variance officer should meet this same requirement.

Page 99, 340-71-520 (2)(h) This again must require some kind of study. State specifically what the assessment must be based on (parameters) and what constitutes an acceptable or unacceptable condition; i.e., to what degree can the system impact public waters.

Page 44, Table 1, 6 Groundwater interceptors require 50' separation where alternative tile dewatering system rule provides for only a 20' separation. Appears to conflict.

Page 44, Table 1, 9 This specifies cuts manmade in excess of 30 inches. Thirty inches is not shown on diagram 18 of a cut manmade or in the definition 340-71-100 (26) on page 110. If we want 30 inches to be the minimum elevation, it should be reflected on diagram 18 and added to the definition in 340-71-100 (26).

Basically, I feel you and your staff did an excellent job on the rule revision. Thanks for your efforts and an opportunity to offer additional comments.

Mary Russell R.S.

WR

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WATER QUALITY CONTROL

Kay Nelson

DEQ'S WONDERFUL WONDERLAND OF PROPOSED RULE CHANGES

Nov. 19, 1980

TO: All interested parties.

FROM: One interested party: Kay Nelson, PO Box 477, LaPine OR 97739

After drawing up the following examples, I consulted with experts who are better qualified to interpret the proposed DEQ rules than I am. They believed that these examples accurately reflect the proposed rulings.

TO PERMIT OR NOT TO PERMIT?

Example #1: You own a half acre lot in Oregon which was created in 1975. It is fairly level. There is evidence of temporary ground water 2' below the surface. There is a permanent water table 6' below the surface, and there is no impervious layer above the water table. The soil is classified as well drained.-----You will be permitted to install a standard septic system 2' deep, leaving no separation between the bottom of your drainfield trenches and the temporary ground water.

Example #2: You own another larger lot, 3/4 acre, which was created the same year. It is also fairly level. On it there is also evidence of temporary ground water 2' below the surface. There is a permanent water table not 6', but 40' below the surface. It also has no impervious layer above the water table. The soil is classified as rapidly draining.-----You will not be permitted to install any sewage disposal system of any kind unless a detailed flow net analysis and hydrogeological study discloses that loading rates exceeding 450 gallons per acre per day will not increase the nitrate-nitrogen concentration in the groundwater above 5 milligrams per liter.

TO CHARGE A FEE OR AN ARM AND A LEG?

Example #1: You apply for a permit for a sewage disposal system for a single family dwelling.-----You must pay \$120. for a site evaluation fee.

Example #2: You apply for a permit for a sewage disposal system for an eighteen space mobile home park.-----You must pay \$1200. for a site evaluation fee.

WHAT ELSE IS NEW WITH DEQ?

Plenty.

If you are one of the several thousand people who have paid from \$25. to \$120. to obtain a feasibility permit promising that you will be able to install a septic tank on your lot, that permit will become invalid even if it states specifically that subsequent rule changes will not invalidate it.

If you own one of the many thousand lots south of Lava Butte which are less than an acre in size, the new rules will not permit any sewage disposal system (unless you wish to use a compost toilet, a modern convenience you may wish to forgo). In effect, this means that many thousand properties which could today obtain permits will not be able to do so under the proposed rules. In a public information item published last week the DEQ stated: "If a lot is approvable under current rules, it would be approvable under the proposed rules." In view of the drastic rule changes, this has to be a deliberate lie.

THE DEQ WILL HOLD A PUBLIC HEARING ON THESE PROPOSED RULE CHANGES TOMORROW, NOV. 20 AT THE DESCHUTES COUNTY COURTHOUSE ANNEX, CONFERENCE ROOM A AT 10 A. M. PLEASE COME IF YOU ARE INTERESTED.

Kay Nelson


 Hearing Section

NOV 21 1980

DEPARTMENT OF PLANNING & DEVELOPMENT

JACKSON COUNTY

 State of Oregon
 DEPARTMENT OF ENVIRONMENTAL QUALITY
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 WATER QUALITY CONTROL

November 18, 1980

 T. Jack Osborne
 DEQ, Portland
 P. O. Box 1760
 Portland, OR 97207

RE: Comments on Draft Rule Package

Dear Jack:

Following are my comments on the new draft of the subsurface rules dated October 20, 1980.

Page	Section	Comments
7	(5)	This section belongs in the Personnel Rules or should be adopted as an agency policy. As it now stands, current field personnel will have a difficult time meeting the educational requirements for this new classification. DEQ may find itself forced to hire recent college graduates with no experience to fill senior positions because veteran field staffers will not have had an opportunity to qualify as "Waste Management Specialists". The term "entry level personnel" needs to be specifically defined.
11	(B)	If an applicant receives a site evaluation approval for a sand filter or other alternative system, is he still entitled to a free re-evaluation within 90 days? Or will free re-evaluations not be available only after a standard system approval is granted? Please clarify.
30	(4)	There are several problems with this section. The most obvious is how do we deal with recently installed systems which were limited to two or three bedroom dwellings because of insufficient "Useable Area". On what grounds do we deny a two bedroom expansion? How often and how frequently can an increase of one or two bedrooms be allowed on an unmodified system - once, twice, every month, yearly? One possibility would be to allow the two bedroom increase only for those systems which have operated continuously without failing for at least three years; a proven track record, if you will. The expanded use would be allowed only

once; subsequent expansions would require an alteration permit. Exactly what are "the portions of these rules relating to soil conditions"? Texture, effective soil depth, unstable land forms, fills and cuts, all of the above? None of the above?

- 33 (3) This section gives every agent the powers of a variance officer. Any existing system which is not failing (probably because it was installed in a suitable site) can be replaced with one in a non-suitable site. This section should be eliminated. If it is retained, DEQ concurrence should be required before such an alteration is allowed.
- 35 (b) We occasionally find "effective soil depth" limited by layers of massive, highly compacted soils which are not defined in this section. These limiting layers should be included in the definition or you should add the phrase "include but are not limited to" just before "hardpans, claypans, etc."
- 36 (b) As now written, water table levels may be determined by monitoring only in soil with rapid or very rapid permeability. Other soils, many of which do not mottle, could NOT be monitored no matter what other highwater table indicators were present. The reference to "soil with rapid or very rapid permeability" should be stricken.
- 36 (i) The requirement curtain drains be proven effective before permit issuance should not be made absolute. Give the Agent the option of whether or not to require a demonstration of effectiveness.
- 38 (i) Why limit systems to less than four bedrooms when the "Authorization Notice" section would allow an immediate two bedroom addition? This section (which is reasonable) is a good argument against leaving the "Authorization Notice" section as is.
- 50 (1) &
(2) I am at a loss to explain why a major rewrite of the ETA rules is felt to be necessary at this time. These system are installed in almost no other portion of the state outside of Jackson County. My staff has had absolutely no problems with the current rules.

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The ETA system has been very well received by the public and it is the most popular and successful alternative system we have. No member of my staff or the staff at the local DEQ office is in favor of this new draft. It should be deleted and the current language retained. If you want to make the ETA system more available to areas in Eastern Oregon, I suggest you design a new system which would be used in areas with annual precipitation of fifteen inches or less.

In any case, the concept of allowing ETA beds to be installed into saprolite or fractured rock is a complete departure from the remainder of this rule package and the goal of entire program. What this section says is that septic tank effluent, once it enters an ETA bed, no longer required aerobic treatment in a soil medium for its purification. Why this should be so in an ETA system and no other is not and cannot be justified.

- 52 (2) There should be a minimum of six inches of suitable soil between the bottom of the disposal trenches in a low-pressure system and the "soil as defined in Appendix A, 105 (a) and (b)".
- 56 (2) No justification is offered for restricting seepage trench systems to lots created before January 1, 1974. There is obviously no problem with the design concept since seepage trenches will be approved on slopes over 30%. This has been a very successful practice in Jackson County and I see no reason to restrict seepage trench installations more than they currently are. The deletion of the requirement for DEQ concurrence is ill-advised. It serves as a useful check and prevents abuse.
- 57 (2) Redundant systems should not be permitted where a seepage trench system is feasible. This language is contained in the current rules and should be retained.
- 61 Footnote 2 Bottomless sand filters should never be installed into saprolite. Saprolite is frequently impermeable and this would result in rapid failure of the system. We do not have a reliable method for determining the permeability of saprolite formations.

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- 63 (1) (b) These two sections are inconsistent if the sand
and filter is to serve a single family dwelling with
(2) five or more bedrooms. Specify which section has
priority in this case.
- 68 (1) (b) It is difficult to justify why a 31% slope requires
12 more inches (60 vs 48) of soil than a 30% slope.
The slope-depth chart should be a uniform progression
up to 45% slope. The sudden change will lead to
deliberate "fudging" of slopes indicated on site
evaluations.
- 69 The major problem with the tile-dewatering system
concept is that no performance standard is stated.
The agricultural drain is not required to lower
the water table by so much as a single inch. It is
obviously felt that these drains will be universally
effective; I doubt that such a conclusion is
warranted by the dated available. There is, however,
ample evidence showing that once septic tank
effluent enters a water table, treatment effectively
ceases. Terry Rahe's study at OSU showed that,
under saturated flow conditions, movement of
bacteria through the soil is extremely rapid.
If the drain tile system does not effectively lower
the water table, the polluted ground water will be
rapidly brought to the ground surface at the outfall.
- This proposal should be modified to include a
performance standard for the lowering of the water
table. The minimum separation distance between
the disposal trench bottom and the new groundwater
table should be specified. Low pressure distribution
should be made an integral part of this system.
Finally, the Agent should have the option of monitoring
the performance of the field drainage tile before
issuing a septic system construction permit.
- 85 Dropping the requirement for DEQ concurrence on
Rural Areas Proposal is very ill-advised. It
effectively makes every county sanitarian a variance
officer for large parcels. Quite frankly, many Agents
are not qualified to be variance officers. Our
experience in Tillamook County is an obvious example
of what may happen if certain counties are left to
their own devices.

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WATER QUALITY CONTROL

T. Jack Osborne
November 18, 1980
Page 5

Also, once the word gets around that contract counties can grant Rural Areas Variances without involving DEQ, the pressure on the field sanitarians will increase greatly. This pressure will come from the applicant, land development interests, and local politicians. The county sanitarians will be much more vulnerable to these pressures than DEQ personnel.

However, the dropping of the concurrence requirement is merely a symptom of a much more serious problem - that of DEQ backing away from its responsibility of administering a uniform, consistent, technically competent, state-wide program for on-site sewage disposal. If DEQ continues in this direction of giving total authority and responsibility to the contract counties, the state will wind up with thirty-six individual programs. The counties will give lip service to the rules and the concept of a statewide program while administering the program however they please. As subsurface specialist positions are eliminated from the local DEQ offices, effective program supervision will cease. An audit by DEQ Headquarters staff every five years or so, will do little more than show the flag. Even if a major problem (such as Tillamook County) is found, DEQ would not have the qualified staff available to take over the program and straighten things out.

This direction of less state involvement and more local independence was tried in the early 1970's when the State Health Division had the program. It failed and was a major reason why the program was assigned to DEQ. DEQ should not now make the same error.

In closing, I want to thank you for including me in the rules drafting committee. Please call me if you have any questions about my comments.

Sincerely,

Bradley W. H. Prior, R. S.

Bradley W. H. Prior, R.S.
Supervising Sanitarian

kc

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 21 1980

WATER QUALITY CONTROL

Clyde W. Purcell

728 N.E. GREENWOOD
BEND, OREGON 97701

November 18, 1980

DEPARTMENT OF ENVIRONMENTAL QUALITY
2150 NE Studio Road
Bend, Oregon 97701

Gentlemen:

I believe the reasoning for the changes DEQ is proposing in the installation of subsurface drainfields is unfounded. The Central Oregon area has not experienced continuing problems to warrant such changes.

If these changes are inacted, consumers will pay due to a new rule being inacted because of isolated cases. Businessmen and government agencies alike should be working together to conserve housing cost for the consumer, not increase the costs.

Respectfully,


Clyde W. Purcell



November 18, 1980

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

Re: Proposed On-Site Sewage Disposal Rules - Written Testimony

Gentlemen:

Century West Engineering Corporation offers the following testimony in response to the Department's proposed On-Site Sewage Disposal Rules:

1. 34-71-100-(12) In the definition of "Failing System", the term "incompletely treated sewage" is not defined. The degree of treatment needed, to be in compliance, should be stated.
2. 340-71-220-(2bB) This statement on "a temporary water table" allows installation of disposal trenches in contact with the upper surface of the temporary water table. The definition of "Public Waters" (340-71-100 (22)) appears to include a "temporary water table". Since it is difficult to dispute that "incompletely treated sewage" is going to enter the groundwater under these conditions, this part of the Rules is in conflict with item 1 above.
3. 340-71-120 We support the concept of clearly defining agency jurisdiction areas.
4. 340-71-140-(1)(a) The large system fee of \$120 per 450 gallons is disproportionately high and should be reduced. The single lot site evaluation fee of \$120 covers mobilization, transportation, and site reconnaissance, in addition to examination of test pits. The large system fee should not reflect the complete duplication of efforts involved in making several single site evaluations at different locations.
5. 340-71-170 Specific checklists should be used for all precover inspections and should address and verify proper sizing, grade of lines, proper materials used, and unusual or unpredicted conditions encountered during installation such as shallow rock or groundwater not

seen in the initial site inspection. In addition to better precover inspection requirements, installer licensing should include training and examination. This becomes more important as the Rules are revised to allow more complex systems.

6. 340-71-220-(2)(c) This requirement to maintain separation from rapid or very rapid permeable materials does not make allowance for the presence of relatively restrictive material between the trench bottom and the permeable material, which would effectively prohibit downward water movement and/or provide treatment as effluent water passed through it. Neither is provision made for minimum depth to water. In areas where groundwater exists tens to hundreds of feet below the ground surface, this Rule is needlessly restrictive. We recommend this condition be revised so that (1) it does not apply in areas where a natural physical feature exists between the trench and the permeable materials, which will provide additional treatment and (2) it does not apply in areas not subject to groundwater contamination as shown by a geologic and/or hydrologic study.
7. 340-71-272-(2) See comments above under #6.

340-71-275-(3) A separation distance to groundwater should be specified and a "confining layer" should be defined.

340-71-275-(3)(c) Establishing an arbitrary upper limit for any given element, compound, or other measurable parameter appears to not take into account local geologic differences, hydrologic differences, climatologic differences, and background water quality levels in a given aquifer, surface water body, or drainage basin. In the case of a nitrate-nitrogen limit it is presumed that the limit of 5 mg/l was selected to allow a safety margin below the established drinking water limit of 10 mg/l. In many areas of Central Oregon, background nitrate-nitrogen levels are in the range of 0.1-0.5 mg/l and allowing an increase to 5 mg/l would amount to 10 to 50 fold increase. This appears to be administratively inconsistent with many parts of these Rules as well as with the Department's Water Quality Rules which address allowable increases of contaminants with respect to background conditions, recognizing statewide differences occur. This limit also appears to be environmentally unsound when one considers the increase in other "non-harmful" contaminants, which could accompany a substantial increase in nitrate-nitrogen concentration. Finally, a detailed study should be used not to verify whether a limit is reached, but rather to identify carrying capacity of the shallow aquifer and land above it. Limits should be based upon background water quality and standards established in terms of percent increase over background levels.

Department of Environmental Quality
November 19, 1980
Page 3

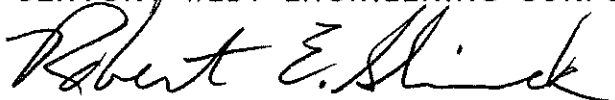
In summary, we generally support the intent of the Department's proposed Rules. There appear to be some inconsistencies which should be resolved. There also appears to be an effort to address the issue of "treatment" versus "disposal" of septic tank effluent. By not defining the result of "treatment" and of "disposal", the intent of some sections of the Proposed Rules becomes unclear. Specifically, the 48 inch separation requirement to a material with rapid to very rapid permeability clearly seems to address the concept of "treatment", but without a minimum separation distance established to groundwater, the need for a high level of treatment must be questioned. A similar argument could be made concerning the need for a "special" distribution system in areas not subject to groundwater contamination. Consideration of economic burden on property owners versus environmental protection needed and attainable should be very carefully weighed before requiring "improved" systems in areas where they may have no significant advantage.

Finally, we urge the Department to expand its regulatory emphasis beyond site selection for on-site systems to construction standards, practices, and control. Without more rigid inspection standards than are currently called for, and in light of the probable increase in numbers of complex systems, lack of construction control will likely result in continued chance of system failure due to improper installation, increased liability for installers, increased cost of system design and construction, and marginal improvement to the environment.

Thank you for this opportunity to comment on your Proposed Rules.

Very truly yours,

CENTURY WEST ENGINEERING CORPORATION



Robert E. Shimek, Director
Environmental Sciences Department

RES/gs

benton county health department

benton county public service building
530 N.W. 27th Street
Corvallis, Oregon 97330

November 17, 1980

General Health Administration/Information
& Vital Statistics
757-6835
Community Health Programs
757-6837
Environmental Health Programs
757-6841
Mental Health Programs
757-6844

To: Jack Osborne
From: Ron Smith *Ron*
Subject: More Comments on New Subsurface Draft

(1) Holding tanks and sumps average weight should be on record along with a calculated volume/foot. An appendix on bouyancy compensation will also be helpful.

(2) There is no minimum drop box area. We feel this may cause problems in pumping systems using Allied's 5 inch by 5 inch boxes.

(3) Who is to demonstrate what with curtain drains is unclear to me. Does this mean curtain drains will be optional with mottling below 24 inches? Does this mean lots are approvable after curtain drains demonstrate a consistent lowering of perched water in the drainfield area? Do we do winter water monitoring to determine this?

(4) Signs of saturation and effective soils definitions will have different approval rates. Regional workshops covering these interpretations and also alternate systems installation methods and what soils they could be used in would be useful. As correct interpretation may lead to higher levels of saturation and more inundation for standard systems than at least Benton and Linn County are now using, A built-in system of review at 5 year intervals would help to show how correct interpretations are.

Similar workshops for county planning staffs could give a general picture of what the new rules, especially new alternative systems mean in terms of usable land.

(5) A quarterly review of what the experimental committee is finding along with techniques, legal interpretations, and new applications that the Portland DEQ personnel have come up with would be useful in several ways. How a system is installed on a 45% slope, why a system has to be 50 feet from an intermittent stream, but only 20 feet from an agricultural drain. How a system with an automatic dosing siphon on an ag tile system is designed are all topics that could be covered that would give field personnel more ability to address new and proposed rules. What is really needed are ways of increasing information exchange as counties take on more responsibility.

RS/cs

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E V I E W E D
NOV 19 1980

WATER QUALITY CONTROL

W.Q. - SSSD - Osborne

2120 NE Meadow Lane
Bend, Oregon 97701
November 18, 1980

DEQ
2150 NE Studio Road
Bend, Oregon 97701

EGC
Hearing Section

NOV 24 1980

Dear Persons,

I have just read in the November 17, 1980 issue of the Bend Bulletin of your proposed rules changes for septic systems. You propose a low pressure pumping system to more evenly distribute the water in the drain field. This being an added cost of between \$1200 and \$2000 per property owner.

I agree with the need, but not with the method.

I would like to suggest that you consider using a drain field pipe with far less holes in it. This, with your slope change to 30 percent, as you proposed, would achieve the same goal. The cost would not be anymore than it now is, and it would not use any electric energy.

Although I am not in the market for a drain field at this time, I am an interested citizen.

Thank you,

Robert Summers

Robert Summers

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NOV 24 1980

Water Quality Division
Dept. of Environmental Quality

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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NOV 19 1980

BEND DISTRICT OFFICE



TRUCK STOP, INC.

P.O. Box 305 • Old Highway 99 • Wolf Creek, Oregon 97497 • 503-866-2422, 503-866-2521

November 17, 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 20 1980

Mr. Jack Osborne
Department of Environmental Quality
P.O. Box 1760
Portland, OR. 97207

WATER QUALITY CONTROL

Dear Mr. Osborne;

With regard to your proposed rule OAR 340-71-520 regarding large systems for sewage disposal, I have several comments. As of now I will not be able to attend any of your public hearings since I have conflicts on each of those dates. However, I hope that you take my considerations seriously and do not adopt these stringent requirements.

Section (2)(a)(A) state that a pressure distribution system will be required. I have objections because of the additional cost involved. I do not see why it is absolutely necessary. Does the additional cost to the consumer justify the pressure distribution system?

Section (2)(a)(B) requires a drainfield to be divided into units of 600 lineal feet each. After talking with our county health department they pointed out that this will be an additional cost to the property owner but only provides questionable benefits.

Section (2) (b) states that a "competent professional" will be required to prepare plans and specifications. This, of course, adds an enormous cost to any project that would fall into this category. Professional engineers are not cheap. Although in some cases they would be beneficial, in many other cases they would not be necessary. I strongly object to this required provision also.

But my main objection is to 2 (d) requiring the applicant to provide a written assessment of the impact to the quality of public waters and public health. You are basically insisting on an environmental impact statement which can only add a great cost to the project. There are no guidelines for this written assessment. This provision alone would make large

systems virtually impossible to construct.

My main objection to all of these rigid proposals is the fact that DEQ in the past has always appeared very inflexible in their attitude. A system of 2,000 gallons would be just as costly to meet the regulations as a very large system, 25,000 gallons. Nevertheless, the small fellow has to pay the same price. I would hope that the Environmental Quality Commission will reject these additional burdens the DEQ wants to place upon the taxpayers and citizens of Oregon.

Thank you for your time and input. I would hope that the entire large system proposal is rejected.

Sincerely yours,

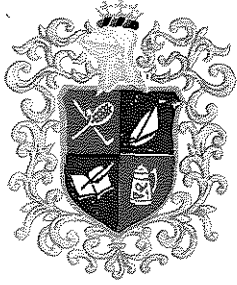


George R. Thompson

cc. Josephine County Health Department
Governor Victor Atiyeh
Senator E.D. "Debbs" Potts
Representative-elect George Trahern

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 20 1980

WATER QUALITY CONTROL



November 4, 1980
 4935 SE 75th Ave.
 Portland, Oregon 97206

Legislative Administration Committee
 S 401 State Capitol
 Salem Oregon

Dear Sirs:

I am writing to protest the D. E. Q changing the rules & regulations in regard to installing well & septic systems on our property at La Pine. A pressure system is far too expensive for retired people to install. We have had this property for 15 years expecting to retire here.

Please use your influence to see that the D. E. Q does not pursue this any further.

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NOV 13 1980

LEGISLATIVE
 ADMINISTRATION
 COMMITTEE

Very truly,

N. V. Tucker

State of Oregon
 DEPARTMENT OF ENVIRONMENT & QUALITY

RECEIVED

NOV 19 1980

WATER QUALITY C

Master



November 4, 1980
4935 SE 75th Ave.
Portland, Oregon 97206

Legislative Administration Committee
5401 State Capital
Salem Oregon

Dear Sirs:

I am writing to protest the D. E. Q. changing the rules & regulations in regard to installing well & septic systems on acre property at La Pine. A pressure system is far too expensive for retired people to install. We have had this property for 15 years expecting to retire here.

Please use your influence to see that the D. E. Q. does not pursue this any further.

RECEIVED

NOV 15 1980
LEGISLATIVE
ADMINISTRATION
COMMITTEE

Very truly,

N. H. Tucker

State of Oregon
DEPARTMENT OF ENVIRONMENT & QUALITY

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NOV 19 1980

WATER QUALITY C



**NORTHWEST
SOIL
CONSULTING**

Steve Wert, C.P.S.S.
SOIL SCIENTIST
9480 Garden Valley Rd.
Roseburg, Oregon 97470
673-4148

November 13, 1980

Mr. Jack Osborne
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Jack;

The following are comments on the proposed rule changes for January 1981. As you'll see, I have made some general comments and specific comments that are referenced to the pages in the new rules.

General

1. I understand the use of narrow trenches will be allowed on a case-by-case basis. However, there is no mention made of their use. Their use needs to be encouraged because they offer some real advantages over our present methods. They are not a panacea - just one more tool we need.

Concerns of whether the bottom or sidewall is absorbing the effluent are rather pointless. In actual practice, both are absorbing. The trenches I have watched in operation have had 8" of gravel in an 8" wide trench. The trenches received 100 gallons per dose. The trenches filled about four inches and then drained in a matter of six minutes. Both sidewalls and bottoms accepted the effluent.

2. Fills, whether they be capping type or deep fills, are nothing to be afraid of as long as they are installed and designed by competent people. They can be considerably less money than a sand-filter system. For example, most of the capping fills in Douglas County are costing about \$2700 to \$3500. That is the system installed and the cap in place. (The material is borrowed on site.) If material has to be transported to the site, the economic picture changes drastically.

Specific

Page 6. Requiring WPCE permits on flows over 5000 gallons is too restrictive, in my opinion. I think DEQ is selling itself too short. The Illahee project here in Douglas County has design flows of over 20,000 gallons/day. DEQ handled that one. I would recommend operating on a case-by-case basis. If, in the opinion of the DEQ, a project is very complicated and warrants a WPCF permit, then one can be required.

Page 35. 1 (d) Suggest using the term low chroma mottles (chromas of two or less) in the definition.

Page 37. (e) Suggest rewording this as follows: The site has been, in the opinion of the agent, incorrectly filled or modified. Fills properly installed are acceptable. (Rewording makes it sound more positive for fills.

Page 41. 8 (a) This is really intended for trickle flow distribution. It seems to me it is inappropriate for pressure distribution. Suggest that it be stated these are standards for trickle flow. (see comments for page 54.)

Page 48. 3 (a) I would not see anything wrong using a soil for the cap that is one textural class either side of the texture of the original soil except in the case of clay or silty clay. For the fine textured soils, the cap could be sized based on the infiltration capacity of the original soil. The cap could be made large enough so the effluent infiltrated into the original surface before it leaked out the sides.

Page 4 (d) Suggest adding a sentence that would allow 5' separation on uphill side.

Page 50. 2 (c) The sentence...Exposure and slope aspect may be taken into consideration...is confusing. Does it mean if the exposure is southerly, less room is required? Also, exposure and aspect are synonyms.

Note: Could not find Appendix A mentioned on Page 52.

Page 53. C A 2" pipe is too large to specify as a minimum. Too large a pump is required and in some cases, too much effluent is needed to fill the lines. North Carolina and Wisconsin both use 1½" most of the time.

I understand it is easier to figure friction losses when a 2" pipe is used. But it is not that big a deal to figure it for 1½".

Page 53. (D) There are too many shalls in this section. The design should be a little more flexible. North Carolina uses 1/8" holes for the most part, but they do allow 3/32". In some designs, a 3/32" is needed. They also use 2½-5' between holes. They have had no problem with 5' spacing.

Wisconsin and North Carolina recommend having the holes on the bottom of the pipe. What is the reason for having them on top? Having them on the bottom does not cause them to plug.

By having them down, the pipes can be placed on top of the gravel. That way, during construction, distribution can be checked and the gravel can be placed in one operation. Also, having them on the bottom prevents effluent from syphoning to a lower line. The syphoning could cause over-loading of one of the lines.

Page 54. (E) The caps should be the same type of material as the pipe. Otherwise, they leak. In other words, plastic should go to plastic. Iron caps won't work on plastic pipe for very long.

Page 54. (F) This statement will reduce much of the benefits from pressure dosing in silty and clayey soils. One of the main advantages of pressure dosing is maintaining aerobic conditions. Most of the work done by Dr. Jerry Tyler at Wisconsin indicates that two to three doses per day gives the best results in silty soils. Five doses would be more appropriate in coarse textured soils.

The number of cycles should be based on soil texture, not a flat rate.

Page 54. (C) Suggest adding a sentence to this section something like the one that follows: Where narrow trenches (6-8") are used, and spacing of the trenches is 5', one half of the area for a standard drainfield is needed.

Page 54. (d) (A) Suggest the following: Pressurized drainfield trenches shall be constructed using (a) the specification for the standard drainfield trench; (b) guidelines listed below; or (c) as otherwise allowed by the Department on a case-by-case basis.

Guidelines for Pressure Dosed Drainfields

Length of trench	70 feet
Bottom width	6-24 inches
Min. depth of trench	12 inches
Min. distance between disposal trenches (center to center)	5 feet

Page 54. C. Absolutely NO!

If the intrusion of sandy soil into the filter material is a problem, then I suggest using pea gravel as the filler material. This has been successfully used by Dr. Timothy Winneberger.

Sidewalls contribute significantly to the absorption area. They should not be shut off by an impervious material.

Page 55. (G) This sentence is out of place, it seems. Does it belong in section 340-71-280?

Page 61. The minimums seem to be a little over designed. Based on local experience, I would recommend the following:

	<u>sq.ft/150 gallons</u>
Gravel to sandy loam	100
Loam to clay loam	100
Silty clay loam to clay	150
Saprolite or fractured bedrock	100
Shrink-swell clays	275

Page 98. 2 (b) In my opinion, 600 feet is too small. If a large community system was going to be dosed, it would be impractical to require a pump for each 600 feet of drainfield. Ilahee would have required 30 separate drainfields. Imagine the cost of 30 pumps or 30 dosing syphons.

Table 1. Item 7. I feel a 20' separation from a curtain drain upslope is too much. I think 10' would be more appropriate. Maybe 5' on slopes over say 10%.

Also, a 50' separation downslope is in conflict with the Tile Dewatering Systems. On page 69, it states 20' is the separation distance.

Item 9. Cuts of 30" is really not much of a problem. I don't think Item 9 is needed. If cuts get over six feet, they are covered by Item 10 anyway.

Diagram 9. Section A-A shows a 4" PVC pipe collecting effluent in the bottom of the sandfilter, which then goes to the drainfield. Since the effluent is very clean coming through the sand, it would seem a 1 $\frac{1}{4}$ " pipe would be adequate. This size would also be adequate for the drainfield, in my opinion.

Questions

1. Will curtain drains be allowed on sandfilter sites?
2. Will soil modifications be allowed on sandfilter sites such as fills?

Thank you for sending me a copy of the rules and soliciting my comments. My comments are intended to be constructive.

Sincerely;


Steve Wert

LINN COUNTY DEPARTMENT OF HEALTH SERVICES
COURTHOUSE ANNEX

P. O. Box 100, Albany, Oregon 97321



Michael McCracken, M.S.
Administrator

Benjamin Bonnlander, M.D., M.P.H.
Health Officer

Dennis D. Dahlen, M.S.W.
Mental Health Director

JoAline Olson, R.N.
Public Health Director

Richard Swenson, R.S.
Environmental Health Director

Public Health 967-3888
Mental Health 967-3866
Environmental Health 967-3821
Administration 967-3905

November 21, 1980

Mr. Jack Osborne
Department of Environmental Quality
Post Office Box 1760
Portland, OR 97207

RECEIVED
NOV 24 1980

Water Quality Division
Dept. of Environmental Quality

Re: Written Testimony on Proposed Rules for
On-site Sewage Disposal

Dear Jack:

I would like to submit testimony on three items in the rules which have been discussed at Diamond Lake and the November 6 meeting in Portland, but which have not been resolved by my satisfaction. I have serious concerns with the following.

340-71-120(5) - "Waste Management Specialist" -- I am all in favor of upgrading the technical skills and professionalism of the people working in the field, but job qualifications should not be included in these rules. The DEQ can adopt hiring practices (as it already has) that ensure job openings will be filled by qualified people. Through its agreements with counties, the DEQ can also require that entry level personnel in the counties meet certain minimum educational qualifications.

340-71-220(2)(b)(B) - "Temporary Water Table" -- The minimum depth of 24 inches to a temporary water table evolved from the thinking that a standard 24-inch deep drainfield should not be in contact with saturated soil for extended periods of time. I still feel this is the "healthiest" approach to take. HOWEVER, using the "Conditions Associated with Saturation" to make this determination, we will be called upon to approve sites where the water table will be well above 24 inches for several weeks if not months every winter. This is because, according to DEQ soil scientists, only a condition in which each ped face is literally covered with distinct mottling falls within the definition of "Conditions Associated with Saturation".

I agree that we need measurable standards, and I agree that soil science is the only approach that offers uniform credibility.

-- continued

Mr. Jack Osborne
November 21, 1980
Page 2

SO I WOULD STRONGLY URGE CONSIDERATION OF A 30-INCH MINIMUM DEPTH TO A TEMPORARY WATER TABLE FOR USE OF STANDARD SYSTEMS. Especially since we have so many alternatives which address wetter conditions.

340-71-220(2)(B)(i) - "Curtain Drains" -- I agree that curtain drains should not be utilized on sites that don't meet the rules unless they can be shown to be effective. However, I feel that we should have the option of requiring them on a marginal site (i.e., 30 inches to heavy clay and 24 inches to a temporary water table) without having the burden of demonstrating their effectiveness.

Thank you for taking time to consider these items. All in all, I feel that you and your staff have done an excellent job with these rules. The new section on connections to existing systems is especially clear and workable compared to previous versions.

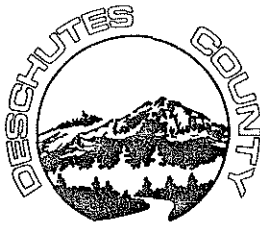
Sincerely,

Bob Wilson

Bob N. Wilson, R.S., Field Supervisor
Environmental Health Services

BNW:nlp

cc: Bob Paeth, DEQ
Gene Clemens, Polk Co.
Bob Foster, Marion Co.
Ron Smith, Benton Co.
Roy Burns, Lane Co.



BOARD OF COMMISSIONERS

BEND, OREGON 97701
(503) 382-4000 ext. 200

Albert A. Young

Clay C. Shepard

Robert C. Paulson

November 24, 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 28 1980

Mr. William Young, Director
Department of Environmental Quality
522 S.W. Fifth Avenue
P. O. Box 1760
Portland, Oregon 97207

WATER QUALITY CONTROL

Dear Bill:

This is to call to your attention our concern regarding the new drainfield and septic tank proposals being advanced by D.E.Q. It is our understanding that if such proposals become effective, low pressure drainage systems requiring a full acre of land will be required in areas of the state which have coarse grain soil conditions.

Such restrictive measures would be especially burdensome in Deschutes County because of (1) the larger number of undeveloped 1/2 acre lots which exist. Many of these lots have received feasibility approval and (2) the extremely differing geologic characteristics found within Deschutes county. In the western part of the county, the water table is several hundred feet deep, while in the southern part, in and around LaPine, the water table is very shallow. Imposing identical standards upon areas with such different characteristics seems completely unreasonable.

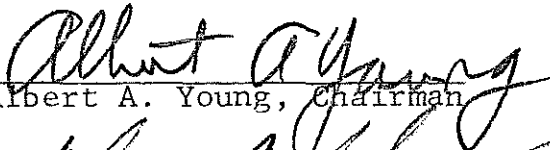
Furthermore, the Environmental Protection Agency, the Department of Environmental Quality and Deschutes County are presently involved in a 208 Water Study of the LaPine aquifer. This thirty month study which began in July of this year is scheduled for completion in January of 1983. It is assumed that this study will reveal the existence of any problems with the existing septic systems in this region. If problems are discovered, appropriate corrections will be undertaken.


The imposition of the restrictive measures called for in these new proposals would prevent home building on many existing lots. This would cause considerable economic hardship for the lot owners. It would also create severe strain for the building industry.

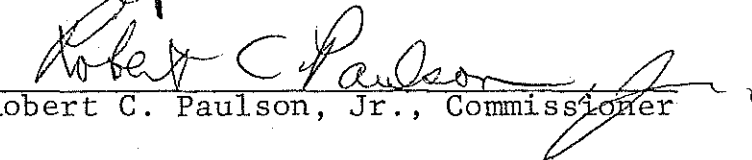
We are determined that the quality of water throughout the county be protected. We feel, however, that the new rules will in no way enhance water purity in the Sisters, Cloverdale and Plainview areas where the water table is in excess of 200 feet. We further believe that the more deliberate, thorough approach in the LaPine area via the 208 Water Study will insure our objective while reducing the problems described above.

We urge your careful reconsideration of these new rule changes.

Sincerely,


Albert A. Young, Chairman


Clay C. Shepard, Commissioner


Robert C. Paulson, Jr., Commissioner

BOC:jr:cs
cc/file

Mr. Jack Osborne



STATE OF OREGON

INTEROFFICE MEMO

TO: Jack Osborne

DATE: November 24, 1980

FROM: Dick Nichols

SUBJECT: Summary of Hearing Testimony
SSSD Hearing - November 20, 1980 - Bend

There were several major points that were mentioned in most of the testimony taken. First, many people were unaware of any evidence of system failures or groundwater contamination because of poorly operating systems. They felt that requiring either low-pressure systems or additional drainfield was unjustified when DEQ could not show any problem or any discernible benefit. Without proper justification, the added costs for the more complex and expanded subsurface sewage disposal systems would just add to the cost of a home. Many people thought the proposed rules would add to inflation.

The second major point centered around DEQ's apparent inconsistency of proposing rules that would severely restrict development in the LaPine area, while at the same time funding a 208 groundwater study. The 208 study intends to determine aquifer protection methods. Why impose requirements now that may turn out to be unnecessary?

The third major concern was the restriction of low-pressure systems to a one-acre minimum lot. Many people thought this would impose an extreme hardship on people, particularly those who owned one-half acre lots and who intended to retire on them. Most people could not see any justification for such a restriction.

A fourth major topic that was voiced dealt with proposed fees. Most people agreed that the fees should be commensurate with the time spent in evaluating the properties. Many felt that the proposed rules did not do this. Many people felt that the money should not be used for anything other than the field portion of the program. One person did not like the waiver of variance fees for in-state people over 65.

A fifth item addressed was the validity of an approved suitability statement. Most people felt that once a lot was approved by DEQ or its agent, the statement should remain valid forever, regardless of any rule changes. Additionally, many people felt that if a lot was approved for a standard system, the Department should not require a more complex system later, if the rules change. Many people felt that the suitability statement must remain valid forever to protect people who had purchased land, subject to SSSD approval.

Other points of testimony were:

1. Many people felt that the rules should consider local conditions. Rules drafted for the Willamette Valley should not be applied in Deschutes County because the conditions, i.e., soil, geologic, climatic, etc., are different.



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SP*75683-125

2. Some people stated that the use of soil mottling for determining water table levels was inappropriate and inaccurate.
3. Some people felt that the Department's public notice for the hearing was poor.
4. Some felt that the SSSD program should not be run by the state, but should be controlled locally.
5. Several persons felt that the rules were in poor order and sloppy.
6. One person felt that the geographic rule should be readopted to fit the needs of Central Oregon.
7. One person felt that before rules could be adopted, the Department should have to do an economic impact study to determine potential costs to the public.
8. One person felt that all existing lots should have septic approval grandfathered, or at least that owners of unapproved lots should be compensated.
9. One person felt that the proposed rules required too large of a dose tank when the dose was only 90-gallons per dose.
10. One person complained that it currently took too long to get a lot approved. The new rules would make it longer.
11. One person felt that the popcorn pumice was not the same as regular gravel and that the DEQ should look at this before requiring low-pressure.
12. One person felt that the criteria for different alternative systems were confusing and inconsistent. She also stated that certain diagrams referred to in the rules were not provided. This person felt that development of alternative systems was good.
13. One person felt that the existing rules are inappropriate. She cited examples such as the Terrebonne failing systems that were allowed by rules, but failed anyway. She also cited a property in Sisters that required a sand filter where it was 100 feet to water. She felt this was a complex, expensive system that was not justified for the conditions.
14. One person stated that the DEQ should look at soil mottling in LaPine in light of the deep soil freezing in the area. He felt this may explain some of the mottling that apparently does not reflect actual water.
15. One person felt that the one major area of contamination was the LaPine core area. He felt that the 208 study should look at ways to renovate the failing systems in the area and that this would solve the problems.

16. One person was an installer who also felt that if there were any problems in LaPine it was because of poorly built systems. He had repaired many, but most of these were very poor, i.e., 55-gallon barrels, very short drain lines, no drain rock, etc.
17. One person did not like the landscaping requirement in the capping fill rules. He felt that it placed a requirement on the installer that would run contrary to the wishes of the home owner. The home owner should deal with the landscaping.
18. One person stated that the more complex systems would require too much expertise to install.
19. One person felt that, particularly with the more complex systems, additional control of construction would be needed to assure proper installation.
20. One person felt that the people who draft the rules should be available to justify the rules and answer questions. He felt that the rules were based upon conclusions for which there was no scientific basis.
21. One person felt that DEQ should look at simpler solutions, not more complex systems.
22. One person felt that the certificate of satisfactory completion on prior approvals should state that the construction was okay, but that the site did not meet current siting criteria. He felt that stating that the system did not meet current rules inferred that the construction was faulty, which it was not.
23. One testifier stated that nitrate would only be a problem on denser development, not on rural development.
24. One person felt expanding the requirements for drainfield lengths would exceed the supply of drainfield rock in the county and would make systems and drainfield rock much more expensive.
25. One person felt that DEQ should be more flexible and should try to work with a lot owner to make a system fit on a lot. Sometimes an owner has to remove trees to make room for a system when it might not be necessary.
26. Several persons felt that the rules should define specifically who is responsible for plumbing and wiring the pump systems.
27. One person felt the more sophisticated systems would require more owner maintenance. This maintenance would probably not be given and, as a consequence, there would be more failures and health problems than would have occurred had simple systems been installed.
28. One person felt that the drainfield lines should be installed with some fall in the lines.

29. One person felt that there was not enough time given to the public to adequately review the proposed rules.
30. One person felt that to change the septic tank inlet from an elbow to a tee would cause odor problems. He also felt that the rule changes on the minimum liquid level would prevent him from manufacturing a low profile tank that could be used in the rocky areas of Central Oregon. He also felt that septic tank specification changes were very expensive because it required him to change his concrete forms.
31. One person was concerned that the change to low-pressure would require a lot owner to pay another inspection fee for the inspector to determine if low-pressure was needed. She also wondered if DEQ would deny septic tanks on lots less than 10 acres because of the county's 10-acre minimum zoning requirements. (Note: In this matter, I told the testifier that (a) no inspection fee would be charged if suitability had been granted, and (b) the 10-acre minimum only applied to the platting of new lots.)
32. One person felt that DEQ should only offer different types of SSSD systems, but the owner or installer should decide which one to use. The person who made the decision would be responsible if the system failed. This person also felt that DEQ should design the system if they wanted plans. He also felt that DEQ's rules encourage large community systems which were not necessarily the best.
33. One person felt that the added drainfield requirements would make it impossible to meet property setback requirements. He felt this should not be allowed to happen.
34. One person felt that rules should not be adopted until they are needed because DEQ never reverses itself.
35. One person questioned what would happen with low-pressure systems during power failures.

Also attached is the testimony that was written. It was not summarized because it appeared to be fairly concise.

RJN:dmc

Attachments



ON-SITE WASTEWATER SYSTEMS

61555 Parrell Road

Suite H

Bend, Oregon 97701

Bus. 388-3995

Res. 389-1419



DEC 07 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
DEC 1 1980

November 25, 1980

Jack Osborne
Subsurface and Alternative Systems Program
Department of Environmental Quality
P.O. Box 1760
Portland, OR 97204

WATER QUALITY CONTROL

SUBJECT: Proposed New Rules on Subsurface Sewage Disposal,
OAR Chapter 340

Dear Jack:

Alan Caldwell, developer of Eagle Springs in Crook County and I had the opportunity to attend the Bend rules hearing on November 20th. Many very good comments were given which need to be considered.

We feel that your Department's rule package helps a great deal to tie all the legislative changes together and provides better clarification on many previously hard to interpret sections. However, it has very serious problems with respect to fees and the use of low pressure distribution systems.

The fee section identifies an evaluation fee of \$120.00 for each 450 gallons of sewage flow for larger systems. This is very unreasonable. Fees should reflect cost for services only. Mr. Caldwell will have many large systems and could be subject to extreme fees. A fee of \$1200 for a 4500 gallon system is too much. My experience shows that such a system would cost about \$20,000 to install. A \$1200.00 fee represents 6 percent of the cost. Your fee increase would represent a ten fold increase in fees over what is now being charged. This obviously is hard to justify.

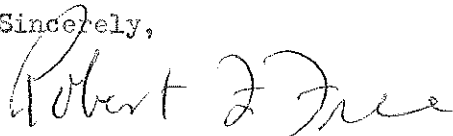
The low pressure distribution system should be salvaged and kept in the rules for "rapidly draining soils" where there is a "real" concern for water quality. There are many situations where loamy sands overlie several hundred feet of basalt which don't appear to warrant expensive low pressure systems.

Page 2

In the LaPine area and many other areas of Oregon with high regional watertables such a system may be needed. However, in the interest of being fair to a person's investment and also considering that we really don't have all the facts about soil treatment (hence the 208 study for LaPine), a person should be able to use his property as long as it meets the rules for a standard system.

I support a grandfathering provision for existing lots of record in the LaPine area until we see the outcome of the present 208 study.

Sincerely,

A handwritten signature in cursive script that reads "Robert F. Free". The signature is written in dark ink and is positioned above the typed name.

Robert F. Free

RFF:skm

cc: Tom Throop, State Representative
Alan Caldwell

SSD - Gen

EAC
Hearing Section

DEC 02 1980
November 21, 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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NOV 24 1980

D. E. Q.
2150 N. E. Studio Road
Bend, Oregon 97701

BEND DISTRICT OFFICE

Attention:

Re: Rule changes on septic tank systems.

This is to protest the proposed requirement for low-pressure drainfields in the total LaPine area. An article appeared in this weeks issue of the "Frontier" regarding the installation of a pump to spread the wastes. It also mentioned an estimated additional cost of \$1200. to \$2000. for every future constructed place if the new rules are adopted.

Nowhere was mentioned the actual boundries of the proposed area. Is it just for the downtown shop area or way out in the country-side? There is a big difference in terrain and soil conditions in various parts of our land. Where we are located all wells are between 65 and 70 feet deep. By the time any wastes goes through that distance, even going straight down, it should be purified.

Present laws require a distance of 100 feet from a well to septic tank, also large rocks must line the drainfield. Because of the latter requirement most of the waste materials should be trapped before it ever reaches the outer soils. County inspectors approve these all over this State so they should be OK.

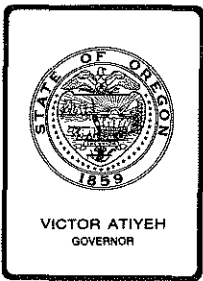
Perhaps where the water table is shallow some corrective measures are advisable, but I believe that is only in a small part of this area. Nothing was written about the existing old problems only about restrictions for new construction.

We believe the present proposal makes the same kind of sense as when everyone with good eyesight is required to wear glasses because one cross-eyed kid requires them!

Mr. & Mrs. David J. Laymon
15740 Cornell Drive
LaPine, Oregon 97739

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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DEC 1 1980

WATER QUALITY CONTROL



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. U, January 30, 1981, EQC Meeting

Adoption of Rules Governing On-Site Sewage Disposal Fees for Clackamas County, Proposed OAR 340-71-140(2)(b) or Existing 340-71-030(2).

Background and Problem Statement

ORS 454.745(4) provides that the Commission at the request of the Director or any Contract County, may by rule increase fees above the maximum levels established in Subsection (1) of ORS 454.745. Fee increases permitted by the Commission shall be based upon actual costs for efficiently conducted minimum services as developed by the Director or Contract County.

Clackamas County has requested that the County's fees be increased above the maximum now established in ORS 454.745. With increasing program costs, Clackamas County feels that an increase is necessary in order to maintain an adequate level of service.

Clackamas County has developed fee information upon which the proposal is based. That information is contained in Attachment A.

At its December 19, 1980 meeting, the Commission authorized a public hearing to consider the question of adopting a new fee schedule for on-site sewage program in Clackamas County. The public hearing was held January 5, 1981, in Oregon City. A hearing officer's report is attached (Attachment B).

Alternatives and Evaluation

Alternatives are:

1. Continue fees at the present maximum established in ORS 454.745.
2. Increase maximum fees above present levels for Clackamas County.



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In evaluating these two alternatives the latter appears most appropriate. Program costs for contract counties and the Department have increased dramatically since present fees were established. In many cases, cost increases are a result of numerous inspection visits required for alternative system construction control. There is a general need to generate additional revenue to maintain an efficient level of program services.

Summation

1. The Commission may by rule, increase maximum subsurface fees established in ORS 454.745 at the request of the Director or any Contract County.
2. Clackamas County has requested that maximum fee levels established in ORS 454.745 be increased for that County.
3. The Commission authorized a public hearing at its December 19, 1980 meeting.
4. A public hearing was held in Oregon City on January 5, 1981.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission adopt rules governing on-site sewage disposal fees to be charged by Clackamas County to be integrated into proposed On-site Sewage Disposal Rules (340-71-100 to 71-600) as OAR 340-71-140(2)(b), if adopted this date. In the event the Commission fails to adopt the Rule Package 340-71-100 to 71-600 Clackamas County fees schedule would be adopted as 340-71-030(2) in existing Rules.



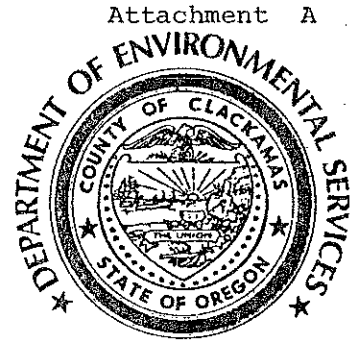
William H. Young

Attachments: 4

- "A" Clackamas County's Analysis of Subsurface Fees
- "B" Hearings Officer's Report
- "C" Draft Statement of Need
- "D" Draft of Proposed Rule

J. Jack Osborne:l
229-6218
December 31, 1980
XL248 (1)

MEMORANDUM



MEMO TO: John C. McIntyre
Director

FROM: Richard L. Polson *R.L.P.*
Chief Soil Scientist

DATE: November 14, 1980

SUBJ: Proposed changes in fees for services in the Soils Section,
Development Services Division

902 ABERNETHY ROAD WINSTON W. KURTH
OREGON CITY, OREGON 97045 Assistant Director
(503) 655-8521 DON D. BROADSWORD
Operations Director
DAVID J. ABRAHAM
Utilities Director
DAVID R. SEIGNEUR
Planning Director
JOHN C. McINTYRE RICHARD L. DOPP
Director Development
Services
Administrator

The Department of Environmental Quality (DEQ) is proposing significant revisions in the rules under which we operate. These changes will allow us to modify our operations so we can stay in harmony with the regulations. For the past couple months we have also been examining our own fiscal and organization posture. The results of this effort suggest that (1) we can eliminate some of the inefficiencies in our system, thereby reducing costs, (2) a new way of handling soil tests needs to be developed, and (3) a new fee schedule, tailored to more accurately reflect our costs, should be developed.

In order to increase efficiency, some of our existing procedures have already been streamlined. We are developing form letters that take less time to fill out and type, and will eliminate forms that are of marginal value. Effective January 1, 1981, we will be adopting a new procedure for soil tests that should give better results than past practices. These steps should reduce our costs of operation slightly, but increase efficiency significantly. We have also done a cost/revenue study on our section. The results of this study show that our section has collected between 41 and 62 percent of the monies necessary to pay our costs. The remainder of our costs come from building permit revenues. For the past year or two the percentage of costs paid by revenues has declined slightly. We would like our section to cover 50 to 60 percent of its cost through revenue collection, and with this in mind propose the attached fee schedule. Some fees have been increased, one is reduced, and some fees are unchanged. The following paragraphs will discuss the fees where changes are proposed.

The fee for soil feasibility studies is increased from \$50 to \$75. The average cost for processing such studies is about \$124. This 50 percent increase is due to our cost increases plus our intention to offer greater service with each application. We will look at more test holes and be more thorough in completing each study. The new fee is still substantially less than the \$120 fee charged by the DEQ and some contract counties.



Page 2
John C. McIntyre
November 14, 1980

Several changes are proposed for the septic tank permit program. The current fee for a permit for any system is \$40. We propose to charge \$50 for any type of system where only a single inspection should be necessary for approval. Those systems that are more complex (requiring 2 or 3 inspections) will require an \$80 fee. Sand filter systems, which require a thorough plan review as well as at least 3 or 4 inspections, will cost \$100, split between a \$25 plan check fee and a \$75 construction permit fee. Large systems, such as for mobile home parks, restaurants, or schools, require much more work at both the planning and construction stage; thus, the new fee. The alteration permit fee is new and covers changes or expansions in systems where no failure is involved.

The fee for pumper truck inspections is reduced from \$25 to \$15. The time and energy involved in these inspections does not warrant the \$25 fee.

The fees for soil investigations have been changed slightly. We will not do investigations on parcels smaller than 5 acres after January 1, 1981. These parcels will be handled by feasibility studies. The minimum fee for 5 acres to 7 acres will be \$150. All other fees are unchanged.

The fee for the septic permits are higher than those permitted by the DEQ rules. In order to charge such fees, our fee schedule must be approved by both the Board of County Commissioners and the Environmental Quality Commission (EQC). House Bill 2111, Chapter 591, Oregon Law 1979 requires that fees must not exceed the cost of operating the program. Based on our projected work load, our revenue for the current fiscal year should range between \$133,000 and \$158,000. Expected expenses should be near the \$248,000 level. We are in no danger of violating the law in this regard. Further, our proposal will more equitably distribute the cost of the program to the customer receiving the services.

If you agree with these changes, I would like to cut a court order to be presented to the County Commissioners. Hopefully, the Commissioners can act soon enough so that this schedule can be presented to the EQC at their mid-December meeting.

Thank you for your time and cooperation.

RICHARD L. POLSON - Chief Soil Scientist
Development Services Division

/rn

Attachment

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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NOV 25 1980

WATER QUALITY CONTROL

Assumptions:

Number of Studies:

Feasibilities	:	750 to 900 per year
E.S.R.	:	450 to 500 per year
Septic Permits	:	950 to 1100 per year
Soil Investigations:		75 to 100 per year

Expected Revenue:

Feasibilities	:	\$56,250 to \$67,500 per year
Exist. Syst. Rev.	:	\$18,000 to \$20,000 per year
Septic Permits	:	\$47,500 to \$55,000 per year
Soil Invesigations	:	\$12,000 to \$16,000 per year

TOTALS \$133,750 to \$158,500 per year income

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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WATER QUALITY CONTROL

MEMO TO: Richard L. Dopp
Administrator
Development Services Division

FROM: Richard L. Polson
Chief Soil Scientist

DATE: September 10, 1980

SUBJ: Cost Analysis from January 1, 1980 to June 30, 1980
for Soils Section, Development Services



In order to determine if any changes are necessary or warranted in my section, I have studied the revenues versus the cost of the four major areas within my responsibility. The data is summarized in the table below. As you can see, no portion of our program approaches paying for itself. While this is not unexpected, perhaps the magnitude of the gap may be. The following analysis of the meaning of these numbers is given.

Within the above time frame, data was provided to show cost breakdowns by job code and by project number. Employees included in the analysis were myself, John Borge, Cathy Cartmill, Lee Grimes, Bruce Henderson, Dan Bush and Lew Meteliz. Omitted were Pat Totten, Karon Beers and any costs due to you, Jerry, Fron or other incidental personnel. Table 1 shows the number of studies completed in the 6 month time period for each category. Table 2 shows the direct and total expenses attributed to each job. The total cost was calculated by determining the percentage of our total expenses covered by direct costs. Assuming the remaining percentage can be called indirect costs, the percent of expenses covered by indirect costs is 61.2 percent. Thus, if each direct cost is multiplied by 2.58, a total cost can be calculated.

Table 3 is a data summary. The data show that feasibility study fees pay about half of what it costs to complete the average study. All other portions of our program pay between 32 and 38 percent of the operating expense. I do not find the data concerning existing system reviews or construction permits surprising, and would anticipate similar data if other time periods were sampled. However, the number of soil investigations has fallen sharply this year, so the numbers shown here are well below the norms that I would have expected over the previous four or five years.

If the data provided is assumed to be roughly accurate, some interesting questions need to be asked. At what level or percentage of overall expenses should the Soils Section be expected to function? How do the numbers shown here compare to data gathered during the same period in other years? Can one assume that the current method of accounting accurately reflects true costs? Each of these questions has implications that may be decisive in determining whether any changes in our fee schedule can be justified.

The second question above should be answered first, since it would be difficult to justify an upward adjustment of fees if we are now collecting about the same or a greater percentage of our expenses through our current fee schedule. I have no data on that at hand; if you have it, it would be useful in this analysis. If not, perhaps the information can be retrieved from accounting.

Assuming that some adjustment of fees is indicated, then some target income level as a percent of expenses should be set. Below are three possible methods for adjusting fees to achieve 50, 60 or 70 percent of our operating expenses.

1. 50%

Total Expenses \$143,000 - Income Needed \$71,500

- a) Soil Feasibilities - at 400 studies/6 mos., a \$10.00 increase in fees would generate \$4,000.
- b) Septic Tank Permits - at 330 permits/6 mos., a fee increase of \$15.00 for new construction would result in an increase of approximately \$5000. The fee for the remaining repair permits would be unchanged at \$25.00, to encourage parties with failing systems to repair at minimum cost.
- c) Sand Filters - preliminary data indicate that the cost of processing and plan checking sand filter applications is about \$100. The cost for all inspections on these systems is also about \$100. Thus, a minimum fee of \$120 for a sand filter installation permit seems justified. This fee would add about \$1000 to our 6 months income picture.
- d) Existing System Reviews - a \$10 increase for about 450 studies per 6 months would add \$4500 to revenues.

TOTAL INCREASE IN REVENUES	\$14,500
REVENUE (current)	\$55,500
TOTAL PROJECTED REVENUE	\$70,000

The remaining \$1500 could, in all probability, be made up through an increased demand for soil investigations and other miscellaneous fees.

2. 60%

Total Expenses \$143,000 - Income Needed \$85,800

- a) Soil Feasibilities - increase fees by \$20.00 would increase income \$8000.
- b) Septic Tank Permits - increase fees across the board by \$20.00 would increase income by \$9000. Sand filter permits would be as above, adding another \$1000 to income.

- c) Existing System Reviews - increase fee \$10.00 would add \$4500 to revenues.
- d) Increase soil investigation fees by 25 percent. Assuming a return to normalcy in the number of investigation requests, this fee increase would generate between \$5000 and \$8000 in revenue each 6 months.

TOTAL INCREASE IN REVENUES	\$27,500 to \$30,500
CURRENT REVENUE	\$55,000
TOTAL PROJECTED REVENUE	<u>\$82,500 to \$85,500</u>

3. 70%

Total Expenses \$143,000 - Income Needed \$100,100

- a) Soil Feasibilities - increase fees by \$50 for a net revenue increase of \$20,000.
- b) Septic Tank Permits - increase fees by \$25 across the board, resulting in a net increase in revenue of \$11,250. Increase fees to cover sand filters to \$100, resulting in increased revenues of \$1000.
- c) Existing System Reviews - increase fees \$10 to add \$4500 to net revenues.
- d) Soil Investigations - increase fees by 30 percent to add \$6-9,000 to net revenues.

TOTAL INCREASE IN REVENUES	\$42,700 to \$46,700
CURRENT REVENUE	\$55,000
TOTAL PROJECTED REVENUE	<u>\$97,700 to \$101,700</u>

This data is summarized in Table 4. These numbers are useful only after the question in the previous paragraph is answered.

A final question that needs to be addressed is whether the current cost accounting system gives us a reasonable estimate of costs. I am reasonably sure, after studying the data, that our accounting techniques could work, but currently miss the mark somewhat because the staff is not fully aware of how to use the appropriate codes, or the impact of the codes on the department's function. A quick training session appears to be called for.

In summary, this section is currently supplying about 39 percent of the revenue required to support it. Proposed increases in revenue through fee changes are within the framework of current DEQ rules. However, some basic questions must be resolved before any changes in fees are considered. These are:

1. At what level of revenue (as a percent of cost) should the Soils Section operate?
2. Can any proposed increase in our fees be justified politically, in terms of public acceptance or the long-term inflation involved with the Soils Section fee schedule?

Page 4
Richard L. Dopp
September 10, 1980

If you have a target income level in mind, or need more data, let me know and we can discuss what steps should be taken next.

RICHARD L. POLSON - Chief Soil Scientist
Development Services Division

/rn

Attachments

Office of Oregon
Department of Environmental Quality
L. J. W. E. D.
NOV 25 1980
WATER QUALITY CONTROL

TABLE I
SOURCES OF REVENUE - SOILS SECTION
JANUARY 1, 1980 to JUNE 30, 1980

<u>PROJECT</u>	<u>NUMBER PERFORMED</u>
Soil Feasibilities	388
Septic Tank Permits	455
Existing System Reviews	439
Soil Investigations	54

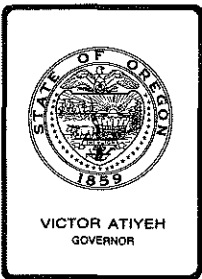
TABLE II
DIRECT AND TOTAL EXPENSES ASSOCIATED WITH
PROJECTS IN SOILS SECTION

<u>PROJECT</u>	<u>AVERAGE DIRECT COST</u>	<u>AVERAGE TOTAL COST</u>
Feasibilities	\$ 48.18	\$124.18
Construction Permits	\$ 33.02	\$ 85.19
Existing System Reviews	\$ 26.71	\$ 68.91
Soil Investigations	\$186.77	\$481.87

TABLE III
DATA SUMMARY

Type of Study	Avg. Direct Cost to Process	Avg. Total Cost to Process (Direct & Indirect Expenses)	Avg. Revenue Per Study	Percentage of Costs Paid by Revenue	Current Fee Schedule
1. Soil Feasibility	\$48.18	\$124.18	\$ 60.31	48.6%	\$50/\$90
2. Existing System Reviews	\$26.71	\$ 68.91	\$ 24.48	35.5%	\$40
3. Construction Permits	\$33.02	\$ 85.19	\$ 32.71	38.4%	\$24/\$40
4. Soil Investigation	\$186.77	\$481.87	\$155.96	32.4%	Variable

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
NOV 25 1980
WATER QUALITY CONTROL



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Sherman O. Olson, Jr., Hearings Officer

Subject: Report on Public Hearing held January 5, 1981, on Proposed Amendment to Rules Governing On-Site Sewage Disposal Fees for Clackamas County, OAR 340-71-140(2)(b)

Summary of Procedure

Pursuant to Public Notice, a public hearing was convened at the Clackamas County Department of Environmental Services, 902 Abernethy Road, Oregon City, on January 5, 1981, at 10 a.m. The purpose of the hearing was to receive testimony regarding proposed amendments to the rules governing on-site sewage disposal fees for Clackamas County.

Summary of Testimony

Except for the hearings officer, no one else attended the hearing. No testimony was offered for consideration.

Respectfully submitted,

Sherman O. Olson, Jr.
Hearings Officer

SOO:1
XL260 (1)



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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of The Adoption)	Statutory Authority,
of Rule 340-71-140 (2) (b))	Statement of Need,
Establishing a Fee Schedule for)	Principal Documents Relied Upon,
On-Site Sewage Disposal Permits)	and Statement of Fiscal Impact
and Services in Clackamas County)	

1. Citation of Statutory Authority: ORS 454.625, which authorizes the Environmental Quality Commission to adopt rules pertaining to subsurface sewage disposal and ORS 454.745 which establishes fees to be charged for on-site sewage disposal permits and services.
2. Need for Rule: Clackamas County has experienced an increase in costs for providing services, issuing permits and general administration of the on-site sewage disposal program. In order to maintain the present level of service, a general fee increase is necessary. The proposed fee increase will support approximately sixty percent of the on-site sewage disposal program.
3. Documents relied upon in proposal of the rule:
 - a. Memorandum to Richard L. Dopp from Richard Polson, both of Clackamas County, dated September 10, 1980.
 - b. Memorandum to John C. McIntyre from Richard Polson, both of Clackamas County, dated November 14, 1980.

The above documents are available for public inspection at Clackamas County Department of Environmental Management, 902 Abernethy Road, Oregon City, Oregon, during regular business hours, 8 a.m. to 5 p.m., Monday through Friday.
4. Fiscal and Economic Impacts: Some fees are increased. The direct monetary impact will fall upon individual applicants for permits or services. A positive impact will be seen by increased County Revenues which will offset General Fund monies in the County's budget.

Dated: January 2, 1980

William H. Young, Director
Department of Environmental Quality

TJO:l
XL248.A (1)

CLACKAMAS COUNTY FEE SCHEDULE

(A) FEASIBILITY STUDIES

First Lot or Site	\$75.00
Each Additional Lot or Site evaluated while on the site	\$65.00
Consultant Reviews	\$65.00

(B) SEPTIC TANK PERMITS

Standard Systems	\$50.00
Alternative Systems	

(i) Holding tanks, seepage pits, redundant,
steep slope, split waste, seepage trench
systems \$50.00

(ii) Tile Dewatering Systems, Capping Fill
Systems, and Pressure Distribution Systems \$80.00

(iii) Sand Filters

Plan Check Fee	\$25.00
Construction Permit	\$75.00

Large Systems

(i) Plan Review for each 1200 gallons
daily sewage flow, or part thereof \$40.00

(ii) Permit, for each 1200 gallons daily
sewage flow, or part thereof \$40.00

Repair Permits, any system \$25.00

Alteration Permits, any system \$40.00

Permit Renewals * \$25.00

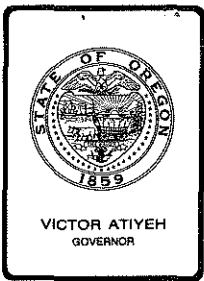
(C) EXISTING DISPOSAL SYSTEM REVIEWS \$40.00

(D) PUMPER TRUCK INSPECTION, EACH VEHICLE \$15.00

(E) SUBDIVISION REVIEWS \$40.00
per lot

(F) RECORD SEARCHES \$10.00

* Fee may be waived if no additional work is required by
this department.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. V, January 30, 1981, EQC Meeting

Proposed Amendments to Rules Governing Subsurface
Sewage Disposal and Nonwater-Carried Sewage Disposal
Facilities Schedule of Civil Penalties, OAR 340-12-060.

Background and Problem Statement

ORS 468.130 requires the Commission to adopt by rule a schedule of civil penalties establishing the amount of a civil penalty that may be imposed for particular violations as outlined in ORS 468.140.

The current schedule of civil penalties pertaining to subsurface sewage disposal has not been revised or amended since 1974. Since that time there have been numerous changes in the rules governing subsurface sewage disposal, not the least of which is the current effort to completely rewrite the entire package. Concomitant with rule changes is the creation of new violations which must, therefore, be subject to civil penalty assessment. However, the primary thrust of the civil penalty schedule revision is not directed at describing penalty amounts for new violations but establishing revised civil penalty amounts for what are essentially the same violations.

The problem has traditionally been one of effective and timely enforcement of the subsurface rules. The current civil penalty schedule establishes minimum amounts assessable per day of violation that result in the Department having to either allow a specific violation to continue in order to assess a penalty that will get the attention of the violator or assess a timely but insignificant amount. The Department intends to improve the effectiveness and timeliness of its enforcement program in on-site sewage disposal by raising the minimum civil penalty amounts. As an example, the current schedule of civil penalties allows the Department to assess a \$10 penalty against an individual who installs an on-site sewage disposal system without the Department's permit. The violation is probably one of the most serious in the subsurface program. Once the system is installed and the individual begins using it, a court order will more than likely be required to force abandonment of that system. Recognizing that



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a stronger deterrent may be more beneficial to the citizens of this state in preventing a public health hazard, it follows that the minimum penalty assessable for such a violation be increased.

The Statement of Need and Fiscal Impact for this rulemaking is attached (Attachment I).

Alternatives and Evaluation

1. Do not change the existing civil penalty schedule.

As indicated above, this alternative would not provide the impact in the enforcement area of subsurface sewage disposal that is necessary in order to maintain and protect the public health and welfare of the citizens of Oregon.

2. Rescind current schedule of civil penalties and adopt proposed schedule.

The proposed schedule of civil penalties will provide for a more efficient and effective enforcement program, thus benefiting the public health and welfare of the citizens of Oregon. By raising the minimum amounts assessable for each violation, per day violation, the Department will be in a stronger position to encourage the elimination of that violation to the benefit of public health.

Following are examples of proposed changes in the schedule:

- a. Increases the minimum penalty which may be assessed for installation of a septic system without a permit from \$10 to \$100.
- b. Increases the minimum penalty which may be assessed for the disposal of septic tank pumpings in an unauthorized disposal site, from \$5 to \$100.

A public hearing was held in Portland on December 18, 1980 (Attachment II). One person attended. No oral testimony was received. Written testimony was received from Lane County (Attachment III). As a result of the public hearing, the Department has not changed its position with respect to the proposed rule adoption.

Summation

1. The Commission is required to adopt by rule a schedule of civil penalties for certain violations as outlined in ORS 468.140.
2. The current schedule of civil penalties governing subsurface and nonwater-carried sewage disposal facilities violations has not been amended since 1974. The current schedule does not realistically reflect today's economy nor does it assist the Department in its goal of protecting the public health by providing a more effective enforcement mechanism.

Director's Recommendation

Based upon the summation and results of the public hearing, it is recommended that the Commission adopt the amendments to OAR 340-12-060.

Bill

William H. Young

Attachments:

- I. Statement of Need and Statement of Fiscal Impact
- II. Hearing Officer's Report - December 18, 1980
- III. Copy of Lane County testimony on proposed rule change
- IV. Proposed amendments to OAR 340-12-060

John H. Rowan:g
229-6202
December 22, 1980
GX100X.D (1)

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the) Statutory Authority,
Adoption of Rule) Statement of Need,
340-12-060; On-Site) and Statement of Fiscal Impact
Sewage Disposal Systems)
Schedule of Civil Penalties)
)
)

STATUTORY AUTHORITY:

Oregon Revised Statutes 468.130.

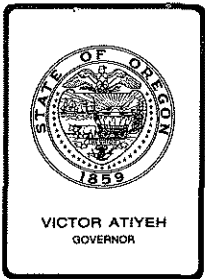
NEED FOR RULE:

The current schedule of civil penalties, in effect since 1974, does not provide the Department with an effective enforcement mechanism due to the rather low minimum amounts assessable. In order for enforcement to be effective in the on-site sewage disposal program, thereby protecting public health, it is necessary that the alleged violator be assessed a more substantial minimum penalty than heretofore possible. A more substantial civil penalty assessment will get the attention of the alleged violator more quickly and thus lead to a more timely resolution of the violation.

FISCAL IMPACT:

No apparent positive fiscal impact. Negative fiscal impact will be on those persons who are in violation of the rules governing on-site sewage disposal. No additional staff will be needed as a result of the new rules.

John. H. Rowan
229-6202
December 19, 1980



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207
522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: John H. Rowan, Hearing Officer

Subject: Proposed Rule Making Pursuant to ORS 468.130
Report of Public Hearing
December 18, 1980

On December 18, 1980, a public hearing was held pursuant to the public notice distributed December 1, 1980. The hearing was held in Portland at 1 p.m. in Room 1400 of the Department's offices located at 522 SW 5th. Those present included Ron E. Baker of DEQ in Roseburg, Van A. Kollias of DEQ in Portland and the hearing officer. No one from the general public attended. The record was opened at 1:04 p.m. At 1:30 p.m. the record was closed and no oral testimony was provided. The written testimony from Lane County's Land Use Compliance Officer (Attachment III) is in support of the Department's proposed rule changes.

John H. Rowan
229-6202

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MEMORANDUM

lane county

TO DEQ, Enforcement Section, Regional OperationsFROM Janet Chase, Land Use Compliance Officer, Dept. of Environmental ManagementSUBJECT Proposed Rule Changes relative to civil penalties assessable for subsurface violations DATE December 8, 1980

As the enforcement coordinator for Lane County's subsurface violations I am very much in favor of increasing the minimum civil penalties.

The amount of penalty increase that can be assessed is indicative of the State's conviction that the regulations are essential and will be enforced.

Increasing the minimum penalty for subsurface violations would establish confidence that DEQ is serious about compliance. This increased confidence for enforcement staff and sanitarians may result in a greater degree of voluntary compliance at the County level.

The current civil penalty minimum is not a deterrent. In some cases it would be more economical to violate a specific regulation and pay the civil penalty.

Thank you for this opportunity to express an opinion on the proposed rule changes.

cc: Roy Burns

JC/bs

REGIONAL OPERATIONS DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY
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Proposed Rule Changes

[Subsurface Sewage Disposal and Nonwater-Carried Sewage Disposal Facilities] 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 [subsurface sewage disposal and nonwater-carried sewage disposal facilities] on-site sewage disposal 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 twenty-five dollars (\$25) nor more than five hundred (\$500) upon any person who:

(a) Violates a final order of the Commission requiring remedial action;

(b) Violates an order of the Commission limiting or prohibiting [construction] installation of [subsurface sewage disposal and nonwater-carried sewage disposal facilities] on-site sewage disposal systems in an area;

[(c) Performs, or advertises or represents himself as being in the business of performing, sewage disposal services, without obtaining and maintaining a current license from the Department, except as provided by statute or rule; or]

(c) 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;

(d) Operates or uses a [newly constructed or modified subsurface sewage] nonwater-carried waste disposal [system] facility without first obtaining a [certificate] letter of [satisfactory completion] authorization from the [Department] Agent [,except as provided by statute or rule] therefore;

(e) 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;

(f) Fails to connect all plumbing fixtures from which sewage is or may be discharged to a Department approved system;

(g) Commits any other violation pertaining to on-site sewage disposal systems; or

(2) No less than [ten] one hundred dollars [(\$10)] (\$100) nor more than [four] five hundred dollars [(\$400)] (\$500) upon any person who:

[(a) Constructs or causes to be constructed a subsurface sewage disposal system or nonwater-carried sewage facility or part thereof without first obtaining a permit from the Department therefor;]

(a) Performs, or advertises or represents himself as being in the business of performing, sewage disposal services, without obtaining and maintaining a current license from the Department, except as provided by statute or rule;

(b) [Constructs] Installs or causes to be [constructed] installed a subsurface, alternative or experimental sewage disposal system, [or nonwater-carried sewage disposal facility which fails to meet the minimum requirement for design and construction prescribed by the Commission therefore;] or any part thereof, without first obtaining a permit from the Agent;

[(c) Commits any other violation in the course of performing sewage disposal services; or]

[(d)] (c) Fails to obtain a permit from the [Department] Agent within three days after beginning emergency repairs on a subsurface, alternative or experimental sewage disposal system.

(d) Disposes of septic tank, holding tank, chemical toilet, privy or other treatment facility sludges in a manner or location not authorized by the Department;

(e) Connects or reconnects the sewage plumbing from any dwelling or commercial facility to an existing system without first obtaining an Authorization Notice from the Agent;

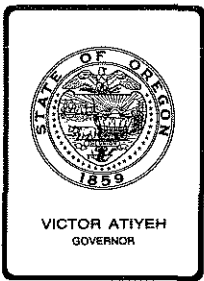
(f) Installs or causes to be installed a nonwater-carried waste disposal facility without first obtaining written approval from the Agent therefor;

(g) 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;

(h) As a licensed sewage disposal service worker, performs any sewage disposal service work in violation of the rules of the Commission.

[(3) Not less than five dollars (\$5) nor more than three hundred (\$300) upon any person who commits any other violation pertaining to the subsurface disposal of sewage or nonwater-carried sewage disposal facilities.]

GW20.A



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. W, January 30, 1981, EQC Meeting

Mr. Rodney D. Swanson--Appeal of Subsurface Variance Denial

Background

The pertinent legal authorities are summarized in Attachment "A".

Mr. Swanson's property (approximately 90 feet by 60 feet, identified as Tax Lot 3000, in Section 1 DD, Township 4 South, Range 11 West, in Tillamook County) was evaluated for on-site sewage disposal by Mr. Brent Raasina, a sanitarian for Tillamook County, on June 15, 1976. Mr. Raasina determined the property to be in compliance with the Department's minimum requirements and issued a Certificate of Favorable Site Evaluation with the following conditions:

1. Lot is approved for a two (2) bedroom dwelling--providing it can be demonstrated by means of a plot plan that sufficient area exists to accommodate drainfield and drainfield replacement area while maintaining required setbacks.
2. 180 sq. ft. of seepage bed effective sidewall area per bedroom.
3. Subsurface sewage facility must be located on a plot plan which is approved by the County Sanitarian prior to the commencement of any construction.

On March 21, 1980, the Environmental Quality Commission adopted a temporary rule that voided all Certificates of Favorable Site Evaluation issued in Tillamook County from January 1, 1974, through December 31, 1979. The temporary rule provided that each property owner may request the property be reevaluated without fee. Mr. Swanson was notified by registered mail of the temporary rule and how it affected his property.



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An application for reevaluation was submitted by Mr. Swanson to the Department's North Coast Branch Office on August 7, 1980. Mr. John Smits, an Environmental Analyst for that office, reevaluated the Swanson property that day and determined it did not comply with the Department's minimum standards for installation of either a standard or alternative sewage disposal system. He found that a permanent water table was present at a depth of less than five (5) feet from the ground surface (water was observed at thirty inches on adjacent lots at the same elevation), and that because of the small lot size, insufficient area is available for a future replacement system. Mr. Swanson was notified of the reevaluation denial by letter dated August 26, 1980.

An application for variance from the subsurface rules was received by the Department, and was assigned to Mr. Michael G. Ebeling, Variance Officer. On September 9, 1980, Mr. Ebeling examined the proposed site and held a public information gathering hearing. After closing the hearing Mr. Ebeling evaluated the information provided by Mr. Swanson and others. The property is located on a deflation plain. A test pit exhibited unconsolidated blow sand forty (40) inches deep over unconsolidated black sand. A permanent groundwater table was observed at ten (10) feet from the ground surface, and is expected to rise to within thirty (30) inches during the rainy season. The property is nearly level. Mr. Ebeling found that even though the property is limited, area for installation of a system (seepage bed with pressurized distribution piping), and future replacement is available, providing the design sewage flow does not exceed three hundred (300) gallons per day. But, given the very rapidly drained characteristic of the sand, Mr. Ebeling was concerned about its ability to adequately treat sewage effluent before discharge into the expected shallow groundwater. As Mr. Ebeling was not convinced that a subsurface sewage disposal system could be installed at the proposed site without causing pollution of public waters, he denied the variance request by letter dated October 1, 1980 (Attachment "B"). Provision was made for reconsideration of this decision after data on water level observations at the site are gathered by Tillamook County staff and supplied to Mr. Ebeling for review.

On October 17, 1980, the Department received a letter from Mr. Swanson appealing the Variance Officer's decision (Attachment "C").

Evaluation

Pursuant to ORS 454.660, decisions of the variance officer to grant variances may be appealed to the Environmental Quality Commission. Such an appeal was made. The Commission must determine if a subsurface sewage disposal system of either standard or modified construction can reasonably be expected to function in a satisfactory manner at Mr. Swanson's proposed site.

After evaluating the site and after holding a public information hearing to gather testimony relevant to the requested variance, Mr. Ebeling was not able to find that a subsurface sewage disposal system would function in a satisfactory manner. Mr. Ebeling was unable to modify the proposal to overcome his concerns about the proposed site. Provision was made for reconsideration of the decision after actual groundwater levels are established.

Summation

1. The pertinent legal authorities are summarized in Attachment "A".
2. On June 15, 1976, Mr. Brent Raasina evaluated Mr. Swanson's property to determine if a standard subsurface sewage disposal system could be installed. Mr. Raasina issued a Certificate of Favorable Site Evaluation subject to three (3) conditions.
3. The Environmental Quality Commission adopted a temporary rule on March 21, 1980, that voided all Certificates of Favorable Site Evaluation issued in Tillamook County from January 1, 1974, through December 31, 1979.
4. At Mr. Swanson's request, the property was reevaluated by Mr. John Smits on August 7, 1980. Mr. Smits determined that the property did not meet the Department's minimum standards to install an on-site system because of the presence of permanent water table at a depth of less than five (5) feet, and because there was not sufficient area available to install a replacement system. Mr. Swanson was notified of the reevaluation denial by letter dated August 26, 1980.
5. Mr. Swanson submitted a variance application to the Department, dated September 9, 1980.
6. On September 9, 1980, Mr. Ebeling examined the proposed drainfield site and found it to be located on a deflation plain. The soil consisted of forty (40) inches of unconsolidated blow sand above unconsolidated black sand. A permanent groundwater table observed at ten (10) feet below the ground surface was expected to rise to within thirty (30) inches.
7. A public information gathering hearing was conducted by Mr. Ebeling on September 9, 1980, so as to allow Mr. Swanson and others the opportunity to supply the facts and reasons to support the granting of the variance.
8. Mr. Ebeling reviewed the variance record and found the testimony did not support a favorable decision. Although Mr. Ebeling was unable to modify the proposal to overcome all of the site limitations, he made provision for reconsideration should data to be collected on water level observations at the site so warrant.

9. Mr. Ebeling notified Mr. Swanson by letter dated October 1, 1980, that the variance request was denied.
10. A letter from Mr. Swanson appealing the Variance Officer's decision was received by the Department on October 17, 1980.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the findings of the variance officer as the Commission's findings and uphold the decision to deny the variance.



William H. Young

Attachments: 3
Attachment "A"
Attachment "B"
Attachment "C"

Sherman O. Olson, Jr.:1
XL217 (1)
229-6443
11/6/80

ATTACHMENT "A"

1. Administrative rules governing subsurface sewage disposal are provided for by Statute: ORS 454.625.
2. The Environmental Quality Commission has been given statutory authority to grant variances from the particular requirements of any rule or standard pertaining to subsurface sewage disposal systems if after hearing, it finds that strict compliance with the rule or standard is inappropriate for cause or because special physical conditions render strict compliance unreasonable, burdensome or impractical: ORS 454.657.
3. The Commission has been given statutory authority to delegate the power to grant variances to special variance officers appointed by the Director of the Department of Environmental Quality: ORS 454.660.
4. Decisions of the variance officers to grant variances may be appealed to the Commission: ORS 454.660.
5. Mr. Ebeling was appointed as a variance officer pursuant to the Oregon Administrative Rules: OAR 340-75-030.

XL217.A (1)



ATTACHMENT "B"

Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

October 1, 1980

CERTIFIED MAIL

Mr. Rodney D. Swanson
Route 5, Box 420
Yakima, WA 98903

Re: WQ-SSS-Variance Denial
T.L. 3000; Sec. 1DD;
T. 4S.; R. 11W., W.M.;
Tillamook County

Dear Mr. Swanson:

This correspondence will serve to verify that your requested variance hearing, as provided for in Oregon Administrative Rules, Chapter 340, Section 75-045 was held on September 9, 1980, at the property site.

You have requested variance from the Oregon Administrative Rules, Chapter 340, Sections 71-020(1)(i); 71-030(3)(a) and 71-030(1)(c).

Just prior to the public information gathering hearing I visited the proposed site to gather soils and topographical information relevant to your variance proposal. The proposed drainfield site is located on a deflation plain. One test pit was provided for my review. The profile exhibited forty (40) inches of unconsolidated blow sand over unconsolidated black sand. Water was observed at one hundred twenty (120) inches below ground surface. The natural ground slope of the property was nearly level. The landscape position of this property suggests that a permanent water table may come as close as thirty (30) inches from ground surface.

To overcome the site development limitations you, with the aid of Mr. John Smits of our North Coast Branch Office, have proposed to install a pressurized distribution system with three hundred and ninety-seven (397) lineal feet lateral piping in one-foot wide trenches with laterals spaced three (3) feet apart. The system was designed to serve a single family dwelling with a maximum daily sewage flow of one hundred and fifty (150) gallons. The proposal did not address a specific trench depth. I have considered of a twelve (12) inch capping fill and limiting the construction depth to twelve (12) inches into the natural sand profile. This depth provides the maximum separation distance between the permanent water table. Pressurized laterals provide better distribution of effluent throughout the drainfield, which allows for better treatment of the sewage effluent.

Variance from particular requirements of the rules or standards pertaining to subsurface sewage disposal systems may be granted if it is found that the proposed subsurface sewage disposal system will function in a satisfactory manner so as not to create a public health hazard or to cause pollution of public waters, and special physical conditions exist which render strict compliance unreasonable, burdensome, or impractical.

Mr. Rodney D. Swanson
October 1, 1980
Page 2

Your proposal, although well prepared, does not give assurance that it will overcome the limitations present at the site. Sand is a very rapidly draining material, its ability to remove pathogenic agents from the sewage effluent before discharging into the shallow permanent groundwater is questionable. Even though the size of your property is limited, a pressurized distribution system designed at a daily peak flow of three hundred (300) gallons could be physically located. But, I am not yet convinced that a modified sewage system (pressurized flatbed) can be installed so as to provide sufficient depth of unsaturated sand above permanent water table to prevent degradation.

Therefore, based on my evaluation of the verbal and written testimony contained in the record, I am not convinced that the proposed drainfield will function in a satisfactory manner so as not to cause pollution of public waters of the state. Your variance request is regretfully denied.

As discussed with you during the hearing, Tillamook County personnel will monitor water levels through a winter season. The monitoring would normally be completed on or before April 30. Tillamook County staff must keep a record of their observations, and when completed provide me with a copy of their monitoring data. I will review their data, and may reconsider this decision if the data so warrants.

Pursuant to OAR 340-75-050, my decision to deny your variance request may be appealed to the Environmental Quality Commission. Requests for appeal must be made by letter, stating the grounds for appeal, and addressed to the Environmental Quality Commission, in care of Mr. William H. Young, Director, Department of Environmental Quality, Box 1760, Portland, Oregon 97207, within twenty (20) days of the date of the certified mailing of this letter.

Please feel free to contact me at 229-5289 if you have questions regarding this decision.

Sincerely,

Michael G. Ebeling
Subsurface Sewage Systems Specialist
Subsurface and Alternative
Sewage Systems Section
Water Quality Division

MGE:cn
XCD95

cc: Douglas Marshall, Tillamook County
John Smits, North Coast Branch Office
Greg Baesler, Northwest Region

Mr. William Young.

This letter is a request for an appeal of a variance denial by Mr. M. G. Ebeling.

The property in question is T.L. 3000 Sec I.D.D. T & S. R II W-W.M., commonly known as 1st Add, to Lakesea subdivision Lot 2 Blk 15 - Terra Del Mar. In 1976 we obtained a site approval for a septic tank. In 1978 a visit to Tillimook County Sanitation Dept, assured us the permit was still valid. At that time we suggested installing a septic tank prior to building sometime in the future. The sanitation Dept. stated it was not necessary, as we were not sure of our house location. The reason we were not sure was because the Tillimook building Dept. had allowed an adjacent house to build a guest house. They were allowed five bedrooms on their lot. The guest house has been rented out to a Deputy Sheriff for over a year, which is in violation of county codes. This is also quite aggravating to us, as we are only asking for a one bedroom single family dwelling.

Mr Ebeling's decision to deny a variance request is debatable for various reasons.

The most important one in our minds is that Mr. John Smith felt that a pressurized Dist. System designed to serve a single family dwelling would be justifiable on our building site.

Also in talking to Mr. Ebeling we found that basically he did not have any guide lines in making this denial. It was just his decision to go either way. This was very confusing to us.

In a denial reply to us, he verified the existence of wet sand at 120 inches. Then suggested a permanent water at 30 inches from ground surface. — Also confusing.

We had a buyer for this Lot and had planned to use the money for a payment on a farm we are buying in Yakima County Wash. I am retired from Pac. No. W. Bell Co., and needless to say this has been a financial blow to us. The price of the Lot went from \$120,000 to almost nothing.

At this point unless we can get some satisfaction we have no choice, but to get legal assistance. It would seem someone would be liable for our misfortune.

The Ironic part for us is that informed people in Pacific City feel the sewer lines will be extended to Terra Del Mar within the next few years. We need to sell the Lot by next April for our farm payment. Hope you can help.

Sincerely

Bob D. Swanson

Rt 5 Box 420

Yakima, Wash. 98903.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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OCT 20 1980

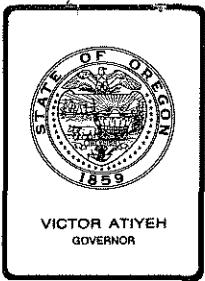
WATER QUALITY CONTROL

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

OCT 17 1980

OFFICE OF THE DIRECTOR



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. Y, January 30, 1981, EQC Meeting

Proposed Amendments to the Administrative
Rules for Solid Waste Management
(OAR Chapter 340, Division 61)

Background and Problem Statement

The Resource Conservation and Recovery Act of 1976 (RCRA) requires states to adopt a solid waste plan. Criteria for an acceptable plan are included in 40 CFR Part 256 and were adopted on July 31, 1979. The law allows 18 months from that date for states to submit a plan to the Regional Administrator of EPA-Region X (January 31, 1981). State guidance documents published by EPA indicate that funding will be withdrawn unless the plan is submitted.

The State Solid Waste Plan can be incorporated into Solid Waste Management Rules under the rulemaking authority of ORS 459, which allows for reasonable and necessary rulemaking, by reference, similar to the Air Quality SIP.

The statement of need and fiscal impact statement are attached (Attachments I and II).

Alternatives and Evaluation

The only alternative other than adopting a State Plan is to discontinue participation in the federally funded solid waste program. The present funding for federal fiscal year 1981 beginning October 1 is \$117,200. It is uncertain whether EPA would continue funding of the Hazardous Waste Program if a plan is not adopted. At a minimum, hazardous waste portions of the plan would be required.

The state plan is to identify a general strategy for solid waste disposal, resource recovery and resource conservation and is to set forth the arrangements between state and local governments for implementing the plan. As such, the Division's Goals and Objectives and Status Report and Department rules are incorporated. All of these documents have undergone



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public review by the general public. At a minimum, a group of advisors to the Division have had opportunity to review and comment on the documents. The draft State Plan was circulated to over 75 advisors for comment. Only minor changes in the Plan were suggested by advisors (only 3 responses were received).

A public hearing was held on December 4, 1980, in Portland (Hearing Officer's Report--Attachment III). Four persons attended. All persons gave verbal testimony regarding various portions of the plan. Major written comments were submitted by one person.

Written comments were also received from Region X--EPA regarding their perception of deficiencies in the plan.

As a result of testimony and written comments, including those of EPA, additions and/or corrections have been made in the plan. It is the opinion of staff that these additions and corrections are not major and Department policy is not substantially changed from the original plan.

Summation

1. EPA, through RCRA and regulations, requires submission of an adopted State Solid Waste Plan prior to January 31, 1981, to allow for continued funding of the solid waste program.
2. ORS 459 gives the EQC authority to adopt "reasonable and necessary" rules covering solid waste management.
3. The public has been involved in development of the plan and an advisory committee has reviewed the draft plan.
4. Minor changes in plan content have been made as a result of testimony and EPA comments. These changes are not major.

Director's Recommendation

Based upon the summation, it is recommended that the Commission adopt the amendment to OAR Chapter 340, Division 61.



William H. Young

- Attachment I - Statement of Need for Rulemaking
- Attachment II - Fiscal Impact Statement
- Attachment III - Hearing Officer's Report
- Attachment IV - Response to Public Comment
- Attachment V - Proposed Amendment to Division 61

Robert L. Brown:c
SC158
229-5157
12/29/80

Before the Environmental Quality Commission

In the Matter of the Adoption of)
Amendments to Solid Waste)
Management Rules OAR Chapter)
340, Section 61-005 to 61-110.)

Statement of Need

The Environmental Quality Commission intends to adopt Solid Waste Program rule amendments OAR 340, Section 61-005 to 61-110.

A. Legal Authority
 ORS 459

B. Need for the Rule

The proposed amendments are needed to adopt a State Solid Waste Plan as required by Public Law 94-580 (Resource Conservation and Recovery Act of 1976) and 40 CFR Part 256 (July 31, 1979), Guidelines for Development and Implementation of State Solid Waste Management Plans.

C. Principal Documents Relied Upon

1. Public Law 94-580 (90 Stat. 2795)
2. 40 CFR Part 256 Guidelines for Development and Implementation of State Solid Waste Management Plans.

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Before the Environmental Quality Commission

In the Matter of the Adoption of)
Amendments to Solid Waste) Fiscal Impact Statement
Management Rules OAR Chapter)
340, Section 61-005 to 61-110.)

The Environmental Quality Commission intends to adopt Solid Waste Program rule amendments OAR 340, Section 61-005 to 61-110.

Adoption of a State Solid Waste Plan and submission of this plan to the federal Environmental Protection Agency will have no substantial fiscal impact on state or local government or the public at large. The plan only outlines existing policies, goals and statutes and regulations.

Adoption of the plan does make the state eligible to receive federal funding (federal F/Y 81 Total \$512,000) and should pass-through money become available, local designated solid waste planning and implementing agencies would be eligible. As funding for pass-through has never been appropriated, no estimate of possible funds can be made.

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Before the Environmental Quality Commission

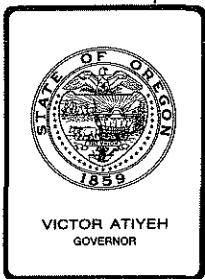
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SB79.A



Environmental Quality Commission

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Attachment III

Agenda Item No. Y

January 30, 1981, EQC Meeting

MEMORANDUM

To: Environmental Quality Commission

From: Margaret McCue, Hearings Officer

Subject: Proposed Rulemaking (State Solid Waste Plan) Report
of Public Hearing--December 4, 1980

On December 4, 1980, a public hearing was held pursuant to a notice issued November 17, 1980. The hearing was held in Portland at 1:00 p.m. in Room 1400 of the Department's offices at 522 S.W. 5th.

Four persons were present. Following an explanation of the purpose of the meeting, all persons present gave testimony. Those present were Roger Emmons, representing Oregon Sanitary Service Institute; Angus MacPhee, representing Newberg Landfill; Allen Willis, representing Boise Cascade; and Dick Gallaher, representing himself.

Testimony was given by Roger Emmons who summarized a seven-page written submittal. Major points were as follows:

1. Association supports the basic plan.
2. There appears to be inconsistency between discussion of processing for volume reduction only; Page 1 vs Page 30.
3. Oppose both federal and state exemption of small volume generators of hazardous waste.
4. The plan does not emphasize the role of private industry in collection, transport and disposal of solid waste even though over 98% of collection is private.
5. Plan does not clarify the difference between "reserved" vs. "responsibility of" in local government involvement discussion.
6. Discussion of the open dump compliance schedule should be clarified.
7. Public participation practices of the Solid Waste Division criticized. Request reformation of a permanent technical advisory committee instead of a mail-out and return comment advisory group.



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8. Reward discussion of franchising to emphasize that franchising is not a major problem in most areas of the state. Problem is in discussion of recycling in franchise ordinances.
9. Revise discussion of disposal to remove "limit land disposal to only that waste that cannot otherwise be handled."
10. Request more trained people in headquarters vs generalists in regional offices.
11. Discussion of waste reduction is in conflict with ORS 459.
12. Add in "Priority Matrix" (P3) "Hazardous Waste Generators" with an A rating.

Angus MacPhee concurred with Mr. Emmons' testimony.

Dick Gallaher indicated that a closed landfill (closed to use by general public) may not be acceptable to residents immediately surrounding the landfill.

Allan Willis began a discussion of disposal definition in both solid waste P31 and hazardous waste P41. Discussion centered around the terms "spilling" and "leaking" and whether accidental spills would tend to make a site a disposal site. He requested that some qualifier be added to explain that accidental spills are not covered. This was opposed by Mr. MacPhee and supported by Mr. Emmons.

There being no other verbal testimony, the record was left open until December 4, 1980, at 5 p.m., for receipt of written comments.

Response to Public Comment

Attached is a summary of comments received in response to the December 4, 1980 public hearing on proposed amendments to administrative rules for Solid Waste Management (OAR Chapter 340, Division 61-State Plan Adoption).

Comment: Appears to be inconsistency between different discussions of processing for waste reduction.

Response: Wording changes to clarify were added.

Comment: Oppose both federal and state exemptions of small volume generators of hazardous waste.

Response: Simply eliminating the Federal and State exemptions will not solve any alleged problems with the current handling of small quantities of hazardous waste at local landfills. As a practical matter, if local landfills can't be used for small quantities of hazardous wastes, then sanitary sewers, storm sewers, garages, basements or backroads will be!

Instead of forever debating the merits of this or that exemption or regulation, State and local governments, and the private garbage collection industry, need to develop convenient, economical alternatives to local landfills such as collection/transfer programs. Without an alternative, small businesses and the public will continue to use unauthorized methods to get rid of unwanted chemicals in local landfills or elsewhere. To the public, regulations notwithstanding, local landfills appear the best available method for disposal of small quantities of unwanted chemicals.

The terms spilling and leaking are specifically included in the definitions to insure that responsible cleanup could be required even after an "accident." Depending on the material spilled or leaked, the potential hazard to public health or the environment is not lessened just because it was an "accident" versus a "purposeful act." It is the potential hazard that determines the level of response or required cleanup, if any, that is stipulated.

Response to Public Comment

Page 2

Comment: The plan does not emphasize the role of private industry in solid waste collection, transport and disposal.

Response: Wording to include private industry was added.

Comment: Plan does not clarify the difference between "reserved" vs "responsibility of" in local government involvement section.

Response: Wording to clarify was added.

Comment: Discussion of the open dump compliance schedule should be clarified.

Response: Section was rewritten to clarify system and reasons for compliance schedule.

Comment: Public participation procedures are not adequate. A permanent technical advisory committee is needed.

Response: A discussion of a permanent technical advisory committee was added.

Comment: Reword discussion of franchising issue.

Response: Clarification of franchising problems was added.

Comment: Revise discussion of "disposal."

Response: Staff feels the discussion as written is the ultimate goal; however, wording to clarify and qualify this feeling was added.

Comment: Request more trained people in headquarters vs generalists in regional offices.

Response: Personnel matters of the Division are not an item to be discussed in a State Solid Waste Plan.

Comment: Discussion of waste reduction and resource recovery is in conflict with ORS 459.

Response: Sections were examined and clarification was added.

Response to Public Comment

Page 3

Comment: Add in "Priority Matrix" "Hazardous Waste Generators" with an "A" rating.

Response: Has been added by footnote.

Comment: A closed landfill (closed to use by general public) may not be acceptable to neighbors.

Response: Limited public access to landfills is the ultimate for efficient landfill operation. Some other location for the general public, such as a mini transfer station, can be provided.

Comment: The terms "spilling" and "leaking" in both solid waste and hazardous waste definitions should be qualified to exempt accidental spills.

Response: Definitions as listed in the document are taken from the federal legislation. Accidental spills are handled under a separate set of regulations and should not apply to these definitions. However, if accidental spills are not properly handled, these definitions could apply and enforcement be initiated.

Proposed Amendments to Solid Waste Management Rules
OAR Chapter 340-61-005 to 61-110.

"State of Oregon Solid Waste Plan"

61-017 This solid waste plan, including rules prepared by the Department of Environmental Quality, is adopted as the State Plan pursuant to the Federal Resource Conservation and Recovery Act.

[Publications: The publication(s) referred to or incorporated by reference in this rule is available from the office of Secretary of State or the Department of Environmental Quality]

RLB:b

SB79.C

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*
LIST OF ATTACHMENTS

1. OREGON SOLID WASTE MANAGEMENT STATUS REPORT - 1979

LEGAL AUTHORITY - LAWS AND RULES GOVERNING SOLID WASTE PROGRAM:

2. ORS 459 - SOLID WASTE CONTROL
3. ORS 468 - POLLUTION CONTROL
4. ORS 767 - MOTOR CARRIERS
5. OAR 340-14-005 thru 14-050 - PROCEDURES FOR ISSUANCE, DENIAL, MODIFICATION AND REVOCATION OF PERMITS
6. OAR 340-61-005 thru 61-110 - SOLID WASTE MANAGEMENT IN GENERAL (Includes new rules re landfill siting assistance and requirements for waste reduction which have not yet been typeset into the rules.)
7. a. OAR 340-62-005 thru 62-100 - PROCEDURES FOR LICENSING HAZARDOUS WASTE MANAGEMENT FACILITIES
b. OAR 340-63-006 thru 63-240, 63-400 thru 63-435, & OAR 860-36-060 thru 36-066, DEQ HAZARDOUS WASTE MANAGEMENT
8. OAR 860-36-060 thru 36-066 - STATE FINANCIAL ASSISTANCE TO PUBLIC AGENCIES FOR POLLUTION CONTROL FACILITIES FOR THE DISPOSAL OF SOLID WASTE
9. Letter from Department of Justice clarifying DEQ authority
10. 1981 State/EPA Agreement
11. Public Participation Questionnaire; sign-up sheet for 1980-81 activities
12. List of DEQ Regional Offices
13. Governor's Proclamation designating solid waste management planning areas
14. Governor's Proclamation designating solid waste management planning and implementing agencies
15. Letter of clarification to solid waste management planning and implementing agencies clarifying responsibilities

#

Commonly Used Acronyms:

DEQ	Oregon Department of Environmental Quality
EPA	Federal Environmental Protection Agency
RCRA	Resource Conservation and Recovery Act of 1976 (Federal)
SEA	State/EPA Agreement - annual work plan for use of Federal funds

"Division" refers to DEQ Solid Waste Division

"Subtitle D" of RCRA refers to the section regarding State or Regional Solid Waste Plans

"Subtitle C" of RCRA refers to the section governing Hazardous Waste Management

* Not included except in submission to EPA and on file in DEQ and Secretary of State offices

INTRODUCTION

This Plan has been prepared to satisfy a requirement of the Resource Conservation and Recovery Act of 1976 (RCRA). The Federal Act provides that a State Plan approved by the EPA's Regional Administrator is a prerequisite to provision of Federal funds to State and local agencies under Subtitle D of RCRA. RCRA's intent, we believe, is to ensure that all states have in place adequate waste management programs, and the EPA has provided standards for the development of such programs in the "Guidelines for Development and Implementation of State Solid Waste Management Plans."

For those States with existing waste management programs, however, the requirement basically amounts to providing a documentation of what those programs consist of, and demonstrating that they meet RCRA standards. In fact, given the status of Oregon's waste management program, stimulation of waste reduction activities would have been our first choice for use of Federal funds, over the planning and inventory activities which have been required. A description of the development of Oregon's solid waste management program since 1971, and summaries of all local plans are contained in the Oregon Solid Waste Management Status Report - 1979, Attachment 1.

What the following pages represent, then, is a presentation of Oregon's program in the format of the Federal Guidelines for Development and Implementation of State Solid Waste Management Plans. Important documents which are integral with this presentation are attachments, and are listed on page iii.

CHAPTER I - SCOPE OF PLAN

This Plan addresses all solid waste in Oregon that poses potential adverse effects on health or the environment, or provides opportunities for resource conservation or resource recovery. They include: municipal refuse, wastewater treatment sludge, pollution control residuals, industrial wastes, mining wastes, agricultural wastes, water treatment sludge, septic tank pumpings, and hazardous wastes. The Plan also addresses all aspects of solid waste management, which are: resource conservation, source separation, collection, transportation, storage, transfer, processing (including resource recovery), treatment and disposal. A description of our program for improved solid and hazardous waste management, addressing all categories of waste and waste management aspects follows in Chapter III.

A. Priorities

On page 3 is a matrix indicating which waste types are getting most of the DEQ's attention, and the priorities for addressing the various aspects of managing each waste. As the matrix illustrates, municipal and hazardous wastes get the major share of the DEQ's attention. Historically, both local and state efforts have focused largely on solving the pressing environmental, health and nuisance problems associated with transfer and disposal of municipal solid wastes. The State has developed minimum standards for the storage, collection, and transportation of solid wastes. Regulation and enforcement of these activities is normally a local responsibility. Processing waste for volume reduction alone is expensive and considered a low priority except in cases where alternatives are not feasible.

While there is a need to address the aspects of waste management mentioned above on a continuing basis, the State and some local governments recognize that efforts must be focused on implementing waste reduction and resource conservation measures as well. While waste reduction and resource recovery are philosophically high priorities of the DEQ, as outlined in Legislative and EQC policy statements, the degree to which we are able to make progress in these areas is a direct reflection of at least three factors:

1. **Legislative mandates:** With the passage of new legislation in 1979, the DEQ was enabled to require waste reduction programs as a condition of landfill siting or financial assistance to Designated Agencies. We do not have authority to require such programs as a part of the local plans where such assistance is not requested.
2. **Availability of funds:** Historically, we have been able to encourage waste reduction and resource recovery through operation of the Recycling Switchboard, tax incentives and Pollution Control Bond monies, all programs funded by the Oregon Legislature. Although resource conservation and recovery appear to be high priorities of RCRA, almost no money has been allocated by EPA for these activities. We feel that in Oregon waste

reduction should be a higher priority for federal funding.

3. Local government initiative: As more local governments undertake source separation and resource recovery projects, both DEQ headquarters and Regional staffs will devote more technical assistance time to such matters, and more pollution control bond funds will be allocated for these purposes.

Priority efforts in hazardous waste management have been to establish a program to ensure proper storage, collection, transportation, treatment and disposal of hazardous wastes so as to protect health and the environment. In addition to maintaining this basic program, it is a high priority for the future to develop alternatives to long-term storage (disposal) of hazardous wastes. This will mean stimulating private industry to reuse wastes where possible, and to manage them so as to recycle them into usable products, reduce them in volume and/or neutralize their hazardous properties.

B. Goals and Objectives

The following program goals and objectives were developed in 1980, through an organized planning process, and guide the program implementation. They have been prioritized into three categories: "A"--must do, "B"--should do, and "C"--nice to do as resources permit. Following are the goals with prioritized objectives:

SOLID WASTE PROGRAM

MISSION STATEMENT: To protect public health and safety and the environment and to conserve natural resources through a statewide program to:

Minimize the generation of solid waste, obtain maximum recovery of usable materials, and provide for environmentally acceptable disposal of presently unusable solid waste

within the framework of citizen involvement, interagency coordination, and efficient use of available resources. (Includes "generation to disposal" control of hazardous waste.)

GOALS

- I. To reduce/minimize generation of solid waste and hazardous waste.
- II. To increase/maximize recovery of usable resources from solid waste and hazardous waste.
- III. To ensure environmentally acceptable management of solid waste and hazardous waste.
- IV. To plan and manage the solid waste program for the Department of Environmental Quality.

STATE SOLID WASTE MANAGEMENT PRIORITIES

1980-84

ASPECTS OF WASTE MANAGEMENT

WASTE TYPES	DISPOSAL	RESOURCE CONSERVATION	SOURCE SEPARATION	COLLECTION	TRANSPORT	STORAGE	TRANSFER	PROCESSING	TREATMENT
<u>Priority 1:</u>									
Municipal (residential, commercial & demolition)	A	A	A	C	C	C	B	A	Not Applicable
Hazardous *	A	A	A	A	A	A	A	A	
<u>Priority 2:</u>									
Industrial	A	B	B	C	C	C	C	B	B
<u>Priority 3:</u>									
Agricultural	B	B	B	B	B	B	C	B	C
Mining	B	C	C	C	C	C	C	C	C
Water Treatment Sludge	B	C	C	C	C	C	C	C	C
Wastewater Treatment Sludge	B	C	C	C	C	C	C	C	C
Septic Tank Pumpings	B	C	C	B	B	C	C	C	C
Pollution Control Residue	B	C	C	C	C	C	C	C	C

* Hazardous waste also includes a unique category of management which is "Generation." This would receive an "A" priority.

A = High Priority
B = Medium Priority
C = Low Priority

GOAL I

TO REDUCE/MINIMIZE GENERATION OF SOLID WASTE AND HAZARDOUS WASTE.

OBJECTIVES

Priority

- A Develop Data Base by geographic region of MSW, IW, sludge and other factors determined appropriate.
In priority order:
(1) Municipal/Hazardous Wastes, (2) Industrial Wastes/Demo, (3) Sludge
- A Carry out ongoing public education program to promote waste reduction.
- A Assist recyclers and local government in planning, implementation and coordination of waste reduction activities.
- A Increase waste reduction programs for industrial and hazardous waste generators.
- B Establish programs to reduce contributions of specific items to solid waste stream.
- B Work with generators (public/industry) to reduce hazardous wastes.
- C Seek legislative clarification of responsibility and role of state and local government in solid waste management programs.
- C Promote research into new or improved technology for waste reduction.

GOAL II

TO INCREASE/MAXIMIZE RECOVERY OF USABLE RESOURCES FROM SOLID WASTE AND HAZARDOUS WASTE.

OBJECTIVES

Priority

- A Develop markets for recyclable & recycled materials as they become available.
- A To promote hazardous waste treatment facilities.
- B Evaluate use of mechanical and thermal processing techniques for municipal wastes and selected materials and promote appropriate projects.
- C Encourage controlled salvage from the waste stream.

GOAL III

TO ENSURE ENVIRONMENTALLY ACCEPTABLE MANAGEMENT OF SOLID WASTE AND HAZARDOUS WASTE RESIDUE.

OBJECTIVES

Priority

SOLID WASTE

- A Bring all landfills into compliance with performance standards.
- A Develop and implement a groundwater protection program which satisfies the requirements of RCRA.
- A Assure that a continuing program of technical assistance and pertinent information concerning solid waste disposal is provided to the staff, local government, industry and the public.
- B Develop and implement the use of uniform landfill siting criteria and procedures.
- B Develop and implement a program for proper sludge management (use, treatment and disposal of all sludges).
- B Ensure proper closure of completed and abandoned landfills.
- B Develop a data base, by geographic region, of the volumes of municipal, industrial, demolition waste and sludges being landfilled.
- C Complete the RCRA inventory.
- C Bring the issue of "required acceptance" of wastes to local decision makers.

HAZARDOUS WASTE

- A To ensure that all off-site hazardous waste treatment facilities are in compliance with licenses (permits); facility and operating plans; statutes and rules (six (6) estimated).
- A To ensure that all on-site hazardous waste treatment facilities are in compliance with licenses (permits); facility and operating plans; statutes and rules (six (6) estimated).

- A To ensure that all off-site hazardous waste collection sites are in compliance with licenses (permits); facility and operating plans; statutes and rules (four (4) existing - six (6) proposed).
- A To ensure all hazardous waste generators are in compliance with the statutes and rules.
- A To ensure that all hazardous waste transporters are in compliance with rules.
- A Assume state authority for RCRA Subtitle "C" (hazardous waste).
- A Acquire and maintain knowledge of hazardous waste management facilities; waste reduction, treatment and disposal techniques; and environmental monitoring techniques.
- A Provide adequate response capability for hazardous material spills/emergencies.
- A To ensure that all operating hazardous waste disposal sites are in compliance with licenses (permits); facility and operating plans; statutes and rules.
- B Ensure integrity and safety of inactive sites.
- B To ensure that all on-site hazardous waste collection sites are in compliance with licenses (permits); facility and operating plans; statutes and rules (estimate twenty-five (25)).
- B Complete and implement pesticide waste management program.
- C Complete and implement pesticide container recycle/disposal program.
- C Develop and maintain baseline information by intrastate geographic regions on hazardous waste management activities.
- C To increase the number of hazardous waste collection sites (promotional objective only! - See separate compliance objective).
- C Develop Pacific Northwest comprehensive management plan for collection, transportation, treatment and disposal of hazardous wastes (EPA, Region X and Canada).
- C Develop and implement public education program for hazardous waste program.

GOAL IV

TO PLAN AND MANAGE THE SOLID WASTE PROGRAM FOR THE DEPARTMENT OF ENVIRONMENTAL QUALITY.

OBJECTIVES

Priority

- A Prepare a biennium budget.
- A Carry on an ongoing program planning effort.
- B Carry on a division-wide public participation program.
- B Provide for staff training.

C. Five-Year Strategy

The proposed five-year work plan for solid waste management is based on the Goals and Objectives. Under each objective, a series of tasks has been developed. A time schedule for when these tasks will be accomplished, and an estimate of resource commitment required to complete these tasks is included in the 1981 State/EPA Agreement, pages 284 to 324 (Attachment 10). A more generalized discussion of the five-year period is contained on pages 241 to 249 of the same document.

D. Plan Update

The Department undergoes a program planning process every two years. The next reevaluation of goals, objectives and tasks will begin in early 1982, preceding the State's biennium budgeting process. Following this program planning effort, the State Solid Waste Management Plan will be updated October 1982 and every two years thereafter (review and revision process).

E. Authority

Existing legal authority for solid waste management is found in the following Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR). See Attachments 2 through 8.

ORS Chapter 459, Solid Waste Control
(Management & regulatory authority over solid waste including hazardous waste)

ORS Chapter 468, Pollution Control
(Air and water quality authority used by solid waste program, nuisance abatement, tax credits and funding for local government)

ORS Chapter 767, Motor Carriers
(Basis for manifest system for regulating hazardous waste transport)

OAR Chapter 340

14 through 14-050 Procedures for Issuance, Denial, Modification and Revocation of Permits

61-005 through 61-110 Solid Waste Management in General (Collection, storage and disposal standards)

62-006 through 62-100 Procedures for Licensing Hazardous Waste Management Facilities

63-006 through 63-240 Department of Environmental Quality Hazardous Waste Management Facilities (Hazardous wastes and generator control)

63-400 through 63-435 Department of Environmental Quality Hazardous Waste Management Facilities (Treatment, storage and disposal facilities)

(OAR Chapter 860)

36-060 through Department of Environmental Quality Hazardous Waste Management Facilities (Haulers of hazardous waste)

82-005 through 92-055 State Financial Assistance to Public Agencies for Pollution Control Facilities for the Disposal of Solid Waste

Also, see Attachment 9, a letter from the Oregon Department of Justice which contains the opinion that the DEQ has adequate authority to prohibit the establishment of open dumps and to close or upgrade existing open dumps. The new rules will be equivalent to or more stringent than the Criteria, except in the area of sludge disposal (see discussion, Chapter III). We expect adoption by June 1981.

The Division is also taking proposals to the 1981 Legislature to:

1. Correct a SNAFU in the law regarding waste reduction programs for solid waste. The proposed change would allow loan of pollution bond fund money to prepare waste reduction plans.
2. Establish permit fees for solid waste landfills to provide an alternate funding source to Subtitle D RCRA funds, which may be phased out.
3. Establish performance bonds for landfills to cover costs of closing the fill and/or repairing any environmental damage.
4. Remove the exemption for disposal of certain sludges.
5. Upgrade laws to allow Oregon to run the hazardous waste program in this state, in lieu of EPA. Would provide for site closure bonds, penalties, permit for on-site storage of hazardous wastes, a license fee and deed notation on property containing closed hazardous waste disposal sites.

CHAPTER II - IDENTIFICATION OF RESPONSIBILITIES FOR WASTE
MANAGEMENT IN OREGON; DISTRIBUTION OF FUNDING

- A. Responsibility for development and implementation of the State Plan: State legislation which was enacted in 1971 establishes the DEQ Solid Waste Division, and assigns to the DEQ the tasks of adopting and enforcing minimum performance standards and providing technical assistance to local governments. This legislation retains the primary responsibility for implementation of solid waste management programs with local governments, reserving to the State those functions necessary to assure effective programs, cooperation among local government units and coordination of solid waste management programs statewide.

The Resource Conservation and Recovery Act of 1976 requires identification of waste management planning areas, and of agencies to be responsible for waste management in those areas. Counties and Regions which had been the units for previous State planning efforts (see 1979 STATUS REPORT, Attachment 1), were identified as planning areas, and the county and regional governments which had developed the plans were designated as the agencies responsible for waste management and planning (see Governor's Proclamations, Attachments 13 and 14).

Of the various categories of solid waste, management of municipal wastes including collection, transportation and disposal, has been a high priority for local and state government attention. In addition, disposal of sewage sludge in connection with local wastewater treatment efforts has been designated as a high priority for local government attention. (See DEQ letter clarifying responsibilities for waste types, Attachment 15.) Therefore, although State legislation gives responsibility for waste management primarily to local governments, we foresee little local government planning activity for the remaining waste types (hazardous, industrial, etc.). Management of these wastes presently consists of DEQ regulatory activity in relation to industries and other generators.

- B. The State has legal authority to pass Federal funds through to local governments under OAR Section 82-005 thru 82-055. These procedures are patterned after existing State procedures, and were adopted so that Federal RCRA funds can be passed through to local governments if they become available.
- C. The DEQ has historically, and will continue to coordinate substate planning and implementation. Not only do we provide funds and technical assistance for such planning and implementation, but permits for facilities are issued based in part upon conformance with the accepted waste management plans. We also assist in coordinating projects which involve more than one planning and implementing agency.
- D. The DEQ is conducting the classification of disposal facilities for the inventory of open dumps (see Chapter III, this report, and the 1981 State/EPA Agreement, Attachment 10).

- E. The DEQ is responsible for development and implementation of the State regulatory program (see Chapters III and IV, this report).
- F. As noted in other sections of this report, the DEQ assists local government in development of their waste management plans, including resource conservation and recovery programs. Responsibility for development and implementation of these plans, however, rests with designated planning and implementing agencies.
- G. The planning and implementation of solid waste management facilities and services is reserved to local government, with State assistance as described in A above. Oregon is unique in the cooperation and assistance provided to local government by private industry in collection, transport, and disposal. The responsibility for planning and implementation of hazardous waste facilities rests with the State in cooperation with private industry.

CHAPTER III - SOLID WASTE MANAGEMENT PROGRAM

Regulation and Enforcement

A. Scope of Authority

Chapter 459 of Oregon Revised Statutes (ORS - Attachment 2) provides the framework for the state's regulatory and enforcement program. While primary responsibility for adequate solid waste management programs remains with local government, the state has broad authority to adopt and enforce minimum performance standards for the storage, collection, transportation, treatment and disposal of solid waste. This rulemaking authority is limited only to the extent that the EQC must find proposed rules to be "reasonable and necessary . . . to prevent vector production and sustenance, transmission of diseases to man or animals, air pollution, pollution of surface or ground waters, and hazards to service or disposal workers or to the public" (see ORS 459.015 and 459.045).

The storage of municipal wastes is normally regulated by local government in Oregon. The state has assumed primary responsibility for regulating the storage of other solid wastes. The state adopted minimum standards for proper storage of all non-hazardous solid wastes in March 1972.

The collection and transportation of municipal wastes is primarily regulated by local government, although there are state standards relative to load limits, speed limits, etc. The state minimally regulates the collection of other wastes and is the primary regulator of solid waste transfer facilities. A few local governments, however, have regulatory programs in addition to the Department's for controlling municipal solid waste transfer facilities.

Processing and treatment facilities are primarily regulated by the state, although local governments may also regulate such facilities. A permit from the Department is required for solid waste processing and/or treatment and there are special sections in the Department's rules governing incinerators and composting facilities.

Disposal of solid wastes is also primarily regulated by the Department, but there is a considerable amount of local involvement. Local government approval is required in the establishment of new disposal sites, many local governments own and/or operate disposal sites and several local governments have regulatory programs in addition to that of the Department.

The Department's current rules, adopted in March 1972, are equivalent to most, but not all, of the RCRA criteria for classification of solid waste disposal facilities (40 CFR Part 257). Department staff are currently drafting revised rules which will be equivalent to the criteria, except in the area of sludge disposal. It is anticipated that these rules will be adopted by July 1981. (See copy of the current rules, Attachment 5.)

The RCRA criteria for land spreading of sludge are currently in an interim form and are the subject of much technical debate. For this reason, the Department is opting to postpone modification of its rules in this area until the Criteria are finalized. The Department has appealed that portion of the interim criteria which requires adjusting the pH of the solid waste and soil mixture to 6.5 or greater. Research by Oregon State University scientists indicate that such treatment is a needless expense as it results in virtually no substantial change in the rate of heavy metal uptake by the crops to which sludge is typically applied in Oregon. The Department is hopeful that EPA will delete or modify this requirement.

The Department currently does not have authority to regulate land spreading of sludge to an extent that could be considered equivalent to the interim criteria. Under the state's water quality statutes (ORS Chapter 468), the Department may regulate sludge application where there is an apparent threat to surface or ground water (ORS 468.72 and 468.770). However, where water quality is not threatened, the Department lacks authority to formally regulate sludge application so as to prevent contamination by pathogens, heavy metals or other toxic materials. ORS 459.005(11)(b) specifically excludes materials returned to agricultural land as fertilizers and soil conditioners from the state's legal definition of "solid waste." Recognizing this deficiency, the Department is proposing corrective legislation to the 1981 Legislature. As noted above, however, even as regulatory authority is granted, the Department does not intend to immediately adopt regulations that are identical to EPA's interim sludge disposal criteria.

B. Surveillance and Monitoring

The Department has ten field offices around the state in addition to the central office and laboratory. The field staff investigate complaints and carry out routine surveillance of solid waste facilities. The field staff also draft permits (see PERMITS below) and initiate any enforcement action. A small central office staff write rules, establish policies and procedures, review and approve permit drafts, lead the review of engineering plans for solid waste facilities and provide technical assistance and training for the regional staff. Headquarters and regional staff frequently conduct joint field inspections. The Department's laboratory includes two chemists who are assigned full-time to solid waste program activities. The chemists collect and analyze samples of various solid, liquid and gaseous materials.

Disposal sites located in areas where there is a potential for groundwater impact are required to install groundwater monitoring wells, in accordance with the recommendations of hydrogeologists from the State Department of Water Resources. Monitoring wells are sampled at least annually (most are sampled semi-annually) by Department staff and samples are analyzed in the Department's laboratory. In addition to the groundwater monitoring, numerous special surface water surveys are conducted as part of the permit application review and permit compliance monitoring processes. Recently, the Department added the

capability to evaluate disposal sites and their environs for accumulations of explosive gases. In addition to the Department's monitoring activities, the agency's rules allow the Department to require self-monitoring by site operators when necessary or desirable. The Department's right to enter disposal sites for purposes of determining compliance and to enforce pertinent rules and regulations is guaranteed by ORS 459.285.

C. Permits

ORS 459.205 provides that a solid waste disposal site shall not be established, operated or maintained and that an existing site shall not be substantially altered or expanded until a permit is obtained from the Department. This permit, which contains a number of "conditions," is the Department's primary regulatory tool. The Department may deny a permit or may suspend or revoke a permit for facilities which fail to comply with the statutes or the Department's rules (ORS 459.245 and 459.255). Violation of permit conditions may result in a variety of criminal and civil penalties. Applications for a permit to establish a new disposal site or to modify or expand an existing site must include a feasibility study report (environmental impact assessment) as well as detailed engineering plans and specifications. These documents allow the Department to evaluate proposals and, by conditional approval, assure compliance with state standards.

D. Enforcement

ORS 459.276 states that the Environmental Quality Commission (the Department's governing board) may take "whatever action is appropriate for the enforcement of its regulations or orders." As noted above, these actions may include a full range of criminal and civil penalties and other legal remedies. In addition to the staff noted above, the Department's solid waste program is supported by a full-time Investigation and Compliance Section which coordinates enforcement activities and prepares and prosecutes cases. The Department is also represented by legal counsel from the Department of Justice.

E. Summary

Oregon's DEQ has available most, but not all, of the authority and program elements necessary to achieve compliance with standards including the closure or upgrading of all open dumps. Where deficiencies exist, the Department is actively pursuing remedies.

Closing or Upgrading Open Dumps

A. Open Dump Inventory

The State of Oregon is conducting an inventory of all existing disposal sites as defined by RCRA and is evaluating each site against the EPA sanitary landfill criteria for the purpose of listing open dumps in accordance with Section 4005 of RCRA. The inventory is a necessary prerequisite to implementing a dump closing program as required by Section 4003. EPA views the inventory as a planning tool to help states and Congress determine the extent of the problems associated with improper disposal of solid waste.

1. Methodology

The inventory is being conducted primarily by DEQ staff. Staff from other agencies and/or consultants are used as needed. Classification of a site shall be made only after an on-site inspection and evaluation in accordance with EPA's sanitary landfill criteria. Violations are documented so as to withstand judicial review if necessary. In the event that there is no reasonable way to promptly determine the classification of a site, that site will be classified as indeterminate until a final determination can be made. A reasonable effort will be made to search out operating sites currently unknown to the State, possibly including the use of aerial photography.

Operators of facilities found to be in violation of the Criteria or the Department's rules are mailed a preliminary notification which describes the violation(s) and includes a schedule for correction. In the event that corrections are not feasible or when operators refuse to comply within the time period allotted, the operator and other directly affected parties are sent a final notification (by certified mail) at least 20 days prior to the date when the facility name must be submitted to EPA for publication on the open dump list.

Facilities classified as open dumps will be upgraded or closed to the extent that state rules are equivalent to the RCRA criteria. That is, violation of the Criteria is not of itself an illegal act under Oregon law. However, facilities or practices which violate the Criteria may also violate equivalent state statutes or rules and therefore be subject to enforcement action by the Department. Permits for facilities found to be violating the Department's rules or Oregon statutes will be promptly amended to include a time schedule for upgrading or closure, unless such a schedule is already in effect. The time period allotted for compliance shall not exceed five years from the date of publication on the open dump list. A list of sites so classified during FY 80 and their compliance schedules appears in Chapter VI.

In addition to the Department's enforcement program, it should be noted that under Section 7002 of RCRA, any citizen may file suit in federal court against any facility believed to be in violation of the prohibition on "open dumping" described in Section 4005(c) of RCRA.

2. Appeals

Pursuant to ORS Chapter 183, the Department has promulgated regulations outlining procedures for contested case hearings. Any action by the Department which would result in closure of a disposal site may be appealed to the Environmental Quality Commission for such a hearing. As noted above, it shall be the policy of the Department to notify affected parties by certified mail at least 20 days prior to formal classification of a site as an open dump. In the event of an appeal, classification shall be delayed until the appeals process has been completed and a ruling made by the Environmental Quality Commission.

3. Timetable

DEQ staff have completed an inventory of most municipal (domestic) waste sites. Those which remain (including some considered indeterminate) will be completed during FY-81. Background data (i.e., name of property owner, legal description of property, etc.) for impoundments and some industrial waste landfills have been gathered. The actual survey of industrial waste sites began approximately October 1, 1980. Data on all sites to be listed in the next publication of the inventory will be submitted by September 1, 1981. Data on sites inventoried after that date will appear in subsequent publications of the inventory.

Inasmuch as the inventory shall include all categories of solid waste disposal sites, a phasing of the inventory over several years will be required. The determination of priorities for the classification of disposal sites was based upon (a) the potential for health and environmental impact of the solid waste material or disposal facility, (b) the availability of state regulatory and enforcement power, and (c) the availability of federal and state resources for this purpose. Accordingly, categories of facilities and their priority for inventory are as follows:

1. Municipal waste disposal sites.
2. Industrial waste impoundments and landfills.
3. Waste water treatment plant sludges.
4. Other pollution control residues.
5. Agricultural waste disposal sites.
6. Mining waste disposal sites.

Through a grant from EPA, the Department has completed a preliminary assessment of surface water impoundments in

accordance with Section 1442(a)(b)(c) of the Safe Drinking Water Act (P.L. 930523). This assessment was completed in May, 1980. The results of this survey will provide some of the data necessary for the RCRA inventory.

4. Dump Closure Requirements

The Department's administrative rules specifically require proper closure and continued maintenance of a disposal site before it may be legally abandoned. All solid wastes must be compacted and covered with at least two feet of compacted earth. The final cover must be graded, seeded with appropriate groundcover and maintained until the fill has stabilized. The Department is also seeking authority from the 1981 Legislature to require performance bonds or other surety from disposal site operators to further assure proper closure and maintenance of completed landfills.

5. Abandoned Facilities

As noted above, state rules currently prohibit the abandoning of a solid waste disposal site without proper closure and maintenance. These rules have been in effect since 1972 and it is the Department's position that very few, if any, illegally abandoned facilities exist that pose any significant threat to public health or the environment. Nevertheless, as time permits, the Department will seek out and pursue proper closure of any abandoned facilities that may exist. Authority for such action exists in ORS 459.205 which prohibits a landowner from "maintaining" a disposal facility, without a permit from the Department, whether the facility is being actively operated or not.

B. Establishment of New Open Dumps

It is the policy of the State of Oregon to prohibit the establishment of new open dumps. Currently, the Department's rules specifically prohibit the open dumping of putrescible waste and the Attorney General's Office has confirmed that authority exists to adopt additional rules prohibiting all open dumps (see Attachment 9). As noted above, proposed rule changes have been drafted and are scheduled for adoption by no later than July 1981.

CHAPTER IV - HAZARDOUS WASTE MANAGEMENT PROGRAM

Prior to the late 1960s--early 1970s, no effort was made to make a program or legal distinction between non-hazardous and hazardous solid wastes in Oregon. However, as a result of the abandonment of some 23,500 fifty-five gallon drums of pesticide manufacturing residues near Lakeview, Oregon in 1970, the State's attention was focused on the potentially serious public health and environmental implications associated with the mismanagement of toxic/hazardous chemical wastes. This attention resulted in action by Oregon's 1971 legislature, which assigned to the Environmental Quality Commission and Department of Environmental Quality the responsibility to adopt administrative rules and implement a regulatory program to manage the collection, storage, transportation and disposal of hazardous wastes in Oregon. The Department's initial effort was to complete an inventory of potentially hazardous wastes, the results of which were published in a March, 1974 report entitled "Hazardous Waste Management Planning 1972-73." An update of that inventory was undertaken in 1978-79 and the results will be published shortly.

During 1975 and early 1976, the Department worked with a private company to evaluate and license a proposed chemical waste landfill near Arlington, Oregon. A license was issued in March of 1976 to Chem-Nuclear Systems, Inc., and today that authorized site is receiving approximately 1,000,000 cubic feet per year of hazardous wastes from business, industry, government and the general public in the Pacific Northwest (Oregon, Idaho, Washington, Alaska, Hawaii and western Canada). Depending on their physical and/or chemical properties, these wastes are handled in solar evaporation treatment ponds, disposal trenches, land treatment facilities or long-term secure storage buildings. Proposed additions to the site include neutralization/detoxification facilities, sludge dewatering facilities and waste solidification facilities.

In 1979, major revisions/improvements were made to the hazardous waste administrative rules such that they currently provide for:

1. Defining hazardous waste
2. Registering generators
3. Registering transporters
4. Licensing off-site storage and treatment facilities and disposal sites
5. Requiring use of a manifest during transportation
6. Requiring submission of reports from generators and operators of storage, treatment and disposal facilities
7. Requiring proper packaging, labelling and placarding during storage and transportation

As a result of these rules, some 140 generators and 83 transporters have registered as of December 31, 1980 (these numbers have been increasing monthly due to DEQ compliance monitoring and report review activities). Further, DEQ licenses 1 disposal site, 3 off-site collection sites for small quantities of hazardous waste (applications for two additional sites were received during August, 1980), and is processing 4 applications for off-site hazardous waste treatment facilities.

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On August 2, 1980, DEQ submitted a draft application to EPA to manage a "substantially equivalent" state program in lieu of a federal hazardous waste program. On September 16, 1980, the Department submitted a complete application for Phase I Interim Authorization. On November 17, 1980, EPA held a public hearing in Portland on Oregon's Application for Phase I Interim Authorization. We expect EPA's approval of Oregon's program by January 16, 1981. Meanwhile, we are consulting with a task force which will advise the DEQ, the EPA and the 1981 Oregon Legislature regarding the issue of whether the DEQ or the EPA should run the program on a permanent basis.

Over the last year, DEQ and EPA-Region X conducted an uncontrolled (abandoned) site survey. The purpose of this survey was to locate any large quantities of uncontrolled hazardous waste that may pose a threat to public health or the environment. As of December 31, 1980, DEQ and EPA conducted approximately 85 investigations of chemical waste disposal sites. Although some investigations are still continuing (to collect ground or surface water samples, to examine soil and geologic profiles, to better define waste, stored or disposal of etc.), to date the survey has not uncovered any large quantities of uncontrolled hazardous waste that present an immediate threat to public health or the environment.

CHAPTER V - RESOURCE RECOVERY PROGRAM

- A. Resource Conservation and Recovery Policies and Strategy
(For greater detail on policies, see 1979 Status Report, Attachment 1).

The State Legislature has charged the Department of Environmental Quality with the responsibility of actively encouraging and assisting local government, industry and private citizens to conserve and recover resources that were previously discarded. The Environmental Quality Commission has developed various incentives to pursue this objective, including the following programs:

1. Planning grants to local government entities.
2. Pollution Control Bond grant/loan program for project implementation of resource recovery projects.
3. Approval of tax credit applications for private industrial facilities that utilize waste materials.
4. Public information and education programs, and exhibits and seminars.
5. Technical assistance programs to assist in planning activities, equipment testing and material and energy market development.

These programs have been beneficial, but are only beginning to promote resource conservation and recovery. Among the various factors inhibiting progress in achieving the goals are:

1. Recent economic conditions beyond the control of the affected parties such as inflation, recessions and loss of state financial resources.
2. Lack of adequate skilled personnel within the Department.
3. Lack of successful projects in Oregon and nationally.
4. Reluctance by local government to modify present practices of disposal to accomplish recovery and reuse of waste materials.

Although some of the factors which discourage conservation and recovery programs are beyond the power of the Department or the State to change, certain programs and procedures can be modified to achieve better results. Portions of the following items will be implemented by the Department to the extent that necessary resources are available:

1. Strengthen the existing information and education programs by incorporating new materials as they become available from other federal, state, local government, industrial or private sources. These sources can include programs and information developed by schools, industrial associations, and governmental agencies on all levels.

2. Develop and present periodic training sessions around the state to Department regional staff members and use of the other forums. This could include providing staff presentations to other organizations (Association of Oregon Counties, Association of Oregon Industries, etc.) as well as to schools.
3. Initiate cooperative evaluation and assistance programs within the various DEQ divisions to better utilize staff expertise on specific projects.
4. Develop new programs in cooperation with other state agencies (Department of Energy, Public Utility Commission, etc.) to encourage use of waste materials as energy sources.
5. Develop new techniques in cooperative efforts with private associations (American Society of Mechanical Engineers, Governmental Refuse Collection and Disposal Association, Oregon Sanitary Services Institute, Association of Oregon Industries, Association of Oregon Recyclers, etc.) to foster material and energy recovery program to using wastes.
6. Continue and improve the existing technical assistance program by employee development and by implementing a project manager program (one individual having overall responsibility and resources) for a project.
7. Continue use (as financial resources are available) of the present grant/loan program.
8. Continue tax credit approvals for waste reduction and recovery programs; guidelines (under the direction of the Environmental Quality Commission).

B. Procurement of Recovered Materials

A draft report "Institutional Barriers to the Procurement of Products Made From Recovered Materials in the State of Oregon" has been produced by a contract research firm for the Department. This report contains a review of present state policy with regard to procurement of items containing recovered materials. In the process of review, all key procurement agencies and items were identified. Special attention was paid to construction materials, paper products, waste oil, and tires.

Efforts were made to coordinate with the Oregon Department of Energy and its activities toward compliance with the Federal Energy Production and Conservation Act (EPCA). The report will recommend procurement procedures and policies for responsible agencies. A further product of the report will be the establishment of a timetable for implementation of procurement procedures to bring the state and local procurement agencies into full compliance with Section 6002 (C) of RCRA by September 30, 1982.

In consideration of the lack of emphasis put on this section of the law by the EPA, and given the multi-jurisdictional nature of procurement in Oregon, the report will be advisory and informational rather than regulatory in nature.

The draft report is still in the review process, and thus far, no negative comments have been received. During this period of research and report review, Oregon procurement agencies have been making efforts to obtain recycled products through their standard procurement procedures. The Oregon Department of General Services has made special efforts to finalize administrative changes necessary to enable the Department to comply with Attorney General's Opinion (No. 7856) relative to ORS 279, recycled paper. Procedures have been changed to include more recycled paper in the bidding and purchase process and to increase the general use of recycled paper by the Department of General Services and other state agencies.

C. Waste Reduction Program Planning

Realizing that waste reduction will be slow to occur without special emphasis, the Division is contemplating development of a statewide plan which will identify realistic volume of recoverable materials in the waste stream and target volume goals for recovery. These figures would be based on local area conditions such as amounts, distance from markets, current prices paid, etc.

D. Supply of Waste to Resource Recovery Facilities

The Division has researched existing state and local laws and found no prohibition of local government entering into long-term contracts for the supply of waste to resource recovery facilities.

E. Additional Information

For more information about resource recovery and waste reduction efforts, see the 1979 STATUS REPORT, Attachment 1, and the 1981 State/EPA Agreement, Attachment 10.

CHAPTER VI - FACILITY PLANNING AND DEVELOPMENT

A. Solid Waste Facilities

Planning for new disposal facilities to replace those which are reaching capacity, those which are scheduled for closure as a result of state regulations, and/or those which are identified as open dumps based on Federal Criteria is a high priority. Resources will go first to planning for replacement of the sites which handle the greatest volumes and serve the greatest numbers of people. Local waste management plans will be updated as necessary to accomplish this facility planning.

As local government requests our assistance in facility planning and implementation, we intend to encourage updating of their local waste management plans governing all aspects of waste management. In such cases, waste reduction programs will be a required part of the plans. Should accelerated population growth or other factors create needs for plan updates, we would, of course, encourage additional planning activities and provide whatever technical and financial assistance we have available. The Solid Waste Division will contact counties as necessary to encourage plan updates and offer supplemental state planning grants as an incentive.

Following is a list of counties we presently intend to work with, in priority order, along with a listing of the sites in each county which are classified as open dumps. Where an asterisk (*) appears in the conversion/closure date column, these schedules are still under negotiation. Where schedules have been established, the Department has found that there is no reasonable public or private alternative available. Those counties marked with a double asterisk (**) are already working on solid waste management plan updates.

PRIORITY #1

<u>County</u>	<u>Site</u>	<u>Permit No.</u>	<u>Conversion/ Closure Date</u>
** 1. Portland	Metro Area	(Need for new regional site)	
** 2. Marion County	Brown's Island	255	7/1/83
** 3. Hood River County	Hood River	168	*
** 4. Clatsop County	Elsie	73	11/1/81
	Seaside	22	11/1/81
	Cannon Beach	23	11/1/81
	Astoria	118	*
	Warrenton	120	12/31/83
** 5. Lincoln County	Waldport	132	*
	Agate Beach	162	*
	North Lincoln	182	*

PRIORITY #2

<u>County</u>	<u>Site</u>	<u>Permit No.</u>	<u>Conversion/ Closure Date</u>
1. Wheeler County	Fossil	260	*
2. Lane County	Cottage Grove	83	*
	Creswell	78	12/31/83
3. Columbia County	Santosh	195	12/31/82
4. Coos County	Powers	160	7/31/82

PRIORITY #3

<u>County</u>	<u>Site</u>	<u>Permit No.</u>	<u>Conversion/ Closure Date</u>
1. Benton	Monroe	66	9/30/81
2. Lake County	Christmas Valley	9	7/1/82
	Fort Rock	276	7/1/82
	Plush	10	7/1/85
	Summer Lake	183	7/1/82
	Silver Lake	184	7/1/82
	Adel	4	7/1/85
	Paisley	178	7/1/82
3. Malheur County	Willow Creek	228	*
	Juntura	272	*
	Harper	271	*
	Adrian	101	*
	Brogan-Jamieson	103	*
4. Jackson County	Butte Falls	205	*
5. Grant County	Dayville	(Need for new site)	
	Long Creek	(Need for new site)	
6. Polk County	Fowler's	198	7/31/82
7. Umatilla County	Pilot Rock North	107	*
8. Baker County	Unity	(Need for new site)	

B. Hazardous Waste Facilities

Planning for hazardous waste disposal sites should be done on a regional basis. The Chem-Security disposal site in Oregon presently receives approximately 45 percent of its wastes from Washington, and 5 percent from Canada. Thus, projections for the life of the site vary depending upon actions taken region-wide. Given historical volumes, the estimated life

of this site is 80 years, but the increase in the number of materials which are defined as hazardous wastes under EPA rules could double these volumes, decreasing the life of the site to 40 years. This increase at the Chem-Security site could be off-set if the State of Washington opens a disposal site as planned. We will be investigating, in cooperation with Washington, the possibility of providing a facility in that state which could meet regional needs which are not presently met at the Chem-Security site, e.g., an incineration facility. The Hazardous Waste Section is not presently allocating planning resources to develop additional disposal facilities in Oregon.

Oregon's plan for collection of hazardous wastes is already developed. It is to encourage the development of a collection site in each Oregon city of 10,000 or more people. We are presently working with local government, local landfill operators, and transporters/generators of hazardous wastes to implement the plan and provide this important service.

Planning for adequate treatment of hazardous wastes should also be done regionally. We intend to identify treatable wastes being generated in the region, and to determine their volumes and geographic locations. We will then determine the available capacity of treatment facilities, and based on this information determine what additional capacity is needed. We will use tax incentives to encourage industry to provide new capacity in Oregon. (Since treatment is essentially an industrial process, we anticipate that it is private industry which will provide the service.)

Chapter VII - COORDINATION WITH OTHER PROGRAMS

Requirements:

- a) DEVELOP THE STATE SOLID WASTE MANAGEMENT PLAN IN COORDINATION WITH FEDERAL, STATE AND SUBSTATE PROGRAMS FOR AIR AND WATER QUALITY, WATER SUPPLY, WASTE WATER TREATMENT, PESTICIDES, OCEAN PROTECTION, TOXIC SUBSTANCES CONTROL, AND RADIATION CONTROL. Draft copies of the plan will be sent to these programs for review and comment.
- b) PROVIDE FOR COORDINATION WITH PROGRAMS UNDER SECTION 208 OF THE CLEAN WATER ACT. The Water Quality program has not yet addressed waste disposal sites as non-point sources. We will coordinate activities with them when they move into this activity.
- c) PROVIDE FOR COORDINATION WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). Where NPDES permits are in effect, state facility permits and actions taken to close or upgrade open dumps are issued as amendments to this permit, and where practicable, are coordinated with issuance of new or revised NPDES permits.
- d) PROVIDE FOR COORDINATION WITH ACTIVITIES FOR MUNICIPAL SEWAGE SLUDGE DISPOSAL AND UTILIZATION CONDUCTED UNDER THE AUTHORITY OF SECTION 405 OF THE CLEAN WATER ACT AND WITH THE PROGRAM FOR CONSTRUCTION GRANTS FOR PUBLICLY OWNED TREATMENT WORKS. The Department has undertaken an integrated sludge management project, as detailed in 1980 and 1981 State/EPA agreements, and described further in Chapter III.
- e) PROVIDE FOR COORDINATION WITH STATE PRETREATMENT ACTIVITIES FOR THE CLEAN WATER ACT. See d) above.
- f) PROVIDE FOR COORDINATION WITH AGENCIES CONDUCTING ASSESSMENTS OF THE IMPACT OF SURFACE IMPOUNDMENTS ON UNDERGROUND SOURCES OF DRINKING WATER UNDER THE AUTHORITY OF THE SAFE DRINKING WATER ACT. The Solid Waste Division conducted the Surface Impoundment Assessment (to identify potential impacts on drinking water) in cooperation with the Water Quality Division, and will work in cooperation with Water Quality and Regional staff to determine impacts of industrial impoundments on drinking water as part of the Open Dump Inventory over the coming year.
- g) PROVIDE FOR COORDINATION WITH STATE UNDERGROUND INJECTION CONTROL PROGRAMS UNDER THE AUTHORITY OF THE SAFE DRINKING WATER ACT AND WITH THE DESIGNATION OF SOLE SOURCE AQUIFERS UNDER THAT ACT. A preliminary work plan has been developed between DEQ Water Quality Division and the State Water Resources Department to identify sole source aquifers. We will be kept informed as this project proceeds, and consider protection of sole source aquifers in our regulatory and permitting program.
- h) PROVIDE FOR COORDINATION WITH STATE IMPLEMENTATION PLANS DEVELOPED UNDER THE CLEAN AIR ACT; INCINERATION AND OPEN BURNING LIMITATIONS; AND STATE IMPLEMENTATION PLAN REQUIREMENTS IMPACTING RESOURCE RECOVERY SYSTEMS. Municipal open burning dumps are prohibited under state

law, except for a few rural sites which have been given variances while developing alternatives. These variances are being evaluated as they expire, and are largely being phased out. Silvicultural, agricultural, land clearing, and waste burning are coordinated with the SIP, and must get permission from DEQ regional offices based on the SIP.

- i) PROVIDE FOR COORDINATION WITH THE ARMY CORPS OF ENGINEERS PERMIT PROGRAM FOR DREDGE AND FILL ACTIVITIES IN WATERS OF THE UNITED STATES. The DEQ will not approve a proposed landfill plan where dredge and fill is proposed without Corps approval.
- j) PROVIDE FOR COORDINATION WITH THE OFFICE OF ENDANGERED SPECIES, DEPARTMENT OF INTERIOR, TO ENSURE THAT SOLID WASTE MANAGEMENT ACTIVITIES, ESPECIALLY THE SITING OF DISPOSAL FACILITIES, DO NOT JEOPARDIZE THE CONTINUED EXISTENCE OF AN ENDANGERED OR THREATENED SPECIES NOR RESULT IN THE DESTRUCTION OF ADVERSE MODIFICATION OF A CRITICAL HABITAT. In review of plans for proposed sites we will consult with State Fish and Wildlife, and the Office of Endangered Species.
- k)
 - 1. We will be aware of developments and coordinate with programs under the Toxic Substances Control Act (EPA) and the Federal Insecticide, Fungicide and Rodenticide Act (State and Federal Departments of Agriculture) to accomodate disposal of substances banned and removed from the market under these programs.
 - 2. We will coordinate when appropriate with the EPA and the National Oceanic and Atmospheric Administration regarding disposal in ocean waters under the Marine Protection, Research and Sanctuaries Act.
- l) Where practicable and applicable, we will coordinate with programs of other Federal agencies, including:
 - 1. Department of the Interior - Fish and Wildlife Service, re wetlands
 - Bureau of Mines and Office of Surface Mining re mining waste disposal and use of sludge in reclamation
 - U.S. Geological Survey re wetlands, floodplains and groundwater
 - 2. Department of Commerce, National Oceanic and Atmospheric Administration re coastal zone management plans.
 - 3. Water Resources Council re floodplains, surface and ground waters.
 - 4. Department of Agriculture, including Soil Conservation Service re land spreading solid waste on food chain croplands.
 - 5. The Federal Aviation Administration re locating disposal facilities on or near airport property.

6. The Department of Housing and Urban Development re 701 comprehensive planning program, flood plains mapping.
 7. The Department of Defense re development and implementation of state and substate plans with regard to resource recovery and solid waste disposal programs at various installations.
 8. The Department of Energy re state energy conservation plans under the Energy Policy and Conservation Act.
 9. Other programs as deemed appropriate.
- m) Where practicable, we will coordinate with solid waste and hazardous waste management plans in neighboring states and with plans for Indian reservations in the state.

CHAPTER VIII - PUBLIC PARTICIPATION

A. Requirements for Public Participation in State and Substate Plans

1. The Solid Waste Division maintains a current list of agencies, organizations and individuals affected by or interested in the Plan. We conducted a major constituency development activity in early 1979, and have recently conducted an update of our list of advisors. As a part of that update, we asked advisors to sign up for specific tasks, and as a result developed a list of persons interested in reviewing the State Plan. (See questionnaire, Attachment 11.)
2. An information depository of relevant information is maintained at the Solid Waste Division headquarters office, and when appropriate, in each of the DEQ's 10 regional and branch offices around the state (see list, Attachment 12).
3. This draft plan has been reviewed by those advisors who expressed an interest in doing so, and by other appropriate individuals. A public hearing was held in the process of formal adoption of the Plan by the EQC, and a responsiveness summary has been prepared to summarize the public's view and set forth the Agency's responses. This responsiveness summary will be made available to the public and all those who commented.
4. While the task of compiling State Plan elements has not been deemed an appropriate activity for public participation, such participation has occurred over the years in the development of the State program and of the local waste management plans which make up pieces of the State Plan. A State Advisory Committee was involved in the initiation and review of local waste management planning. (See summary of local plans in 1979 Status Report, Attachment 1.) Similar committees existed for each of the local planning units. The State Advisory Committee was also instrumental in developing much of the policy and guidance found in the 1979 Oregon Solid Waste Management Status Report. Subsequently, work in the areas of rule development and revision, education projects, Goals & Objectives revision and prioritization and other specific work products, which are included in the State Plan, has been and is being accomplished with the assistance of task forces, meetings, hearings, and other appropriate public participation activities.

To meet the requirement of providing information and consulting with the public on plan development and implementation, the Division shall further:

- a. Publish information in our newsletter, which reaches an interested audience, as well as send press releases to major media announcing the public hearing prior to adoption of the State Plan by the EQC. Notice of the hearing will also be published in the Secretary of State's Bulletin.

- b. Make copies of the draft and final State Plan available at DEQ Headquarters, Regional and Branch Offices.
 - c. Send drafts of the State Plan for review to those individuals, agencies, and organizations which expressed an interest in reviewing the State Plan on our questionnaire (Attachment 11).
 - d. Prepare a public responsiveness summary and make it available to the public. Copies will be sent to those who responded.
5. State and substate planning agencies shall conduct public hearings and public meetings where the agency determines there is sufficient interest. A public hearing will be held prior to EQC adoption of the plan.
- B. Requirements for Public Participation in the Annual State Work Program
1. A public participation work plan is included in the annual State work program.
 2. Since EPA strictly limits the use of Federal funds allocated under Subtitles C and D, there are few if any decisions left to be made at the State/local level about how to spend these funds. We have, therefore, not found that development of the work program lends itself well to public participation. The DEQ has, however, held a well-publicized public information meeting to inform the public about the nature of the State/EPA Agreement for the year. The draft work program is made available for review at DEQ Headquarters and Regional Offices.
 3. The State/EPA Agreement for the DEQ as a whole, undergoes the A-95 Review process as required. (A process designed to ensure review of federal and federally-funded projects by appropriate state and local agencies.)
 4. The final work program (Attachment 10) is available for review at the DEQ Headquarters and Regional Offices, and contains our comments to EPA on the public participation issue.
- C. Requirements for Public Participation in State Regulatory Development
1. Public hearings are conducted prior to adoption or revision of any rules, in accordance with the State Administrative Procedures Act. Legislative hearings are conducted prior to adoption of any legislation. Where there is sufficient interest, public workshops, task forces or other meetings may be held. A public responsiveness summary is prepared, sent to those who commented, and made available to the public.
 2. In advance of such hearings, fact sheets are prepared and made available to those on the appropriate mailing list(s), and placed in the information depositories.

D. Requirements for Public Participation in the Permitting of Facilities

1. Hearings on approval for or renewal of disposal or resource recovery facilities are generally and most appropriately held by the local/regional governments involved. The DEQ would hold hearings only if local governments could not be persuaded to provide adequate opportunities for public input. Such hearings would be held in accordance with applicable State and Federal rules.

E. EPA Recommended (Not Required) Public Participation Activities

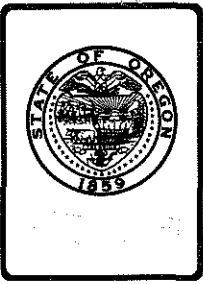
1. "Work with an Advisory Group which has a balanced viewpoint": The Division's process for working with our advisors is outlined in the SEA (Attachment 10). For 1980-81 we updated our list of advisors, sending them a list of activities for which we would like public involvement, and asking them to sign up for the specific activities which interest them. This questionnaire (Attachment 11) was also sent to all State agencies, the nearly 2,000 recipients of our newsletter, BEYOND WASTE, and others.

We now maintain separate mailing lists for each item listed. This approach allows advisors to set priorities for their time and involvement, and helps the Division to avoid the time and expense of sending mailings to those who are not interested in a given task. To date, approximately 175 individuals, organizations or agencies have signed up for involvement in or to receive information for one or more of the listed activities. We will conduct an analysis of each list to see whether additional expertise or points of view would assist us to accomplish the task, and if so, we will actively seek involvement of persons who can provide that.

2. "Develop public education programs": We have developed an education package which helps to explain waste management problems and the need for improved management and waste reduction measures. The materials we have developed (fact sheets, a poster display set, and a slide/tape presentation) are providing invaluable assistance to community, church and youth groups; the schools; and environmental and recycling groups in their educational efforts. Additionally, a display is currently making a tour of public places around the State. A task force will periodically assist our education staff to develop and implement education strategies.

F. Proposed Expansion of Public Participation Program

1. From time to time, the Division has a need to gather technical persons from industry, local government, environmental organizations, etc., to address specific problems. We are currently establishing a procedure to form a group of such advisors to meet on a more formal basis to discuss and make recommendations on program activities.



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item Z, January 30, 1981 EQC Meeting

Request for a Variance from Noise Control Regulations
(OAR 340-35-035) for Buddy Mobile Homes, Marion County

Background and Problem Statement

Buddy Mobile Homes is a mobile home manufacturing plant located in Mt. Angel, Oregon and owned by the Skyline Corporation of Elkhart, Indiana. After complaints were received from adjacent residences, Department staff conducted noise monitoring on August 20, 1978. The company was notified by letter on September 27, 1978 that noise violations of 15 dBA above nighttime L50 (50 percentile) standards and 10 dBA above daytime L50 standards had occurred due to their cyclone, fan and connecting ductwork. The company was requested to submit a plan and schedule to correct the noise violations.

Noise Control Regulations for Industry and Commerce (OAR 340-35-035) subsection (1) (a) Standards and Regulations for existing noise sources limits noise emissions to the following values:

<u>7 a.m. - 10 p.m.</u>	<u>10 p.m. - 7 a.m.</u>
L ₅₀ - 55 dBA	L ₅₀ - 50 dBA
L ₁₀ - 60 dBA	L ₁₀ - 55 dBA
L ₁ - 75 dBA	L ₁ - 60 dBA

Another notice to the company sent on November 6, 1978 affirmed the Department's request for plans and a schedule to correct the noise violations. A date of December 15, 1978 was established for submittal of a control strategy. It was suggested that the company may wish to consider moving the noisy equipment to another location at the plant or enclose the equipment with a high density material.

In April, 1979 the company advised the Department that a cyclone enclosure and silencer were installed in December, 1978. Staff planned to conduct noise monitoring as soon as weather permitted.



Contains
Recycled
Materials

On March 7, 1980 the company was notified that a noise violation still existed with no significant reduction from noise levels recorded in 1978. A further control strategy was requested by April 10, 1980.

Data recorded by DEQ and two acoustical consultants during plant operations in 1980 provide the following results:

$L_{50} = 64 - 65$ dBA
 $L_{10} = 65 - 66$ dBA
 $L_1 = 66 - 70$ DBA

On April 8, 1980 a letter was received from Acker, Underwood, Beers and Smith, attorneys representing Skyline Corporation, the parent corporation of Buddy Mobile Homes. They indicated that Daly Engineering had been retained to conduct noise measurements and make recommendations. This work was expected to be completed by April 24.

On September 5, 1980 a request for a variance from the Department (exception) was received from Acker, Underwood, Beers and Smith on behalf of Buddy Mobile Homes (Attachment 1). Exceptions to the noise control rules can be granted by the Department pursuant to OAR 340-35-010 and OAR 340-35-035(6). The basis for this request was the contention that the noise source in question, Buddy Mobile Homes with the cyclone system, was operating prior to the existence of the impacted noise sensitive property, a mobile home park adjacent to the plant. Subsection 35-035(6)(b) allows the Department to grant exceptions for "industrial or commercial facilities previously established in areas of new development of noise sensitive property."

Supporting grounds for the exception include:

- a) Existence of other noise sources, plant and non-plant associated.
- b) No assurance that the controls recommended by the consultant, at an anticipated cost of \$7000 - \$8000, would be effective.
- c) The ineffectiveness of the controls attempted in late 1978.

Attached to this exception request were the following:

- a) Bid proposal of \$6800, from Arm Priest Sheet Metal of Salem, to move the cyclone approximately 180 feet west to a new location; dated March 13, 1980 (Attachment 2).
- b) A report from Daly Engineering providing results of noise readings on the cyclone system and recommendations for achieving compliance; dated May 1, 1980 (Attachment 3).
- c) A letter from Daly Engineering commenting that a "proposed shielding wall" would not be adequate due to height and orientation deficiencies; dated May 7, 1980 (Attachment 4).

- d) A revised bid proposal of \$7630 from J. I. Johnston Construction Co. of Salem to construct a 12 ft. high block wall to enclose the cyclone; dated May 19, 1980 (Attachment 5).
- e) A report from dBH Acoustics, Inc. providing results of noise readings of the cyclone system and other sources; dated July 31, 1980 (Attachment 6).

On October 21, 1980 the Department denied the exception request (Attachment 7) for the following reasons:

- a) Feasible control alternatives are available.
- b) The violation is substantial and impacts a number of residences in the mobile home park.
- c) The mobile home park was zoned high density residential by the City of Mt. Angel before 1975. Buddy Mobile Homes purchased the plant site in 1976.
- d) The cyclone noise is continuous while operating, unlike the other short duration neighborhood noises. The plant presently operates days and operates swing shifts during better economic times. The complainants report the cyclone fan is periodically left on all night.

On December 11, 1980 the Department received a request for a variance from the Commission (Attachment 8) from the noise control regulations for Buddy Mobile Homes. The basis for the variance request, pursuant to OAR 340-35-100 and ORS 467.060 is that special circumstances render strict compliance with noise emission standards impractical due to special physical conditions. The following was offered to support the request:

- (1) The plant was in operation prior to the development of adjacent noise sensitive property;
- (2) there is no assurance that the proposed noise abatement measures, at an estimated cost of \$7000 to \$8000, will remedy the situation;
- (3) the plant is strictly a daytime operation;
- (4) even with the cyclone system shut down, other noise sources create noise in excess of standards.

Pursuant to ORS 467.060 the Commission may grant a variance if it finds that strict compliance with the rule or standard is inappropriate because:

- a) Conditions exist that are beyond the control of the persons applying for the variance:
- b) special circumstances render strict compliance unreasonable, unduly burdensome or impractical due to special physical conditions or cause;

- c) strict compliance would result in substantial curtailment or closing down of a business, plant or operation; or
- d) no other alternative facility or method of operating is yet available.

Alternatives and Evaluation

A violation of noise control standards has existed from Buddy Mobile Homes' cyclone system since at least August, 1978. Efforts to reduce noise, attempted in late 1978 without Department advice or consultation, were not successful.

Two methods of noise control have been recommended with bids of \$6800 and \$7630 (see Attachments 2 and 5).

Consultant, Daly Engineering, recommended the installation of a noise barrier which would reduce the cyclone system noise from approximately 64 dBA to a level of 40 to 45 dBA at a cost of \$7630 (see Attachment 4).

No professional evaluation was conducted by the petitioner on the proposal to relocate the cyclone system 180 feet to a new location, at a cost of \$6800. This additional distance from the cyclone to the noise sensitive property may be sufficient to achieve compliance with the standards.

The petitioner, Acker, Underwood, Beers and Smith, on behalf of Buddy Mobile Homes, was denied a variance by the Department which was requested based on the existence of the plant before the noise sensitive property. This request was denied primarily because feasible noise controls are available at a reasonable cost and the noise impacts to the adjacent residences are substantial. This basis for denial is still valid with this issue before the Commission (see Attachment 7).

The petitioner notes in their variance request that the costs to reduce noise based upon the bids for a barrier and for relocation were in excess of \$7500. They incorrectly assume that Daly Engineering had reversed its recommendation to construct a barrier. The Daly letter dated May 7, 1980 evaluated a barrier construction bid that was not based upon his engineering recommendations. Daly noted the proposed barrier did not have sufficient height nor did it shield the west side of the cyclone. A revised quote from Johnson Construction dated May 19, 1980 addressed Daly's concerns (see Attachments 4 and 5).

The petitioner claims that noise sources, other than the cyclone system, exceed the L50 - 55 dBA allowable statistical noise level. This is not correct as they have misinterpreted the consultant's data. Both consultants identify the cyclone system as the major noise source causing the violation. The "strip chart" data included in the dBH Acoustics report indicates that other plant and non-plant sources only occasionally cause high noise levels. These noise sources are not frequent enough nor have enough amplitude to exceed the L1, L10 or L50 statistical standards. Naturally the cyclone noise has a constant amplitude and therefore the L50 (the 50 percentile) standard is applicable. It does not appear that other plant noise sources, such as the fork lift trucks, air tools and air compressors, would cause violations of standards with the cyclone noise reduced (see Attachment 6).

Staff does not believe a variance is warranted for Buddy Mobile Homes. It appears that none of the conditions that must be satisfied under the statute (ORS 467.060) to grant a variance are met. The petitioner claims that "in the case of Buddy Mobile Homes, special circumstances render strict compliance with noise emission standards impractical due to special physical conditions." The petitioner has failed to demonstrate that this specific condition (ORS 467.060(1)(b)) has been met. Two acoustical engineering consultants retained by the petitioner have shown that the cyclone system is the major noise source. One consultant designed a noise barrier that would reduce the cyclone noise from 64 dBA to 40-45 dBA. A bid for the noise barrier was \$7630. A second alternative (not evaluated by the consultant) was to move the cyclone system approximately 180 feet to a new location. A bid for this work was \$6800 plus electrical wiring costs.

It is therefore clear to the Department that the cyclone system is the major noise source at Buddy Mobile Homes and that reasonable controls are available that would reduce noise emissions from this source below the standards with an adequate margin of safety.

As the Department does not believe a variance is warranted, it is recommended that the Commission order Buddy Mobile Homes to install necessary controls to achieve compliance with the noise control standards before May 30, 1981.

Summation

The following facts and conclusions are offered:

1. Violations of noise standards have existed at Buddy Mobile Homes, Mt. Angel, since 1978.
2. The major source of excessive noise emissions is their cyclone system.
3. A request for a Department granted exception from the rules was denied on October 21, 1980 because:
 - a) Feasible control alternatives are available,
 - b) the violation is substantial and a number of residences are impacted,
 - c) the residences are located in land zoned for high density residential use, and
 - d) the cyclone system noise is continuous, unlike other neighborhood noise.
4. A request for a variance was received on December 11, 1980 based on the argument that "special circumstances render strict compliance with noise emission standards impractical due to special physical conditions." The "special circumstances" include:
 - a) The plant was operating prior to the development of the impacted residences,
 - b) there is no assurance that the estimated abatement, at a cost of \$7000 to \$8000, will remedy the situation,

- c) the plant only operates during the day, and
 - d) other noise is greater than the cyclone noise.
5. Although the plant cyclone may have been operating prior to the placement of adjacent residences, the area was zoned high density residential prior to construction and operation of the mobile home plant.
 6. Reasonable control of the excessive noise is reasonably available. The petitioner's acoustical consultant proposed a noise barrier that they estimated would reduce the cyclone noise to 40-45 dBA. This provides a daytime margin of 10 to 15 dBA for assurance.
 7. Although present plant operations are confined to daytime hours, the noise impacts during that time period are substantial.
 8. Although other sources of noise exceed the noise level of the cyclone, these other sources are of such short duration that the statistical noise standards are not exceeded.
 9. Buddy Mobile Homes should be ordered to comply with the Commission's noise control standards by May 30, 1981.

Director's Recommendation

Based on the findings of the Summation, it is recommended that Buddy Mobile Homes, Marion County, be denied a variance from the requirements of noise control rules for industry and commerce, OAR 340-35-035, and that Buddy Mobile Homes be ordered to install necessary controls to achieve compliance with these standards before May 30, 1981.



WILLIAM H. YOUNG

John Hector:pw
January 6, 1981
(503) 229-5989

Attachments:

1. Exception request dated 9/4/80
2. Bid proposal - Arm Priest Sheet Metal dated 3/13/80
3. Daly Engineering report dated 5/1/80
4. Daly Engineering letter dated 5/7/80
5. Revised bid proposal - J. I. Johnston Co. dated 5/19/80
6. dBH Acoustics report dated 7/31/80
7. Exception denial dated 10/21/80
8. Variance request dated 12/5/80

ACKER, UNDERWOOD, BEERS & SMITH
ATTORNEYS AT LAW
1200 ORBANCO BUILDING
1001 S.W. FIFTH AVENUE
PORTLAND, OREGON 97204

TELEPHONE
(503) 224-4000

G. MARTS ACKER
LAUREN M. UNDERWOOD
WM. M. BEERS
MILTON R. SMITH
MARK A. HIEFIELD
TIMOTHY N. BRITTLE
DAVID B. CUNNINGHAM

September 4, 1980

Department of Environmental Quality
Willamette Valley Region
1095 25th Street S.E.
Salem, Oregon 97310

Attention: Mr. Jon E. Gjertsen
Assistant Regional Engineer

RE: March 7, 1980 Notice of Violation
of Noise Regulations
Buddy Mobile Homes, Marion County

Dear Mr. Gjertsen:

As you know, this office represents Buddy Mobile Homes concerning the captioned Notice of Violation of Department of Environmental Quality noise regulations in Mt. Angel, Oregon.

The purpose of this letter is to request on behalf of Buddy Mobile Homes that that entity be granted an exception to Section 35-035 (1) of the Oregon Administrative Rules Chapter 340 for the Department of Environmental Quality, pursuant to Section 35-010 of those rules. This request is made pursuant to Regulation 35-035 (6)(b), since Buddy Mobile Homes was previously established in the area in question, and the noise sensitive property (expansion of a trailer park) was a new development following the establishment of Buddy Mobile Homes in the area.

Extensive measurements have been obtained by two different engineering firms of noise levels emanating from the Buddy Mobile Home plant at Mt. Angel, Oregon. The major source of noise emanating from that plant appears to be a cyclone and associated equipment located in the southwest corner of the plant. The portion of the trailer park which is located on the adjacent property to the south of the Buddy Mobile Homes plant was not in existence at the time that the cyclone and associated equipment were installed and operating. I am in the process of obtaining photographs which document the fact that the noise sensitive trailer park was a new development

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State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALEM, OFFICE

Mr. Jon Gjertsen
Department of Environmental Quality
Page 2

subsequent to the establishment of Buddy Mobile Homes on its present site in Mt. Angel. Additionally, this office as counsel for Skyline Corporation, the parent of Buddy Mobile Homes, has done the legal work involved with the Mt. Angel site from the purchase of the subject property in September of 1976 through the present time.

Enclosed for your reference are copies of the reports of Daly Engineering Company and dBH Acoustics, Inc. Both of these engineering firms took measurements of the noise levels at the property line between Buddy Mobile Homes and the noise sensitive property. Also enclosed is a graph made by dBH Acoustics during the period of measurement. Notations have been made on this graph indicating the source of peak noise periods. It is obvious that the cyclone is not the only source of noise during peak periods despite the fact that noise is substantially reduced when the cyclone is not in operation (lunch hour and evening). Indeed, the noise levels are periodically as high on the graph when the cyclone is off as during periods when it is in operation. It is also noteworthy that the plant is strictly a daytime operation with markedly reduced noise output after approximately 5:30 p.m.

Further complicating the situation here is the lack of adequate assurance that the proposed shielding wall will in fact reduce noise emissions from the plant to within DEQ limits. In that regard, I am enclosing a letter from Engineer Edward A. Daly of Daly Engineering Company in which he indicates that in his opinion the proposed wall will not perform the desired function. The anticipated cost of building the wall is in the area of \$7,000 - \$8,000 (estimates from J.I. Johnston Construction Co., Inc. and Arm Priest Sheet Metal, enclosed).

Further, you will recall that the cyclone in question was the subject of a DEQ violation in November of 1978. To correct the problem, Buddy Mobile Homes expended a sum in excess of \$2,500 for installation of a 42" silencer and insulated box. Your office by letter dated March 7, 1980 directed to Mr. Leo Blair at Buddy Mobile Homes indicates that this expenditure resulted in "no significant reduction" of noise levels.

In summary, then, the following factors make this a particularly appropriate case for the granting of an exception:

- Pre-existence of the Buddy Mobile Homes plant on the site in question with a later expansion of

Mr. Jon Gjertsen
Department of Environmental Quality
Page 3

noise-sensitive property nearby;

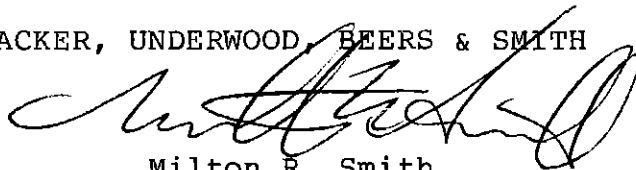
- Existence of numerous noise sources during the working day;
- Lack of assurance of effectiveness of the proposed shielding wall at an anticipated expense of \$7,000 - \$8,000;
- Ineffectiveness of earlier attempted modification.

From my reading of the regulations of the Department of Environmental Quality, an exception can be granted by the Department of Environmental Quality without approval of the full Commission. I will be happy to provide whatever additional documentation you would require with respect to dates of construction of the Buddy Mobile Home plant and expansion of the mobile home park which is the noise, sensitive property in this instance.

I will look forward to hearing from you.

Very truly yours,

ACKER, UNDERWOOD, BEERS & SMITH



Milton R. Smith

MRS:cs
Enclosures

cc: Mr. William H. Young
Mr. John R. Lutz

BID PROPOSAL AGREEMENT

Attachment 2
Agenda Item Z
January 30, 1981
EQC Meeting

March 13 19 80

Attn: Leo Blair

Submitted To: Buddy Mobile Homes
P.O. Box 829, Mt. Angel, Oregon, 97362

Job or Location: Move existing cyclone approx. 180' west to new location.

Armpriest Sheet Metal proposes to furnish all equipment, materials and/or perform all labor necessary to complete the following:

We submit herewith our bid as follows:

1. Supply approximately 180' of pipe to match existing main to fan inside the building.
2. Supply approximately 2- 90° elbows.
3. Cut new hole through the wall at the new location.
4. Move the cyclone, fan and fuel bin to the new location.
5. Install new footing for the cyclone and fan.
6. Speed up existing fan to overcome the resistance of the new pipe.

FOR THE SUM OF-----\$6800.00

Note: The above price does (not) include high voltage electrical wiring or controls.

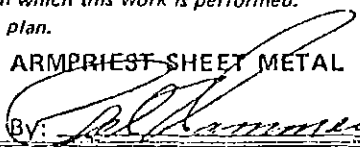
45?

Alt. #1: Extend the ducting out of the existing cyclone and divert exhaust air to ground with sound absorbing liner in the duct..

FOR THE SUM OF-----\$2960.00

All of the above work to be completed in substantial and workmanlike manner according to standard practices.
 Payments to be made each _____ as the work progresses to the value of _____ (_____ %) per cent of all work completed. The entire amount of contract to be paid within _____ days after completion.
 Any alteration or deviation from the above specifications involving extra cost of equipment, materials or labor will only be executed upon written orders same, and will become an extra charge over the sum mentioned in this contract. All agreements must be in writing.
 This firm will not be liable for any damages to equipment or materials mentioned in this contract, either installed or stored on premises, where said damages caused by persons other than our employees, such as other craftsmen or vandals.
 This firm agrees to carry Workmen's Compensation and Public Liability Insurance; also to pay all sales and payroll taxes upon the equipment, materials or labor furnished under this contract, as required by the U.S. Government and the state in which this work is performed.
 This firm is an equal opportunity employer and has an affirmative action plan.

ARMPRIEST SHEET METAL

By:  Pete Hammerquist

ACCEPTANCE

You are hereby authorized to furnish all equipment, materials and/or labor required to complete the work mentioned in the above proposal, for which the undersigned agrees to pay the amount mentioned in said proposal, and according to the terms thereof.

Daly Engineering Company

11655 S.W. Ridgecrest Drive, Rm.110, Beaverton, Ore. 97005

Attachment 3
Agenda Item Z
January 30, 1981
EQC Meeting

May 1, 1980

MAIL STAMP
RECEIVED

MAY 5 - 1980

Buddy Mobile Homes
P.O. Box 829
Mt. Angel, Oregon 97362

BUDDY MOBILE HOMES #597

Attention: Mr. Leo Blair

Dear Mr. Blair:

This letter is to report the results of our noise measurements made at the Buddy Mobile Home plant in Mount Angel, Oregon and recommendations on treatment of the cyclone separator system to bring the noise emissions within Department of Environmental Quality (DEQ) Guidelines.

Noise level measurements were made both with and without the cyclone separator operating. Measurement position was at a point on the fence line which approximates the nearest distance from the separator. Readings were taken on the dbA scale at 15 second intervals for approximately 16 minutes in each case. Table I below gives the results in brief form and Figure 1 is the computer readout for the two cases.

TABLE I

	Sound Levels		
	L10	L50	L90
Cyclone Operating	65 dbA	64 dbA	63 dbA
Not Operating	47 dbA	44 dbA	42 dbA

The L_n value of the sound level equated or exceeded n% of the time. Only the L50 need be considered as this is a violation. The DEQ regulation requires that this value not exceed 55 dbA.

Sound measurements were made at each post position along the fence. Surface vibration measurements were made on each surface of the cyclone and its tower. The level at each post was used to be sure we could calculate the measured levels from the vibration data. The surface on which the vibration measurement

was made and the linear vibration level in db are given in Table II.

TABLE II

Surface	No.	Vibration Acceleration Level
The Metal Housing for the Fan	2	77 db
The Cone below the Settling Box	3	74 db
The Settling Box below the Upper Cone	4	85 db
The Cone below the Upper Cylinder	5	98 db
The Upper Cylinder of the Centrifuge	6	95 db
The Intake Tube to the Fan	7	87 db

The major vibrators are the surfaces of the upper cylinder and the cone below. Sound level data was taken 85 feet from the cyclone on the plant roof to assure that we were getting only sound from two upper surfaces and the discharge.

Calculations were made using the vibration data (octave band) on all surfaces to see if we could predict the levels measured at each fence post position. All but the high frequency levels could be predicted except at a post near a home air conditioning set at one of the houses. The high frequency sound measured was most likely sound from other nearby sources. The calculation indicated the major sources were surfaces 5, 6, and 7. Calculations were made using only surfaces 5 and 6 to see if the level predicted from these surface vibrations would check the level measured on the roof. The calculation checked the measured values.

Clearly we must isolate surfaces 5, 6, and 7 from the houses. Vibration mounting of the fan would reduce some of these levels but not those from the main sources. Enclosure is the only practical method of isolation.

Such an enclosure must block line of sight to the cyclone from the houses and prevent the sound reflected from the finished units being stored on the storage lot from by-passing the

enclosure. The enclosure must run along the south and west sides of the cyclone as shown on Figure 2. An opening must be made or kept in the west shielding wall to put in and remove the dust box. This opening will not defeat the enclosure. The wall section above the opening must be supported. The wall enclosure must have a surface mass of 4.5 pounds per foot squared. This will require 2 1/2 inches of wood, 4 inch cinder or cement block, two sheets of 5/8 inch plywood with 1 inch of sand between them, any other wall of the required mass. The wall must be two feet higher than the top of the upper cylinder of the cyclone.

The discharge from the top of the cyclone should be made a radius, 90°, round duct bend with the outlet facing away from the homes to direct the sound away and still prevent rain from entering the discharge.

The shielding wall should be free standing. It can be in contact with the building but must not be in contact with the fan or cyclone structure.

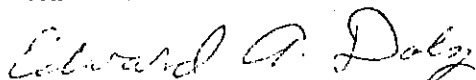
The estimated sound level at the property line near the homes will be 40 to 45 dbA from this source. This is well below what is needed but there really are no less drastic measures that will bring the sound from the cyclone to a level below 55 dbA of the regulation.

The information on the wall that was priced out for you has not reached me and we could not, therefore evaluate its effectiveness.

If we can be of further help, please call on us.

Sincerely,

DALY ENGINEERING COMPANY



Edward A. Daly, P.E.

EAD/zk

Enclosures:

-DALY ENGINEERING CO. -

04/22/80

Buddy Mobile Homes

DATE 04/10/80 POSITION 02 TIME 11:25 - 11:41 AM

DBA	FRQ	FRC	%
62	7	69	100.0
63	41	62	89.9
64	14	21	30.4
65	5	7	10.1
67	2	2	2.9

DBA AVE= 63.4 S.D.= 0.963 ERR OF MEAN= 0.116

L90= 63. L50= 64. L10= 65. Leq=63.5

-DALY ENGINEERING CO. -

04/22/80

Buddy Mobile Homes

DATE 04/10/80 POSITION 02 TIME 12:02 - 12:18 PM

DBA	FRQ	FRC	%
41	8	66	100.0
42	13	58	87.9
43	18	45	68.2
44	12	27	40.9
45	5	15	22.7
46	3	10	15.2
47	4	7	10.6
48	3	3	4.5

DBA AVE= 43.5 S.D.= 1.853 ERR OF MEAN= 0.228

L90= 42. L50= 44. L10= 47. Leq=43.9

Figure 1

Mobile Home Court

Fence

120'

Point of A-Weighted
 Sound Measurement

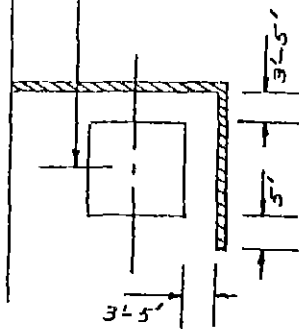
Point of Octave Band
 Sound Measurement

Mobile Home
 Manufacturing
 Plant

93'

Parking Lot

Cyclone Separator
 With Wall



PREPARED FOR
 SKYLINE CORPORATION
 MT. ANGEL, OREGON

TITLE

BARRIER WALL LOCATION

PREPARED BY
 Daly Engineering Company
 BEAVERTON, OREGON

Scale: none

DATE:
 5-1-80

JOB NO:
 448

FIGURE NO:
 2

Daly Engineering Company

11855 S.W. Ridgecrest Drive, Rm.110, Beaverton, Ore. 97005

Attachment 4
Agenda Item Z
January 30, 1981
EQC Meeting

May 7, 1980

Acker, Underwood, Beers & Smith
Attorneys at Law
200 Century Tower
1201 Southwest Twelfth Avenue
Portland, Oregon 97205

Attention: Wm. M. Beers

Dear Mr. Beers:

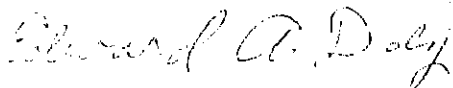
I sent our letter report out on May 1, 1980. The letter was sent to Leo Blair and he is to send copies to you and his home office.

The information on the proposed shielding wall reached me today. As I read the proposal, the wall is only on the south side, it is not clear how far it comes out from the building, and it seems to be planned to be the height of the present building wall. If this is true it will permit the reflected sound from the finished units in the storage lot and will not shield the main sources of sound.

If we can be of further help, please call on us.

Sincerely,

DALY ENGINEERING COMPANY



Edward A. Daly, P.E.

EAD/zk

cc: Mr. Leo Blair

MAY 22 1980



J. I. JOHNSTON CONSTRUCTION CO., INC.

GENERAL CONTRACTORS

1596 22nd Street S.E. • P.O. Box 3196

Salem, Oregon 97302

Phone 585-7406



BUILDING SYSTEMS

Attachment 5

Agenda Item Z

January 30, 1981

BOC Meeting

MAIL STAMP
RECEIVED

MAY 20 1980

BUDDY MOBILE HUKES #597

May 19, 1980

Mr. Leo Blair
Skyline Corporation
P.O. Box 829
Mt. angel, Oregon 97362

Dear Mr. Blair:

We have revised our quote of April 3, 1980, for the block screen wall as per the following:

Add approximately 12'-0" to the height to enclose the cyclone.

Add a pair of hollow metal doors at the West side to enable the removal of the trash cart.

The revised quote is \$7,630.00.

Sincerely,

J.I. JOHNSTON CONSTRUCTION CO., INC.

James I. Johnston

JIJ:tp

AUG 4 1980

Attachment 6
Agenda Item Z
January 30, 1981
EQC Meeting

dBH Acoustics, Inc.

7904 S.W. 14th Portland, OR 97218 (503) 245-4448

July 31, 1980

Mr. Milton R. Smith
Attorney
Acker, Underwood, Beers & Smith
1200 Orbanco Building
1001 S.W. 5th Avenue
Portland, Oregon 97204

Re: Skyline Corporation Environmental Noise Survey

Dear Mr. Smith:

Enclosed is our report concerning the noise environment as measured at the Skyline, Mt. Angel, Oregon, plant, eastern property line on July 29, 1980. Measurement conditions and weather were excellent and the plant personnel very cooperative.

Please call if we can be of further service.

Very truly yours,

DBH ACOUSTICS, INC.

Albert G. Duble

Albert G. Duble, Vice President
Acoustical Engineer

cc: Mr. Leo Blair
Mr. John R. Lutz

Enclosure

AGD:mr

ENVIRONMENTAL NOISE SURVEY
SKYLINE CORPORATION - MT. ANGEL, OREGON

INTRODUCTION

On July 29, 1980 DBH Acoustics, Inc. conducted an 8-hour outdoor noise measurement on the common property line between the Skyline plant and a mobile home park. The microphone was located over the property line at a height equal to the center of a rear window on the nearest mobile home.

For each hour between 7:00 a.m. and 3:30 p.m. a statistical noise level measurement was taken. For a permanent chart record, a continuous strip chart recording was taken. The mobile home manufacturing plant was in full operation during the measurement period.

INSTRUMENTATION

The equipment listed below was used to detect and record noise, and was acoustically calibrated at the site before, in the middle and after the end of the measurement period.

Condensor Microphone	Bruel & Kjaer 4145
Statistical Noise Analyzer	Bruel & Kjaer 4426
Strip Chart Recorder	Bruel & Kjaer 2305
Acoustic Calibrator	Bruel & Kjaer 4230

All equipment was in normal working condition and is electrically calibrated once per year by Bruel & Kjaer (USA) in their Cleveland, Ohio laboratory.

A polyurethane foam windscreen was used at all times over the microphone, except during calibration.

DATA

Tables 1 and 2 list statistical and octave frequency band noise levels as measured during the day work shift at the Skyline plant. The original strip chart with notations made during the measurements is included with this report. A copy of four segments is attached to illustrate the techniques.

Table 1
Property Line Statistical Noise
Skyline Corporation - Mt. Angel, Oregon

Hour	L1	L10	L50
7-8	68 (75) ¹	66 (60) ¹	65 (55) ¹
8-9	73	66	65
9-10	71	67	64
10-11	67	65	64
11-12	68	65	64
12-1	71	66	63
1-2	68	65	63
2-3	74	66	63
3-3:30	66	65	63

¹ Oregon DEQ daytime (7:00 a.m. to 10:00 p.m.) noise regulation, Chapter 340, Division 35, Table G, February 1979.

Table 2
Property Line Octave Band Noise
Skyline Corporation - Mt. Angel, Oregon

	Octave Band Frequency								
	31.5	63	125	250	500	1000	2000	4000	8000
Property Line Noise	69	71	70	65	62	56	52	47	42
DEQ Table J, Daytime	68	65	61	55	52	49	46	43	40

Atmospheric Conditions - July 29, 1980

0730: 58°F., 68% R.H., Wind 0-3 mph, Clear, Sunny
 1200: 72°F., 55% R.H., Wind 0-6 mph, Clear, Sunny
 1530: 83°F., 43% R.H., Wind 0-6 mph, Clear, Sunny

The following noise sources were observed and are listed in order of apparent importance to the overall noise level at the property line.

<u>Source</u>	<u>Characteristics</u>
Cyclone Dust Collector	Centrifugal fan, runs continuously except for lunch breaks.
Fork Lift Trucks (2)	Material handling, truck unloading, trash container unloading, pallet stacking.
Plant Production Noises	Sawing, pounding, air blasts, air tools Onsrud machine.
Diesel Trucks	Delivery and unloading of raw materials.
Plant Air Compressors (2)	Run continuously, enclosed, door open to rear lot.
Ford Tractor	Moves completed mobile homes around the lot.

DATA INTERPRETATION

The cyclone dust collector fan is the dominant source at the property line at a distance of 100 feet. Fork lift activity is very heavy, the trucks performing many duties. The lift truck propane engines appear to be relatively quiet and well muffled, the noise sources being metallic clanking of the tongs. The trash dump system also introduces some noise due to metal-to-metal impacts.

With the cyclone collector fan off, the noise level drops between 12 and 13 dBA at the property line.

The overall lowest daytime ambient noise measured with the plant idle was approximately 46 dBA.

Bretel & Kiser

kyline Mfg Co -

LA Angel, Or -

- 29-80

DBA

80

94dB, 1000Hz

Cal. tone

70

Chart Speed

0.24 in/Min

60

0.110

50

BYK 2305 Redr

40

QP 1102

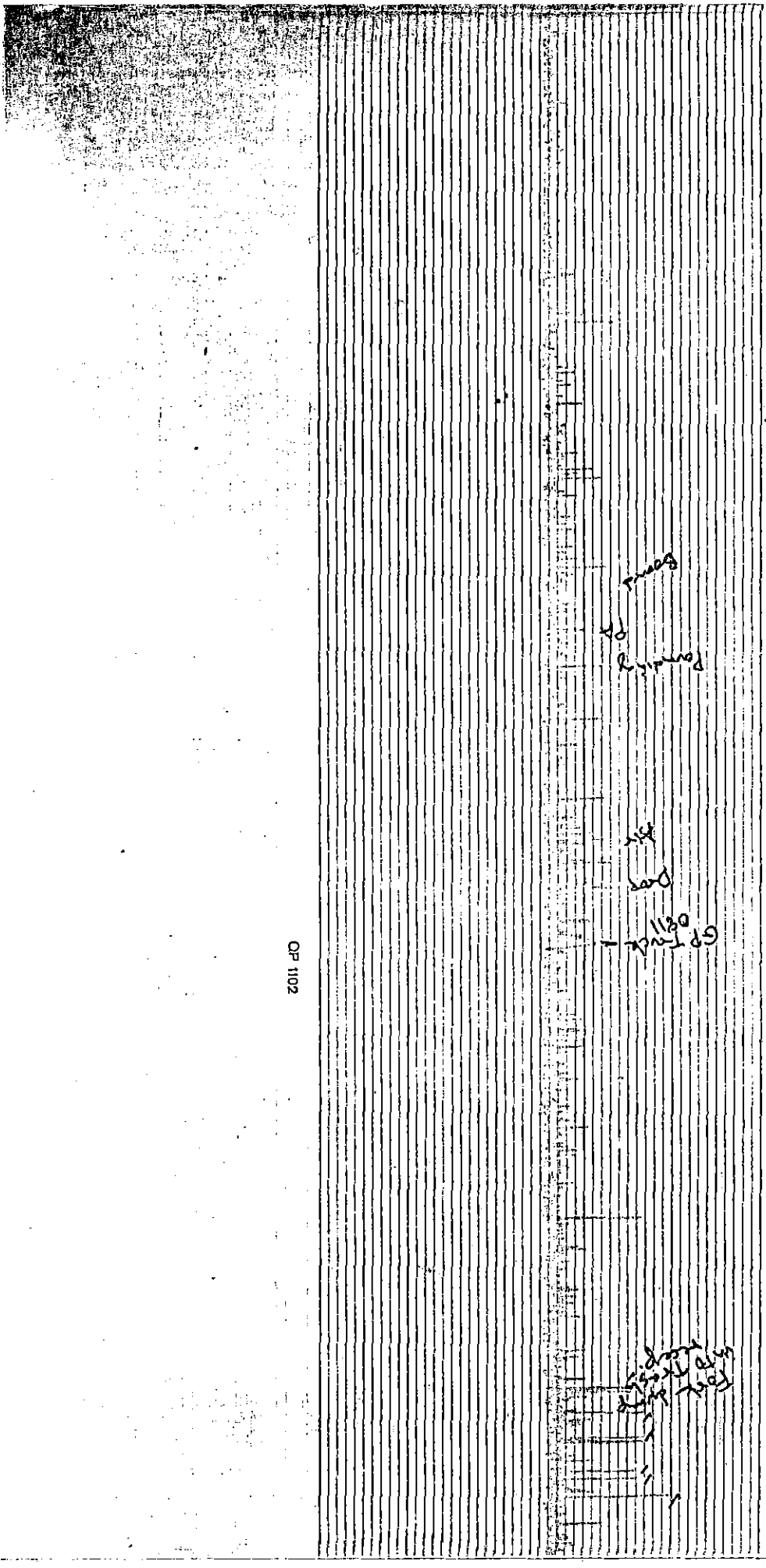
Bridel & Kjaer

Bridel & Kjaer

QP 1102

QP 1102

5
07/10/20



Bridal & Klean

GP 1102

Sand

Drilling

Dr

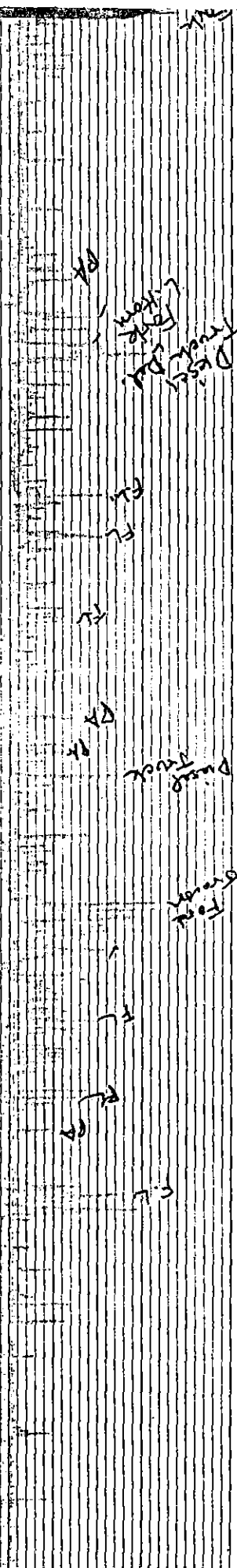
Dr

GP 1102

Hole

Bridal & Klean

Bridal & Klean



OP 1102

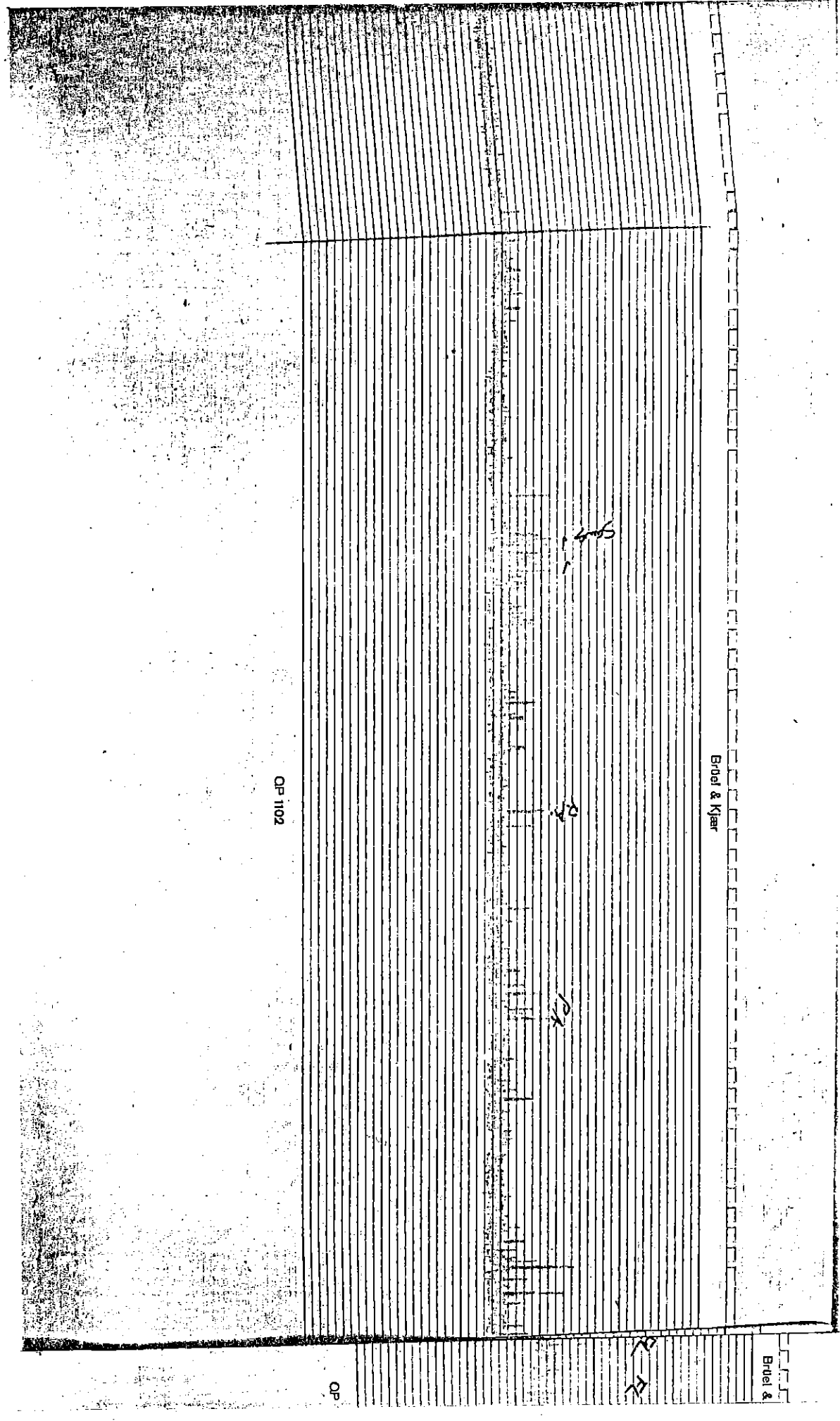
OP 1102

Bridel & Kjaer

OP 1102

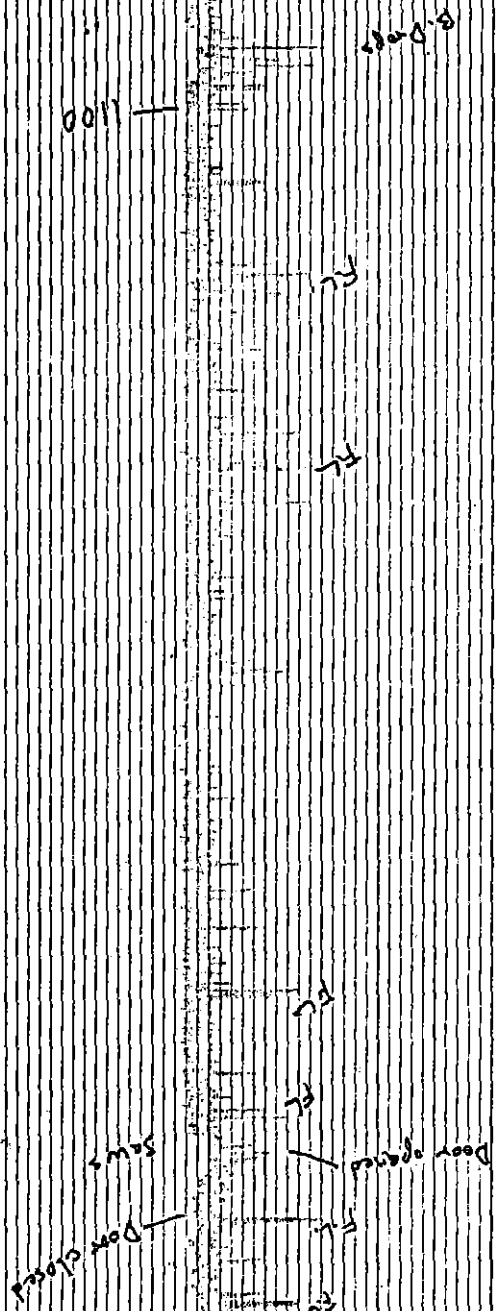
Bridel &

OP



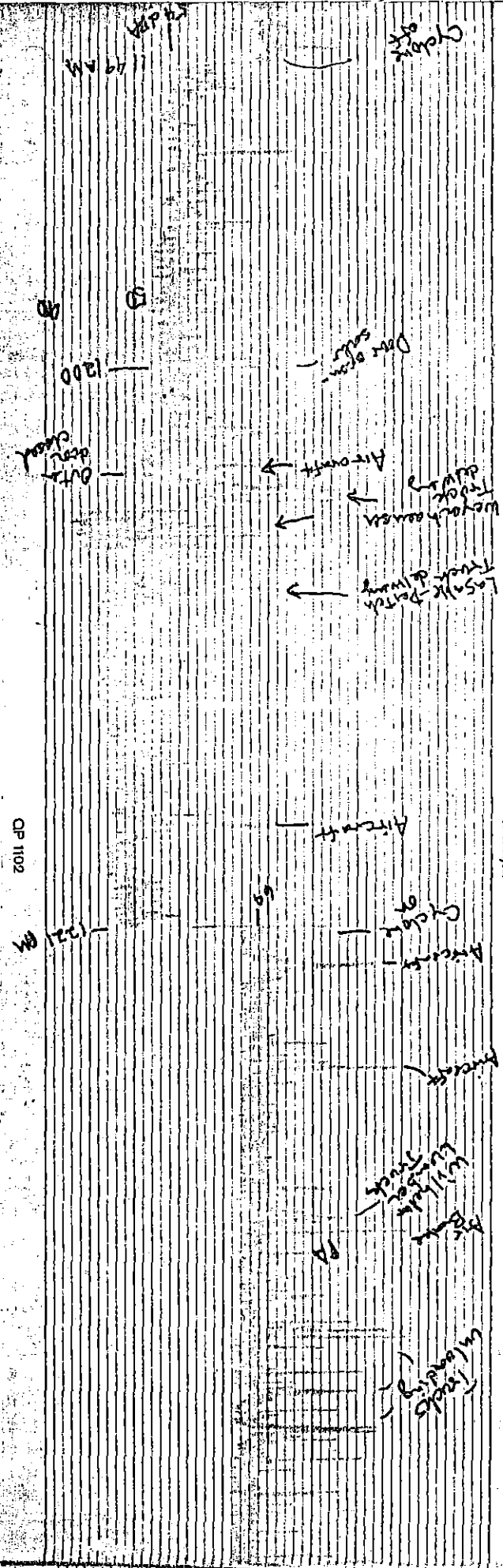
Briel & Kjaer

Briel & Kjaer



OP 1102

OP 1102



Bridel & Kjaer

Bridel & Kjaer



OP 1102

OP 1102

3.20

Britel & Klear

1400

OP 1102

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Fresh
damps

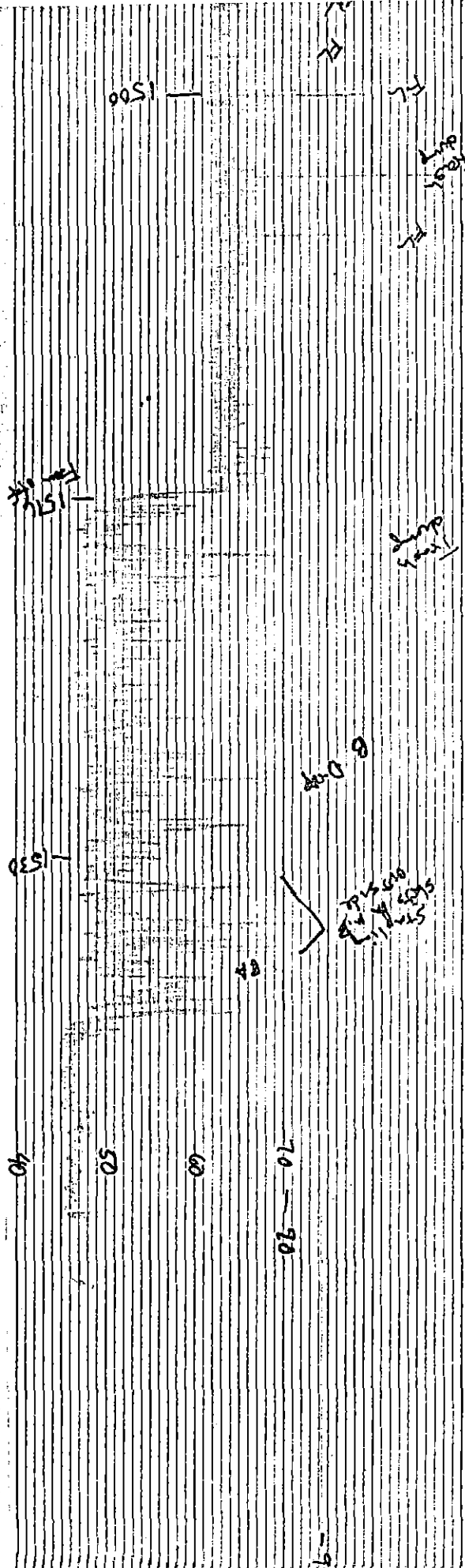
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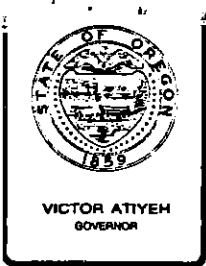
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FE
Fresh
damps

QP 1102

QP 1102





Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229- 5696

October 21, 1980

*Rec'd
10/27/80*

Mr. Milton Smith
Acker, Underwood, Beers and Smith
1200 Orbanco Building
1001 SW Fifth Avenue
Portland, OR 97204

Re: NP - Buddy Mobile Homes
Marion County

Dear Mr. Smith:

My staff has completed review of your September 4, 1980 request for an exception to the Department's Noise Control Rules (Oregon Administrative Rules, Chapter 340, Section 35-035) for the Buddy Mobile Homes Plant in Mt. Angel. In reviewing their recommendations, I find that I must deny your request at this time.

We agree that the major source of noise is the cyclone and fan at the rear of the mobile home plant. The cyclone and fan produce a noise level of 64 to 65 dBA at the nearest noise sensitive property, well above the allowed 55 dBA. Our readings correspond well with those of your consultants.

Although the basis of your request has merit, in that the plant existed before the mobile home park was constructed nearby, I have based my denial on the following:

1. Feasible control alternatives are available, such as high density barriers or relocating the noisy equipment. We have required several plants of this type to control cyclone and fan noise.
2. The violation is substantial and impacts a number of residents in the mobile home park.
3. The mobile home park area was zoned high density residential by the City of Mt. Angel before 1975. I understand the plant property was purchased in late 1976.
4. The noise produced is continuous when the cyclone is operating, unlike short duration neighborhood noises that are less likely to affect the public health and welfare of the nearby residents.

Mr. Milton Smith
October 21, 1980
Page 2

Concerning your statement that earlier attempted noise reduction measures were not effective, the Department can offer technical review services to help assure that any proposal will meet the regulations. In addition, pollution control tax credits are available for noise control installations. I understand information on the tax credit program has been sent to you.

I urge you to expedite your control proposal for the cyclone and fan noise. Please submit your proposal for correcting the violation by November 25, 1980, to the Department's Salem Office, 1095 25th St., SE, Salem, OR 97310.

If you have any questions, or need assistance, please contact either Jon Gjertsen at 378-8240 in Salem, or John Hector at 229-5989 in Portland,

Sincerely,

Original Signed by
WILLIAM H. YOUNG

OCT 21 1980

WILLIAM H. YOUNG
Director

JG:pw

cc: Willamette Valley Region, DEQ

ACKER, UNDERWOOD, BEERS & SMITH
ATTORNEYS AT LAW
1200 ORBANCO BUILDING
1001 S.W. FIFTH AVENUE
PORTLAND, OREGON 97204

TELEPHONE
(503) 224-4000

G. MARTS ACKER
LAUREN M. UNDERWOOD
WM. M. BEERS
MILTON R. SMITH
MARK A. HIEFIELD
TIMOTHY N. BRITTLE
DAVID B. CUNNINGHAM
PAMELA J. BEERY

December 5, 1980

Environmental Quality Commission
c/o Department of Environmental Quality
522 S.W. 5th Avenue
Box 1760
Portland, Oregon 97207

Attention: Mr. William H. Young, Director
Department of Environmental Quality

RE: March 7, 1980 - Notice of Violation
of Noise Regulation
Buddy Mobile Homes, Marion County

Dear Mr. Young:

As you know, this office represents Buddy Mobile Homes concerning the captioned notice of violation of Department of Environmental Quality noise regulations in Mt. Angel, Oregon.

Please consider this a formal request on behalf of Buddy Mobile Homes for the granting of a variance to Section 35-035(1) of the Oregon Administrative Rules Chapter 340 for the Department of Environmental Quality, pursuant to Section 35-100 of those rules, and the provisions of ORS 467.060. The ground for this request for a variance may be found in OAR 35-100(1) and in ORS 467.060(1)(b) since in the case of Buddy Mobile Homes special circumstances render strict compliance with noise emission standards impractical due to special physical conditions. It is my understanding that requests for variances are to be directed to you as director of the Department of Environmental Quality for submission to the full Environmental Quality Commission. It is my hope that this request for variance will be considered by the Commission at their January 30, 1981 meeting.

You will recall that on September 4, 1980, this office prepared and submitted a request for an exception pursuant to OAR Chapter 340 Section 35-035(6) based upon the fact that Buddy Mobile Homes was previously established in this area in Mt. Angel where a subsequent trailer park expansion was undertaken on neighboring property. For your convenience in submitting this request for a variance to the full Commission, I am enclosing a duplicate copy of our September 4, 1980 request for an exception, along with all attachments which were forwarded with that request.

RECEIVED
DEC 12 1980

RECEIVED
DEC 11 1980

Noise Pollution Control

OFFICE OF THE DIRECTOR

Environmental Quality Commission
December 5, 1980
Page 2

fact that without question Buddy Mobile Homes was an established facility prior to the expansion of the neighboring trailerpark, our request for an exception on behalf of Buddy Mobile Homes was denied on October 21, 1980.

Some of the enclosures forwarded in our letter of September 4, 1980 are particularly relevant to this request for a variance. Both bids by Armpriest Sheet Metal and J.I. Johnston Construction Company, Inc. to attempt to reduce noise emanating from the cyclone at the Buddy Mobile Homes plant are in excess of \$7,500. Mr. Edward A. Daly of Daly Engineering Company in his letter of May 7, 1980 reviewed the proposal for constructing a concrete shielding wall around the cyclone and indicated that the proposed wall would not shield the main sources of sound.

Also of particular note is the graph which was prepared by dBH Acoustics following an eight hour evaluation of the noise _____ emanating from the plant, which measurement was taken on the common property line between the Buddy Mobile Homes plant and the adjacent mobile home park. The noise emanating from the Buddy Mobile Homes plant drops well below 50 dBA at approximately 4:00 in the afternoon. At 11:49 a.m. when the cyclone is turned completely off, noise emissions are often in excess of the allowable 55 dBA for daytime use contemplated by the Department of Environmental Quality allowable statistical noise level standards (outlined in Table G of the Department's regulations). Thus, even when the cyclone is turned completely off during the day, other operations at the plant and even unrelated noises such as aircraft flying overhead often result in noise levels which exceed the present applicable DEQ standards. Even assuming that some modification could be undertaken to reduce the cyclone noise to within applicable standards, a fact which is not at all clear from the engineering studies, other noises associated with operation of the Buddy Mobile Homes plant and which are essential to the operation of that plant frequently are in excess of the allowable 55 dBA during the daytime hours when the plant is in operation.

Therefore, in view of the fact that:

- (1) Buddy Mobile Homes plant was in operation prior to the development of the adjacent noise sensitive property;
- (2) there is no assurance that the proposed repairs at an estimated cost of \$7,000 to \$8,000 will remedy the situation;
- (3) the plant in question is strictly a daytime operation with noise emissions well below applicable DEQ standards after approximately 4:00 p.m.; and
- (4) even when the cyclone, the major source of noise in this particular case, is shut completely down during the day other environmental noises including some which are absolutely vital to the continuing operation of the plant create noise emissions in excess of DEQ standards

Environmental Quality Commission
December 5, 1980
Page 3

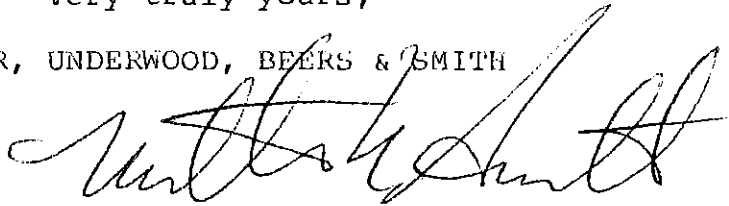
this is a particularly appropriate case for the granting of a variance on behalf of Buddy Mobile Homes. I feel that all of the above factors are factors which should be considered by the Commission in view of the provision in ORS 467.060(3) that the Commission shall consider the equities involved and the advantages and disadvantages to both residents in the community and to the person or corporation conducting the activity for which the variance is sought, in this case Buddy Mobile Homes.

As noted above, this request for variance is intended for consideration at the January 30, 1981 meeting of the Environmental Quality Commission. We will certainly appreciate your thorough review of this request and look forward to receiving the decision of the Environmental Quality Commission following its consideration of this request for variance.

If there is any further information which I can provide please do not hesitate to contact me.

Very truly yours,

ACKER, UNDERWOOD, BEERS & SMITH

A handwritten signature in cursive script, appearing to read 'Milton R. Smith', written over the typed name below.

Milton R. Smith

MRS/sl
encs.

cc: Mr. Jon E. Gjertsen
cc: Mr. John R. Lutz



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item AA, January 30, 1981 EQC Meeting

Request for a Variance from Noise Control Regulations for Airports (OAR 340-35-045) for Pendleton Municipal Airport

Background and Problem Statement

The City of Pendleton owns and operates Pendleton Municipal Airport which is an air carrier airport serving northeastern Oregon.

Commission rule OAR 340-35-045, Noise Control Regulations for Airports, was adopted November 16, 1979 and became effective upon filing on November 26, 1979. Subsection (3)(a) of this rule requires all air carrier airports to submit a Noise Impact Boundary within twelve (12) months of the rule adoption. This boundary is the Ldn 55 decibel noise contour representing existing flight activities at the airport.

On approximately November 21, 1980, the Department was notified by the City of Pendleton that they could not meet the rule schedule to submit the noise impact boundary. On December 8, 1980 the Department received a request for a variance from the Pendleton City Manager (Attachment 1).

An airport master plan for Pendleton Airport was begun in early 1977 and completed and adopted in early 1979. Included in this plan are noise contours for Ldn 65 and 70 decibels, but not the required Ldn 55 contour designated as the "noise impact boundary." The plan includes contours for actual operations in 1975 and projected operations in 1980, 1985, 1990 and 1995. Note that the requirement of the rule is for actual 1979-1980 operations showing the Ldn 55 decibel contour.

The City of Pendleton has submitted 1975 and 1995 noise contours that include an "approximate" Ldn 55 contour. They comment that these "approximate" noise impact boundaries do not encompass any developed or developing areas or noise sensitive uses, except for those on airport lands which are zoned for light and heavy industrial use. However, some airport lands presently contain noise sensitive uses.

The City states that it does not presently have funds to cover the cost of converting the noise analysis to include the required Ldn 55 contour. They question the necessity in their particular case considering the frequency of flights and the existing land uses that might be affected.

The Commission has authority to grant a variance from this requirement pursuant to



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Materials

OAR 340-35-100 and ORS 467.060. Specifically, a variance may be granted if the Commission finds that strict compliance with the rule or standard is inappropriate because:

- a) Conditions exist that are beyond the control of the persons applying for the variance;
- b) special circumstances render strict compliance unreasonable, unduly burdensome or impractical due to some special physical conditions or cause;
- c) strict compliance would result in substantial curtailment or closing down of a business, plant or operation; or
- d) no other alternative facility or method of operating is yet available. (ORS 467.060)

Alternatives and Evaluation

The City of Pendleton requests that the Commission accept the noise impact analysis conducted in 1977-1978 "as meeting the spirit and intent" of the rule requirement.

As an alternative to the above request, the City requests an extension of time, until November 1981, in order to request and incorporate necessary funds to conduct the analysis. The City finds this alternative less desirable than the acceptance of the 1977-1978 analysis.

Staff has attempted to verify the "approximate" Ldn 55 (NEF 20) contours submitted by the City of Pendleton. Technical evaluation of these contours, based upon the flight operations presented in the supporting document, indicated that the "approximate" contours do not reflect analytically derived contours and therefore cannot be approved.

Staff also contacted the FAA control tower at Pendleton Airport to determine whether present flight operations could be reflected by the 1975 operations. It appears that total operations have not changed substantially since 1975, however it was determined that some of the runway usage data has changed. Most air carrier traffic now uses Runway 29 (toward the northwest) during takeoff to avoid the long taxi to Runways 7 and 25 (east and west). The contours were based on all air carrier traffic using Runways 7/25. Therefore, the present contours should reflect the impacts of current air carrier usage of Runway 29.

In summary, staff does not believe the "approximate" contours can be accepted as meeting the requirements of this rule. Therefore, acceptable contours should be developed and submitted within a reasonable time schedule. The schedule proposed by the City of Pendleton for submission, November 1981, should be considered reasonable due to the need for the City to include this item in their 1981-82 airport budget.

Summation

The following facts and conclusions are offered:

1. The Commission's rules for airport noise required the submission of an airport noise impact boundary (Ldn 55 decibel contour) from all air carrier airports by November 1980.

2. The City of Pendleton, owner of Pendleton Municipal Airport, has requested a variance from the impact boundary requirement as they failed to meet the November 1980 due date.
3. The variance request included two alternatives for consideration:
 - a) Accept the noise exposure forecasts conducted in 1977-1978 as meeting the requirements of the rule; or
 - b) provide a time extension, until November 1981, to submit the noise impact boundary.
4. Staff evaluation of the submitted noise exposure forecasts found them unacceptable as meeting the rule requirements.
5. Budgetary conditions exist at this time such that it is beyond the control of the applicant to submit the noise impact boundary prior to November 1981. Therefore, it appears reasonable to grant a variance to submit the noise impact boundary on or before November 30, 1981.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the City of Pendleton, as proprietor of Pendleton Municipal Airport, be granted a variance extending the time, until November 30, 1981, to submit the existing airport noise impact boundary as specified under OAR 340-35-045(3)(a).



WILLIAM H. YOUNG

John Hector:pw
January 13, 1981
(503) 229-5989

Attachment (1):

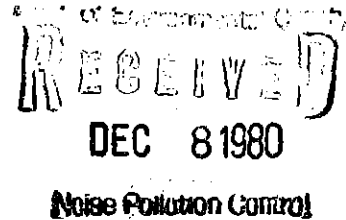
1. Variance Request

THE CITY OF PENDLETON

P. O. BOX 190
PENDLETON, OREGON 97801

December 3, 1980

AI N-05u



Mr. John Hector
Oregon Dept. of Environmental Quality
522 S.W. 5th Avenue
P.O. Box 1760
Portland, OR 97207

Dear Mr. Hector:

The City of Pendleton was unable to submit a Pendleton Municipal Airport noise impact boundary within the criteria and time established by EQC Rule OAR 340-35-045 which was November 26, 1980.

Our Airport Master Plan completed and adopted in early 1979, a copy of which is attached, includes a 65 and 70 DBA contour in the form of a Noise Exposure Forecast of 30 and 35 respectively, while your regulations call for a 55 DBA contour (see pages 54 through 60).

When approximating a 55 DBA on our 1975 and 1995 Noise Exposure Forecast maps (copies attached) we find that the 55 DBA boundary does not encompass any developed or developing areas or noise sensitive uses within or outside the corporate city limits, excepting airport lands which are zoned for light and heavy industrial use in our pending Comprehensive Land Use Plan. Much of the airport lands are outside approximated 65 and 70 DBA contours.

We have received no noise complaints from the public and certificated air carrier flight frequencies have not changed significantly, if at all. We have no funds presently to cover the costs of converting and extending our Noise Exposure Forecast data to DBA and would question the necessity in our particular case considering the frequencies of flights and existing land uses that might be affected.

We respectfully request the Environmental Quality Commission to grant a variance to their 55 DBA contour standard in the case of the Pendleton Municipal Airport and accept our Noise Exposure Forecast as meeting the spirit and intent of your regulation.



Mr. John Hector

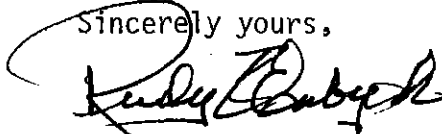
- 2 -

December 3, 1980

Another, but less desirable, alternative would be to grant a variance that would provide an extension of time for compliance to November 1981, which would allow us the necessary time to request and incorporate necessary funds to accomplish conversion and extension of our Noise Exposer Forecast data in our 1981-82 Airport Fund budget.

A favorable response to this variance request will be appreciated.

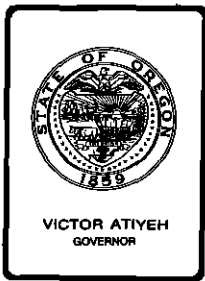
Sincerely yours,

A handwritten signature in black ink, appearing to read "Rudy R. Enbysk". The signature is written in a cursive style with a large, looping initial "R".

Rudy R. Enbysk
City Manager

RRE:dpm
enc.

cc: Pendleton Airport Commission
Pendleton Planning & Building Dept.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. BB, January 30, 1981, EQC Meeting

Summary of December 4, 1980 Public Hearing Regarding Issues Affecting the Allocation of Federal Sewerage Works Construction Grants During Fiscal Year 1982; Specifically Certain Provisions of OAR 340-53-005 through 035 Concerning Ranking of Project Components, Discontinuance of Transition Policy, and Possible Reductions in Grant Participation

Background

On July 2, 1980, a proposal to establish the Department's priority criteria for allocating construction grants, administrative rules and the draft fiscal year 1981 priority list were distributed for public comment. On August 5, 1980, a public hearing was held concerning the adoption of the criteria and the list for use during FY 81. As a result of the hearing, the Department modified the proposed criteria and list. The criteria, the FY 81 priority list, a summary of the hearing and a discussion of the changes resulting therefrom were submitted for action at the September 19, 1980 meeting of the EQC. At that meeting, several agencies offered testimony on the Department's proposed modifications and expressed concern regarding the limited time for preparation of public comments on the Department's proposed modifications.

After considering the consequences of delaying certification of FY 81 grants for at least three months and because the controverted portions of the criteria primarily affect grants management in FY 82 and beyond, the EQC approved the modified criteria and FY 81 list. However, the EQC further instructed the Department to provide additional opportunity for public comment regarding the following three issues:

1. The determination of the segments or components to be included in a "project." OAR 340-53-015(5), as adopted, specified that the Department will consider (a) the specific components or segments that will be ready to proceed during a funding year and (b) the operational dependency of other components or segments on the component or segment



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being considered and (c) the cost of the components or segment relative to allowable project grant;

2. The termination of the transition policy after September 30, 1981. OAR 340-53-015(8), as adopted, specified that all projects, regardless of the date of Step 2 certification will be ranked and scheduled according to priority criteria in FY 82 and subsequent years; and
3. The Commission's authority to establish federal grant participation at 50 percent of eligible project costs after September 30, 1981. OAR 340-53-020(4) specified that after FY 81, EQC may reduce the grant participation to 50 percent if allowed by federal law or regulation.

A Notice of Public Hearing on the above rules and issues was distributed to interested parties on the construction grants mailing list on October 17, 1980. Related informational materials were distributed to these parties on October 30, 1981. The notice requested further public testimony on the issues cited above. Although the Department did not propose amendments to the language or intent specified in the administrative rules adopted by the EQC on September 19, 1980, the public was informed that amendments may be adopted by the EQC as a result of the public comments.

As a result of the public hearing held December 4, 1980 on these issues, forty-eight respondents, including citizens, municipalities, service districts, professional consulting firms, business and private interest organizations, and a federal agency, provided comments. A summary of testimony is appended as Attachment A.

Evaluation and Discussion

1. Ranking of Treatment Works Components

The FY 1981 priority criteria assigned each treatment works component or segment a separate priority ranking. However, the criteria also required that the the Department consider the operational dependency of other components or segments on the components or segments being considered for ranking. Therefore inter-dependent components of a single sewerage system could receive the same priority ranking and could occur together on the list with the component or segment having the higher priority score. This provision of the priority criteria lowers the ranking of project components which provide less water quality benefits while maintaining the higher ranking of the more beneficial components.

The public testimony generally supported the EQC policy adopted in OAR 340-53-015(5). Where stated, the reasons noted in favor of the separate ranking of components included the closer relationship of funding to water quality benefits and the attempt to effectively spread funding to the higher priority components of other projects.

Several respondents opposed the EQC policy; they cited that separate rankings (1) denied the interrelationships between the components of a community's total improvement program; (2) resulted in the partial completion of local projects or facilities which would not function properly or would be under-utilized; and (3) would produce facilities that are more expensive to plan, design and construct.

The Department believes there is sufficient flexibility in the adopted rule to permit the grouping of essentially related components of a community's system on the priority list. The rule assumes that priority decisions can be made among the sewerage improvement needs a community may require. These priority decisions are substantially based on facts regarding proper function and operation.

The Department also recognizes that individual component rankings may, depending upon the amount and timing of subsequent federal or other local funds, result in deferring completion of a community's total improvement program. The total negotiated cost for professional services for this type of approach may increase for some communities; however, on a statewide basis, professional services financed by federal funds will be more closely directed to high priority water quality or health hazard projects.

2. Transition Policy

The FY 81 priority criteria, adopted in September 1979, provided that all projects would be ranked according to priority criteria after October 1, 1981. Prior to FY 80, projects for which a Step 2 grant had been awarded were assured of a continued high position on the priority list because they were placed in the same relative position at the top of the following year's list. These projects were not ranked according to the approved criteria but were afforded a "transition" status. For FY 80, this policy was modified so that only those projects classed as transition in FY 79 would continue with the same rank in FY 80. Of seventeen projects transitioned in FY 80, only five remain on the FY 81 list. Limited federal funds during FY 81 will fail to complete the first of these transitioned projects.

The public testimony generally supported the EQC policy adopted in OAR 340-53-015(8). The reasons in favor of the elimination of the transition policy included the need to seek maximum water quality benefits from limited dollars. One respondent noted that the continuation of the transition policy would benefit only five agencies through FY 85, thus deferring funds for projects rated highly according to priority criteria. Several respondents believed that a reasonable adjustment period (from September 1979 to October 1980) was afforded the transition projects.

Major objections to the elimination of the transition policy were stated by the respondents who would be affected by the rescheduling of a multi-year project which is currently transitioned. The objections emphasized the consequences of delays, including increased costs, planning and design revisions, and the breach of good faith between the citizens who supported the project and authorized local bonds and the state.

The Department concurs that the elimination of the transition policy will disadvantage projects directly affected. The top two of the five transition projects listed in FY 81 are expected to receive some funding during FY 82 but three others will face several years' delay. However, the impact of continuing the transition policy on statewide construction grant projects during this period of reduced federal funding is to effectively defer for several years the allocation of all construction funds according to the priority criteria.

3. Reduced Grant Participation

A FY 81 priority criterion permits the EQC to reduce the federal participation to 50 percent after FY 81 if allowed by federal law or regulation. The rule establishes the EQC's authority to reduce grant participation; it does not direct such a reduction. The impact of this provision, should this authority be utilized, would be to (1) increase the scheduled scope of work or number of projects undertaken during FY 82 and thereafter, and (2) double the necessary nonfederal matching share of all projects after October 1, 1981.

The public testimony generally opposed action by the EQC to reduce the federal grant level to 50 percent, as authorized under OAR 340-53-020(4). Several significant issues were raised, including:

- a. The potential cumulative affects of reduced grant levels and more restrictive definitions of the scope of eligible project work;
- b. The timeliness of a state decision while federal guidelines governing the EPA's approval of a state's reduced level grant proposal are not yet available; and
- c. The legal impacts on the validity of bond elections held prior to the adoption of the administrative rule.

Several respondents who supported a 50 percent grant program noted they also supported variations to the Department's proposal, such as assistance from a state grant program, lowering of state water quality standards, or a phased-in reduced participation that ensures that projects currently under design receive 75 percent grants.

One respondent, engaged as bond counsel to local governments, stated his opinion that bond elections held prior to the administrative rule might be subject to judicial challenge if specific reference was made to receipt of 75 percent federal grant in the ballot explanation or publication of bond election measures.

The Department concurs that the major concerns expressed are legitimate. However, based on an assessment of critical project needs, the reduced grant level would result in more offers of grant assistance to communities. Many of the public concerns expressed could be accommodated if a 50 percent grant program was implemented in FY 83. However, pending federal guidelines and actions prevent the development of recommendations for any feasible program change during FY 82.

Summation

1. The Department was instructed to conduct further public participation on three issues contained in the administrative rules adopted by the EQC for allocation of construction grants. These issues were (1) the determination of the segments or components to be included in a project; (2) the termination of the transition policy after September 30, 1981; and (3) the authority to establish federal grant participation at 50 percent of eligible project costs after September 30, 1981.
2. After public notice, distribution to the Department's mailing list and publication by the Secretary of State in October, a public hearing was held on December 4, 1980.
3. Public testimony regarding the ranking of treatment works components generally supported the adopted rule which provides for separate priorities, with limited exceptions to accommodate the operability of component(s).
4. Public testimony regarding the transition policy generally supported the adopted rule, which eliminates the transition policy after September 30, 1981. Considerable opposition was stated by individual parties and local governments who are presently holding the transition status and receiving funds.
5. Public testimony generally opposed the reduction of grant participation to 50 percent during FY 82. Major issues included the timeliness of state action before pertinent federal guidelines are published and the potential invalidity of certain bond elections held before the administrative rule is effective. The Department agrees that reduced grant participation during FY 82 is not feasible.

Director's Recommendation

Based on the summation, it is recommended that the Commission:

1. Accept this additional public comment on certain provisions of the priority criteria contained in OAR 340-53-005 through 035.
2. Instruct staff to evaluate federal policies under development regarding reduced grant participation and return at a later date with further information and, if appropriate, recommendations for action.

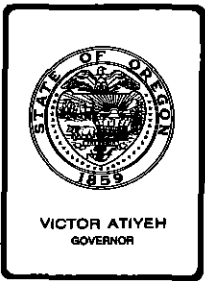


William H. Young

Attachments: 3

- | | |
|--------------|---|
| Attachment A | Public Hearing Report--Bibliography and Summary of Oral and Written Testimony |
| Attachment B | Written Testimony |
| Attachment C | Evaluation and Response to Public Testimony |

B. J. Smith:1
229-5415
January 9, 1981
WL513 (1)



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

ATTACHMENT A

MEMORANDUM

To: Environmental Quality Commission

From: Hearings Officer

Subject: Bibliography and Summary of Oral and Written Testimony on the Three Provisions of OAR 340-53-005 through 035 (1) the Ranking of Project Components, (2) Discontinuance of Transition Policy, and (3) Possible Reductions in Grant Participation which Affect the Allocation of Federal Sewerage Works Construction Grant Funds in Oregon After September 30, 1981

1. City of Cottage Grove

Bill Guenzler, City Engineer. Oral and Written Testimony, 12/4/80.

The many opportunities to respond to the issues at this and prior hearings are appreciated but due to the considerable effort needed to give testimony, the hearings process favors larger cities with staff ability to participate.

The City favors separate priority rankings for project components according to water quality criteria; elimination of the transition policy complements the separate component ranking and is also supported. October 1, 1981, provides an adequate phase-out of the transition rule.

Although the city has historically favored 50 percent grant participation, other eligibility decisions and commitments to make certain improvements without grant assistance would result in approximately 64 percent grant participation. If stringent requirements on grant eligibility for certain work is continued, grants should be at a 75 percent level.

2. Metropolitan Wastewater Management Commission (Lane County Service District, Eugene and Springfield)

William Pye, Manager, introduced the following testimony:

- a. Arl Altman, Project manager for BCS, a joint venture between Brown and Caldwell and SPCM, Inc. Oral and Written Testimony, 12/4/80.



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Requests that DEQ change the project classification and project priority rating for Regulatory Emphasis for various segments of the MWMC project listed on the Fiscal Year 1981 Priority List. Supporting data and a discussion of the interrelationships among components and construction schedules were submitted.

The impact of elimination of the transition status for the MWMC project after FY 1981 will delay completion; increase construction cost estimates from \$128.4 million to \$139.8 million due to inflation; require revisions to plans and design, estimated to cost an additional \$3 million; and possibly delay immediately scheduled work in order to verify their cost effectiveness in light of the new criteria.

A 50 percent grant level would require another bond sale of approximately \$12.7 million. Because Congress and EPA are considering the potential elimination of certain components from grant eligibility, it is prudent to defer fund reduction decisions until federal policies are clear.

- b. Don Gilman, Assistant Director of Public Works, City of Eugene. Written Testimony addended to Arl Altman's testimony. 12/4/80.

Supplied data evidencing discharges of raw sewerage onto streets resulting from inadequate capacity at the West Irwin Pump Station.

- c. G. David Jewett, Attorney for MWMC. Oral and Written Testimony 12/4/80.

MWMC should receive equal treatment as given other high priority projects with separately identified components; only MWMC in the top 7 projects of this type received separate priority rankings. The facts presented by MWMC justify the combined ranking of all MWMC components with the treatment plant component based on the operational dependency criterion in the adopted administrative rule. Potential health hazards may raise the project priority.

The transition policy should be continued because Federal Regulations 40CFR 35.915(a)(1)(IV)(2) state that a project shall generally retain its rating until funded minimal disruption of projects should occur in construction stage where they have relied upon pre-existing procedures to establish bond authority and/or financing arrangements.

A reduction of grant participation is opposed because it (1) historically has not solved water pollution problems; (2) will jeopardize the progress of small communities where bonding capacity is insufficient; and (3) is inconsistent with representations made to local citizens who have relied on 75 percent funding as decisions were made.

In addition, the state administrative rule is untimely and ill-drafted in view of the October 1, 1980 change to the Clean Water Act, which continues 75 percent funding unless modified to a lower percentage rate uniform throughout the state by the Governor with the concurrence of the EPA Administrator and further directs the EPA Administer to issue guidance for his concurrence which must consider (1) the unobligated balance of the state's allocation, (2) the need for assistance and (3) the availability of state grant assistance to replace the federal share reduced by such modification. EPA's guidelines are due February 1, 1981.

- d. Betty Smith, Vice President, MWMC. Written Testimony 12/2/80 read into the record on 12/4/80.

In May 1978, residents of Eugene and Springfield passed a bond authorization for the local share of the MWMC facility based on information that 75 percent of the eligible project would be grant funded. The three administrative rules break faith with the voters.

Opposes the elimination of the transition policy and the separate rating of project components because they lead to inflationary costs and delay. Opposes 50 percent grant level. Starting new projects while others wait to become operational does not meet water quality needs.

- e. R. A. "Gus" Keller, Mayor, City of Eugene. Written Testimony 12/2/80, read into the record on 12/4/80.

The failure of Congress to appropriate promised funds breaks faith with the people. When the MWMC was formed and the local share bonds authorized, an unwritten contract between the state and local taxpayers was made. The administrative rules violate this agreement.

Opposes the loss of transition status for MWMC. A reduced grant level of 50 percent will create public mistrust toward the state.

- f. Vern Meyer, Mayor, City of Springfield. Written Testimony 12/2/80, read into the record on 12/4/80.

Funding delays, a Presidential freeze on funds, and now these administrative rules will delay further and increase costs for the MWMC project and possibly jeopardize its orderly completion. With 75 percent funding, the project components ranked together and the transition status retained, inflation would be the only major problem.

- g. Otto T'Hoofft, Chairman, Lane County Metropolitan Service District. Written Testimony, 12/2/80, read into the record on 12/4/80.

Favors all components of a project ranked at the same priority, a transition policy which retains scheduling continuity and 75 percent grant participation.

Lane County and DEQ have entered into an agreement for improving the River Road/Santa Clara area; the administrative rules will delay and add to the expense of solving these problems.

- h. Linda Christensen, resident of Springfield. Written Testimony 12/2/80, read into the record on 12/4/80.

A decrease in grant participation to 50 percent will create tremendous financial burdens for local residents, a longer delay (beyond presently scheduled 1986) in the completion of the MWMC project, and apathy and distrust of government. The passage of future budgets or grant issues will be threatened because of questions on the credibility of city councils, county commissioners, and MWMC and its staff.

DEQ has a moral obligation to retain 75 percent grant participation.

- i. Randall S. Hledik, Citizen Member, Metropolitan Wastewater Management Commission--Industrial Advisory Committee. Written Testimony 12/3/80, read into the record on 12/4/80.

Reducing the level of grant participation to less than 75 percent is a complete breach of faith by government and would tremendously decrease public confidence in DEQ's authority and judgment. Delays and inflation have already increased the estimated project costs by nearly 50 percent, necessitating voter approval of another bond issue in addition to the 1978 authorization of \$29.5 million.

The public needs the MWMC project to implement its comprehensive plan, accommodate growth, and retain a major industrial employer.

Favors combination of components at one priority ranking, continuation of the transition policy and 75 percent funding.

- j. Joe Clouse, President, Springfield Board of Realtors. Written Testimony 11/5/80, read into the record 12/4/80.

Opposes 50 percent grant participation; believes damage to the credibility of the state and MWMC would prevent voter approval of additional funds.

- k. Dan Leahy, President, and the Board of Directors, Eugene Board of Realtors. Written Testimony 12/2/80, read into the record 12/4/80.

Favors 75 percent grant participation; favors the transition policy for projects under construction; favors combination of all components of a project at one priority ranking.

Opposes the administrative rules because bonds have been issued, delays will cause inflationary expense, needlessly postpone water quality improvements, and risk a building moratorium.

- l. C. Robert Smith, Executive Vice-President, Springfield Area Chamber of Commerce. Written Testimony 12/2/80, read into the record 12/4/80.

Favors 75 percent grant participation because this was fundamental to the agreement to build a regional facility. Any reduced level would result in a loss of faith among local voters who passed a \$29.5 bond issue.

Favors retaining the transition policy for projects under design prior to 1979.

Favors combined ranking of all components of a project at the highest priority.

- m. Sandra Rennie, Councilor and Member, Springfield City Councilor, and MWMC Industrial Advisory Committee. Written Testimony 12/3/80, read into the record 12/4/80.

Favors continuation of the transition policy.

Favors 75 percent grant participation; cites likely inability to complete the MWMC project if grants are reduced. Future budget elections and bond sales would be affected by a loss in credibility of the state and the involved cities.

- n. Tim Rhay, Chairman, MWMC Sludge Advisory Committee. Written Testimony 12/1/80, read into the record 12/4/80.

Separate ranking of project components ignores the relationship of components to a water quality benefit and would result in partially completed projects.

Discontinuance of the transition policy would significantly delay several necessary components of the MWMC project, i.e., sludge disposal, pump stations, sewer rehabilitation.

Favors 75 percent funding. It makes little sense to start new projects when there are insufficient funds to complete those already started.

- o. The Eugene Register-Guard. Editorial on 11/29/80 and news article on 12/3/80, read into the record on 12/4/80.

Favors continuation of transition policy, combination of components at one priority ranking and 75 percent funding.

3. Tri-City Service District, Clackamas County

David Abraham, Utilities Director. Oral and Written Testimony, 12/4/80.

The grants program needs a stable, predictable policy of administration and allocation in order to avoid planning and replanning of projects without ever reaching the implementation stage. Favors the FY 81 priority criteria to correct most critical pollution problems.

Favors the elimination of the transition policy. The phase-out began in FY 79 and has included a reasonable readjustment period for affected agencies. Continuation of the policy would benefit only 5 agencies through FY 85 while others are postponed 2-5 years.

Favors the individual ranking of project components.

Opposes reduction of grant participation to levels below 75 percent resulting from either a grant percentage change or more eligibility criteria that exclude certain components. At the 75 percent grant level, the District's total local share for a total project of \$58 million will be about 43 percent; at 50 percent grant level, the total local share would be about 62 percent. Without state grant funds, the grant level reduction is a step back to pre-1972 when less federal grant participation failed to clean up pollution.

4. City of Oregon City

Alfred Simonson, General Manager. Oral Testimony 12/4/80.

Oregon City supports the statements made by David Abraham of Clackamas County.

5. City of Oregon City

Bill Parrish, City Engineer. Oral Testimony 12/4/80.

Favors separate ranking of project components and the elimination of the transition policy.

Opposes any reduction in 75 percent grant participation. This would effectively kill the Tri-City S.D. project.

6. City of Gladstone

Charles Anderson, Member, City Council. Oral Testimony 12/4/80.

The City supports the views expressed by David Abraham of Clackamas County.

Any reduction in 75 percent grant participation now, after a bond issue has passed for the Tri-City S.D., would be disastrous to the project.

7. City of Gladstone

Leonard Strobel, City Administrator. Oral Testimony 12/4/80.

Supports the views of David Abraham of Clackamas County.

Reduction of federal participation from 75 percent would reduce the credibility of local officials involved for the last 10 years in the Tri-City S.D. project.

8. Compass Engineering Corp. (Milwaukie, Oregon)

Tom Tye, Oral and Written Testimony, 12/4/80.

On behalf of the Tri-City S.D., favored the discontinuance of the transition policy and the ranking of project components.

Since the S.D. bonds were authorized based on an expected 75 percent grant, any reduction in the grant level would result in delays until additional funds were procured and possibly cause a moratorium.

9. Marv Dack, Resident of Gladstone, Oral Testimony 12/4/80.

Supports the statements made by David Abraham of Clackamas County. Noted that the Tri-City area has attempted to rid itself of a moratorium by getting a District formed and passing a bond issue; these efforts should be supported.

10. City of Astoria

Ray Ala, Public Works Director. Oral and Written Testimony, 12/4/80.

The City of Astoria objects strenuously to the reduction of grant participation to 50 percent. Any change in grant level should be made after projects on the present list and are ready to proceed are completed.

11. City of Roseburg

George Stubbert, City Manager. Oral Testimony, 12/4/80.

Favors the separate ranking of project components so that funds not immediately needed could be released for other projects.

Favors the discontinuance of the transition policy; adequate time for program adjustments has been given.

If grant levels are reduced to 50 percent, the state should consider lowering water quality standards which exceed federal minimum standards. Depressed areas should be given special consideration in financing improvements.

12. Agripac, Inc.

Alton McCully. Oral Testimony 12/4/80. Presented Written Testimony from Edward Brennan, President, 12/4/80.

Agripac supports the testimony of the MWMC staff. The most cost-effective improvement and which gives the most load reduction per dollar for Springfield and Eugene is the segregation of Agripac's waste water. Seventy-five percent grant funding is essential to Agripac's continuance in Eugene.

13. Oregon Rural Communities Assistance Program

Norman Jenson. Oral and Written Testimony, 12/4/80.

Project components should be ranked separately. Small communities presently wait for funds while low priority components of higher projects are funded.

Favors the elimination of the transition policy.

The reduction of grant participation should be further evaluated but the financial needs of a community must be considered if funding is reduced. Specific criteria for the grant amount should be based on financial need and ability to pay.

14. Oregon Tri-City Chamber of Commerce (serving Oregon City, West Linn, Gladstone)

Pat Blue, Executive Director. Oral Testimony, 12/4/80.

The Tri-City S.D. project must be financed as presented to the voters who supported a bond authorization predicated on receipt of a 75 percent grant.

15. Tri-City Sewer Committee and City of West Linn Planning Commission

Joe Steinkamp, Chairman. Oral Testimony 12/4/80.

Favors elimination of transition policy and separate priority rankings for project components.

Opposes reduction in grant participation. If less than a 75 percent grant is offered, the Tri-City S.D. project is dead and the credibility of local officials and DEQ will suffer.

16. The League of Women Voters of Central Lane County

Mary Sherriffs, President. Written Testimony, 12/7/80.

Requests that the EQC reconsider the adoption of the rule changes that will reduce funding and delay the completion of the MWMC plant. EQC and DEQ have an obligation to consider the good faith citizens have placed in government.

17. BECON Engineering Consultants (A Joint Venture: Century West Engineering, John Corollo Engineers and CH2M Hill)

J. Ned Dempsey, Principal-in-Charge. Written Testimony, 12/8/80.

Favors the combination of project component according to the highest ranking component so that engineering and construction services are most economically acquired by communities. This avoids construction of facilities which are not sufficiently utilized or do not function properly.

Favors the transition policy. Projects that have been awarded design (Step 2) grants should be continued in a high position on the priority list. These communities have incurred obligations such as procurement of local funds or increased manpower.

Favors 75 percent grant participation unless alternative funds are available. A 25 percent increase in local project costs would jeopardize many projects, especially those in poorer communities. The administrative costs for DEQ to administer a 50 percent grant program would increase.

18. Ragan, Roberts, O'Scannlain, Robertson & Neill, Attorneys-at-Law

Richard Roberts. Written Testimony, 12/9/80.

As bond counsel for numerous municipalities and other local governments, he is concerned that reducing grant participation from 75 percent to 50 percent for certain projects could cast doubt upon the validity of bond elections held prior to the administrative rule change. It is his opinion that the results of such elections may be subject to judicial challenge in cases where specific reference to 75 percent grant participation was made in the ballot explanation or in the publicity of the bond election measure.

19. Metro Service District

Rick Gustafson, Executive Officer. Written Testimony, 11/24/80.

In September 1980, Metro submitted testimony to the EQC which supported state discretion to reduce participation to levels below 75 percent.

Since Congress appears to have approved such reduction only if it is uniform within a state, there is insufficient flexibility for handling projects (such as Tri-City S.D.) which had been planned for 75 percent participation. Metro's prior position is clarified to state that it supports the reduced level of grant provided that consideration is given to projects which have passed bond issues prior to September 30, 1981, and are committed to a 75 percent grant program. Action could be delayed on the reduced level administrative rule or the difference between 75 percent and the reduced level grant could be made up through the State Pollution Control Bond Fund in order to accomplish the desired result.

Favors discontinuance of the transition policy and separate rankings for project components.

20. Lee Engineering, Inc., Representing the City of Troutdale

F. Duane Lee. Written Testimony 12/4/80.

The City endorses the combination of the components of a project where needed to provide an operable facility.

Supports the termination of the transition policy in FY 82. This is consistent with the state's responsibility to maximize water quality benefits.

Supports the adoption of reduced grant participation at 50 percent, effective now, in order to give more time for projects to plan ahead.

21. City of Mt. Angel

Karl Eysenbach, City Administrator. Written Testimony, 10/23/80.

Supports separate ranking of project components.

EQC should maximize the number of cities receiving benefits from the EPA program.

Favors 50 percent grant participation if it is in the best interests of the most people in the state.

Citizens are willing to pay their fair share of city and local taxes for sewer services; EPA/DEQ should allocate scarce resources in terms of the overall demand for construction funds.

22. City of Cannon Beach

John Williams, Mayor. Written Testimony 11/10/80.

Opposes 50 percent grants because they will increase local taxes. Other sources of revenue, such as prepaid connection fees, contradict the City's Comprehensive Plan.

Opposes any change in the practice of transitioning projects that are now underway.

Opposes the separation and ranking of a project into components.

23. CH2M-Hill

Dale Cannon. Written Testimony, 11/12/80.

Supports the ranking of separate components of a project.

Opposes the discontinuance of the transition policy. Long lengths of time from project initiation to completion tend to result in public distrust of consultants, regulatory agencies, and the municipal agencies involved.

24. City of Eagle Point

Del McNerny, City Planner. Written Testimony, 11/18/80.

Favors ranking of projects by separate components.

Favors discontinuance of transition policy.

Opposes reduction of grant to 50 percent.

25. City of Enterprise

W. H. Barrett, Mayor. Written Testimony, 11/14/80.

Opposes any grant reduction.

26. Rogue Valley Council of Governments

Eric Dittmer, 208 Water Quality Planning. Written Testimony, 11/26/80.

Supports separate ranking of project components discontinuance of transition policy, and 75 percent grant level.

27. City of Scio

Edwin J. Gill, Mayor. Written Testimony, 11/28/80.

Favors separate ranking of project components, discontinuance of the transition policy, and reduction of grant level to 50 percent.

28. Bear Creek Valley Sanitary Authority

Richard O. Miller, General Manager. Written Testimony, 12/1/80.

Favors separate ranking of project components, and discontinuance of the transition policy.

Supports 75 percent grant level; however, if federal funding decreases again in the future, the issue should be reviewed again.

29. The City of Silverton, and Kraus and Dalke Consulting Engineers

Douglas Robinson, City Manager and Howard Kraus. Written Testimony, 12/3/80.

Favors separate ranking of project components and discontinuance of transition policy.

Prefers a phased-in approach to grant reduction. Projects for which a Step 2 grant is scheduled after October 1, 1981, should receive 50 percent grants; projects where Step 2 is ongoing should receive 75 percent grants.

30. U.S. Dept. of Agriculture, Farmers Home Administration

Kenneth Kendall, State Director. Written Testimony, 11/19/80.

Supports 50 percent grant level. The resultant additional cost to communities will be more than offset by savings from accelerated funding. Each year's delay can add 10 to 15 percent to ultimate costs.

31. Charleston Sanitary District

Lynn Heusinkveld, Attorney for the District. Written Testimony 11,21,80.

Stated the District's disappointment in the failure of the DEQ to address any of the serious issues raised by the District in its several years of attendance at public hearings held concerning the appropriate system for distribution of grant funds. Discussed numerous items appearing in the agenda item adopted by the EQC on September 19, 1980.

No comments were made concerning the specific issues noted in the Department's October 16, 1980 Notice of Public Hearing.

Respectfully submitted,



B. J. Smith
Hearings Officer

BJS:l
WL510 (1)
1/9/81

AGENDA ITEM BB

January 30, 1981

Attachments B and C are available from B. J. Smith, Water Quality Division, DEQ, 522 Southwest Fifth Avenue, Portland.

J. Shaw

ATTACHMENT B

COPIES OF WRITTEN TESTIMONY

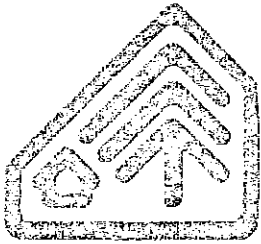
Attached are copies of written testimony submitted by citizens, municipalities, service districts, professional consulting firms, business and public interest organizations and a Federal agency.

LIST OF PUBLIC HEARING ATTENDEES
December 4, 1980

Bill Guenzler	City of Cottage Grove	400 Main 97424
Roger L. Semler	City of Cottage Grove	400 Main 97424
Bill Parrish	City of Oregon City	P.O. Box 631 97045
Alfred Simonson	City of Oregon City	P.O. Box 631 97045
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William V. Pye	MWMC	899 Pearl St. Eugene
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Sarah Bacchuber	MWMC	899 Pearl St. Eugene
Tom Davis	JMM	St.215 7000 SW Hampton 97223
Ken Ferguson	JMM	St.215 7000 SW Hampton 97223
Alton McCully	Agripac	1638 Orchard St. Eugene 97403
Margaret Pritchard	Consultant	2510 SE Concord Portland 97222
Bob Sanders	City of Newberg	414 E 1st Newberg
Dave Fish	City of Oregon City	400 Main 97424
Norman Jenson	ORCAP	351 Columbia Blvd. St. Helens 97031
Pat Blue	Oregon Tri-City Chamber	Oregon City
Billie Blue	Oregon City citizen	Oregon City
Charles Anderson	Gladstone	305 E. Clarendon
David Abraham	Clackamas County	Oregon City
Marv Dack	Gladstone citizen	725 Portland Ave.
Leonard Strobel	Gladstone Administrator	525 Portland Ave. 97207
Tom Tye	Compass Engr.	6564 SE Lake Rd., Milwaukie
Rich Borstad	City of Silverton	306 S Water St., Silverton 97381
John Ewing	Kraus & Dalke	Box 725 Albany 97321
J. Michael Hoehn	City of Roseburg	900 SE Douglas Roseburg
Howard Kraus	Kraus & Dalke	Box 725 Albany 97321

Doug Robinson	City of Silverton	306 S Water Silverton 97381
Ray Ala	City of Astoria	1095 Duane St. Astoria
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Stanton Le Sieur	USA	150 N. 1st St. Hillsboro
Gary Krahmer	USA	150 N. 1st St. Hillsboro
Donald Schut	USA	150 N. 1st St. Hillsboro
Gordon Merseth	CH2M Hill	200 SW Market Portland

Rec'd
12/7/80



CITY OF
COTTAGE
GROVE

400 E. Main Street, Cottage Grove, Oregon 97424

December 3, 1980

OFFICE OF PUBLIC WORKS

Oregon Department of Environmental Quality
522 Southwest Fifth Avenue
Portland, Oregon 97207

RE: Testimony for FY 1982 Sewerage Construction Grant Criteria
OAR 340-53-005 through 035

Comments Concerning 340-53-015(5) on Segments

The City of Cottage Grove concurs with separate ratings for large components as being "best water quality management".

Comments on Concerning 340-53-015(8) on Transition Rule

The new rule on segmenting and the discontinuance of automatic status for partially complete projects are necessary and complementary policies. The City of Cottage Grove feels that the date of October 1, 1981 for the end of the transition policy is ample "phase out" of the old rule. If the Commission were to transition the five noted projects into FY 1982 and FY 1983 as a compromise decision, impact on other water quality related projects would be radical.

Comments on OAR 340-53-020(4) - 50% Funding

The shift from 75% grant match to 50% grant match should be scrutinized in relationship to other eligibility decisions. The Cottage Grove project includes commitments by the City to make certain improvements WITHOUT federal aid. Examples are storm sewer construction, downtown sewer cleaning/repair/rehab and sludge/jet truck. The 1982 costs are estimated as follows according to a recent proposal by the City Council.

<u>Item</u>	<u>Estimated 1982 Cost</u>	<u>Proportion</u>	<u>Comment</u>
Other Grants	\$ 320,000	5%	HUD Community Development
Property Tax	943,200	14%	Increase \$.80/1000 A.V.
Sewer Use Fees	719,500	11%	5.62 increase for \$11.82/mo.
Systems Development	414,000	6%	\$750./Single Family Unit
EPA	4,347,000	64%	At 75% of Eligible Costs
TOTAL	\$ 6,743,700	100%	

WITH FIFTY PER CENT NOMINAL RATE

<u>Item</u>	<u>Estimated 1982 Cost</u>	<u>Proportion</u>	<u>Comment</u>
Other Grants	\$ 320,000	5%	HUD Community Development
Property Tax	1,765,200	26%	Increase \$1.50/1000 A.V.
Sewer Use Fees	1,346,500	20%	8.13 increase for \$14.33/mo.
Systems Develop.	414,000	6%	\$750./Single Family Unit
EPA	2,898,000	43%	at 50% of Eligible Costs
TOTAL	\$ 6,743,700	100%	

Note that a nominal 75% rate is really 64% and a reduction to 50% nominal rate would cause \$63 taxes to be added to the average valued single family dwelling in addition to a monthly sewer bill of \$14.33.

It appears that stringent requirement on eligibility and a 75% grant rate would be the best practical inducement to jurisdictions with important water quality projects.

TESTIMONY GIVEN BY:

Bill Guenzler
City Engineer
Cottage Grove, Oregon

Keena
12/4/80

BCS

A JOINT VENTURE OF

BROWN AND CALDWELL & SPCM, INC., A SVERDRUP CORPORATION COMPANY

132 East Broadway, Room 343
Eugene, Oregon 97401
Telephone (503) 683-1500

December 4, 1980

Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Subject: December 4, 1980, Hearing on Allocation of Federal Sewerage Works Construction Grant Funds Within Oregon After September 30, 1981. Specifically Discontinuance of Transition Policy, Ranking of Project Components, and Possible Reduction in Grant Participation

The following testimony and supportive Exhibits are information relative to MWMC's program regarding transition policy, ranking of project components, and possible reduction in grant participation. BCS, which is a joint venture of Brown and Caldwell, and Sverdrup Corporation, are program managers for MWMC on the Regional Wastewater Treatment program. BCS is a consultant to MWMC, and has been hired for program management services, which include scheduling and planning of the program. BCS makes detailed schedules for planning purposes, coordinates consultant activities, and does other project management functions. The original MWMC Network CPM Diagram prepared by BCS is attached as Exhibit-A as an example of a schedule.

BCS is presenting testimony on the proposed rules to show the effects upon MWMC's program. BCS will address the three priority list criteria.

Ranking of Treatment Works Components

MWMC has pursued a fast-track construction management program for overall cost savings. Fast-tracking and construction management techniques require an overall plan early in the process to allow the project to be completed in the shortest period of time, and at the least cost. The project components were recommended based on:

Expediting the construction which saves escalation costs.

Enabling the program to be tailored to the available funding.

Providing for more flexibility with the delivery schedules of specific prepurchase equipment packages.

Accommodating the eventuality that the land for site expansion cannot be acquired on time or in a single parcel.

Dividing into process packages would have the minimum impact on the design engineer.

The project components were analyzed by BCS with design consultants for an overall schedule and achievable network to minimize costs and discharge of pollutants. The detail analysis and subsequent schedule revealed that the wastewater treatment plant could not become operational until the other components were completed and operational. Exhibit A shows the project components and packages in a CPM Network. The basic logic reflects that Agripac, East Bank Interceptor, Sewer Rehabilitation and the West Irwin Pump Station need to be constructed and tested by the time the wastewater treatment plant and Willakenzie Pump Station are tested and ready for operation.

MWMC has modified the overall schedule to sequence certain components or packages to facilitate the available EPA/DEQ funding. It is BCS' opinion that even if the individual components are constructed, other components and packages must be completed prior to a workable and operable treatment works.

The following is presented as a basis to show why the integration of treatment plant, pump stations, rehabilitation, and Agripac, are all integral to, and important to, achievement of the water quality goals. (The East Bank Interceptor has not been included since it is being funded.) Obviously, the treatment plant provides the removal of suspended solids and BOD from the flows to meet water quality goals. The pump stations are just as important, since they must transmit the wastewater coming from the regional areas to the treatment plant. The alternative to not building the pump stations are to let untreated wastewater overflow to the river and into the streets. The rehabilitation projects are equally important since the treatment plant, pump stations, and interconnecting force mains and interceptors are designed on a basis of cost effective wet-weather flows being removed. The cost effective wet-weather flows to be removed are approximately 82.7 million gallons per day from Eugene, and 35.5 million gallons per day from Springfield. The treatment plant is designed for a 175 MGD peak flow which is in addition to the 82.7 and 35.5 MGD removed. Therefore, without rehabilitation work in Eugene and Springfield and the West Irwin Pump Station improvements (Pump Station No. 2) the infiltration/inflow must overflow to the river or into streets creating a potential health hazard.

The Seasonal Industrial Waste (Agripac) is presently discharging to the existing treatment plant, since the waste flows into a sanitary sewer near the existing Agripac plant. Agripac's waste is low in flow, and very high in BOD and suspended solids. The present effluent water quality is influenced dramatically when Agripac starts discharging to the existing treatment plant. The preliminary design report for Agripac, and the overall planning has called for a separate treatment facility for Agripac which is the cost effective solution. The Seasonal Industrial Waste must be removed prior to the wastewater treatment plant being completed, since it is not designed to treat Agripac's wastes. Also, the early removal of Agripac's wastes improves the water quality goal.

The aforementioned individual components are operationally dependent and do not allow for obtainable water quality goals if not constructed on a timely and paralleling sequence. For these reasons, the components are interrelated and are, therefore, needed to achieve the water quality benefits. BCS recommends that MWC's Rehabilitation (Eugene and Springfield) Pump Station No. 1, Pump Station No. 2, and Agripac's effluent disposal components be changed to receive the same priority points ranking as the wastewater treatment plant component (i.e. B261.51).

The above gives consideration why the individual components are interrelated to the wastewater treatment plant. However, in looking at the data and information of the two cities there are several components improperly ranked. The first is the rehabilitation work of both cities (Eugene and Springfield). The second is West Irwin Pump Station (Pump Station No. 2). We feel these components are improperly ranked because other testimony will confirm that sewage has overflowed in the streets. The Beverly Park wastewater flows in Springfield have been temporarily removed by allowing raw sewage discharges with chlorination into the Q Street Floodway. This obviously is an interim measure but still constitutes a potential health hazard. The other component is West Irwin Pump Station (Pump Station No. 2) and the City of Eugene has written a letter indicating the raw sewage overflows to the City's streets. It would appear to be a health hazard to allow raw sewage flowing in streets, and then into the Willamette River. Based on our knowledge of three components (i.e. rehabilitation work (Springfield and Eugene, and Pump Station No. 2), and their individual ranking merits, BCS recommends the DEQ revise the rating to an A ranking due to the health hazard problem.

The impact upon water quality of the individual components is reflected in Exhibits B through H. Exhibit I gives the assumptions used to arrive at the individual component's effect upon the water quality goal. The summary and explanations of Exhibits B through H are described in Exhibit J. The effect

of the components upon the water quality during dry weather conditions is generally reduced by the removal of Agripac, the start of the wastewater treatment plant, and completion of the Willakenzie Pump Station. The wet-weather and dry-weather water quality impacts are adequately summarized in the 208 ~~plan~~ plan (page 9-2) which states:

"Improved effluent quality may significantly reduce the wintertime concentrations of BOD, suspended solids, and coliform bacteria in the Willamette River. Although there is no evidence that the existing plants contribute significantly to summertime coliform concentrations, and BOD and TSS are currently low in the river, effluent improvement may have a significant effect on summer water quality throughout the entire Willamette system. Increased hydraulic capacity will also eliminate the need to divert raw or inadequately treated wastewater directly to the river during periods of high flow. This long-term positive impact will accrue to both current and future residents. Discontinuance of discharge from the Springfield plant will avoid the possibility of health hazard to swimmers using the Willamette River in Alton Baker Park".

For the reasons previously stated BCS recommends that DEQ change MWMC's components to an A or B project classification with an increase in regulatory emphasis from 90 to 150 points.

Transition Policy

MWMC has planned and scheduled construction packages based on the transition policy. The elimination of the transition policy has an impact on MWMC.

Exhibit B shows the MWMC program at a total cost of \$139.8 million which is equivalent to Alternative 1-A in DEQ's October 30, 1980, handout. By comparison, the affect of continuing the transition policies as shown in Exhibit E which is Alternative 3-A in DEQ's October 30, 1980, handout, indicates a total project cost of \$128.4 million. The difference of \$11.4 million represents the impact upon MWMC's project due to inflation.

By eliminating the transition policy, MWMC cannot continue in a planning phase that it originally contracted with consultants such as BCS. If the transition policy is eliminated, BCS will probably require additional monies from MWMC for continued planning. In fact, BCS has made a preliminary request for approximately \$800,000.00 due to the current funding delays. This amount will undoubtedly increase if delays are encountered as presently predicted in the Priority List, which indicates MWMC's funding to 1985. Other MWMC consultants will have the same problems since construction packages already designed may require revising, combining, or separating. At this time we can only estimate the approximate dollar impact upon the MWMC program, except to state that

several of the consultants will probably require amendments to contracts. This could amount to, using BCS as a basis, to approximately 20 percent of the contract amount, or approximately \$3,000,000.00. Another factor which is not indicated in Exhibit B, or the \$139.8 million, is the impact of construction delays due to not being able to bid projects immediately, since there will be lead time required for redesign.

With the elimination of the transition policy, and depending upon other criteria adopted by DEQ, MPMC may require a new planning and scheduling effort be completed to adjust the program. Based on this criteria, BCS in turn may recommend that the cost effective alternative will be to revise, and make new components versus the components (construction packages) listed within the list. BCS originally looked at horizontal and vertical construction packaging techniques, and with the elimination of the transition policy, there may be a totally new, modified, or revised packaging effort to comply with the new criteria. It is difficult to predict these costs, but the changes would only be made if they benefit the program.

The loss of the transition policy on the MPMC program will have drastic effects due to rising costs, consultant's request for additional funds due to repackaging, and the potential of not having construction contract documents prepared for bidding purposes. Exhibit B, and Exhibit E do not indicate all three factors, but only reflect the inflationary factors for DEQ's Alternative 1-A and Alternative 3-A.

Reduction Grant Participation

DEQ is proposing to eliminate the 75 percent eligible cost funding, and is considering allowing a reduced level of grant funding to as low as 50 percent. BCS has taken the various alternatives as mentioned in the October 30, 1980, DEQ handout, and indicated in Exhibits B through F the impact of the 50 percent funding. Exhibits G and H give initial priority to the wastewater treatment plant and Agripac due to the water quality impact achievable by those two projects. The funding indicated 75 and 50 percent funding level, respectively.

The overall impact of the 50 percent funding level will be to require MPMC to seek another bond sale. As an example, Alternative 1-A, and 1-B should be compared to the amount of local share on each alternative. If the project could be funded under the current planning (Alternative 1-A; Exhibit 1-B) the cost savings will be \$12.7 million to residences in MPMC's jurisdiction. The obvious factor upon Eugene/Springfield/Lane County is the additional financing cost of \$12.7 million for Alternative 1-B, which at the current interest rates will approximately be \$25,000,000 over the next twenty years for payment of principle and interest.

Another impact upon the local communities, which is not addressed in DEQ's criteria, but is being addressed nationally, will be the potential elimination of certain components all together from the eligible list. Due to these considerations at the national level, it would appear prudent to wait and see the impact upon Oregon cities and districts with projects on the priority list. It would appear an undue hardship upon the communities to plan say for a 50 percent funding limitation, and then receive additional information that certain projects would not be funded at all, such as rehabilitation, and interceptors. Obviously, the electorate would be very apprehensive to pass a second or third bond issue on some projects.

Summary

MWMC has undertaken a program to minimize pollutants to the clean waters of Oregon and have hired consultants to prepare schedules, and design to complete the project.

BCS recommends the following:

1. DEQ change MWMC's Pump Station No. 1, Pump Station No. 2, Rehabilitation (Eugene), Rehabilitation (Springfield), and Effluent Disposal (Agripac) components to receive a minimum of a B Project Classification, and 150 points on Regulatory Emphasis based on ~~the~~ ^{their interrelationship} to achieve water quality benefits.
2. DEQ consider changes to MWMC's Pump Station No. 2, rehabilitation (Eugene), and rehabilitation (Springfield) to an A Project Classification and 150 points on Regulatory Emphasis because of their potential health hazard aspects.
3. DEQ consider the direct effect of eliminating the transition policy upon the remainder of MWMC's program due to the direction and overall progress of MWMC's program. The additional non-inflationary costs are estimated at \$3,000,000, and inflation related costs are approximately \$11.4 million.

Dept. of Environmental Quality
December 4, 1980
Page 7

4. DEQ not adopt OAR 340-52-020(4), which allows the EQC to reduce grant participation to 50 percent.

We appreciate the opportunity to testify and look forward to your decision in the near future.

BCS



Arl A. Altman

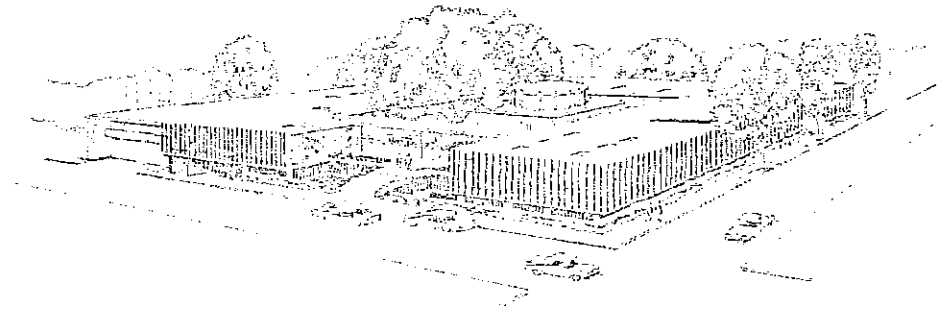
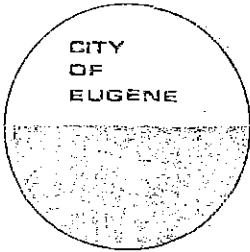
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Dave Jewett (w/enc)
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enc:

BCS

Rec'd
12/4/80



DEPARTMENT OF PUBLIC WORKS ————— 777 PEARL STREET ————— EUGENE, OREGON 97401

December 3, 1980

Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Subject: West Irwin Pump Station (Pump Station No. 2)

The recent heavy rainfall has demonstrated the inadequate capacity of the West Irwin Pump Station (P.S. No. 2), and pressure line from the station to the Eugene sewage treatment plant. The attached photos (taken 12/03/80) show several of the sanitary sewer manholes in the area served by the pump station which are surcharging and discharging raw sewage into the streets.

The SSES study shows that the pump station is 30 percent below the required capacity to serve the existing developed area even after I/I correction. This will be further aggravated by the substantial increase in head at the primary headworks of the new treatment plant when it becomes operational. The pump station's overflows constitute a major health hazard which we feel should be given high priority in the funding of the MWC regional program. Since this is a major component of the approved MWC Facility Plan, we urge that you make every effort to provide the earliest implementation possible for this project.

Very truly yours,

Don Gilman
Assistant Director of Public Works
City of Eugene

cc: MWC

enc:

Rec'd
12/4/80

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December 3, 1980

Department of Environmental Quality
Construction Grants Unit
Box 1760
Portland, Oregon 97207

RE: Public Hearing December 4, 1980, Regarding Allocation of
Federal Sewerage Works Construction Grant Funds after
September 30, 1981/Discontinuance of Transition Policy
Ranking of Project Components and Possible Reductions in
Grant Participation

Attention: William H. Young, Director
Department of Environmental Quality

Joe B. Richards, Chairman
Environmental Quality Commission

Dear Mr. Young and Mr. Richards:

As legal counsel for the Metropolitan Wastewater Management Commission (MWMC), I would like to make the following comments on behalf of MWMC with respect to the issues which are being considered at the public hearing referenced above. As you know, MWMC is charged with the responsibility for the construction of regional sewerage facilities in the Eugene/Springfield metropolitan area. It is a multi-million dollar construction program which has been in the planning, design and now construction process for several years. The resolution of the issues which are the subject of this public hearing are of utmost importance to MWMC and will have a substantial impact upon its ability to bring this construction program to a successful completion. The issues to be considered include (1) whether all components of a wastewater treatment construction project should be separately prioritized; (2) whether the transition policy should be discontinued in FY 82 and beyond; and (3) whether the Environmental Quality Commission (EQC) should embrace a reduction in federal grant participation from 75% to 50% of eligible costs after FY 81. I would like to address my comments to these issues seriatim.

I. INDIVIDUAL COMPONENT RANKING

A review of the priority list shows that DEQ has established seven components for the MWMC project, each of which was assigned a separate ranking priority. These include the treatment plant, pump station #1, sludge management, pump station #2, Eugene sewerage

rehabilitation, Springfield sewerage rehabilitation, and seasonal industrial waste effluent disposal. Our concern with regard to this issue is twofold. First, we wish to ensure that the MWMC project receives equal treatment under the regulations with respect to other projects in like circumstances. Of the top twenty projects on the priority list, at least seven--not including the MWMC project--have separately identified components. Of these, at least two, Tri-City Co./Regional and Douglas Co., have total project costs in excess of \$10 million. Nevertheless, it appears that only the identified components for MWMC were separately prioritized. The components of all other projects appear to have been accorded the same priority as the first listed component for that project.

It goes without saying that both the federal law governing the administration of the Wastewater Treatment Construction Grants program and state administrative law require equal treatment of those subject to the state administrative regulations.

Our second concern involves the desire to ensure that there be a substantial basis in fact for DEQ's action in separately ranking the components of the MWMC project and for the actual ranking assigned to each component. Inasmuch as under the preexisting regulations MWMC was a transition project, it has not been necessary to address these issues directly in the past.

It is our belief that a proper application of the language of the proposed regulations to the facts under which MWMC operates would require a combined ranking of all MWMC components with the treatment plant component. It would also result in the award of a higher ranking to several components than that currently assigned to them by DEQ. The propriety of combining project components under the proposed regulation was not only recognized but emphasized by DEQ in the interoffice memo of October 30, 1980, which included a discussion and analysis of the public hearing issues and which was distributed to interested parties. At page 4 thereof, it was stressed that a combined ranking would be awarded where the components were so inter-related as to be operationally dependent.

Factual data supporting the above assertions will be supplied at the hearing through the effort of the MWMC staff and by its construction management consultant, BCS Project Managers. Additional information will, of course, be supplied prior to the actual consideration of the FY 82 priority list by the DEQ. Moreover, MWMC, its staff and consultants continue to be willing to provide the DEQ with whatever information it may reasonably deem helpful in making factual determinations on these matters.

II. TRANSITION POLICY

The second hearing issue is the question of whether there should be a discontinuance of the transition policy in FY 82 and beyond. Several projects, including MWMC, have based their substantial planning and construction efforts for some time upon the present transition policy and its predecessor. There are two major reasons for not abandoning this policy. First, to do so may well violate the federal regulations governing priority list management. 40 CFR §35.915(a)(1)(IV)(2) provides that "[a] project on the Priority List shall generally retain its priority rating until an award is made."

The second reason for not abandoning this policy is the obvious rationale which underlines the above-referenced regulation. The regulation and the transition policy are both designed to minimize the disruption of projects which have been in the planning and construction stages under and in reliance upon preexisting procedures. Program stability is necessary to insure the timely completion of projects. Most sewerage construction projects and certainly all such projects of any significant size require years of work in organizing, planning, design and construction. Local, state and federal efforts must be coordinated. Recurrent policy changes complicate this already difficult task. More importantly, since ultimately the successful completion of a project depends on the competence and willingness of the local citizenry to approve bonding authority to support the local share of construction costs, the credibility of the grantee agency must be protected and preserved.

Over the years the need for program stability has been recognized by both DEQ and EQC. Prior to 1979, projects with Step 2 grants awarded or which were ready for Step 3 grants were automatically placed at the top of the succeeding year's priority list in order to minimize any delays in project construction completion. The growing scarcity of federal funds forced a reconsideration of this policy in 1979. Total abandonment of the policy was considered by the DEQ and EQC but ultimately the policy recommended and adopted was one of transition.

Under the transition policy, the preexisting rules were continued for projects which had progressed to the construction stage under them. Projects at the facilities planning or design stage were subject to the change in policy. In recommending the adoption of this transition policy, the DEQ found as follows:

"The major advantage of this option is that projects which were scheduled for funding during FY 79 would be 'transitioned' into FY 80 Step 3 funds. However, projects started with similar expectations but where Step 2 work was completed during FY 79 [were] not transitioned. Communities in the former class are distinguishable because bond issues and/or construction financing arrangements already have been negotiated; communities in the latter class should have more ability to reconsider construction scheduling and financing." (Emphasis added).

The transition policy should not now be cast aside. If anything, the need for transition is more acute now than it was before. Projects which were not far enough along to be transitioned have had even more time to reconsider construction scheduling. On the other hand, those that were transitioned are even farther along now with the result that reconsideration of construction scheduling and financing is even more difficult. Bond issues and/or construction financing arrangements have been voted on and approved. Untold hours have been spent establishing the most cost effective means of construction scheduling. All of that will have been wasted if the transition policy is abandoned. Moreover, promises about scheduling and cost levels have been made to the voters and must be kept. Accordingly, the reasons that supported the adoption of the transition policy originally are equally persuasive for its continuance now. Anything less would constitute a breach of faith with those who have proceeded in reliance upon on the state's repeated representations that a transition-type policy would be pursued.

III. REDUCED GRANT PARTICIPATION

The prospect of a reduction in the level of federal grant participation is the most important issue to be considered at the public hearing. In short, it carries with it the seeds of the destruction of the construction grants program in Oregon.

Implementation of the proposal to reduce the level of federal participation from 75% to 50% will in all likelihood retard and possibly ruin the construction grants program because it is economically unrealistic and unacceptable to local voters who will be asked to approve bond issues to pay the local share of construction costs. The original federal legislation passed in 1956 carried with it a 30% federal level of participation in the construction grants program. Due to the failure of local communities to take advantage of the program, the funding level was raised in 1966 to 50%. This did not solve the problem and in 1972, Congress enacted the Federal Water Pollution Control Act which carried with it the

federal level of participation of 75%. The legislative history of this act makes it abundantly clear that Congress viewed the 75% level of federal participation necessary to encourage local communities to take advantage of the construction grants program. The DEQ's proposal to reduce federal participation to 50% would merely return the state to a level of federal participation which was found inadequate in 1966.

Rather than encourage the initiation of new projects in other parts of the state, the opposite would occur. Many communities, particularly the smaller ones, would in all likelihood find their bonding capacity insufficient to support a 50% local share of construction costs even if the voters were willing to approve it. Moreover, the likelihood of the local citizenry supporting a 50% local share is debatable at best. This is even more apparent in communities such as that served by MWMC, in which construction programs are already under way. Moral and financial commitments have been made by federal, state, and local agencies and officials to the people of Eugene and Springfield as well as other communities in the state. Bond authorization elections have succeeded based on the communities' reliance upon representation that 75% of construction costs would be borne by the federal government. The DEQ's proposal would double the local share of construction costs and betray the voters' trust. Whether Eugene/Springfield or any other community could pass additional bond issues would be doubtful at best.

Notwithstanding its probable deleterious effect on the construction grants program, the EQC should not go forward with the grant participation reduction proposal because it is ill-drafted in view of the actual language of the recent amendment to the Clean Water Act. As proposed, ORA 340-53-020(4) provides in part that "[a]fter FY 1981 the Commission may reduce the percentage to fifty (50) percent if allowed by federal law or regulation." The actual text of the amendment to the Clean Water Act worked out by the House Senate Conference Committee and adopted October 1, 1980, continues the 75% funding level

"unless modified to a lower percentage rate uniform throughout a State by the Governor of that State with the concurrence of the [Environmental Protection Agency] Administrator. Within ninety days after the enactment of this sentence, the Administrator shall issue guidelines for concurrence in any such modification, which shall provide for the consideration of the unobligated balance of sums allocated to the State under section 205 of this Act, the need for assistance under this title in such State, and the availability of State grant assistance

to replace the Federal share reduced by such modification." Cong. Rec. -- Senate 10-1-80 at S 14226.

Several factors are immediately apparent from a reading of the text of the amendment. First, no specific percentage reduction is set forth. Second, any reduction must be uniform throughout the state. Third, any reduction must be made by the governor of the state and with the concurrence of the EPA. Fourth, the Administrator must issue guidelines governing the circumstances under which he may concur in any reduction. At the least, the guidelines must consider the unobligated balance of the state's allotment, the need for assistance in the state, and the availability of state grant assistance to replace the federal share.

The language of the regulation proposed by the DEQ does not take any of the above factors into consideration. Doing so would, of course, be impossible at this time because the federal guidelines which will govern grant participation reduction do not even exist yet. On December 3, 1980, I had a telephone conversation with Brian Hansen, Regional Counsel for the EPA Region X, in which he indicated that proposed guidelines are not due for release until February 1, 1981. In fact, he stated that draft guidelines have not yet even been circulated to EPA regional offices for their comment.

In light of the text of the federal legislation and in the absence of any federal guidelines, it would be unwise for EQC to go forward with the grant reduction language proposed by DEQ. Rather, if the concept is not to be rejected out of hand, then the implementing language should at least await the issuance of the federal guidelines to which the state's procedure must conform.

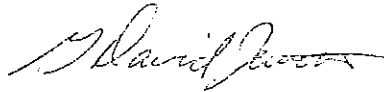
In summary, I believe it is fair to say that the three issues before the EQC at this public hearing have far-reaching consequences for the wastewater construction program in Oregon. Component ranking can drastically affect any individual project and extreme care must be taken to ensure that decisions are made on an evenhanded basis and with sufficient supporting facts. An abrupt end to the historic transition policy would adversely affect those projects which have proceeded through the planning and design stages and into construction in reliance on repeated assurances that the policy would be

Department of Environmental Quality
December 3, 1980
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continued. Finally, a reduction of federal grant participation from 75% to 50% would endanger the very viability of the entire program. Moreover, notwithstanding that problem, in its present form, it would probably run afoul of controlling federal guidelines the exact content of which is as yet unknown.

Very truly yours,

WISWALL, SVOBODA, THORP
& DENNETT, P.C.



G. David Jewett

GDJ/kb
cc: William V. Pye

Rec'd
12/14/80

Metropolitan Wastewater Management Commission

COMMISSION MEMBERS
Boo Adams—Springfield Councilperson
Vance Freeman—Lane County Commissioner
Pat Hocken—Eugene Lay Representative
Betty Smith—Eugene Councilperson
Steve Allen—Springfield Lay Representative
Mark Westling—Eugene Lay Representative
Gary Wright—Lane County Lay Representative

899 PEARL STREET — P.O. BOX 1463 — PEOPLES BANK BUILDING — EUGENE, OR 97401 — PHONE (503) 687-3974

December 2, 1980

Department of Environmental Quality
Construction Grants Unit
P. O. Box 1760
Portland, Oregon 97207

SUBJECT: PUBLIC HEARING TESTIMONY FOR DECEMBER 4, 1980 REGARDING
OAR 340-53-015 (5) AND OAR 340-53-015 (8) AND 340-53-020 (4)

In early 1977 the Metropolitan Wastewater Management Commission was created by Intergovernmental Agreement by and between Lane County and the Cities of Eugene and Springfield. Encouragement for this formation was received by the State Department of Environmental Quality and the United States Environmental Protection Agency. Funding to implement an approved and adopted facilities plan was an important criteria which convinced these three governmental agencies to cooperate in this major regional undertaking. In May of 1978 a bond authorization measure was passed by the Cities of Eugene and Springfield. Information supplied to the voters for this \$29.5 million bond authorization measure indicated that grant funds in the amount of 75 percent of the eligible project costs would be available. This availability could be documented on the Department of Environmental Quality's Priority List current at that time. The projected completion date for the regional sewerage facilities was estimated to be mid 1983.

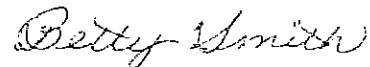
Since that time, the Congress of the United States has seen fit to appropriate funds less than authorized by the Clean Water Act. Additionally, the Executive freeze on grant funds this year has placed the MWMC project far behind schedule with the ensuing cost increase due to inflation negating the original budget estimate, thereby creating a requirement for additional funds, the source of which has not yet been determined.

The three administrative rules which are the subject of this hearing all break faith with those voters who approved the local share bond authorization. The loss of the transition policy and the separate priority components both delay the MWMC project resulting in additional local inflationary costs. In addition, the proposal for 50 percent grant funding would double the local share cost which was not what was promised the voters when they passed their original bond authorization measure.

Water pollution control, with the associated environmental improvement, can only be attained by completing projects which have started. The Department of Environmental Quality's identification of starting projects while others wait to become operational because of funding policies does not appear to be consistent with this State's needs.

When the summary of this hearing is prepared, include a statement indicating that the thrust of these proposed administrative rules appear to delay completion of projects under construction at the expense of funding new projects, and in light of federal funding uncertainties, there is no guarantee that any will ever be completed. Without completion and operation, no improvement in water quality can be realized.

Sincerely yours,

A handwritten signature in cursive script that reads "Betty Smith".

BETTY SMITH
Vice-President

BS:WVP:mck

Keeld
12/4/80

R. A. 'GUS' KELLER



December 2, 1980

Department of Environmental Quality
Construction Grants Unit
P. O. Box 1760
Portland, Oregon 97207

SUBJECT: PUBLIC HEARING TESTIMONY FOR DECEMBER 4, 1980 REGARDING OAR
340-53-015 (5) AND OAR 340-53-105 (8) AND 340-53-020 (4)

Since 1977 when the Metropolitan Wastewater Management Commission received its first grant offer, the Congress of the United States and the Executive Branch of the federal government has been breaking faith with the people by making less and less funds available through the Environmental Protection Agency's Construction Grant Program. This breach of faith becomes evident here in Eugene when taxpayers indicate their mistrust of the federal government regarding funding of our regional wastewater treatment system.

When the Commission was formed and the local share bonds were approved, an unwritten contract between the State and the local taxpayer was made.

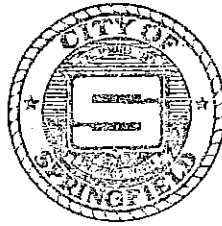
The Administrative Rules as proposed violate this contractual arrangement. The loss of transition means expensive delays and replanning of the project's schedule. Components that differ from the project's priority are inconsistent with original administrative criteria and the proposal for funding a project at a reduced 50 from 75 percent would create in the local taxpayer the same mistrust that is now being expressed toward the federal government.

It is for these reasons that we oppose the adoption of the Administrative Rules which are the subject of the December 4, 1980 Department of Environmental Quality hearing.

Sincerely yours,

R. A. "Gus" Keller
Mayor, City of Eugene

Rec'd
12/4/80



CITY OF SPRINGFIELD
SPRINGFIELD, OREGON 97477

OFFICE OF THE
CITY MANAGER

325 NORTH A STREET
726-3700

December 2, 1980

Department of Environmental Quality
Construction Grants Unit
P. O. Box 1760
Portland, Oregon 97207

SUBJECT: PUBLIC HEARING TESTIMONY FOR DECEMBER 4, 1980 REGARDING OAR
340-53-015 (5) AND OAR 340-53-015 (8) AND 340-53-020 (4)

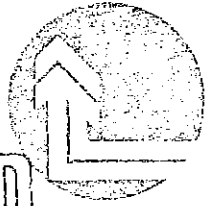
The City of Springfield was promised that by entering into an agreement which would allow the construction, operation and maintenance of regional wastewater treatment facilities, that they would have the most cost-effective sewerage program. Since entering into the agreement, we have experienced funding delays, a Presidential freeze, and now it appears that the proposed Administrative Rules will further delay and increase the local costs of this project.

If it had been known in 1977 that the Department of Environmental Quality would be proposing the adoption of the rules that are the subject of this hearing, who is to say whether Springfield would have chosen the course that it did.

To maintain 75 percent funding commitment, have all components of a project receive the same priority ranking, and retention of the transition policy will at least allow the project to continue with its inflationary costs the only major problem. Adoption of the three administrative rules would put the local people in a completely "no win" situation and could even jeopardize the orderly completion of the regional project.

Sincerely yours,

VERN MEYER, Mayor
City of Springfield



December 9, 1980

RECEIVED
DEC 15 1980

Department of Environmental Quality
Construction Grants Unit
P. O. Box 1760
Portland, Oregon 97207

Water Quality Division
Dept. of Environmental Quality

SUBJECT: PUBLIC HEARING TESTIMONY FOR DECEMBER 4, 1980 REGARDING OAR
340-53-015 (5) AND OAR 340-53-015 (8) AND 340-53-020 (4)

Lane County and the Department of Environmental Quality have entered into an agreement, the basis of which is environmental improvement of the River Road/Santa Clara area. Because this area is within the Eugene/Springfield urban service boundary and the Metropolitan Wastewater Management Commission is responsible for the transportation, treatment and disposal of wastewater within these confines, I am concerned that the Administrative Rules as proposed will both delay and add to the expense of implementing the MVMC program.

At present, Lane County has budget problems and the competition for the tax dollar does not need an additional burden of changing a 75 percent grant program to a 50 percent program with the expectations that the local taxpayer should be saddled with the difference. It appears that components of a pollution control project are all part of the same project and it does not follow that each component should receive a different priority for funding. In addition, the transition policy which allows a project that is under construction to retain its funding position until construction is complete retains scheduling continuity and minimizes the administrative requirements compared to a project that is dropped today and picked up two years hence.

For these reasons, we are against the adoption of the Administrative Rules which are the subject of this Thursday, December 4, 1980 Department of Environmental Quality hearing.

Sincerely yours,

Otto T'Hooft, Chairman
Lane County Metropolitan Wastewater
Service District

Reed
12/4/80

December 3, 1980

To The Department of Environmental Quality
Subject: Metropolitan Wastewater Treatment Plant

Dear Sirs:

The residences of Beverly Park in Springfield, Oregon, are painfully aware of the need for the new wastewater treatment plant. We have experienced sewer surcharge problems in our neighborhood for several years and have watched our children walking to and from school through raw sewage during high periods of rain. An antiquated sewer system defines the need of the Metropolitan Wastewater facility for us personally!

The original agreement for funding the construction and rehabilitation (maintenance) of the plant stipulated that when the plant reached 85% of its capacity, D.E.Q. and E.P.A. would require upgrading and/or enlargement of the facility.

Because of the Federal freeze in 1980 and the delays in money coming into the project as scheduled, the plant's completion date will now be 1986, or thereafter. This may require enlarging the facility before the mortar's dry on the original structure! With the ever-increasing population of our area, this is a real possibility.

D.E.Q.'s efforts to decrease the original 75% funding of the project will not only create a tremendous financial burden for local residents and a longer delay in the completion of the plant, but may, in fact, re-enforce the general feeling of apathy and distrust of governmental bureaucracy. But more importantly, may question the credibility of our city councils, county commissioners and the Metropolitan Wastewater Staff and Commission, thereby seriously threatening passage of future bond issues or budgets in a period of severe economic stress.

The D.E.Q. has a moral obligation and responsibility to our communities to uphold its original commitment to this project and I strongly urge them to comply with their agreement to fund 75% of the Metropolitan Wastewater Treatment Plant.

Sincerely,

Linda Christensen

Linda Christensen
2265 Don Street
Springfield, Oregon 97477

Rec'd
12/4/80

December 3, 1980

Department of Environmental Quality
Construction Grants Unit
P.O. Box 1760
Portland, OR 97207

SUBJECT: Environmental Quality Commission Public Hearing - December 4, 1980
OAR 340-53-015(5), OAR 340-53-015(8), OAR 340-53-020(4)

Gentlemen:

I respectfully request that action be taken to obviate the costly delays which would impair the continued development of the Eugene-Springfield sewage treatment system as a result of the implementation of the subject rules.

In 1976 the citizens of Oregon's second largest metropolitan area recognized the need to properly treat the community's sewage in order to protect the quality of the main stem of the Willamette River at its head waters. Subsequently, the Metropolitan Wastewater Management Commission was formed to construct and operate a regional treatment facility. A most important factor in the local acceptance of such an organization and project was the public anticipation of 75% federal funding participation.

In 1978 the people of the metro area lived up to their part of the program and approved a \$29.5 million bond issue. Since that time, however, federal delays and inflation have increased the estimated project cost by nearly 50%, necessitating voter approval of another bond issue.

To reduce the amount of federal funding to any point below the 75% level would be a complete breach of faith on part of the government, and would result in a tremendous decrease in confidence and trust in the Department of Environmental Quality's authority and judgement.

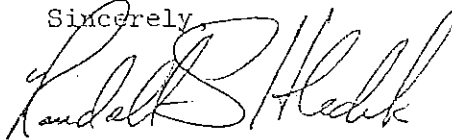
While I can appreciate the position with which the Department is now faced, and understand that the Eugene-Springfield facility requires a large portion of available federal fund appropriations, I find it extremely difficult to accept a proposal which delays the completion of a necessary facility at ever increasing costs. The public need for the project is greater now than it was four years ago, and the expected completion date of 1983 has already been extended three years. The metro area's comprehensive plan places great emphasis on the availability of this system's ability to accommodate growth; the current system has already reached its industrial loading capacity, and the community is in danger of losing a major employer (i.e., Agripac, Inc.) if construction funds are delayed.

Department of Environmental Quality
December 3, 1980
Page 2

Separate component prioritization, discontinuance of the transition policy, and reduction in grant participation would each further delay the date when the regional system could be brought on line. In order to avoid the unnecessary cost and local consternation which would be generated by the implementation of these concepts, I strongly urge you to adopt Alternative 3A which is stated on page 6 of an Interoffice Memo dated October 30, 1980 from Harold Sawyer, Administrator of the Department's Water Quality Division regarding the subject rules. This Alternative would retain currently adopted prioritization and funding methods.

It is imperative for the Department to live up to previous commitments, and it is only logical to finish partially completed projects before starting others given the uncertainty of future fund availability.

Sincerely,



Randall S. Hledik
Citizen Member
Industrial Advisory Committee
Metropolitan Wastewater Management Commission

RSH/as

Kec'd
12/4/80



Springfield Board of Realtors

SPRINGFIELD, OREGON 97477

November 5, 1980

Department of Environmental Quality
C/O Metropolitan Wastewater Management Commission
899 Pearl Street
Eugene, OR 97401

ATT: Sarah Bachhuber

RE: Allocation of Federal Funds

Dear Commission Members:

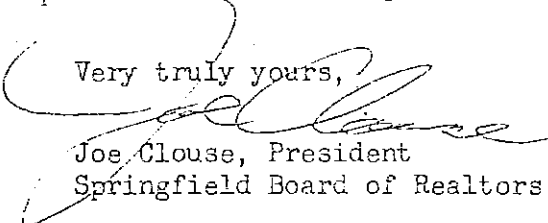
This letter is to express the concern of the Springfield Board of Realtors to your staff's three point proposal revising allocation and distribution of Federal funds for wastewater sewer projects.

The proposed distribution schedule for Federal funds may cause some local hardships, delays and possible cost overruns, but our primary area of concern is your staff proposal to reduce Federal participation from 75% to 50% of the project costs. Our organization understands the metro wastewater project is necessary to comply with Federal Clean Water standards and permit future growth in our expanding area.

The metro wastewater project is of critical importance to our community. The people of our area understand the need and by voter approval have supported the project based on a 75% - 25% formula of participation. To now ask the people to support a 50% - 50% participation is unrealistic. We feel in the eyes of the voters the credibility of the State of Oregon and the Metro Wastewater Commission would be so damaged as to make voter approval for more money impossible.

We urge you not to support staff position-on this matter.

Very truly yours,


Joe Clouse, President
Springfield Board of Realtors

JC:le

Rec'd
12/4/80
December 2, 1980

Department of Environmental Quality
Construction Grants Unit
P.O. Box 1760
Portland, Oregon 97207

SUBJECT: DEQ/EQC DECEMBER 4, 1980 HEARING ON ADMINISTRATIVE RULE CHANGES

At its December 2, 1980 meeting, the Eugene Realtors Board of Directors unanimously voted to submit written testimony on the three proposed changes to administrative rules of the Environmental Quality Commission. We strongly advise the following:


1. 75 percent grant funding without any percentage reduction should be maintained for Oregon projects.
2. Retain the transition policy for projects under construction to maintain administrative continuity.
3. Assigning a different component priority ranking for one interrelated water quality improvement project makes no sense since most projects require total completion before they can become effective pollution control entity.

These changes would adversely affect all potential grantees in the state and especially those under construction like the Eugene-Springfield metropolitan area sewerage project. We oppose the proposed changes because of the following:

1. The local taxpayers voted a local bond authorization measure based on several DEQ commitments which are now apparently going to be rescinded.
2. Delays in construction as a result of these proposed administrative rule changes which will cause additional inflationary expensive and needlessly postpone water quality improvement in the Willamette River and risking building moratorium as a result.

Attached find list of sixteen co-signers.

Sincerely yours,


DAN LEAHY, PRESIDENT
Eugene Board of Realtors

- 1.
- 2.
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- 5.
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- 15.
- 16.

✓ 1. *John A. Smith*
 2. *Helen Lorenz*
 3. *Larney Larkins*
 4. *Phil*
 5. *John W. Houston*
 6. *James L. Sheppard*
 7. *Becky Foster*
 8. *Virginia Smith*
 9. *Edna L. Johnson*
 10. *Bob Bull*
 11. *Dorcas Benson*
 12. *Carol Hagan*
 13. *Carl R. Fring*
 14. *Josephine*
 15. *Lonie Winters*
 16. *John Carter*

BOARD MEMBER
 BOARD MEMBER
 Pres-Elect, Eugene Board
 Vice-President, Eugene Board
 Board Member
 Director
 Board Member
 State Director
 Board Member
 Vice President
 Suburban Director
 Regional Director
 Broker Director
 Committee Chairman
 Committee Chairman
 Pres W.E.R.

1. Ben H. Smith, Board Member
Charles E. Harvey Inc.
2. Helen Lorenz, Board Member
Realty World Lorenz Realty
3. Dorothy Larkins, Pres. Elect, Eugene Board
West Coast Realty
4. Bob Linz, Vice Pres., Eugene Board
Bob Linz Real Estate
5. John Northam, Committee Chairman
Duprey Realty
6. James Sheppard, Director
Gordon Brunton Realty
7. Beverly Foster, Board Member
Century 21 Knutson & Assoc.
8. Virginia Smith, State Director
Countryman Realty, Inc.
9. Edna Johnson, Board Member
Countryman Realty, Inc.
10. Bart Bardwell, Vice President
Benchmark Realty
11. Louise Denson, Salesman Director
Jean Tate Real Estate, VR
12. Carol Hadley, Salesman Director
Curtis Irving Realty, VR
13. Curtis R. Irving, Broker Director
Curtis Irving Realty, VR
14. Jasen Greene, Committee Chairman
Western Investors, Inc.
15. Janie Winters, Committee Chairman
Countryman Realty, Inc.
16. Lynn Outka, Pres. W.C.R.
Home Exchangers

Rec'd
12/4/80

SPRINGFIELD AREA CHAMBER OF COMMERCE
223-N NORTH A STREET P.O. BOX 155 SPRINGFIELD, OREGON 97177 PHONE (503) 746 1651



December 2, 1980

Department of Environmental Quality
Construction Grants Unit
P. O. Box 1760
Portland, OR 97207

SUBJECT: DEQ/EQC DECEMBER 4, 1980, PUBLIC HEARING ON ADMINISTRATIVE RULE CHANGES AFFECTING CONSTRUCTION GRANTS PROGRAM

The Springfield Chamber of Commerce wishes to protest the administrative rules affecting the wastewater treatment works construction grants program. Adoption of these rules will pose an extreme hardship on the citizens of Springfield who are desperate for sewer improvements and rehabilitation which will result in improved water quality. We recommend that you adopt the following policies:

1. Continue to provide 75 percent grant funding of eligible project costs past FY81. It was at the promise of this level of funding that we entered into an agreement to build a regional sewerage facility. You will betray our confidence by defaulting on your commitment of 75 percent funding. Moreover, it will result in a loss of faith among local voters who passed \$29.5 million in bonds in 1978 thinking that that amount would fulfill the requirement for their local share.
2. Retain the transition policy to allow projects under design prior to FY79 such as the MWMC project to maintain their priority position on the funding priority list. It makes no sense to edge out projects already under construction in favor of projects that have yet not broken ground.
3. Rank all the MWMC project components with the same priority. In other words, do not segment the priorities of our project. Our project has several interdependent components which cannot efficiently function independently. For example, without the regional facility, the East Bank Interceptor is useless. We need all components of our project to be operational in order to accomplish regional water quality improvement goals.

The Chamber of Commerce represents the economic interest of the City of Springfield. If our project is delayed, growth in the city will be impaired, and without the regional facility, building moratoriums would likely result.

But above and beyond the economic and growth factors is the environmental motive for completing the plant. The Springfield Area Chamber of Commerce does not wish a water pollution problem created by delays in funding due to inappropriate administrative rules which appear inconsistent with improved water quality goals.

Sincerely,

A handwritten signature in dark ink, appearing to read "C. Robert Smith". The signature is fluid and cursive, written over the typed name.

C. Robert Smith
Executive Vice President

GATEWAY TO THE MCKENZIE RIVER

Rec'd
12/4/80

December 3, 1980

Department of Environmental Quality
Construction Grants Unit
P. C. Box 1760
Portland, Oregon 97207

RE: Public Hearing on Administrative Rules Changes
December 4, 1980

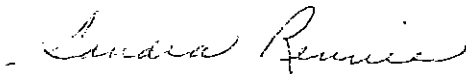
In May, 1978, based on federal and state financial commitments, voters in the Springfield-Eugene metropolitan area approved \$29.5 million in General Obligation Bonds to construct the metropolitan sewer system needed to meet federal and state standards. That figure represented 25% of the estimated project cost, with the remaining 75% to be funded by federal grants.

Governmental delays and continuing inflation have already elevated construction costs. At this stage, a cutback to 50% of federal funding by DEC would be disastrous to the project and a flagrant breach of faith with the voters of Eugene and Springfield.

The growth and economic stability of this metropolitan area is heavily dependent on completion of this project. Competition for capital funds in the communities would make a bonding election for the lost 25% almost impossible. The resulting loss of credibility in the State of Oregon and the cities involved would be detrimental to future budget elections, bond sales, and general public trust in government.

The financial commitments made to the citizens of Eugene and Springfield should be honored. I urge you to reconsider your prior action, to maintain the transition policy, and to continue funding at the present 75% level.

Sincerely,



Sandra Rennie
Councilor, Springfield City Council
Member, MWHC Industrial Advisory Committee

December 1, 1980

Department of Environmental Quality
Construction Grants Unit
Box 1760
Portland, Oregon 97207

RECEIVED
DEC 4 1980

Water Quality Division
Dept. of Environmental Quality

RE: December 4, 1980 Public Hearing on EQC Priority List

Department Members:

The Sludge Advisory Committee of the Metropolitan Wastewater Management Commission (MWMC) wishes to express its concern that funding for the MWMC project remain at the highest level possible for all components of the project in order to finish it at the earliest possible time. The Sludge Advisory Committee by vote at a public hearing on November 10, 1980, authorized this response to the 3 "issues" which are to be the subject of the December 4 hearing. In summary, implementation of changes suggested by the issues would seriously impair the expeditious and cost-effective completion of the MWMC project.

Background

The MWMC was established in 1977 to design, construct, operate and maintain regional sewerage facilities for the Eugene - Springfield metropolitan area. Not only did Federal law require water quality improvements (P.L. 92-500, P.L. 95-217) but also the cities of Eugene and Springfield and the surrounding community were aware that the existing treatment plants were rapidly approaching design capacity. This situation was addressed in a Section 208 Study published in April of 1977. In fact, the Springfield Treatment Plant is now at design capacity and seasonal overloading at the Eugene treatment plant is causing serious problems.

The residents of the Eugene - Springfield area recognize that new facilities must be built and that they should be regional in nature. The regional concept includes: provision of separate treatment for Agripac, a cannery on the Eugene system which uses a great deal of Eugene's present treatment capacity; off-site sludge management facilities; and, a major sewer interceptor to connect the city of Springfield to the regional plant. Each component is interrelated; none of the components can be omitted or substantially delayed if the regional project is to succeed.

Nature of the Proposed Decision

It is not clear what the DEQ is proposing concerning the issues. In the Notice of Public Hearing, you have stated that the DEQ is not proposing amendments to the adopted rule. However, under the agenda item number O, September 19, 1980 EQC meeting, the Director recommended the adoption of Attachment D which is a proposed administrative rule implementing the changes suggested by the "issues." To put it simply, implementing the proposed changes would be like changing the rules in the middle of the game. It would do a disservice to the elected officials and citizens of the Eugene - Springfield area who

have worked since 1977 to meet Federal and EQC requirements and have relied upon the existing regulatory and funding framework.

Separate Ranking of Project Components

This proposal ignores the interrelationship of components to a water quality improvement project. While it may be possible to assign a "water quality benefit" value to a project component, there may be little or no actual water quality improvement if the components are not constructed on schedule. For example, funding the construction of an interceptor without the upgrading or construction of a treatment facility would do little to improve water quality; failure to fund an interceptor for an upgraded treatment facility would do likewise.

It is not an answer to suggest that if a community was unable or unwilling to wait for a grant for a lower ranking component, it should proceed with local funds on the assumption that it would pay more than the 25% share of the total project costs. It is unlikely that the community would find it feasible to make such an indeterminate financial commitment.

If this proposal is implemented, communities will be faced with partially-completed projects and the prospect that what inflation may not do to the cost of the required components, subsequent changes in the rules may.

Discontinuance of Transition Policy

Under this proposal, grant funds for MWC project components other than the treatment plant might be delayed until FY 84 or FY 85. These include sludge disposal, pump stations and sewer system rehabilitation. Grant funding for the treatment plant in FY 82 assumes continuance of the current priority criteria and sufficient federal funding. If those assumptions turn out to be incorrect, necessary components of the regional project which serves one of the larger metropolitan areas in Oregon may be delayed significantly.

Reduction of EQC Grant Participation and Spreading of Available Funds

While achieving broader use of limited grant funds may be an objective in the politics of scarcity, it will not maximize water quality benefits. Spreading more thinly the available funding will not guarantee that smaller water quality projects will be completed but will only insure that the larger projects, such as the MWC project, which will serve large metropolitan regions, will be delayed and costs increased. Broader use of limited grant funds may result only in all projects taking longer to complete after initial funding. Put simply, it makes little sense to start new projects when you don't have the money to finish the projects you have started.

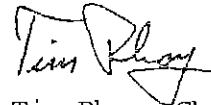
The proposed reduction of EQC grant participation of 50% would not result in the funding of more projects in a shorter length of time. It is clear that reduced grant participation would require greater local share of wastewater treatment costs, but it is not clear that local communities will be both

willing and able to provide such funding. In May of 1978, the voters of Eugene and Springfield authorized 29.5 million dollars in general obligation bonds for what was 25% of the then local costs of the entire project. Because of funding delays and inflation, this amount is inadequate. We have made a good faith effort to fund our share of the project. A reduction in grant participation would be, in effect, an EQC rejection of its commitment. Going back to the voters of Eugene and Springfield for the additional moneys already required for our 25% share will be difficult; requesting additional moneys because of a failure of EQC to live up to its commitment may be fruitless.

Conclusion

We understand that it is difficult to equitably distribute limited funds. Changing the rules in the middle of the game will do nothing to make the distribution more equitable nor improve water quality. We urge you not to adopt the proposals incorporated in the 3 issues.

Sincerely,



Tim Rhay, Chairman
Sludge Advisory Committee

TR:hc

Rec'd
12/4/80
from MWMC

ERG 11/29/80

More trouble MWMC doesn't need

The state Environmental Quality Commission will hold hearings early next month on proposed state Department of Environmental Quality administrative rule changes which, if adopted, would further reduce already inadequate annual allocations of federal "Clean Water" funds to the (Eugene-Springfield) Metropolitan Wastewater Management Commission.

The changes would be unwise. The impact on Eugene and Springfield taxpayers would be drastic and unfair. To understand why, read on:

Promised that the federal government would pick up the rest of the bill, Eugene and Springfield voters approved a \$29.5-million bond issue in 1978 to cover 25 percent of the estimated \$104-million cost of a new metropolitan area sewage treatment plant and trunk sewer lines connecting the two cities to the plant.

The project completion date, established to conform with state and federal laws requiring elimination of river contamination by municipal sewage, was to have been 1983.

The estimated project cost has now climbed to \$150 million — or more — and the completion date has been revised to July, 1986 — or later — because Congress has failed to keep the federal government's bargain in timely fashion.

With federal aid arriving much more slowly than originally promised, the wastewater management commission, cooperatively established by Eugene, Springfield and Lane County, has been unable to keep the project on schedule and so prevent inflation of the final price.

Consequently, it appears that MWMC will soon be forced to ask Eugene and Springfield voters to approve another sizable bond issue to cover 25 percent of the needlessly inflated final bill.

That's enough by itself to make anyone wary about ever again taking the federal government at its word — or trying to comply with federal environmental protection laws, regardless of their merit. But it may be only the prelude to an even more maddening experience thrust upon Eugene-Springfield taxpayers by state authorities.

The DEQ is now proposing that federal funding for portions of the MWMC project be further delayed by giving them lower priorities on the list of Oregon projects to which Clean Water funds will be allocated by the Environmental Quality Commission.

Worse than that, the DEQ is also suggesting that EQC change the funding formula to require 50 percent, rather than 25 percent, local match money for such projects.

The DEQ obviously is attempting to stretch Oregon's annual share of Clean Water funds to initiate new projects in other parts of the state. From a political perspective, that's understandable. The current EQC-approved program allocates the lion's share of these funds to the metro Eugene-Springfield project. Some others that are sorely needed must wait in line.

True, Congress has recently given state governments the option of using Clean Water funds for either 50 percent or 75 percent support of local projects. But how would Oregon benefit by starting more sewage treatment projects, only to have them all dangle more slowly in the wind than even the MWMC project has?

Expeditious use of federal funds to help complete the MWMC project could save Eugene-Springfield taxpayers millions of dollars. The same funds spread over a number of projects would only force the communities in which they would be located into perilous situations like the one Eugene-Springfield has been forced into.

Moral and financial commitments made to the people of Eugene and Springfield by federal, and state, authorities should not be any more lightly regarded than they already have been. Nor should such commitments be unrealistically extended to other Oregonians.

The prospect is that federal support of local projects of all kinds will be harder, not easier, to come by in the years just ahead. If only for that obvious reason, Oregon would be foolish to proceed as the DEQ is advocating.

Rec'd
12/4/80
from NUMMC

Area News

Regional

Sooner or later, \$6 million must be raised

Wastewater funds run short

By DAN WYANT
Of the Register-Guard

Despite rising costs, broken federal promises and threats of further cutbacks in funding, work is moving ahead on Eugene-Springfield's metropolitan wastewater treatment facility.

But there's little chance the project will be completed by its original 1983 deadline, according to Bill Pye, executive officer of the Metropolitan Wastewater Management Commission.

And sooner or later, the commission is going to have to go to Eugene-Springfield voters for another \$6 million or more to complete the massive project, he says.

Cost estimates for the project, originally set at \$104 million, have skyrocketed to between \$140 million and \$150 million because of delays resulting from

cutbacks in federal grants from levels authorized by the 1977 Clean Water Act. The treatment facility originally was designed to meet sewage disposal needs of the metropolitan area until the year 2000.

Construction progress is visible at the regional facility site adjacent to Eugene's existing treatment plant on River Avenue. Four primary clarifier tanks 135 feet in diameter have been completed. They will be able to treat up to 49 million gallons of raw sewage a day. A gaping hole has been excavated for future aeration basins and a maintenance building has been finished and is being used temporarily for storage of construction materials.

Bids will be considered Friday for the first stage of a \$17-million "east bank" interceptor pipeline that will carry sewage from Springfield to the re-

gional treatment facility in north Eugene. A \$6-million contract was awarded earlier for the manufacture of the pipe, which will range in size from 66 to 78 inches in diameter.

The first construction stage of the pipeline will be from the site of a pumping station located east and across the Willamette River from the treatment facility to the vicinity of the Valley River ponds. A second stage, which is to be contracted later this month, will continue the line through Alton Baker Park. The remainder of the six-mile line is being designed.

Bids also are expected to be called shortly for additional work on the treatment plant, probably for construction of the secondary clarifiers, Pye says.

Eugene and Springfield voters approved a \$29.5-million bond issue in 1978 that was intended to cover 25 per-

cent of the cost of the treatment plant and the trunk sewer lines connecting the two cities to the plant. The other 75 percent was expected to come from the federal government as part of a \$5-billion annual national program to clean up America's waterways.

But the federal government hasn't kept up on its share of the funds, Pye says. Oregon's allocation for the grant program should amount to about \$64 million annually. Instead, Oregon received about \$44 million for the 1980 fiscal year and about \$44 million again for the current fiscal year, which started Oct. 1. This money is distributed to the Eugene-Springfield project and other individual projects by the State Department of Environmental Quality under a priority point formula.

The lag in federal funding has
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\$6 million

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slowed the construction schedule and has increased costs because of continuing inflation.

However, that's not the worst of the problems now facing the local wastewater management commission, Pye says.

At a Sept. 19 meeting in Bend, the State Environmental Quality Commission voted to change its administrative rules and adopted a new priority list that will further reduce federal funding for the project and will push the completion time schedule ahead to 1986, he says.

The state agency is proposing to reduce federal matching funds from 75 to 50 percent and to change its system of assigning priorities from total projects — where the Eugene-Springfield project ranks high — to a component-by-component priority list for each of some 24 projects on the state's priority list.

"If they do that, we'd have no federal funds at all in fiscal 1983 or 1984 and that will be devastating," Pye says.

Even though the work on the regional treatment system was to be accomplished in segments, the segments all held the same high priority number, he says. Under the change, segments of other projects in the state have been elevated higher than some of the elements of the Eugene-Springfield facility.

Pye says a Eugene-Springfield delegation vigorously protested the proposed changes at the Bend meeting.

Even so, the state commission adopted the changes but agreed to take more public testimony on the proposals at a meeting Thursday in Portland.

Pye, who will be armed with letters from the mayors of Eugene and Springfield, is hopeful that the state agency will modify its September decision on the basis of testimony at the Thursday meeting.

For one thing, he says he doubts that any of the 24 local governmental agencies on the grant priority list will be able to go ahead with their projects if the 50-50 matching formula is applied.

Pye concedes that the Eugene-Springfield project has been getting the lion's share of Oregon's allocation of federal funds. For this fiscal year, for example, the state allocated \$26 million to continue work on the regional facility plus another \$5 million in carryover

funds from a Roseburg project that was not started.

But Pye argues that it makes sense to complete a project once it is under way rather than to spread out the funding for a number of years.

The state action threatens to delay a key part of the Eugene-Springfield regional plan, which is to build a "seasonal industrial waste" facility to separate Agripac cannery wastes from the main treatment plant, Pye says. The Agripac project is in the local agency's current year budget.

"The biggest improvement for water quality which we can do the earliest is to get Agripac onto its own system," Pye says. "Now, the DEQ is circumventing our approach to water quality improvement."

He says that's because the state agency required the Metropolitan Wastewater Management Commission to sign an agreement last month pledging that first priority will go to completion of the east bank interceptor and treatment components "in a sequence to maximize operational capability of the entire project." Pye says the agreement will be in effect until the local agency shows evidence that it can raise the \$6-million shortfall expected in its share of matching funds, Pye says.

He says he can appreciate the state's position even though he doesn't agree with it.

"Bill Young (the state DEQ director) argues there are 12 projects on the state priority list with existing health hazards," Pye explained. "He says it is hard to justify a \$5 or \$6 million grant to an industry when other communities have raw sewage on the ground."

Pye says the impact of the agreement "is that we've got to find a minimum of \$5 million more to catch up with the inflation cycle."

Pye says options available to the local commission include asking voters to approve revenue bonds that would be paid off from monthly sewer user charges, seeking voter approval of general obligation bonds relying upon taxes for their retirement or hiking the monthly sewer user charge paid by Eugene and Springfield residents enough to pay off the extra costs during the construction period.

Weaver

Continued from Page 1B

eral legislation that would make it illegal for schools or groups to work with

leges that a Fitzgerald radio ad falsely accused Weaver of saying that 1.5 per-

Eugene Air

Mahlon Sweet Airport could have a new air traffic control tower by 1983, the Eugene Airport Commission learned today.

Tom Jost, Mahlon Sweet tower chief for the Federal Aviation Administration, told the commission that a 92-foot tower is planned as a replacement for the existing 32-foot control tower.

Air traffic controllers at Mahlon Sweet have complained in the past that the existing tower is too short for a good view of the airport's operations, and a new tower is included in the airport's

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WISTEC

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the current minimum level.

The four grants include \$2,000 from the Weyerhaeuser Foundation and \$10,000 from the Barker Foundation to help pay for the center's general operating expenses, Sokoloff said.

In addition, WISTEC received \$3,000 from the Eugene Water & Electric Board for a specific exhibit about electricity usage and \$4,000 from the Society of American Foresters for a computerized forest fire simulation game.

Sokoloff said WISTEC still must raise about \$30,000 through grants and contributions to meet its \$75,000 goal for this year. Other funds will be generated largely through museum admissions and membership fees, and Sokoloff said it is realistic to believe that WISTEC will meet its goal.

Nevertheless, he said the science center can expect to have only a "bare-bones program" as long as its budget is so small. He said the WISTEC board must develop a formal, on-going system for fund raising and must try to find enough money to hire a new executive director to replace Gottfried.

WISTEC would be able to hire a new director if it can raise \$100,000 this year, Sokoloff said. He said the prospects for that depend in part on how the public responds to a membership drive the center will start in January. (Memberships cost \$20 a year for individuals and \$35 for families. A special \$30 family rate will be offered during the drive.)

"The real problem I see for a small science center in a community the size of Eugene is that you need a steady turnover of exhibits," he said. "People will stop coming to the museum if the exhibits are the same all the time."

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TESTIMONY PRESENTED BY
DAVID J. ABRAHAM
DECEMBER 4, 1980
DEPARTMENT OF ENVIRONMENTAL QUALITY PUBLIC HEARING
FISCAL YEAR '82 CONSTRUCTION GRANTS CRITERIA
RELATED TO
DISCONTINUANCE OF TRANSITION POLICY,
RANKING OF PROJECT COMPONENTS,
AND POSSIBLE REDUCTION IN GRANT PARTICIPATION

THANK YOU FOR RECOGNIZING MY REQUEST TO PRESENT TESTIMONY AT THIS HEARING. MY NAME IS DAVID ABRAHAM. I AM THE UTILITIES DIRECTOR FOR CLACKAMAS COUNTY. I AM HERE TODAY, PRIMARILY, FOR THE PURPOSE OF REPRESENTING THE TRI-CITY SERVICE DISTRICT WHICH WAS FORMED BY A VOTE OF THE CITIZENS IN OREGON CITY, WEST LINN, AND GLADSTONE IN JUNE OF 1980. THE DISTRICT VOTERS SUPPORTED THE PASSAGE OF A \$25 MILLION BOND AUTHORIZATION IN SEPTEMBER TO SUPPORT THE LOCAL SHARE OF THE SEWERAGE FACILITIES PROGRAM FOR THE TRI-CITY AREA.

WE APPRECIATE THE FARSIGHTEDNESS OF THE ENVIRONMENTAL QUALITY COMMISSION'S DECISION DIRECTING AN EARLY RESOLUTION OF THE ISSUES WHICH ARE THE ITEMS FOR DISCUSSION ON TODAY'S AGENDA. CREDIT IS ALSO DUE THE DEQ STAFF FOR THE COURAGE TO ADDRESS THESE ISSUES IN THE FACE OF THE CONTROVERSIES THAT MAY ARISE. IT HAS BEEN APPARENT FOR SOME TIME THAT THESE ISSUES MUST BE ADDRESSED AND RESOLVED SO THAT THE STATE-WIDE GOAL OF WATER POLLUTION ABATEMENT CAN GET BACK ON TRACK BY RE-ESTABLISHMENT OF THE STABLE, PREDICTABLE POLICY OF GRANTS ADMINISTRATION AND ALLOCATION. A STABILITY THAT ALLOWS LOCAL SEWERAGE AGENCIES TO PROCEED THROUGH THE MINIMUM TWO TO FIVE-YEAR PERIOD OF FACILITIES PLANNING, ENVIRONMENTAL IMPACT ASSESSMENT,

PUBLIC INVOLVMENT AND FINANCIAL PLANNING STAGES BEFORE GETTING TO THE IMPLEMENTING STAGES OF CONSTRUCTION. GRANTS ADMINISTRATION POLICIES THAT ARE CONSTANTLY CHANGING WITH EACH FISCAL YEAR RESULT IN THE PERPETUAL PLANNING AND REPLANNING OF PROJECTS WITHOUT EVER REACHING THE IMPLEMENTING STAGES. THIS HAS BEEN THE CASE IN OREGON SINCE THE OUTSET OF THE FY-79 FISCAL CRISIS. IF THE EFFORTS TODAY RESULT IN AN EARLY RESOLUTION OF THE FY-82 CRITERIA, AND INTRODUCE STABILITY FOR THE FISCAL YEARS BEYOND, A SIGNIFICANT STEP WILL HAVE BEEN ACCOMPLISHED IN REACHING THE STATE-WIDE GOAL OF WATER POLLUTION ABATEMENT.

WITH REGARDS TO THE SPECIFIC DISCUSSION ITEMS, THE FIRST OF WHICH IS, "RANKING OF TREATMENT WORKS COMPONENTS," WE CONTINUE TO WHOLEHEARTEDLY SUPPORT THE STAFF RECOMMENDATION AS ADOPTED IN THE FY-81 PRIORITY CRITERIA BY THE ENVIRONMENTAL QUALITY COMMISSION. ADOPTION OF THIS CRITERIA PUTS THE CONSTRUCTION GRANTS PROGRAM EXACTLY WHERE IT OUGHT TO BE--BACK ON TRACK WHERE AGAIN CORRECTION OF THE MOST CRITICAL WATER POLLUTION PROBLEMS STATE-WIDE IS THE BASIS FOR ALLOCATING GRANT MONIES. YOUR WORK-UP DOCUMENT DISTRIBUTED FOR THIS HEARING STATES IN THE GENERAL DISCUSSION, AND I QUOTE: " THE DEPARTMENT AND THE COMMISSION HAVE MADE A COMMITMENT TO INSURE THAT LIMITED FUNDS ARE USED TO MAXIMUM WATER QUALITY BENEFITS," AND I UNDERLINE WATER QUALITY BENEFITS. THE ADOPTED CRITERIA ON RANKING OF TREATMENT WORKS COMPONENTS ADDRESSES PRECISELY THAT COMMITTED GOAL.

THE SECOND DISCUSSION ITEM ON TODAY'S AGENDA DEALS WITH THE TRANSITION POLICY ABOLISHMENT. THERE WOULD BE LITTLE REASON TO HOLD HEARINGS TODAY ON ANY OF THE ISSUES IF THE DECISION TO ABOLISH THE TRANSITION POLICY IN FY-82 IS REINDED. DEQ STAFF HAS REPORTED THAT CONTINUATION OF THE TRANSITION POLICY WOULD RESULT IN THE FIVE AGENCIES RECEIVING ALL OF THE FEDERAL GRANT FUNDS ALLOCATED TO THE STATE THROUGH FISCAL YEAR 1985. ALL OTHER

PROJECTS ON THE ELIGIBILITY LIST MIGHT JUST AS WELL BE FOLDED UP AND THROWN OUT THE WINDOW. THE DEQ STAFF, IN ITS REPORT TO THE ENVIRONMENTAL QUALITY COMMISSION HAS STATED THAT THE TRANSITION POLICY WAS NEVER INTENDED TO BE PERPETUATED INDEFINITELY. IN FACT, IT HAS BEEN GRADUALLY PHASED OUT WITH EACH SUCCEEDING FISCAL YEAR SINCE ITS INCEPTION IN THE MODIFIED FY-79 CRITERIA.

THE AGENCIES WITH THE FIVE REMAINING PROJECTS IN THIS PREFERENTIAL STATUS WILL HAVE HAD FOUR YEARS TO ADJUST THEIR FINANCIAL PROGRAMS TO THE REVISED CRITERIA THAT RESOLVES THE FISCAL CRISIS IN THE GRANTS PROGRAM. THESE FIVE AGENCIES HAVE, OVER THE THREE FISCAL YEARS, BEEN ABLE TO CONTINUE PROGRAMS AT FULL SPEED UNDER THE OLD PRECRISIS POLICY. THIS OCCURRING WHILE ALL OTHER AGENCIES OF THE STATE HAVE HAD THEIR PROGRAMS POSTPONED IN FUNDING FROM TWO TO FIVE YEARS OR MORE, AND AFTER THAT HAVE HAD TO SCHEDULE FUNDING OVER SEVERAL MORE YEARS FOLLOWING CERTIFICATION OF THEIR PROJECT. THE AGENCIES IN THIS PREFERENTIAL STATUS ARE NAIVE IN THINKING THAT THE OTHER 100 OR SO AGENCIES ON THE PRIORITY LIST ARE GOING TO SIT IDLY BY AND PERMIT THIS INEQUITY TO BE PERPETUATED. IF THESE FIVE AGENCIES HAVE NOT MADE ADJUSTMENTS IN THEIR PROGRAMS AS ALL OTHER AGENICES IN THE STATE WERE COMPELLED TO DO, THEY HAVE ONLY THEMSELVES TO BLAME FOR THE CONSEQUENCE.

IN THE INTEREST OF SEWERAGE AGENCIES IN THE COUNTY, INCLUDING INDIVIDUAL COUNTY SERVICE DISTRICT AGENCIES, CLACKAMAS COUNTY CAN READILY SUPPORT THE ADOPTED POLICIES OF "PROJECT COMPONENT RANKING AND ABOLISHMENT OF THE OLD TRANSITION POLICY". THESE POLICIES ARE FAIR. THEY INSURE EQUITABLE AND EQUAL EVALUATION OF ALL PROJECTS WITHIN THE COUNTY. THE POLICY IS EQUALLY FAIR TO ALL JURISDICTIONS THROUGHOUT THE STATE FOR THE SAME EQUITABLE AND EQUAL STANDARD WILL BE APPLIED UNIFORMLY THROUGHOUT THE STATE. AND FINALLY, THEY ARE POLICIES THAT DEQ CAN READILY SUPPORT AS IN THE PUBLIC'S INTEREST BECAUSE THEY CLEARLY

ESTABLISH ABATEMENT OF THE MOST CRITICAL WATER POLLUTION PROBLEMS AS THE BASIS FOR ALLOCATING THE LIMITED GRANT FUNDS IT MUST ADMINISTER.

REGARDING THE LAST ITEM ON TODAY'S AGENDA, THAT IS THE QUESTION OF REDUCED GRANT PARTICIPATION, ONE MUST PONDER SEVERAL QUESTIONS. WITH REGARDS TO THE ACTION OF THE CONGRESS IN ALLOWING STATES TO MODIFY THE FUNDING LEVEL, WHAT WAS THEIR INTENT? WHAT WAS THE PURPOSE UNDER PUBLIC LAW 92-500 OF SETTING THE LEVEL AT 75% ORIGINALLY? WASN'T IT BECAUSE THE OLD 50% LEVEL ALLOWED UNDER PUBLIC LAW 660 WASN'T GETTING THE JOB DONE? ALSO IF IT WERE THE INTENT OF THE CONGRESS TO SIMPLY REDUCE THE LEVEL OF FEDERAL PARTICIPATION, WHY WASN'T THE CHANGE MADE MANDATORY AND UNIFORMLY ACROSS THE NATION?

ON THE OTHER HAND, ONE MIGHT ASSUME THE INTENT WAS TO GIVE THOSE STATES THAT HAVE MATCHING GRANT PROGRAMS SOME FLEXIBILITY IN THE UTILIZATION OF THE FEDERAL GRANT FUNDS IN A MORE CONSTRUCTIVE AND COMPATIBLE ARRANGEMENT. SINCE OREGON DOESN'T PURSUE THIS APPROACH, IT SEEMS THAT REDUCTION OF FEDERAL GRANT PARTICIPATION IS A REGRESSIVE STEP TO THE OLD SYSTEM THAT DIDN'T ACCOMPLISH THE JOB. IN ACTUALITY, IT IS TRULY REGRETABLE THAT THE STATE DOESN'T HAVE A MATCHING GRANT PROGRAM. THEY HAVE THE AUTHORITY FROM THE VOTERS TO INSTITUTE SUCH A PROGRAM AND IN FACT DID SO IN THE PAST. OUR NEIGHBORING STATES HAVE THESE PROGRAMS WHICH THEY AGGRESSIVELY ADMINISTER. ARE THE WATERWAYS OF OUR STATE LESS PRECIOUS TO US?

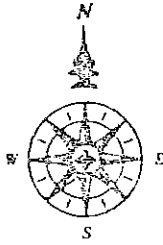
NEEDLESS TO SAY, THE TRI-CITY SERVICE DISTRICT CANNOT SUPPORT THE CONCEPT OF REDUCED GRANT PARTICIPATION FOR ITS PROJECT. IT CANNOT SUSTAIN ITS PROGRAM BELOW A 75% LEVEL WHETHER IT BE FROM REDUCTION OF FEDERAL GRANT PARTICIPATION OR A REDUCTION

DUE TO THE ELIMINATION OF ELIGIBLE COMPONENT. THIS POSTURE IS NOT DUE TO A GREEDY ATTITUDE ON THE PART OF THE DISTRICT. THE FACT IS THAT THE DISTRICT'S PROGRAM HAS ALREADY BEEN ADAPTED TO THE CHANGING CONDITIONS BROUGHT ABOUT BY THE FUNDING CRISIS IN THE STATE'S GRANT PROGRAM. THE DISTRICT'S LOCAL SHARE ALREADY GREATLY EXCEEDS THE CONVENTIONAL 25% LOCAL SHARE. BASED ON 1980 TOTAL PROJECT COSTS ESTIMATES OF \$58 MILLION, THE DISTRICT'S LOCAL SHARE IS 43% OF THE TOTAL. IF THE 50% FUNDING LEVEL WAS INVOKED, THE DISTRICT'S LOCAL SHARE OF THE \$58 MILLION WOULD ESCALATE TO 62%. THIS DOES NOT TAKE INTO ACCOUNT THE FURTHER ESCALATION THAT WILL OCCUR AS A RESULT OF THE INFLATION FACTOR THAT WILL CONFRONT THE PROJECT OVER THE NEXT FOUR YEARS.

THE COMMUNITIES OF OREGON CITY, WEST LINN, AND GLADSTONE WHICH MAKE UP THE TRI-CITY SERVICE DISTRICT HAVE BEEN STRUGGLING WITH THIS PROBLEM FOR 10 YEARS, ADAPTING AND READJUSTING TO THE EVERCHANGING GOALS, GUIDELINES, AND MANDATES OF THE FEDERAL, STATE AND METROPOLITAN AGENCIES. THEY HAVE MIRACULOUSLY HELD THE PROGRAM TOGETHER, GAINING FINALLY THE PUBLIC SUPPORT IN THE RECENT FORMATION OF THE DISTRICT, AND FURTHER THE PUBLIC'S APPROVAL OF THE AWESOME BURDEN OF A \$25 MILLION GENERAL OBLIGATION BOND AUTHORIZATION. THIS PROGRAM WAS PUT FORTH TO THE PUBLIC AND RECEIVED ITS SUPPORT ON THE BASIS THAT WE HAD FINALLY ACCOMPLISHED THE LAST REQUIREMENT OF THE PUBLIC AGENCIES CONTROLLING THE ACCOMPLISHMENT OF THIS NEEDED PROGRAM.

THANK YOU.

Rec'd 12/4/80



COMPASS CORPORATION

ENGINEERING — SURVEYING — PLANNING

6564 S.E. LAKE ROAD
MILWAUKIE, OREGON 97222

(503) 653-9093

Department of Environmental Quality Hearing
December 4, 1980
Portland, Oregon

Gentlemen:

I am Tom Tye, from Compass Engineering in Milwaukie, Oregon, and I am here on behalf of the Tri-City Service District.

1. I wish to support the proposed discontinuation of the transition policy. We must distribute the grant funds to the needed projects and not continue long range projects while other needed pollution facilities are delayed.
2. I wish to support the proposed procedure of ranking of project components to construct the most critical water pollution problems first. We must use our grant funds to obtain the maximum water quality benefits.
3. You are aware of the formation of the Tri-City Service District and passage of the districts portion of construction funds based on 75% grants. If we do not get the 75% grants it appears that this project will be delayed until additional funds can be obtained. Delays would be unfortunate, as you have now lifted the moratorium, and we certainly do not wish to have a new moratorium imposed because the State did not continue with their support.

The Tri-City Service District is ready to proceed with their project. We only ask that you please continue your support for this needed program.

Plans

OFFICE OF THE PUBLIC WORKS
DIRECTOR/CITY ENGINEER
1095 Duane Street
325-5821



November 17, 1980

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

Re: Possible Reduction In Sewer
Construction Grant Funds

Gentlemen:

The City of Astoria has been prepared to proceed with the Williamsport sewer extension since early 1978. Preliminary plans and cost estimates were made at that time and the share of local funding was and is available. In fact, the City funding has been available since 1973.

The Department of Environmental Quality construction grants priority list in November 1977 showed our project to be #61. Since that time, we have progressed on the list until the latest list shows us as #38.

We do not quarrel with the priority ratings, although it appears that some projects, which have been funded, are experiencing considerable overruns in costs, which results in a smaller number of new projects that can be funded. We do, however, protest against any proposed percentage reduction in the grant participation.

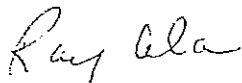
The Williamsport project was estimated to cost \$700,000 in 1978. Using the 75-25% plan, the City's cost would have been \$175,000. Using an inflation rate of 10% per year compounded, the 1981 construction cost would be \$932,000. The 75-25% plan would result in a City cost of \$233,000 or an increase of \$58,000 due to inflation. The proposed 50-50% plan would give the City cost at \$466,000 or a 266% increase over the original figure.

We realize that inflation in costs of construction will continue to increase the City's share of costs, but as can be seen by the figures, a change in percentage share is far greater. We feel that any change in grant sharing should be made only after the projects on the present list are completed. To penalize local agencies who have been ready to proceed would be a gross injustice in the administration of the grant sharing program.

Department of Environmental Quality
November 17, 1980
Page 2

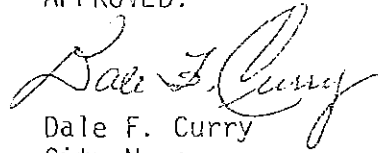
We submit these comments under the firm direction of the Astoria City Council and request your support to those of us who have acted in good faith.

THE CITY OF ASTORIA



Ray Ala
Public Works Director

APPROVED:



Dale F. Curry
City Manager

RA:dls

cc: Mayor Chopping
Daily Astorian
KAST
KVAS
Senator Mark Hatfield
Senator Robert Packwood
Representative Les Aucoin
League of Oregon Cities

Rec'd 12/4/80



December 4, 1980

Mr. Bill Young, Director
Department of Environmental Quality
522 S. W. Fifth
Portland, OR 97207

Dear Mr. Young:

Thank you for the opportunity to sit in on the meeting with you and your staff. I can now better understand the dilemma and the difficulty associated with the distribution of government funds. Everyone's individual project is their own candidate for a high priority. I do believe, however, that everyone is in agreement that a potential health hazard would take priority over any other type of project.

Your comment regarding the difficulty that you would have in placing a high priority for government funding on the "Agripac" project, however, should be clarified. The most efficient use of government funds by MWMC in their effort to reduce pollution of the Willamette River, is to get Agripac out of this municipal system. Agripac is not particularly interested in being in a separate system but it appears this is the least costly alternative to MWMC, to other industrial concerns and to Agripac.

It has been explained to me that the MWMC seasonal wastewater facility (Agripac project) gives the greatest pollution reduction per dollar of investment of any proposed project. The MWMC seasonal wastewater facility at a cost of \$8.9 million will offer a 3,000 lb. BOD reduction per day. The main MWMC facility at a cost of \$140 million will result in a reduction of approximately 4,500 lbs. of BOD per day.

Since your staff meeting I have once again reviewed with our Board our cost and profit projections for the next five years to see if Agripac could afford to commit to pay for the total MWMC seasonal industrial wastewater facility. Our average pre-tax profit margin for the past five years has been 4.05 percent of sales, or about 14.5 percent return on equity. With this return we are not able to commit beyond repaying the 15 percent local funding. This commitment is not taken lightly because all of our major capital investments have been to improve productivity (reduce costs). We have major building repairs that we are putting off because the capital funds are not available.

I am also informed that unless funding of the MWMC seasonal wastewater facility occurs prior to September 30, 1981, there may be no federal funding. I have discussed the possibility of no federal funding with our Board, and our present financial condition dictates that we stay in our Eugene facility until we are forced to move.

You mentioned your "stewardship" of state and government funds and our Board also is deeply concerned about the good "stewardship" of our growers' investments. Each of our three plants is facing about the same problem that

Mr. Bill Young
December 4, 1980
2.

we have in Eugene. We would be less than good stewards if we did not have alternative plans, but it is a very difficult situation for us. It is to our financial advantage to stay at our Eugene site as long as possible should no federal funding be made available for the MPMC seasonal wastewater facility.

Sincerely,

AGRIPAC, INC.

Edward F. Brennan
President

EFB/b

cc: Mr. William V. Pye

12/4/80

THE OREGON
RURAL COMMUNITIES ASSISTANCE PROGRAM
351 Columbia Blvd.
St Helens, Oregon 97051

Comments to the Department of Environmental Quality, December 4th, 1980

The Oregon Rural Communities Assistance Program is part of a national effort of providing technical assistance to small rural communities in establishing adequate wastewater and drinking water facilities. The need for this assistance has been well established. In addition to direct assistance the ORCAP program also is concerned with the policies and regulations which will ultimately affect the small communities in some way with respect to these basic services. Therefore, it is in this capacity which we wish to address the issues being considered today.

1. With respect to the ranking of components: Larger cities in the process of financing new and enlarged sewage facilities obviously benefit by ranking components together. A close scrutiny of EPA funded projects in Oregon would reveal instances where low priority components received money while small towns desparately dependent on financial assistance for meeting minimum EPA requirements must wait endlessly as these multimillion dollar projects absorb all funds available. Segments or components should not be ranked together.

2. With respect to transition policy we also concur with the Department. The transition policy should without question be eliminated. It promotes a gross inequity and defeats the intentions of the Construction Grants Program. As pointed out in the discussion paper, projects facing serious problems have not received needed assistance, again because expensive urban projects consume all resources.

3. A flexibility to vary the grant amount from 50% to 75% could be helpful in getting more projects done sooner. However, it is important to clarify the conditions which will determine the grant amount. It is essential that the financial needs of a town be taken into consideration. With this in mind we believe that the value of being able to implement more projects by in some cases reducing the grant amount should be further evaluated.

In summary, the changes made which hopefully will promote a more equitable distribution of limited Construction Grant Funds should be retained by the Department of Environmental Quality. It is important that this financial assistance be used where needed the most and not subject to political influence or special interests. Our one concern would be that if a policy of reducing grant amounts below 75% is adopted, specific criteria be developed for determining the grant amount based on financial need and the ability to pay.

THE LEAGUE OF WOMEN VOTERS OF CENTRAL LANE COUNTY



Affiliated with the League of Women Voters
of Oregon and of the United States

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
DEC 8 1980

To: Department of Environmental Quality

WATER QUALITY CONTROL

From: League of Women Voters of Central Lane County

Re: Construction Grant Rule Changes, OAR 340-53-015 (5, (4), (8))

The League of Women Voter of Central Lane County urges the Environmental Quality Commission to reconsider the adoption of the administrative rule changes that will reduce funding and delay full functioning of the Eugene-Springfield sewage treatment plant. We testified over two years ago that both Eugene and Springfield's existing systems were at or near capacity and we were concerned about resulting water pollution. In the mean time the volume of sewage has increased and efforts to put a metropolitan treatment and collection system on line have been continually frustrated by political and funding stumbling blocks.

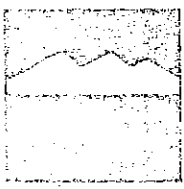
Poor water quality and eventually a health hazard could result from this delay. If the Eugene-Springfield sewage plant is submitted to the new administrative rules the Metropolitan Wastewater management Commission will have to seek a large sum of money from the voters. With the present economic and political climate it could be several years before sufficient funding is available to complete the plant. Existing systems have broken down in the past. The potential for sizable failures increases daily as does the potential for pollution.

Good faith between government and the voters is also at stake. The relationship between DEQ and MWMC is strained when the Commission must reschedule, replan and face irate voters due to a drastic change in policy. The voters, who are more reluctant than ever to pass money issues, are not going to trust the bureaucracy who made promises based on 75% federal funding. EQC and DEQ have an obligation to consider the public's trust in their decision.

In Closing we ask that EQC modify the funding rule changes to allow the Eugene-Springfield sewage system to be completed as close to schedule as possible. The citizens are depending on clean water and fair treatment.

Mary Sherriffs

President
League of Women Voters
of Central Lane County



BECON

BEND ENGINEERING CONSULTANTS

A Joint Venture

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CENTURY WEST ENGINEERING CORPORATION

JOHN CAROLLO ENGINEERS

CH2M HILL

8 December 1980
C10716.W0

Department of
Environmental Quality
Construction Grants Unit
P. O. Box 1760
Portland, OR 97207

ATTN: Ms. B. J. Smith

Gentlemen:

SUBJECT: Comments Concerning OAR 340-53-015(5), OAR
340-53-015(8) and OAR 340-53-020(4) for Discon-
tinuance of Transition Policy, Ranking of Project
Components and Possible Reductions in Grant
Participation.

Our opinion concerning the ranking of treatment works components is that the practice of assigning a project priority based on the highest priority of the various components should be continued. This practice will allow the completion of a project in a relatively short period of time and in a reasonable manner. If this is not done, component parts will be completed at various times as the priority status provides funding, thus requiring a municipality to acquire engineering and construction services in a piecemeal fashion. In the long run, and over all the projects in the state, this would significantly add to costs for water quality projects.

This piecemeal construction could also result in facilities which are not sufficiently utilized or which do not function properly. For instance, a city might have a particular area with a high priority for collection and interceptor lines and a new sewage treatment plant. However, if a projection of total city connections requires a much larger treatment plant than can be used by that area, major portions of the plant could remain unused until the entire system is completed. This could result in deterioration of the unused equipment and a waste of construction funds if the city cannot prove that the components are interrelated and dependent.

Our opinion concerning the transition policy is that projects which have been awarded a Step II grant should be continued in a high position on the priority list, thus allowing their completion. Design funds previously expended for these projects could be wasted if the projects are not constructed because of future lower ranking. It is more logical to complete

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DEC 10 1980

Water Quality Division
Dept. of Environmental Quality

Mrs. B. J. Smith
8 December 1980
Page 2

ongoing projects which are already underway and/or partially completed than to embark on new projects which will eventually be funded and constructed in due process.

Communities which are involved in these transition projects have already procured local funds and increased staffing to administrate the projects. Certain obligations may have been incurred in procuring the funding which would place these communities in legal or financial jeopardy. Lost manpower utilization becomes an added cost with no off-setting benefit. The transition project communities are committed and obligated; they should be allowed to complete their projects.

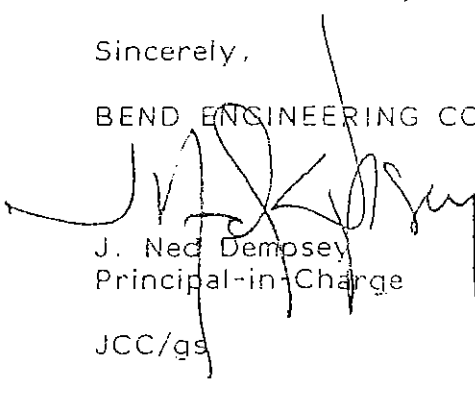
Our opinion concerning reduced grant participation is that projects should be funded at the 75 percent level unless alternative funding can be secured. Most communities within Oregon would incur significantly higher financial burden for their projects at the 50 percent level than at the 75 percent level. We believe that the 25 percent increase to be paid from local funds would be so great that many of the projects could not be constructed. Therefore, the overall goal of the water quality program would be damaged. At best, only communities with better financial bases could afford the 50 percent funded projects so poorer communities would be eliminated from the program.

On the other hand, if the 50 percent funding level program was passed and more communities were involved, the overall administrative cost to DEQ would be greater as a result of the increased number of grants. This would result in an increase in manpower and budget for DEQ. Reducing funding from 75 to 50 percent appears to be a "no-win" proposition.

To provide the best water quality program for the State of Oregon, the transition policy should be continued, projects should be ranked in accordance with their highest ranking component and grant funding should continue at the 75 percent level.

Sincerely,

BEND ENGINEERING CONSULTANTS



J. Ned Dempsey
Principal-in-Charge

JCC/ga

RAGEN, ROBERTS, O'SCANNLAIN, ROBERTSON & NEILL

LAWYERS

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PORTLAND, OREGON 97204

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WILLIAM A. MARTIN
OF COUNSEL

MEMBER OF COLO. BAR ONLY

RONALD K. RAGEN
RICHARD D. ROBERTS
DIARMUID F. O'SCANNLAIN
WATSON D. ROBERTSON
JAMES K. NEILL, JR.
DOUGLAS P. COURSON
D. CHARLES MAURITZ
CHRIS L. MULLEMAN
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PAUL R. ROMAIN
RODNEY E. LEWIS, JR.

December 9, 1980

Department of Environmental Quality
Construction Grants Unit
Box 1760
Portland, Oregon 97207

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DEC 10 1980

Water Quality Division
Dept. of Environmental Quality

RE: Allocation of Federal Sewerage Works Construction Grant Funds within Oregon after September 30, 1981; Specifically certain provisions of OAR 340-53-005 through 035 concerning possible reductions in grant participation.

Gentlemen:

We are writing this letter to comment upon proposed changes to OAR 340-53-020(4) which would allow the Environmental Quality Commission to decrease grant participation for sewerage projects from seventy-five percent to fifty percent in fiscal year 1982 and beyond if allowed by federal law or regulation.

We are writing in our capacity as bond counsel for numerous municipalities and other local governments in the State of Oregon. It is our concern that reducing grant participation from seventy-five to fifty percent for certain projects could, in some cases, cast doubt upon the validity of bond elections held prior to the rule change. We do not wish to comment on the merits of the proposal, but only to suggest that the Department consider this potential problem in its deliberations.

In some bond elections it is possible that a specific reference to a seventy-five percent grant participation may have been made in the ballot explanation or in publicity of the bond election measure. If such were the case, and the issuance of bonds were approved, the results of the election might be subject to judicial challenge. Even if specific reference to the percentage of grant participation was not made in the ballot explanation, the credibility of the various issuers could be damaged by having to return to the voters for additional funding.

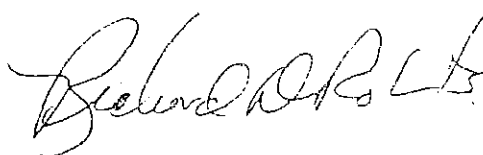
Department of Environmental Quality
December 9, 1980
Page 2

Therefore, we would urge that the Department, in discussing the proposed change to OAR 340-53-020(4) consider the issue raised in this letter.

Should you have any questions regarding our views on this matter, please do not hesitate to call.

Very truly yours,

RAGEN, ROBERTS, O'SCANNLAIN,
ROBERTSON & NEILL

A handwritten signature in cursive script, appearing to read "Richard D. Roberts".

Richard D. Roberts

RDR/mwr



METROPOLITAN SERVICE DISTRICT
527 SW. HALL ST., PORTLAND, OR. 97201, 503/221-1646

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
DEC 1 1980

Rick Gustafson
EXECUTIVE OFFICER

Metro Council
Marge Kafoury
PRESIDING OFFICER
DISTRICT 11

Jack Deines
DEPUTY PRESIDING
OFFICER
DISTRICT 5

Donna Stuhr
DISTRICT 1

Charles Williamson
DISTRICT 2

Craig Berkman
DISTRICT 3

Corky Kirkpatrick
DISTRICT 4

Jane Rhodes
DISTRICT 6

Betty Schedeem
DISTRICT 7

Ernie Bonner
DISTRICT 8

Cindy Banzer
DISTRICT 9

Gene Peterson
DISTRICT 10

Mike Burton
DISTRICT 12

November 24, 1980

WATER QUALITY CONTROL

Mr. Joe B. Richards, Chairman
Environmental Quality Commission
P.O. Box 1760
Portland, Oregon 97207

Re: Allocation of Construction Grant Funds Within
Oregon After September 30, 1981

Dear Joe:

In September of this year Metro submitted testimony to the Environmental Quality Commission concerning the state's Sewerage Works Construction Grants Program. Among our testimony at that time was the recommendation that DEQ should continue to seek a change in federal legislation to enable the state at its discretion to reduce the level of federal grant participation below the current 75% level.

It is my understanding that Congress has approved reduction of federal participation in the Construction Grant Program provided the reduction is uniform across the board for all projects within the state. Certainly this is the most democratic way of approaching the problem however it does not permit any flexibility for those projects (like the Tri-City Service District in Clackamas County) which are in process and had been planned based on the assumption of the 75% funding level. A shift at this time to a lesser level would seriously endanger the implementation of such projects.

Metro continues to support maximum utilization of available federal construction grant funds provided that consideration is given to those projects in process which have passed their bond issue prior to September 30, 1981, and are committed to a 75% level of

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 28 1980

OFFICE OF THE DIRECTOR

November 24, 1980
Mr. Joe B. Richards
Page 2

grant funds. This could be accomplished by delaying action on this recommendation until these projects are completed or as an alternative making up the difference between reduced federal funds and available local funds through the State Pollution Control Bond Program.

The other two recommended changes to the Construction Grant Program, specifically discontinuance of the transition policy and individual ranking of project components are consistent with Metro's previous recommendations and are strongly supported. By eliminating these policies the EQC will insure that those projects or parts of projects which provide the most water quality benefit to the state of Oregon will continue to receive the highest priority.

As a final statement let me commend DEQ and the EQC for their initiative in establishing a task force to investigate the options for managing the Pollution Control Bond Fund so as to maximize its usefulness to local governments. Metro is willing to support this project in anyway we can.

Thank you for your consideration of these recommendations. As before we welcome your questions and comments.

Sincerely,



Rick Gustafson
Executive Officer

RG:JL:pj

Rec'd
12/1/80

Lee Engineering, Inc.

Consulting Engineers

708 MAIN, SUITE 202
OREGON CITY, OREGON
PH. 503-655-1342

F. DUANE LEE P.E.
DAVID A. LEE P.E.
JAMES G. SMITH P.E.

December 4, 1980

Project Nos. 287.4 & 132.4

Mr. Harold Sawyer, Administrator
Water Quality Division
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Re: Priority List Criteria
Hearing of December 4, 1980

Gentlemen:

The City of Troutdale has asked that we represent them at the public hearing. Our comments are related to a memorandum from DEQ which was distributed on October 30, 1980.

1. Concerning segments or components to be included in the project, we endorse the present policy which does not prohibit combining components where they are needed to provide an operable facility. We believe that the DEQ staff has and will continue to react in a favorable manner concerning this subject and no additional changes should be made in the priority ranking system.
2. With regard to the termination of the transition policy in FY '82 and beyond, we would concur that this policy should be adopted. The simple fact that a project is listed on the priority list should not take precedence over the responsibility of the State to maximize water quality benefits. We agree with the statement in the memorandum, "If it is acceptable that ranking criteria accurately addresses the need for a project (or component), then funding of lower ranked "transition" projects before those having a greater identified need does not represent the best use of grant dollars."
3. The City of Troutdale together with the East Multnomah County Sewer Consortium has always agreed with priority ranking policy which distributed grant funds to as many eligible projects as possible. The City of Troutdale continues to support this premise and therefore endorses the policy of reducing the eligible funding to the 50% level as now allowed by Federal law. We would further endorse a provision to make this 50% funding a requirement rather than simply stating it as an alternative policy which EQC may adopt at a later date. In this matter, future projects can begin now to plan for the 50% funding level.

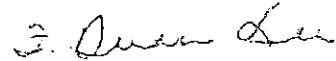
Mr. Harold Sawyer, DEQ

Page 2

December 4, 1980

We recognize that to reduce the 50% funding level at this time may have some financial impact on projects which are well into the planning process. However, to do otherwise at this time simply puts the burden on other communities. Many communities have to fund 100% of their projects, whereas others are getting grants up to the 75% level. If some cities in Oregon can fund necessary projects at the 100% level, it appears obvious that most communities in Oregon could well afford projects at the 50% level.

Respectfully,



F. Duane Lee, P.E.

FDL:d1j

cc: City of Troutdale - Ed Murphy

THE CITY OF MT. ANGEL

Incorporated April 3, 1893

Area Code 503

Telephone 845-6139

P.O. Box 960

MT. ANGEL, OREGON 97362

RECEIVED
OCT 27 1980

October 23, 1980

Water Quality Division
Dept. of Environmental Quality

Environmental Quality Commission
522 S.W. 5th Ave.
Portland, Oregon 97207

To the Commission:

I regret that I will be unable to attend your public hearing on proposed rule changes of OAR 340-53-005 to 035 on December 3, 1980. I would like this submitted as written testimony at that hearing.

It appears as if the handwriting is on the wall as far as future allocations of EPA sewer construction grants are concerned. The demand for construction monies in Oregon has always far outweighed the available funds, and many quarters are now calling for actual reductions in funding beyond what has been allocated in the past. Thus it is very important for both the EQC and the DEQ to make the most of what appears to be an increasingly scarce resource.

1. The proposed rule change for OAR 340-53-015(5) appears to be a very sensible approach to making the state's sewer money go farther. I believe that it is in everyone's best interest to allocate monies in the most rational fashion, and I see no reason why any city should piggyback less cost-effective projects onto a worthy one, particularly when another city may have just as high-priority a project. It makes no sense to deny money to those areas where a grant can do the most good, just because a high cost low benefit portion of sewer construction work is included on any applicant's total grant request. My only comment is that such a parceling out of Oregon money should have been made on this strict priority basis a long time ago.
2. As far as the changes proposed in OAR 340-53-015(8) I have to remain somewhat ambivalent. On one hand, there is a good rationale for continuing the transition policy beyond FY 82, simply because those cities that have been most eager to complete their sewer projects have

placed earlier, more intensive efforts into receiving funding, and the possible elimination of transitioning could impose some hardship on cities that have led the way earlier. On the other hand, it is safe to assume that all cities have had a more or less equal chance for funding since FY 79, and FY 82 certainly gives those districts having a leg up on everyone in construction a chance to finish most if not all of their projects by 1982-83. While I cannot comment on the merits or demerits of this proposal directly, I would urge that again, the overriding concern of the commission should be in insuring that the maximum number of cities receive benefit from the EPA funding available. Your actions on this proposed rule change should take this factor into account above all.

3. As to OAR 340-53-020(4), I hate to say this, but I believe that a reduction of grant participation from 75 to 50 percent on a contingency basis is a good idea. Obviously as a city administrator, I would prefer that my jurisdiction get the largest possible amount of federal dollars for the smallest city expenditures. Property tax reduction and reasonable sewer fees are important concerns to local governments, and the uncertainty surrounding Ballot Measure #6 in the November election has certainly intensified that concern. I am sure that the passage or failure of Ballot Measure #6 will be an important factor in your decision as to whether or not to maintain the 75% level of support.

However, if 6 is defeated at the polls, there will be a clear message that the citizens of Oregon are willing to pay their fair share of city and local taxes for the continued support of sewer services. Similarly, the factor of whether a Carter or Reagan administration will be in office will certainly have an impact on the total amount of EPA money available to Oregon. Beyond all this however, there still remains the principle of having citizens pay their just contribution to the upgrading of services. There also remains the principle of allocating scarce EPA/DEQ resources in terms of the overall demand for construction monies. The benefits that accrue in grants should be distributed to the most people, and if this means a reduction in support to any community (as painful as that might be), then so be it. However, if it is at all possible to preserve the 75% level of funding, then it should be done. That is why I would prefer a reduction in support to 50% only if it appears that such a change may be necessary for Oregon.

I appreciate this opportunity to comment, and I hope that the events in the November election have not made my statements obsolete.

Sincerely,



Karl Eysenbach

CITY OF CANNON BEACH



"The Beach of a Thousand Wonders"

P. O. BOX 368
CANNON BEACH
OREGON 97110

November 10, 1980

Department of Environmental Quality
522 S.W. 5th. Ave.
P.O. Box 1760
Portland, Or. 97207

To Whom It May Concern:

The City Council of Cannon Beach meeting on November 4, 1980 directed me to respond to the issues which will be addressed by your hearing scheduled for December 7, 1980. The City Council wishes to go on record as opposing any attempt to reduce grant participation by E.Q.C. from 75% to 50% of costs for sewer works construction. The reason for opposition is simple, any reduction will only result in increased taxation. The suggestion that additional funding could be realized by Municipalities from prepaid connection would in the case of Cannon Beach, result in a contradiction of our Comprehensive Plan. Planned developments and sub-divisions are limited in size and number by the Comprehensive Plan; advancement of a program of pre-connection fees would only serve as a tool for developers to use in seeking a more favorable position with the City.

Secondly, the City Council opposes any change in the transition policy. While the changes being considered could improve our ~~priority position,~~ it does not seem to us, fair to be changing the goal posts of those projects already underway or given priority ranking.

Thirdly, the City Council believes a project should be given priority based on its entirety rather than by components. Partial funding for particular components has not, according to Cannon Beach's experience, been previously allowed. The overall design, the innovativeness of the concept, and the critical nature of the need should determine the priority ranking for the entire project.

Sincerely,

John Williams, Mayor



engineers
planners
economists
scientists

November 12, 1980

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NOV 17 1980

Department of Environmental
Quality
P.O. Box 1760
Portland, Oregon 97207

Water Quality Division
Dept. of Environmental Quality

Attention: Mr. Harold Sawyer
Administrator, Water Quality Division

I have reviewed the interoffice memo dated October 30, 1980, which discusses allocation of the Federal Sewage Works Construction Grant Funds within Oregon. I wish to submit the following comments:

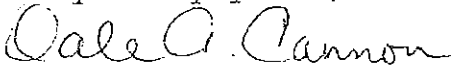
1. I agree with the development of project priority based on the component criteria. I think the policy will allow distribution of Federal funds to those projects with the greater need. This, obviously, will take more administrative work to breakdown the projects by components and assign separate priorities to them. Obviously, great care will have to be taken so that the components are not broken down so finely that the completed project will not provide a complete operable facility.
2. I do not agree with the discontinuance of the transition policy. I firmly believe that once a project is funded, that the funding should carry through until project completion. It is difficult even with the transition policy to properly plan and inform the public on the schedule and local financial commitments needed to complete a project. The very long lengths of time from project initiation until completion, even with the transition policy and the continuing changes due to the ups and downs of the funding program have tended to result in a distrust of consultants, regulatory agencies, and the municipal agencies involved by local citizens. Discontinuation of the transition policy, I believe, will enhance that distrust.
3. Obviously, by your reducing the grant participation more and more communities will be looking at local funding.

Mr. Harold Sawyer
November 12, 1980
C10.72
Page 2

Based on the volume of regulation and paper work and project delays associated with the grant program, this will probably result in many many more projects being accomplished at a sooner time than now accomplished.

Thank you for this opportunity to comment.

Very truly yours,

A handwritten signature in cursive script that reads "Dale A. Cannon".

Dale A. Cannon

mw/TC47S

"GATEWAY TO THE LAKES"

Steven N. Bartlett, Mayor
Rose Draper, Council Pres.



Robert C. Moore, Administrator
Nita Gosnell, Recorder

November 18, 1980

DEQ, Construction Grants Unit
522 S.W. 5th Avenue
P. O. Box 1760
Portland, Oregon 97207

Dear Sir:


This letter is in response to your recent communication regarding a proposed administrative rule establishing criteria for development and management of a statewide priority list for municipal waste water treatment works construction grants.

The City of Eagle Point, Oregon, would like to submit the following comments:

1. The city supports the ranking of a city's plan by components, as proposed by DEQ;
2. The city supports DEQ's proposal to discontinue the transition policy in F.Y. 82 and beyond;
3. The city opposes reduction of grant participation from 75% to 50% of eligible costs.

Thank you for providing an opportunity for the city to submit comments on this matter.

Yours truly,


Del McNerney
City Planner

DM/dc

City Of Enterprise

108 N. E. First
Enterprise, Oregon 97828

November 14, 1980

Department of Environmental Quality

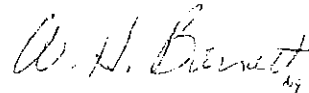
P. O. Box 1760

Portland, OR 97207

Gentlemen:

Even though funding for correction of this city's wastewater treatment facility is several years away, the Enterprise City Council went on record at their meeting November 10, 1980 as endorsing 75% funding for these projects and opposing the proposed 50% funding.

Sincerely,



W. H. Barnett

Mayor

CANDY RAYBURN
Chairman
MARK KELLENBECK
Vice-Chairman

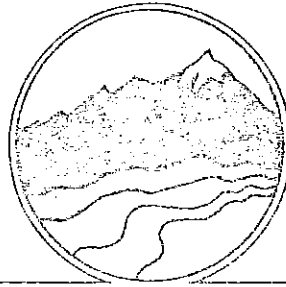
JOHN HALLETT
Secretary

DENNIS G. LEWIS, AICP
Executive Director

Mailing Address:
P. O. Box 3275
Central Point, OR
97502

155 S. Second, Rm. 200
Central Point, OR
97502

(503) 664-6674



ASHLAND
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SHADY COVE
TALENT

MEMBERS:

BEAR CREEK VALLEY SANITARY AUTHORITY
CITY & RURAL FIRE DISTRICTS
IRRIGATION DISTRICTS
ROGUE VALLEY TRANSPORTATION DISTRICT
SOIL & WATER CONSERVATION DISTRICTS
WATER DISTRICTS

ROGUE VALLEY COUNCIL OF GOVERNMENTS

November 26, 1980

Harold Sawyer, Administrator
Water Quality Division
Department of Environmental Quality
P. O. Box 1750
Portland, Oregon 97207

Subject: Response and Recommendation Concerning Proposed Alternatives
for Prioritizing Sewerage Works Construction Grant Funds

Dear Mr. Sawyer:

On November 25, 1980, the Sewerage Works Subcommittee of the RVCOG Water Quality Review Committee met to consider the proposed alternatives for prioritizing sewerage works construction grant funding.

Concerns of each local agency affected by the proposal (Eagle Point, Bear Creek Valley Sanitary Authority, Grants Pass, and Medford) were considered by the subcommittee.

The committee recommended that Alternative 1A (Table A of your October 30, 1980 transmittal) be supported. A major consideration in that decision was the continuation of the 75% Federal share funding ratio. It was emphasized that even if the 75% level delayed a project for one or two years, it would be more desirable for local agencies with very limited funding to receive the higher percentage to assure project implementation.

On November 26, 1980, the RVCOG Executive Committee authorized this letter of formal response be sent prior to your December 4 deadline, rather than wait for the regular RVCOG Council meeting on December 17, 1980.

If you have any questions regarding this recommendation, please feel free to call.

Sincerely,

Eric Dittmer, Coordinator
208 Water Quality Planning

Dittmer:kf

cc: Dick Miller, BCVSA
Don Walker, City of Medford
Del McNerney, City of Eagle Point
Public Works Director, City of Grants Pass
Larry Cauble, WQRC Chairman

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
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WATER QUALITY CONTROL

MAYOR
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RECORDER
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WATER-SEWER SUPT.
VANNIE SHELTON

City of Scio

INCORPORATED OCT. 24, 1886

P. O. BOX 37

Scio, Oregon 97374

COUNCILMEN
VIRGIL CROW
JOE MENHART
MIKE MURPHY
ANN SAMPLE
JANICE PARKER
OLLIN WOOD

November 28, 1980

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OCT 29 1980

Water Quality Division
Dept. of Environmental Quality

Department of Environmental Quality
Construction Grants Unit
Box 1760
Portland, OR 97207

Re: Public Hearing on December 4, 1980 (80-105)

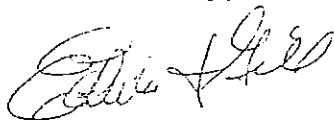
Greetings:

The City of Scio, through its Mayor and City Council, reviewed the proposed policy changes that are being considered. The City's position on the three items is as follows:

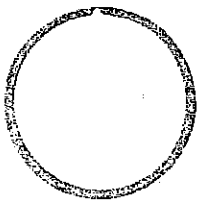
1. The City favors ranking components according to the approved ranking criteria.
2. The City favors discontinuance of the transition policy.
3. The City favors reducing grant participation to the 50% level.

We would like this to be a part of the written testimony to be heard on December 4, 1980. Thank you.

Yours truly,



Edwin J. Gill, Mayor
City of Scio



BEAR CREEK VALLEY SANITARY AUTHORITY

PHONE (503) 779-4144 • 3915 SOUTH PACIFIC HWY. • MEDFORD, OREGON 97501

December 1, 1980

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DEC 4 1980

Mr. Harold Sawyer, Administrator
Water Quality Division
Department of Environmental Quality
P. O. Box 1760
Portland, OR 97207

Water Quality Division
Dept. of Environmental Quality

Dear Mr. Sawyer:

The following comments are submitted relative to the "Allocation of Federal Sewerage Works Construction Grant Funds Within Oregon after September 30, 1981":

1. Issue: OAR 340-53-015(5), component prioritization: We agree that each component of a system should be prioritized separately. It appears from the discussion that provision is made for combining components where necessary to ensure an operable facility. An entity should be prepared and willing to prove that combining is necessary.


2. Issue: OAR 340-53-015(8), transitioning: We agree that transitioning be discontinued in FY-82. A project should stand on its need and conditions.

3. Issue: OAR 340-53-020(4), 75% to 50% funding: We strongly disagree with reducing grant participation below 75% of eligible costs considering current and proposed Federal funding levels. Limited local funds would make it extremely difficult to continue many needed projects. If the Federal funding level should decrease in future years, this issue should again be reviewed and affected entities again given a choice.

In summary, we recommend Alternative 1A (Table A of your October 30, 1980 transmittal) be supported.

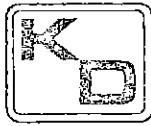
We appreciate the opportunity to comment and make our position known on these important issues. If you have a question on our comments, please call.

For the Board of Directors
BEAR CREEK VALLEY SANITARY AUTHORITY


Richard O. Miller,
Manager

ROM:gj

HOWARD G. KRAUS, P.E.
RICHARD DALKE, P.E.



KRAUS & DALKE
CONSULTING ENGINEERS

276 N.W. HICKORY STREET
NORTH ALBANY CENTER
POST OFFICE BOX 725
ALBANY, OREGON 97321

TELEPHONE 503-928-2583

December 3, 1980

Mr. Robert T. Evans
Department of Environmental Quality
Construction Grants Unit
Box 1760
Portland, OR 97207

Re: Silverton Step II
(79-58-01)

Dear Mr. Evans:

As Silverton's consulting engineers for their sewerage works project, we would like to comment in behalf of ourselves and the city on the three issues that the EQC feels worthy of further public testimony. We appreciate the EQC's desire for input and hope that our comments aid in providing a guide for the controversial decisions required.

Regarding OAR 340-53-015(5) which addresses the prioritizing of segments or components of a city's plan, we feel the separate prioritizing of components is the best solution. If component prioritizing is not provided then fewer important water quality projects will be completed and maximum benefit will not be realized. Therefore an EQC plan for component prioritization has our endorsement.

Transitioning, described in OAR 340-53-015(8) should definitely be discontinued. We can see no reason for some communities to have flawless systems while others live with poor systems that could be repaired if a transitioning policy were not in force. The move toward elimination of transitioning in FY 82 is a wise step.

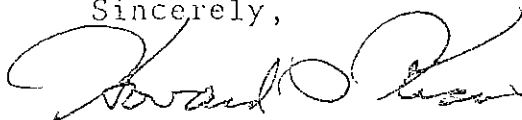
With respect to OAR 340-53-020(4) which allows grant reduction from 75 percent to 50 percent, we feel the phasing in of this procedure is the most workable solution. It is obvious that continuation of the 75% funding program as exists now will not best meet the requirements of Oregon's water quality goals. A 50 percent share will definitely help more projects get underway. However, the immediate conversion to this format as proposed in Alternative 1B would not be a wise move as financial plans for communities with on-going Step II's would be significantly altered. This could create

Mr. Robert T. Evans
December 3, 1980
Page 2

unnecessary political pressures and potentially alienate a municipality's voters from established plans. On the other hand if the proposed lead time is allowed for the conversion to 50% funding then less financial plan adjustment will be required. Furthermore the voters would not be faced with the surprise of additional bonding requirements after a plan has been adopted.

With these factors in mind, we feel that Alternative 1C should be the course of funding followed by the State of Oregon.

Sincerely,



Howard G. Kraus, P.E.
Kraus & Dalke Consulting Engineers



Douglas K. Robinson
Silverton City Manager

JE:bb

UNITED STATES DEPARTMENT OF AGRICULTURE
FARMERS HOME ADMINISTRATION
Room 1590, Federal Building, 1220 SW 3rd Avenue
Portland, Oregon 97204

November 19, 1980

Department of Environmental Quality
Construction Grants Unit
Box 1760
Portland, Oregon 97207

RECEIVED
NOV 21 1980

RE: Federal Sewerage Works Construction Grants

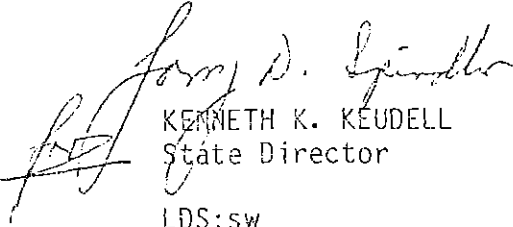
Water Quality Division
Dept. of Environmental Quality

Gentlemen:

In response to your Notice of Public Hearing concerning allocation of federal sewerage works construction grants, Farmers Home Administration would like to go on record as supporting OAR 340-53-020 (4), which allows the EQC to reduce grant participation from 75% to 50% of eligible costs after FY'81 if allowed by federal law or regulation.

The need for new and improved sewerage treatment facilities in Oregon communities is of such magnitude as to command a high annual commitment of capital expenditures. By awarding limited federal grant funds for such facilities at the 75% level, the community resource commitment is limited to 25% of capital costs. A 50% federal grant level would provide for local project contributions to increase to 50%. While this level of community capital outlay will place some additional financial strain on community budgets, it will allow construction of needed projects at a rate 50% faster than at current grant levels. We believe that the resultant additional costs to communities will be more than offset by ultimate program savings that can be realized by accelerated funding. Each year of delay in project funding can add 10 to 15% to ultimate costs, thus quickly negating the 25% additional federal grant participation provided by the 75% grant level.

Sincerely,


KENNETH K. KEUDELL
State Director

LDS:sw

LYNN H. HEUSINKVELD
ATTORNEY AT LAW
A PROFESSIONAL CORPORATION
336 NORTH FRONT STREET
COOS BAY, OREGON 97420

TELEPHONE
(503) 269-7511

W. H. Young
② B. J. Smith

November 21, 1980

Mr. William H. Young
Environmental Quality Commission
P. O. Box 1760
Portland, Oregon 97207

Re: Charleston Sanitary District
Memorandum dated September 19, 1980
and Notice of Public Hearing
dated October 16, 1980
Our File No. 212-7.8-1

Gentlemen:

The Charleston Sanitary District is disappointed that the Department of Environmental Quality has failed to address any of the serious issues raised by the Charleston Sanitary District in its several years in attendance of Public Hearings held for the purpose of gathering information concerning the appropriate system for distribution of EPA Clean Water Act funds.

The District is even more disturbed and disappointed that the Staff would so carelessly distort the situation in Charleston. I direct your attention to item 8 of Exhibit 1 to your September 19, 1980 Memorandum. In discussing the Charleston Sanitary District's bond issues, about the only thing the Staff has right is the estimated cost of the project. In fact, District voters approved a bond issue not of \$585,000.00 but of \$950,000.00. The assertion that the District has in some manner reneged on an understanding is completely scurrilous. As part of the application for federal assistance the District, on June 25, 1975, stated that service would be provided to District inhabitants by an ongoing improvement program based on population density and financial capabilities.

Staff indicates "we are not aware that the District has any good faith efforts to keep this commitment". It is extremely disheartening that the Staff is unaware of the District's efforts to complete the sanitary sewer system. The District has made repeated efforts since 1977 to secure appropriate funding. Staff should be fully aware of the fact that the cost of construction and the 13% bonding limitation have been

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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OFFICE OF THE DIRECTOR

Mr. William H. Young
Environmental Quality Commission
November 21, 1980
Page 2.

substantial problems. The estimated total project cost for completion of the collection systems improvements was estimated on November 21, 1977 to be \$6,276,600.00. The assessed valuation of the District in Fiscal year 77-78 being estimated at \$22,279,570.00. The 13% limitation placed a statutory ceiling on bonded indebtedness of the District at \$2,896,344.00. Given the fact that the District had a current debt of \$950,000.00 as stated above, the maximum additional bonds the District could issue on November 21, 1977 was \$1,946,344.00, an amount sufficient to complete only one-quarter of the construction cost. Nevertheless, on November 21, 1977 FHA Loan and Grant funding was requested by the District. Simultaneously applications were pursued with HUD and your own Department of Environmental Quality. Commencing May 16, 1978 your file should contain annual applications from the Charleston Sanitary District for consideration for grant funding. As you can see from the above calculation and the enclosed breakdown, the District is without financial capacity to complete the system without grant assistance.

A portion of the system was completed by the Charleston Sanitary District in 1978, a Pressure Main Intertie for the Coos Head Naval Facility being completed in that year with the District's own funds. Another portion of the project, collector systems for Wygant Avenue, Travis Street and Wilshire Boulevard should be completed during early 1981 with the assistance of the County of Coos and the Department of Housing and Urban Development. The District has repeatedly sought the assistance of the Department of Environmental Quality in erradicating the pollution problems affecting the Coos Bay and South Slough Estuary Sanctuary and has repeatedly directed the Department's attention to the provisions of the Clean Water Act contained in 33 USC, Section 1251, specifically the following:

"The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the nation's waters. In order to achieve this objective it is hereby declared that consistent with the provisions of this chapter - . . .

(2) It is the national goal that wherever attainable an interim goal of water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water be achieved by July 1, 1983."

The District has repeatedly urged that the grant allocation system does not appear to be directed to the achievement of that goal. The District has repeatedly advised the Department of Environmental Quality

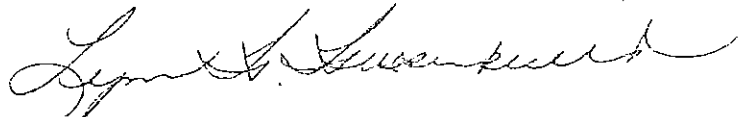
Mr. William H. Young
Environmental Quality Commission
November 21, 1980
Page 3.

that the South Slough Estuary Sanctuary is worthy of protection, the most recent correspondence being my letter of July 18, 1980 to Mr. Gildow and Mr. Hansen. Only Mr. Hansen has responded to that communication and his response as indicated by the response from the Coos County Health Department belies his own lack of awareness with respect to the severity of Charleston's problems.

Please, before you criticize the District, get your facts straight. The Department of Environmental Quality should know that the District passed a bond issue in the amount of \$950,000.00 for the Department of Environmental Quality purchased \$585,000.00 of those bonds the same time as the United States National Bank of Oregon was purchasing the balance of \$365,000.00. The District is ready, willing and able to cooperate with the Department of Environmental Quality in rationally approaching the pollution problem existing within the District; the Department's cooperation, however, is necessary in order for the District to resolve the substantial pollution problems which exist.

Thank you for taking the time to consider this matter.

Sincerely,



Lynn H. Heusinkveld

LHH:sre
cc: client
Enc.

COST ANALYSIS

Charleston Sanitary District

Collection System Improvements
 Project #1385-E-71
 November 21, 1977

12" Gravity Sewer 2,500 L.F. @ \$59.00/L.F. =	\$ 147,500	
10" Gravity Sewer 800 L.F. @ \$57.00/L.F. =	\$ 216,600	51,300
8" Gravity Sewer 75,100 L.F. @ \$55.00/L.F. =	\$ 4,020,400	4,130,000
Pump Stations 4 Ea. @ \$100,000.00/Ea. =	\$ 400,000	
Pressure Mains 2,100 L.F. @ \$15.00/L.F. =	\$ 31,500	
Submarine Crossing 700 L.F. @ \$125.00/L.F. =	\$ 87,500	
Total Construction Cost	\$ 4,903,600	
Engineering, Legal, Contingencies	\$ 1,373,000	
Total Project Cost	\$ 6,276,600	

District Bonding Limitation	
Assessed Value FY 76-77	\$21,018,462
Projected Increase FY 77-78	\$ 7,261,108
Estimated A.V. FY 77-78	\$22,279,570
13% Limitation	\$ 2,896,344
Less Current Debt	(950,000)
Maximum Additional Bonds	\$ 1,946,344

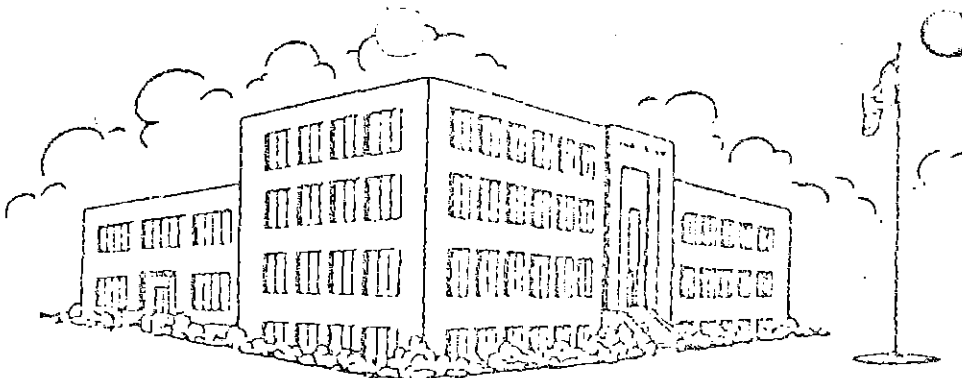
Financing Plan if 50% Grant Funding:

FHA Loan = G.O. Bond Issue	\$ 1,946,000
FHA Grant (50%)	\$ 1,946,000
Total Program	\$ 3,892,000

Financing Plan if 75% Grant Funding:

FHA Loan - G.O. Bond Issue (25%)	\$ 1,569,150
FHA Grant (75%)	\$ 4,707,450
Total Program	\$ 6,276,600

AUG 25 REC'D



Health Department

County of Coos

Courthouse

Coquille, Oregon 97423

Telephone: 395-3121 Ext. 329

August 21, 1980

U.S. Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101

Re: Charleston Sanitary District, Coos Bay, Oregon

Gentlemen:

In your letter of August 15, 1980 to Mr. Heusinkveld regarding funding and priority for the additional sewer collector lines, Charleston Sanitary District, several alternatives were mentioned. I would like to make some comments on these alternatives.

Regarding improving maintenance and installing new septic tanks, I feel that in areas of high water table--the so-called "hepatitis flats" area of the district--this method is not feasible. In 15 years with the Coos County Health Department, I have seen too many new systems fail a short time after installation (2-3 years). It is not economically feasible for the citizens of this area to invest in short-term solutions of this nature.

Holding tanks and "honey wagons" are theoretically workable, but are not recommended for permanent dwellings in this area because of the expense and constant maintenance involved. Various means of upgrading septic systems (i.e. a mound system) can cost \$10,000 in Oregon due to strict D.E.Q. requirements. The Charleston District is a low socio-economic area and any expense of this nature would be better spent on a collector sewer.

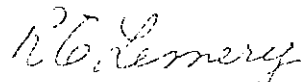
Wastewater separation, water conservation and recycle systems may be applicable to new installations where, for example, low volume toilets could be installed. However, water shortage is not a limiting factor in this area with our 60 inch annual precipitation.

U.S. Environmental Protection Agency -2-
Charleston Sanitary District-Coos Bay, Oregon

August 21, 1980

Further, I think you will find that promoting central sewer systems is within the goals of the Oregon Department of Environmental Quality.

Very truly yours,



R.G. Lemery, Registered Sanitarian
Coos County Health Department

RGL:dja

CC: Jack Osborne, Oregon D.E.Q. (Portland)

→CC: Beryl Taylor, Charleston Sanitary District.

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101



REPLY TO
ATTN OF: M/S 613

August 15, 1980

Lynn H. Heusinkveld
Attorney at Law
336 North Front Street
Coos Bay, Oregon 97420

Re: Charleston Sanitary District, Oregon Challenge to
Oregon Construction Grant Priority System

Dear Mr. Heusinkveld:

Thank you for your letter of July 17, 1980, asking for review of the Oregon State priority system for sewage treatment construction grants. Your letter also indicates that Charleston Sanitary District intends to file suit to determine the validity of the State's priority system in the event the District's concerns cannot be resolved by discussions with the Oregon Department of Environmental Quality (DEQ) and the U. S. Environmental Protection Agency (EPA).

The issue raised in your letter is whether it is consistent with the goals of the Clean Water Act 1/ and the goals of the Coastal Zone Management Act 2/ for the DEQ to not fund collector sewers for Charleston Sanitary District. Your letter indicates that provision of collector sewers to residents within Charleston Sanitary District whose septic tanks are failing is necessary in order to achieve the goals of the Clean Water Act. The Sanitary District is adjacent to the South Slough estuary, which you have described as an important area for propagation of fish, shellfish and wildlife as well as for recreation in or on the water.

The State has received your letter and no doubt will be responding independently. I have also circulated your transmittal to various divisions of EPA Region 10 for review in light of the Oregon State Health Division's July 3, 1980 study you have enclosed. The following is a discussion of the issues you have raised pertaining to Federal laws and regulations. I have also pointed out some additional options you may wish to pursue with the State DEQ.

You have indicated that the goals of the Clean Water Act would be furthered by provision of collector sewers to residences within the boundaries of the

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1. 33 U.S.C.A. §1251, et seq. (Supp. 1979).
 2. 16 U.S.C.A. §1451, et seq. (Supp. 1979).

Sanitary District. Nevertheless, provision of a sewage treatment works grant for collector sewers by the State and EPA is only one method of achieving these goals. Section 208 of the Act ^{3/} requires areawide wastewater treatment management and planning by states or designated local agencies. The Act also encourages state or local enforcement of water quality standards violations due to septic tank failure, and this control mechanism is incorporated in the State's Water Quality Management Program approved under Section 208.

Furthermore, it is unclear from your letter whether construction of collector sewers is the only alternative available to the Sanitary District for correction of problems caused by septic tank failure. I would be interested in learning whether the Sanitary District has a septic tank inspection and correction program, and whether such a program would be helpful or is helping alleviate the pollution problem. In the event the problem cannot be resolved by septic tank correction, you may wish to explore with the State the potential for funding of on-site disposal systems employing innovative or alternative wastewater treatment technology. Funds are reserved out of the State's allotment of construction grant funds each year for projects employing innovative or alternative technologies.

It should be noted that there are certain Federal restrictions on grant funding of new collector systems or rehabilitation of old collector systems under the Clean Water Act and implementing regulations. EPA Construction Grants Program Requirements Memorandum PRM No. 78-9, which describes these limitations, is enclosed. It is not clear from your letter whether your proposed project would qualify for construction grant funding under these Federal limitations.

States generally set the rules pertaining to allocation of Clean Water Act construction grant funds within a state, rather than the EPA. This is so because states have primary responsibility for this matter under the Clean Water Act. Section 101(b) of the Clean Water Act provides:

(b) It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act. It is the policy of Congress that the States manage the construction grant program under this Act and implement the permit programs under Sections 402 and 404 of this Act. ^{4/}

The EPA is responsible for ensuring that the State's process meets certain minimum Federal requirements, including the restrictions on funding of new

3. 33 U.S.C.A. §1288 (Supp. 1979).

4. 33 U.S.C.A. §1251(b) (Supp. 1979). See, also, 40 C.F.R. Part 35, Subpart E (1979).

collector sewers contained in Section 211 of the Act and implementing regulations. ^{5/} You have pointed out that the State may have gone further in restricting funding of new collector sewers than the Federal limitations on assistance for such projects require. You have referred to Oregon Administrative Rule (OAR) 340-80-020(3), which provides:

The following will not be eligible for state certification:

(a) The cost of collection systems except for those which serve an area where a mandatory health hazard annexation is required pursuant to ORS 222.850 or where elimination of waste disposal wells is required by OAR 340-44-005. In either case a step one grant for the project must have been certified prior to September 30, 1979.

Due to lack of concrete information about the eligibility of your project given Federal limitation, I cannot conclude that your project is in fact affected by the above provision. However, if your project would be eligible under the Federal requirements but for this Oregon rule, it is also unclear whether the project would rate high enough on the State's priority list to become fundable in the next few years. The State is using its general allotment of construction grant dollars to provide funds for projects which have been on the priority list for several years and are necessary in order to achieve the enforceable requirements of the Clean Water Act. It is an unfortunate fact that many additional projects which are needed to meet the Clean Water Act's goals go unfunded each year in Oregon and other states due to shortage of funds.

Your letter and the July 3, 1980 study issued by the Oregon Division of Health indicate that serious health problems may occur if the present treatment practices are allowed to continue. I have spoken with the author of the Division of Health study (Mr. Ostasz) and also with Mr. Bill Titus of the Health Division about the study's findings. I understand from them that this was a preliminary study, and that further study would be necessary to establish a "danger to public health" from septic tank failure as that term is applied to ORS 222.850, et seq., by the Health Division and local boards of health in mandatory health hazard annexation proceedings. Nevertheless, EPA is concerned about the conclusions of the July 3, 1980 study and the concerns you have raised in your letter. Please keep us informed of further investigations or other developments through our Oregon Operations Office, 522 Southwest Fifth Avenue, Yeon Building, Second Floor, Portland, Oregon 97204.

With regard to the Coastal Zone Management Act (CZMA) concerns you have raised, EPA is cooperating and participating with State and local governments in effectuating the purposes of the CZMA. We are not currently engaged in funding your project and therefore cannot engage in the consistency of determination process described in Section 307 of the Act and 15 C.F.R. Part 930 (44 Fed. Reg. 37143, et seq., (6/25/79)).

5. See, PRM 78-9 enclosed.

Additionally, it may be pertinent to note that the Oregon Department of Environmental Quality has submitted a "concept paper" regarding a shellfish study of Coos Bay to EPA for possible grant funding under our Section 208 Clean Water Act water quality management program. If this proposal is considered for funding (which will be decided by EPA in August), it may be possible to include the South Slough in the area being studied. I suggest you work with DEQ to establish your concerns with regard to the South Slough of Coos Bay.

I will be out of the office through August 18, 1980. Please feel free to contact me after that date if I can be of further assistance at (206) 442-1152.

Very truly yours,

Peter H. Hansen
for Brian L. Hansen
Attorney
Office of Regional Counsel

Enclosure

cc: (With enclosures)
Bill Titus
Dr. Delane Munson
Charles Mosher
Dick Granger
The Hon. Al Ullman
Office of Sen. Robert Packwood
Coos County Board of Health

Attachment C

Evaluation and Response to Public Testimony
(Responsiveness Summary)

On December 4, 1980, the Department requested comments at a public hearing regarding three issues affecting the allocation of construction grant funds after September 30, 1981:

- 1. The determination of the segments or components to be included in a "project" and providing for separate priority ratings thereof;
- 2. The termination of the transition policy after September 30, 1981; and
- 3. The authority of the Environmental Quality Commission (EQC) to establish federal grant participation at 50% of eligible project costs after September 30, 1981, if allowed by federal law or regulation.

The staff concludes that public hearing participants generally supported the EQC's present policies for items 1 and 2 above, and generally opposed the implementation of a reduced grant level during FY 82. Testimony was received for and against each issue. The major concerns presented are summarized below:

Separate Component/Segment Ranking

Separate component ranking was supported for reasons such as: (1) attaining a better relationship between funding and water quality benefits targeted according to the priority criteria and (2) spreading limited funds to the higher priority components of projects by deferring lower priority work. Several respondents were concerned that the separate rankings: (1) denied the interrelationships between components of a total project; (2) resulted in partial completion of local projects or facilities which would not function properly or be underutilized; and (3) produced facilities that are more expensive to plan, design and construct. Several respondents questioned the adequacy of the separate rankings for one large project on the FY 81 priority list and submitted documentation regarding the operational dependency of many components.

The present rule requires that the Department consider operational dependency when deciding whether an individual ranking or a ranking combined with other components is appropriate. Each project is reviewed with information supplied by the grantee during development of the annual priority list. The appropriateness of separate rankings and the accuracy of priority point ratings for individual components will be reviewed during development of the FY 82 priority list; pertinent information from this hearing will be analyzed. Individual component rankings may, depending upon the amount and timing of subsequent funds, result in delaying completion of a total project; the total negotiated cost for professional services for these incremental programs may increase. However, advance planning and selection of high priority components will ensure that essential needs are met first at least cost.

Transition Policy

The elimination of the transition policy after FY 82 is provided for according to OAR 340-53-015 (8). The reasons supporting the EQC's position included: (1) the closer relationship between funding and high priorities according to water quality-based funding criteria, and (2) benefits to more local agencies that have projects rated highly on the priority list because only five agencies would receive all the construction funds for conventional projects through FY 85. Several respondents noted that the phase out of transition project status which was adopted by the EQC in September, 1980, was announced sufficiently in advance of the effective date October 1, 1981, that reasonable adjustments would be made by local agencies.

Objections to the elimination of the policy cited that: (1) new projects should not be started where those already begun cannot be completed; (2) projects which are underway have incurred special obligations when they procured local funds or increased their manpower; and (3) the policy trims the long length of time from project initiation to completion. One comment referred to a federal regulation stating that a project shall generally retain its priority rating on the project priority list until an award is made. Several respondents outlined the affects of elimination of the policy on the Metropolitan Wastewater Management Commission's project, i.e. \$11.4 million in projected inflation costs, \$3 million for replanning and redesign, delay, and the breach of good faith between local citizens who authorized bonds and the State. Two respondents favored the elimination of the policy only if projects that had started design before FY 79 were completely funded first.

With federal allocations to the State diminishing year to year, the Department's choice is: (1) to risk the continued total deferral of new projects, which rate comparatively higher in priority according to state water quality and public health criteria than the projects classed as transition on the FY 81 priority list; or (2) to defer the segments or components of the transition projects that do not rate comparatively high in priority according to State water quality and public health criteria. Although it recognizes that many of the objections expressed are legitimate, the Department supports the elimination of the transition policy in order to closer relate funding and the high priority projects on the State's priority list. The economic situation faced in the grants program has changed considerably in the past years so that the transition policy would no longer effectively cut down project time length for four of the five projects classed as transition during FY 81. FY 81 available funds cannot even meet the entire project cost of the top project. For FY 82, the elimination of the transition policy will greatly disadvantage the scheduling of this project; however, segments or components of this project which rate highly according to priority criteria are expected to receive funds in FY 82.

The time allowed to phase out the transition status was thought to be sufficient by some respondents and insufficient by others. Prior to FY 80, projects for which a Step 2 grant had been awarded were transitioned to the top of the following year's priority list. During FY 80, the priority criteria was changed so that only projects classed as transition during FY 79 were continued at the top of the list. Many of these transition projects were completed during FY 80 and dropped off the priority list. When the priority criteria for FY 81 was proposed in July, 1980, transition projects remaining from the FY 80 priority list were continued at the top of the list but it was proposed that the unfinished projects would be ranked according to water quality related priority criteria on the FY 82 priority list. The EQC adopted this proposal at its September, 1980 meeting. The Department views the adjustment period as a reasonable one, considering that little time is accorded the State to adjust its funding priorities to annual Congressional appropriations. However, the high priority ranking given transition projects in the past was an administrative policy developed by the State to move projects into completion. Until recent years the transition policy did not result in the deferral of construction on projects rated more highly on the priority list.

The elimination of the transition policy is believed to be consistent with the federal regulations. No project priority rating, calculated in accordance with the water quality based priority criteria, will be affected. Priority ranking will change.

The Department recognizes the disadvantages of eliminating the transition policy, but recommends that economic circumstances and the selection of projects on a water quality criteria basis justifies the elimination.

Reduced Grant Participation

A minority of respondents supported a 50% grant program. Only three respondents unconditionally supported the reduced level; several others suggested reduced levels should be in concert with reduced water quality standards, special financing for depressed areas, variable grant levels based on need and ability to pay, or use of the State Pollution Control Bond Fund to make up the difference. Two respondents favored 50% grants if they were phased-in so that projects which had bond issues passed prior to FY 82 or had a Step 2 grant awarded before FY 82 were not affected.

In opposition to a grant level reduction several issues were raised:

- a. The potential affect of reduced participation and more Federal limitations on work considered eligible would effectively reduce assistance levels to far less than half the cost of some projects;

- b. Any decision by the State at this time would predate the development of federal guidelines expected on this issue;
- c. The validity of bond elections may be legally challenged where they refer to receipt of a 75% federal grant in the ballot explanation or publication of bond election measures;
- d. A changed grant level would violate the good faith and reliance of local citizens who have passed bond issues for a 25% local share;
and
- e. Fifty percent local financing is beyond the financing ability of small communities.

The Department agrees that many of the issues raised prevent any reduction in grant participation during FY 82. Issues (a) and (b) above will be more easily evaluated during the next fiscal year. Because issues (c) and (d) currently affect a few projects where bonds have been authorized, the direct impacts of a grant level change should be carefully evaluated and steps proposed to mitigate potential adverse affects before a reduced level is adopted. Each of the variations suggested by those supporting a reduced level program depend on other significant program changes which may depend, in part, on federal guidelines. Therefore, reduction of grant participation during FY 82 is not recommended.

Other Issues

Several respondents representing the Metropolitan Wastewater Management Commission requested that adjustments be made to the project classification (letter code), the point rating for Regulatory Emphasis, and the combination of segments or components of the facilities.

The Department will consider these requests and the documentation submitted during the development of the FY 82 priority list.

Summary of Public Participation Activities

The public hearing process successfully solicited comments from a broad range of participants, including citizens, small and large communities, service districts, professional consulting firms, business and public interest organizations, and a federal agency. Testimony was provided by forty-eight respondents.

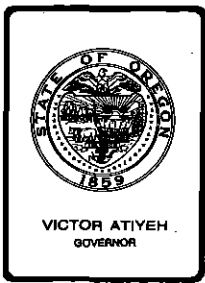
Although one respondent commented that the public hearing process employed by the Department favored large cities who have the staff available to participate in the proceedings, it appeared that this activity included several small community perspectives. Many small and mid-size communities

who are less directly affected also presented testimony, especially in written form. Several of these smaller communities do not often participate in the opportunities for comment on the construction grants program. The Oregon Rural Assistance Program, specializing in aid to small communities, also presented testimony.

Much of the volume of testimony was received from two project areas directly affected by the policies discussed. The diversity in project areas represented as well as the number of comments received were considered in the Department's evaluation of public testimony.

Chronology

- | | |
|--------------------|---|
| September 19, 1980 | The EQC approved the FY 81 priority list and the administrative rules containing priority criteria and management policies. The EQC also directed the Department to provide additional opportunity for public comment on three identified issues (and rules). |
| October 16, 1980 | The Department published a notice of public hearing and sent individual copies to the construction grants mailing list. |
| October 30, 1980 | Background information was mailed to addressees on the construction grants mailing list. |
| December 4, 1980 | A public hearing was held at 10:30 a.m., Dept. of Fish and Wildlife Bldg., Portland. |
| December 10, 1980 | The hearing record was closed. The complete record of testimony and list of attendees is maintained by DEQ Water Quality Division. |
| January 20, 1981 | Copies of Agenda Item BB scheduled for EQC review on January 30, 1981, were mailed to the construction grants mailing list. The item included an Evaluation of Public Testimony. |



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

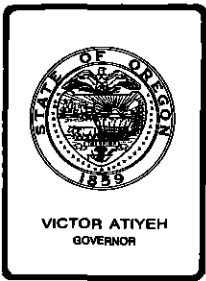
MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Corrections to Agenda Item No. CC
January 30, 1981, EQC Meeting

Acceptance of Yard Debris Alternative Disposal Methods and/or Recovery Program - Portland Metropolitan Area

<u>Page</u>	<u>Paragraph--Sentence</u>	<u>Correction</u>
15	Paragraph 3 - last two sentences that read "Woody waste materials currently going to the landfills represents approximately 17% of the total municipal waste generated. This material could potentially be diverted to energy production or other useful purposes."	Replace with "Waste acceptable for hog fuel, woody waste & some prunings, represents approximately 30-35% of the yard debris generated or approx. 202,800-236,600 cu.yd. This compares with the estimated 84,784 cu.yd. previously burned."
22	Paragraph 5 - 3rd sentence	Insert after "presented": "(Attachment 10)"
27	Paragraph 2 - 3rd sentence reads "twice-yearly"	Replace with "once-a-month"
29	Paragraph 1 - 2nd sentence reads "46,000"	Replace with "42,000"
29	Paragraph 2 reads "Burning of the region's yard debris in hog fuel boilers would reduce the mass of material to be landfilled by 98 percent."	Replace with "Burning of the region's yard debris in hog fuel boilers would reduce the volume to 2% ash."

<u>Page</u>	<u>Paragraph--Sentence</u>	<u>Correction</u>
29	Under "Assumptions Used in Calculating Environmental Impacts From Different Disposal Practices," 5th assumption reads "Fifty trucks are in operation per day."	Replace with "Thirty trucks are in operation per day."
34	Paragraph 1 - Summation g. Last two sentences that read "Woody waste materials currently going to the landfills represents approximately 17% of the total municipal waste generated. This material could potentially be diverted to energy production or other useful purposes."	Replace with "Waste acceptable for hog fuel, woody waste & some prunings, represents approximately 30-35% of the yard debris generated or approx. 202,800-236,600 cu.yd. This compares with the estimated 84,784 cu.yd. previously burned."



Environmental Quality Commission

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MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. CC, January 30, 1981, EQC Meeting

Acceptance of Yard Debris Alternative Disposal Methods and/or Recovery Program--Portland Metropolitan Area

I. Background and Problem Statement

A. EQC/DEQ Policy with regard to open burning in a metropolitan area.

The Environmental Quality Commission and its predecessor the Oregon State Sanitary Authority together with local regional air pollution authorities (City of Portland, Columbia Willamette Air Pollution Authority) have wrestled with the issue of open burning of yard debris since 1959. The policy for open burning is set forth in Oregon Administrative Rule 23-025 which states:

In order to restore and maintain the quality of the air resources of the state in a condition as free from air pollution as is practicable, consistent with the overall public welfare of the state, it is the policy of the Environmental Quality Commission to eliminate open burning disposal practices where alternative disposal methods are feasible and practicable; to encourage the development of alternative disposal methods; to emphasize resource recovery; to regulate specified types of open burning; to encourage utilization of the highest and best practicable burning methods to minimize emissions where other disposal practices are not feasible; and to require specific programs and timetables for compliance with these rules.

Statutory authority for the EQC to adopt rules for open burning is contained in Oregon Revised Statutes (ORS) Chapter 468.

The Department considers open burning in a metropolitan urban area as a wasteful use of the airshed, a significant source of nuisance and, increasingly, a wasteful use of a potential source of energy. It has been the Department's objective to phase out open burning in conjunction with the development of alternative disposal methods. In reality, no significant resources were directed toward developing practicable alternatives until the Portland airshed was designated a non-attainment area for particulate matter.

B. Background

In the Portland area, regulation and enforcement of open burning from the environmental standpoint dates back to the 1960s. At that time the Columbia Willamette Air Pollution Authority (CWAPA) adopted a strategy to phase-out open burning on a step-wise basis. The first prohibitions were directed toward industrial, commercial and governmental burning. The next step addressed burning of land clearing debris in the core area and eventually to broader areas as jurisdictional boundaries expanded.

In 1970 the CWAPA Board imposed a ban upon backyard burning which resulted in considerable public outcry. After a series of public hearings conducted by a citizen advisory committee, the ban was modified to allow spring and fall burning of yard debris. The spring and fall periods were established to allow this type of burning during a time when the debris was generated (spring yard and garden debris; fall leaves and garden debris).

In the ensuing years, the burn periods were continued, primarily because alternative disposal practices were not developed. In June, 1979, the EQC granted what was intended to be the last extension which permitted a fall 1979 and a spring and fall burn period in 1980. In granting this extension the Commission directed staff to establish reasonable programs with local jurisdictions which would provide alternative disposal methods and/or resource recovery for yard debris.

This Commission action coincided with the recommendation of the Portland Air Quality Advisory Committee (PAQAC), the citizen committee charged with advising the DEQ regarding which control strategies are the most acceptable to the public as a means to attain particulate air quality standards in the Portland Metropolitan area. The Portland metropolitan area is formally designated pursuant to the Federal Clean Air Act as a non-attainment area for particulate matter. The PAQAC took an active interest in the open burning issue because vegetative matter was identified by the Portland Aerosol Characterization Study (PACS) as a major contributor to the local air quality problem. In addition, open burning has been a source of numerous nuisance complaints.

In response to the Commission directive, the Department's Solid Waste Division prepared a document entitled "Alternatives to Open Burning of Domestic Yard Debris" (Attachment 1) which presents a variety of information on various alternatives to open burning. In September, 1979, the Department and the PAQAC sponsored an Open Burning Workshop for local governmental jurisdictions. The purpose of the workshop was threefold:

1. To impress upon these jurisdictions that the EQC/DEQ were seriously considering the 1980 burn seasons as the final extension.
2. To provide them with the latest information on alternatives in use. This was done by presentation of the above mentioned solid waste report and by guest speakers from Salem, Oregon (neighborhood clean-up) and Berkeley, California (composting)
3. To inform local governments, that due to the diversity of local regulations regarding disposal, availability of equipment, etc., and the fact that Metro was not prepared to address this matter on a regional basis, the Department would be requesting each entity to develop an alternative program and timetable for implementation.

At its meeting of October 9, 1979, the PAQAC passed a resolution (Attachment 2) recommending to the DEQ and EQC that the open burning rules be amended so that the backyard burning could be prohibited after December 31, 1980, within the Metropolitan Service District boundaries.

Subsequently, from October, 1979, through January, 1980, staff from the Northwest Region met and corresponded with each of the potentially impacted local government jurisdictions and requested that a program be developed and an implementation schedule established. At the time it appeared that financial assistance would be available from the Pollution Control Bond Fund for the purchase of equipment.

On January 25, 1980, the PAQAC adopted the following statement as their formal position on open burning:

1. The Department of Environmental Quality should develop alternatives to open burning so that the open burning ban can go into effect by the end of 1980 (March 21, 1979, Testimony to the Environmental Quality Commission).
2. The December 31, 1980, ban on open burning should go into effect with the provision that the DEQ may give an extension to a city or county which has made a good faith effort in

developing alternatives (excluding the use of sanitary landfills), and which has a DEQ approved work program but which will not have alternative disposal methods ready by that date.

At its February 22, 1980, meeting the EQC reviewed the Department's efforts (Attachment 3--Agenda Item No., K, February 22, 1980, EQC Meeting) and the PAQAC recommendation and approved the following course of action:

- March-May, 1980 - Receipt of programs and time schedules from local governments.
- March-June, 1980 - Rewrite Open Burning Rules to improve clarity and revise boundaries for burning ban as necessary.
- July-August, 1980 - Approve local government plans for implementing ban.
- August, 1980 - Authorization for public hearings on Open Burning Rules.
- September, 1980 - Hold public hearings around the state on new Open Burning Rules.
- November, 1980 - Propose adoption of new Open Burning Rules.

Correspondence (Attachment 4) from some of the local jurisdictions were received from January to May, 1980.

In early May, 1980, the Department advised each community that state financial assistance for purchase of equipment was doubtful; and that local planning and financing should move ahead in order for the ban to take effect by 1981.

On May 30, 1980, the local governmental entities were invited to attend a meeting for the purpose of sharing information and determining the status of each community. This meeting was attended by the following jurisdictions:

Milwaukie	Clackamas County	West Linn
Cornelius	Portland	Oregon City
Wilsonville	Washington County	Hillsboro
Lake Oswego	Beaverton	

The status of each community attending is summarized as follows:

1. Lake Oswego--a citizen task force composed of neighborhood association members and the fire chief recommended the following policy which was subsequently adopted by the city council.
 - a. Support the ban.
 - b. Implement a short-term private sector collection and disposal program with material going to a landfill.
 - c. Support private recycling measures through educational programs (composting, mulching).
 - d. Continue committee to work on long-term goal to provide total recycling and resource recovery.

The Lake Oswego report was the most comprehensive received as it actually developed citizen in-put, costs to the individual and necessary ordinance changes.

2. Milwaukie--this city identified three alternatives although they did not have good information on the quantity of waste involved, nor did the city have funds to implement an alternative.
3. Hillsboro--this city identified a \$100,000-\$200,000 cost to implement a chipping program. The city had no budget for this program. Additional financing would be required for ultimate disposal and continued operation.
4. Oregon City--city had only projected costs for pick-up and dumping in a canyon.
5. West Linn--had no plan, but does own a chipper. A subsequent letter from West Linn advised that the city was awaiting a final ban declaration and that they were pursuing a solution which would result in waste being converted to hogged fuel and sold to C-Z, West Linn.
6. Wilsonville--no plan.
7. Cornelius--no plan.
8. Clackamas County -- opposed ban unless alternative disposal methods were on-line, but had no plan.
9. Portland--had made a major effort and has assisted the Department in coordinating with other cities, identifying

funding sources and gathering pertinent information. In addition, the City had received inquiries from private industry who expressed interest in processing all debris and converting to hogged fuel. They also had a gross estimate on costs of neighborhood chipping and a pilot project (processing storm debris) underway to develop more accurate information on processing costs, heat value of material, volumes, etc. Details of this pilot or demonstration project are presented later in this report.

10. Washington County -- no plan, no intention of developing a plan.

Other correspondence received is summarized as follows:

Rivergrove--objects to the ban and believes burning should be allowed on good ventilation days.

Troutdale--city has limited resources but would be able to require private haulers to provide pick-up and deposition in landfill.

As a result of the May 30, 1980 meeting, it became clear to the staff that most of the local governmental units did not have the resources to develop and establish alternative disposal methods and/or resource recovery schemes for backyard debris. Perhaps the best indication of this attitude was expressed in the letter from the Washington County Board of Commissioners which stated, "We have no program, have not funded a program, have no ability to fund a program, and do not anticipate any ability to develop or fund a program."

It was decided after that meeting that the best means of getting the information and sharing with the local jurisdictions was to form a task force; have that task force gather the necessary data so far as collection, sites, processing, and potential markets; then distribute the information so that each jurisdiction could make a decision as to the best alternative to implement given their particular situation. The task force consisted of representatives from the City of Lake Oswego, City of Milwaukie, City of Portland, Metro, and the Department.

The EQC was informed of the change in direction at its June 20, 1980, meeting.

In July, 1980, it was learned that Metro was establishing a Waste Reduction Task Force. One of the objectives of that task force was to develop a Metro Yard Debris Recovery Program and hire

a consultant to look at most of the issues with regard to collection, storage, processing, and marketing of backyard debris. In order not to duplicate efforts, the fledgling open burning task force decided not to go further with work in these areas. Nevertheless, the staff felt certain key information would not come out of this report. A yard debris survey with the assistance of the EPA, Technical Assistance Panel therefore was conceived as a means to answer the following:

1. To determine how many people burn yard debris and what type of debris they burn.
2. To determine the total volume of yard debris generated by single family residences in the Portland Metropolitan Area.
3. To evaluate current disposal practices and determine what generators might do after a burning ban is implemented.
4. To determine the impact a burning ban might have on area landfills assuming the material normally burnt might be disposed of in the landfill.

At the October 17, 1980, EQC meeting the staff reported that the above pertinent studies would not be available as expected for public scrutiny before the dates for public hearings on the proposed open burning rules. The Director requested the EQC to authorize the department to hold hearings on a rule modification to allow a spring burning season. That hearing, to be held at the regular EQC meeting in December, would be limited to that issue.

At the October 21, 1980, public hearing in the proposed State Implementation Plan for particulates in the Portland area, the chairman of the PAQAC testified that the committee preferred to see a ban on open burning retained in the proposed SIP for particulate.

On December 17, 1980 the "Draft Metro Yard Debris Recovery Program" (Attachment 5) prepared for the Metropolitan Service District by Resource Conservation Consultants was hand delivered to the Department.

On December 19, 1980, the request for a rule modification (Attachment 6) to allow a spring burning season was presented to the EQC. The Commission denied the request but directed the staff to proceed with completion of the final report on the availability and costs of alternative disposal methods and with rewriting of open burning rules, holding of public hearings and consideration of adopting revised rules by May 1981. This report is a piece of the entire package dealing only with the yard

debris alternative disposal methods and/or recovery programs for the Portland Metropolitan Area.

C. Problem Statement

Backyard burning has long been an issue of public sensitivity in the Portland area--on both sides of the issue.

Because of air quality, public health and nuisances considerations most metropolitan areas the size of Portland have prohibited open burning. Most of the bans were accomplished in the late 60's and early 70's. In almost all cases the ban was established then a method was found to get rid of the residential yard debris. A list (Attachment 7) of areas approximately the size of the Portland Metropolitan Area and some of the communities in Oregon where an open burning prohibition has been established is attached.

Analysis of the Particulate Air Quality Impact of Open Burning in the Portland Area

Introduction

The Open Burning of yard debris primarily produces respirable sized carbonaceous smoke particulates which are generally less than 2 1/2 microns in diameter. As was learned during previous years when field burning smoke impacts in the Willamette Valley were extensively analyzed it is sometimes difficult to determine with accuracy the air quality impact of individual sources of respirable smoke particulate. This is due to the intermingling of chemically similar smoke from several similar sources such as slash and field burning, wood heating and open burning practices including backyard burning and land clearing. Two different independent techniques were employed to evaluate the particulate air quality impact of open burning in the Portland area. These techniques employed actual measurements of air quality and computer simulation of possible impacts.

Both techniques produced impact estimates which agree reasonably well with each other lending some credence to the accuracy of such an analysis.

Summary

In summary, based on monitoring data and computer modeling, it appears that the open burning of yard debris materials in the Portland area can cause 24-hour respirable particulate impacts in the range of 40 to 65 ug/m³ on a worst case day and that open burning produces maximum impacts in the 10 to 15 ug/m³ range on about 7 days per year in certain residential areas. There are about a total of 37 days per year of open burning which have

an average impact of 7 ug/m^3 . Worst open burning impacts in the 40 to 65 ug/m^3 range have occurred on a day when State and Federal particulate air quality standards were considered to have been violated.

Since open burning is restricted to about 67 permissible burning days per year, annual impacts are considerably less and are calculated to be about .75 micrograms/cubic meter on an annual average basis in the 2 x 2 kilometer residential grid with greatest impacts. These impacts are significant because they occur at locations already projected to exceed annual particulate standards. These impacts are based on area wide average conditions. Impacts near individual fires would be expected to be considerably higher.

Table 1 below summarizes the air quality impacts attributable to open burning based on both monitoring data and on computer model simulations.

Table 1

PARTICULATE AIR QUALITY IMPACTS IN THE PORTLAND AREA FROM OPEN BURNING
 (Micrograms/cubic meter)

	Worst Case	Average 24-Hr. Impacts on Burn	Average 24-Hr. Impacts on Worst 7 Burn	Annual
	<u>24-hr. Impact*</u>	<u>Days **</u>	<u>Days per Yr.</u>	<u>Impacts</u>
Downtown Portland (Based on Actual Measurement)	15 ug/m ³	N. M. ***	N. M. ***	N. M. ***
Downtown Portland (Based on Modeling)	4-11 ug/m ³	.4-.6 ug/m ³	1.3-2.1 ug/m ³	.04-.07 ug/m ³
Maximum Residential Site (Based on Modeling)	25-65 ug/m ³	5-7 ug/m ³	7.5-12.1 ug/m ³	.47-.75 ug/m ³

* Modeled worst case impacts assume that worst case days have 3 to 5 times as much burning as average allowable burn days. This is a reasonable assumption since 65% of allowable burn days have some precipitation; a dry weekend day at the start of the open burning season will have considerably more burning than most days.

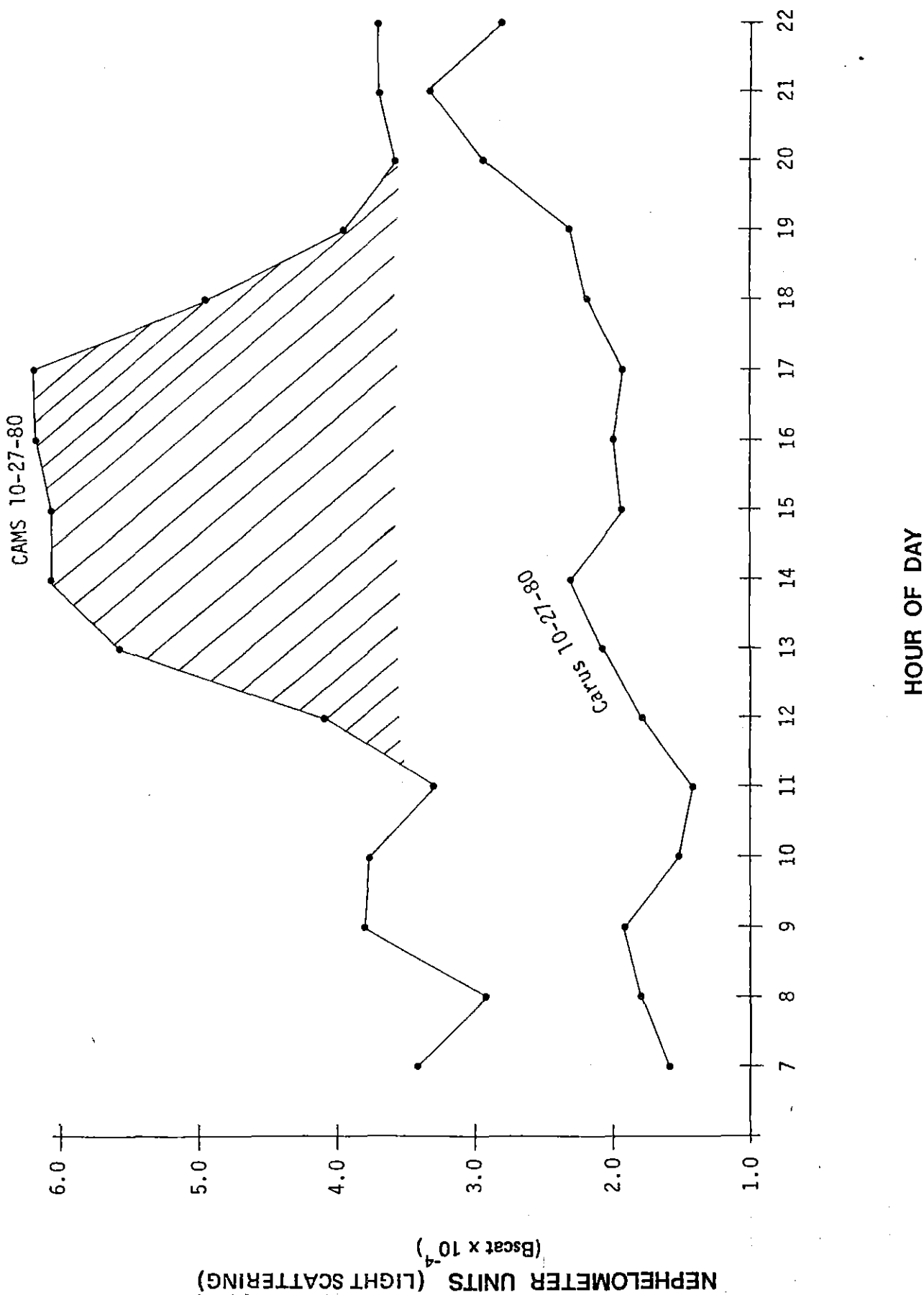
** Average impact on the 37 burn days per year with less than .10 inches rain.

*** Not measurable - cannot differentiate from other similar sources.

NOTE: Range in impacts reflects fluctuations in material burned from year to year.

Figure 1

NEPHELOMETER VARIATION on October 27, 1980



NEPHELOMETER VARIATION on March 4, 1980

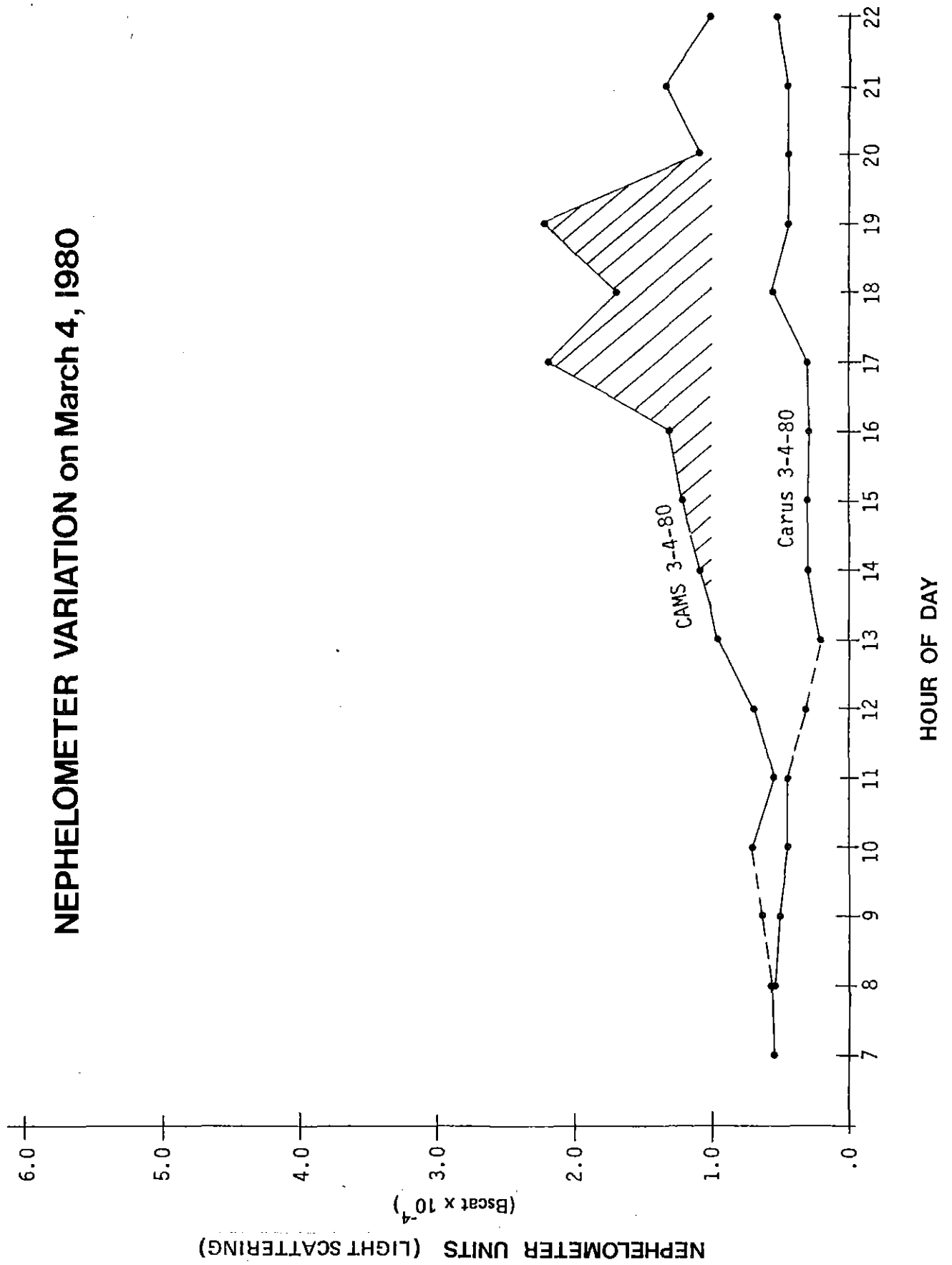


Figure 2

TYPICAL 24-HOUR PATTERN OF NEPHELOMETER READINGS IN OCTOBER & MARCH

OCTOBER

1977 1978 1979

MARCH

1977 1978 1979

3 YR. MEAN AVERAGE NEPHELOMETER READINGS

(Bscat x 10⁻⁴)

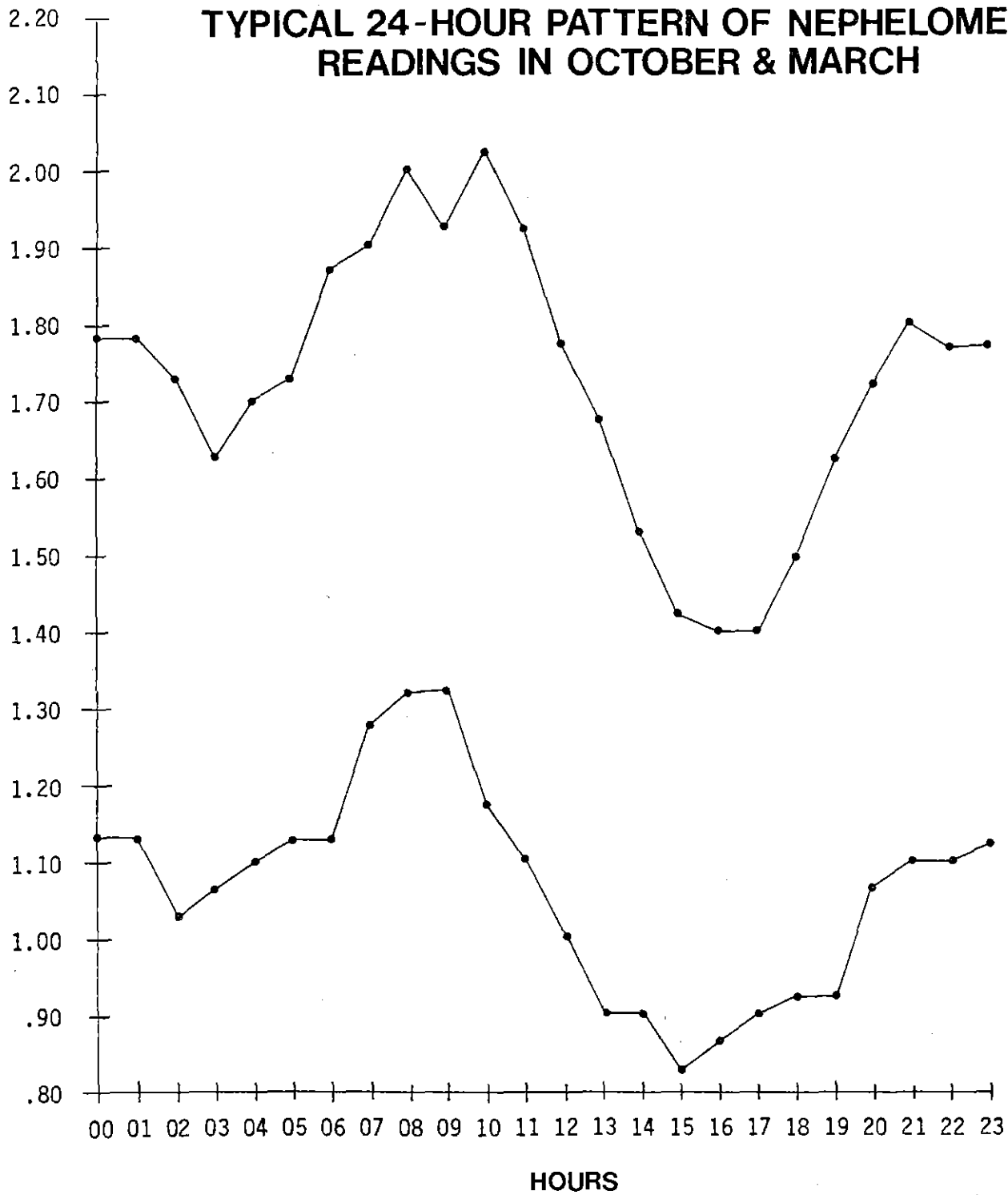


Figure 3

Analysis Techniques

The two techniques utilized for impact assessment were 1) actual measurements using nephelometer or particulate light scattering curve distortion analysis and 2) computer modelling via the calibrated Portland area particulate concentration simulation model. Nephelometer curve distortion analysis will be presented first.

Nephelometer Analysis

The nephelometer measures the amount of light-scattering produced by solid and liquid particulates in the air on an hourly basis. Nephelometer readings vary directly in proportion with the amount of respirable sized fine particulates in an air mass and have thus been frequently utilized for the analysis of smoke impacts (which are predominately "respirable" particulates). Nephelometer readings are generated on an hourly basis (as compared to 24-hour total particulate samples) which allows analysis of how much fine particulate was present in the air mass over time. This information is useful in distinguishing some types of smoke impacts such as residential wood burning from others such as open burning because the time period of the activities are generally different. Residential wood burning activity is generally greatest during the 6 p.m. to 11 p.m. time period whereas open burning activity is generally greatest during the noon to 7 p.m. time period.

Figures 1 and 2 show how nephelometer readings varied over time on two different days with observed significant backyard burning impacts. Both days exhibited increased nephelometer readings during the afternoon time period. This is in marked contrast to the normal nephelometer pattern throughout a day which typically has the lowest nephelometer readings during the afternoon period when ventilation from solar heating is normally the greatest. Figure 3 shows the normal daily nephelometer pattern for average October and March days. Clearly, this demonstrates that nephelometer readings are normally lowest during the afternoon maximum ventilation period.

The October 27, 1978 and the March 4, 1980 dates were both among the first days that open burning was allowed during the fall and spring open burning seasons during those years, respectively. The increased nephelometer readings during the afternoon period on both days appears to be attributable to open burning smoke. The shaded area in Figures 1 and 2 represents the portion of those days' nephelometer readings which appear to be attributable to open burning. For the 24-hour period, the nephelometer readings were .63 units higher on October 27th and .16 units higher on March 3 than they otherwise would have been. Since each b-scat unit measured by a nephelometer in the Portland area is normally associated

with 24.3 micrograms/cubic meter * of respirable particulates, 24-hour average impacts of 15.3 ug/m³ on October 27th, 1978 and 4 ug/m³ on March 4, 1980 can be attributed to open burning on the basis of nephelometer curve distortion analysis. These estimates are based on downtown Portland monitoring which is rather remote from actual burning areas. Therefore higher impacts could be expected in other parts of the region where burning actually occurs.

Computer Simulation Analysis

Computer simulation modeling was also used to calculate approximate open burning impacts. The DEQ's particulate model, GRID, has been calibrated and used extensively during 1979 and 1980 to develop control strategies for the Portland Particulate State Implementation Plan (SIP). GRID generates values for source impacts for many sources which agree well with chemical mass balance impact estimates developed in the Portland Aerosol Characterization study. There are currently estimated about 460 tons per year of particulates produced from backyard burning. Impacts were calculated on an annual basis, on a worst case day basis, and for several different meteorological conditions.

For the analysis of typical 24-hour open burning impacts, meteorological analysis of past open burning days was conducted to determine which type of meteorological conditions have been present on burning days during recent years. Of the approximately 67 burn days per year, only about 37 of these days have less than .1" of rain. Of these 37 burn days on which almost all of the burning occurs, typically 7 of these days will have marginal dispersion conditions which result in relatively larger air quality impacts. Maximum site impacts average about 12 ug/m³ for those seven days per year. The average particulate air quality impact for the approximately 37 burn days with less than .1" of rain is 7 ug/m³ at the maximum site.

For the worst case day analysis, it was assumed that some open burning days will have about 3 to 5 times as much burning as compared to an average burning day, either because the particular day is near the beginning of the season, or it is a weekend day, or because of the weather conditions. For example, 65% of burning days normally have some precipitation. Thus it is reasonable to expect that a dry weekend day at the start of the open burning season will have considerably more burning than other days. As shown in Table 1 presented previously, maximum 24-hour impacts in the 40 to 65 ug/m³ can occur at the maximum residential site if one of the peak

* Based on data from 25 sampling days during the Portland Aerosol Characterization Study, fine particulate concentrations correlate with nephelometer measurements (b-scat x 10⁻⁴) with a .90 correlation coefficient. Each unit of nephelometer measurement is normally indicative of 24.3 ug/m³ of fine particulate. To be conservative, only fine particulate impacts were included in calculating this relationship, even though source sampling data indicates there is an additional .23 ug/m³ of coarse particulate for each 1.0 ug/m³ of respirable open burning particulates.

burning days at the start of a season is a dry weekend day with slow wind conditions.

Worst case day predictions of particulate impact from open burning for the downtown Portland site compare reasonably well with the impacts calculated for a worst case day based on the nephelometer curve distortion analysis, both in the 10 to 15 ug/m^3 range. The fact that both analysis methods produce similar impact estimates for the downtown Portland area justifies additional confidence that the calculated impacts are in the approximate range as the actual impacts.

Since open burning occurs only on about 67 of the 365 days per year, annual average impacts are considerably less. Annual impacts predicted by the simulation model for the downtown Portland area were about .1 ug/m^3 and about .75 ug/m^3 at the worst location in the region, a primarily residential area in the southeast part of the city of Portland.

Significance of Particulate Concentrations From Open Burning

Both the nephelometer curve distortion analysis and the computer simulation analysis indicate that daily worst case impacts in the downtown Portland area can be on the order of 10 to 15 ug/m^3 . Although the DEQ's nephelometers are not located in residential areas, the modeling analysis indicates worst case impacts of as high as 40 to 65 ug/m^3 can occur in residential areas on days when maximum burning occurs and when meteorological dispersion conditions are marginal. These concentrations are significant because the smoke particulates are fine and can penetrate the deepest portion of the lungs. For comparison, identifiable industrial control strategies would only be able to reduce 24-hour maximum concentrations by 1 ug/m^3 .

Open burning of yard debris produces large quantities of respirable smoke particulates which are concentrated in residential areas where sensitive segments of the population can be impacted. The smoke is composed primarily of fine particles smaller than 2 1/2 microns in size and can reduce visibility by obscuring light. The odors produced can also be significant on a nuisance basis and the particulate matter can cause irritation and soiling. The smoke is largely composed of fine carbonaceous particles which are products of incomplete combustion and, like cigarette smoke, contain some polycyclic organic compounds including carcinogens.

Standards Violations

On October 27, 1978, daily open burning impacts of 10 to 15 ug/m^3 occurred in some residential areas. The KOIN tower TSP site at the top of the West Hills, the only site operating that day, recorded a 127 ug/m^3 average level for the day which is a full 17 ug/m^3 higher than TSP levels recorded on any other day at that site since monitoring began in 1973. Based on the relationship between concentrations at the KOIN site and the downtown Portland Central Fire Station site (.79 correlation coefficient) the

expected TSP levels at the Central Fire Station would have been 229 ug/m^3 . Clearly, violations of State and Federal Air Quality Standards at other areas in the city would be expected based on airshed modeling results.

The $.75 \text{ ug/m}^3$ annual average maximum site impact from open burning occurs in a residential area projected to exceed the annual particulate standard by 1987, and emission reductions are difficult to achieve from other area sources. As a comparison, the strategy of reducing the average residential wood burning moisture content from 28% to 23% will only produce 1.4 ug/m^3 annual average reduction at the residential site and a $.6 \text{ ug/m}^3$ reduction at the downtown Portland site.

Chemical Mass Balance Analysis

The Portland Aerosol Characterization Study successfully utilized chemical tracing to identify many severe impacts. Backyard burning occurred on only one day analyzed during PACS. This day identified a vegetative burning impact of 5.7 ug/m^3 . Minor burning was expected on this day due to rainy conditions and evaluation of the nephelometer trace indicated wood heating contributed significantly to the vegetative burning impact. Future CMB analysis on backyard burn days will likely produce similar unclear results as a substantial portion of the open burning season occurs when significant wood heating can also occur making chemical differentiation of the two similar composition smoke virtually impossible.

Open Burning As a Nuisance

Open Burning constitutes an important source of public nuisance. Within the Portland area, smoke from backyard burning is one of the major sources of public complaint. Of the fires observed by the fire service agencies or Departmental personnel, many are composed of green or wet material; many are smothered by poor feeding/stoking practices, and many are left unattended.

Although the area-wide impact may be difficult for a person to appreciate, the impact of a smokey fire or area inundated with smoke from a number of fires does impact people and in particular those with respiratory problems. This is witnessed by the number and type of complaints the Department has received. A summary of these complaints from 1977-1980 are as follows:

Formal Complaint Against a Specified Fire (1977-1980) 173

Telephone reports opposing burning or commentary on overall poor air quality due to burning: $91 ('80) + 41 ('77-'79) = 132$

Telephone complaints regarding desire to burn (1980) on "no burn" days: $30 (1980) + 89 ('77-'79) = 119$

II. Yard Debris Survey

The Portland Metropolitan Area "Yard Debris Survey" (Attachment 8) results are fairly consistent with past estimates concerning volumes of material burned and waste disposal habits. Perhaps the most surprising result of the survey was the degree to which the public supports a ban. Those individuals residing in single family dwellings that responded to the survey supported a ban on backyard burning habits 2 to 1. This point is consistent with the number of individuals who burn vs those that don't. In addition, those who previously burned or self haul indicate they would join a collection system, if such services was available, 2 to 1.

In looking at landfill impact, the true impact would be hard to determine. The reason being no one knows what percentage of the waste previously burned will wind up in the landfill rather than be composted or disposed of in some other way. Overall it appears 35% of the residents burn varying amounts of yard debris. Based on volume estimates, the material burned is approximately 12.5% of the total amount of yard debris generated by homeowners. Approximately half, as determined by the survey, of all waste generated in yard maintenance activities winds up in landfills. If all material previously burned were to go to the landfill, one would expect to see yard debris landfill volumes increase by 26%. On the other hand, if satisfactory disposal or recovery alternatives are made available, a reduction in landfill volumes could result.

An estimated total municipal waste generation rate for the Portland Metropolitan Service District is 800,000 tons per year. The survey estimates roughly 42,000 tons of yard waste has been previously burned. The impact of a burning ban would equate to 5% of the total municipal waste generation and would more than likely not be noticed at the landfills. Woody waste materials currently going to the landfills represents approximately 17% of the total municipal waste generated. This material could potentially be diverted to energy production or other useful purposes.

One should be careful in reporting or quoting the figures presented in this survey. The information provided from the survey is the public's best estimate of volumes. Such estimates may be somewhat nebulous and are a "best guess" response. However, volume estimates made by the public have shown to be consistent with modeling techniques used to estimate volumes.

The detailed results and tabulation are included in the survey report (Attachment 8).

III. Alternative Disposal Methods and/or Resource Recovery Options

A. Draft Metro Yard Debris Recovery Program

In recognition of an increased solid waste disposal problem due to the proposed ban on backyard burning of yard debris after December 31, 1980, Metro established a Waste Reduction Task Force (WRTF). One of the issues the WRTF was to review and make recommendations for Metro involvement included yard debris disposal. To assist in this review, Metro hired a consultant, Resource Conservation Consultants, which prepared a draft report entitled, "Metro Yard Debris Recovery Program." (Attachment-5).

This report covers the potential alternatives in each of the four areas of program operation; collection, storage, processing, and marketing of the yard debris.

"Collection options included private hauling under a local government contract, individual subscription to a private hauler, collection by a government agency, citizen transport, neighborhood projects, and a public or private chipper service. The WRTF decided to eliminate collection by a government agency and give a low priority to citizen transport of yard wastes. Utilization of existing systems and the private sector were emphasized.

Potential storage locations for yard debris included individual residences, landfill sites, available public property, and commercial locations. Due to a perceived fire hazard problem, the Task Force assigned a low ranking to the option of storage at each residence. It was noted that storage options are related to collection and processing recommendations.

Processing alternatives included chipping, burning, composting, separation for firewood, or no processing of the material. The no processing option was eliminated by the WRTF. Open or controlled burning was given a low priority while centralized chipping and individual or neighborhood composting were recommended.

Marketing or end-use strategies included citizen purchase, commercial purchase, public purchase, landfilling, free dispersal or no marketing of the material. No marketing of a yard debris product was eliminated and landfilling as an end-use was assigned a low priority.

To date, the draft general policy recommendations of the WRTF include coordination or leadership by METRO in a promotion and education program for alternative yard debris disposal as well as other aspects of waste reduction; private sector operation of the major program elements; coordination by METRO with local jurisdictions of existing collection systems; and individual homeowner responsibility for program costs." ¹

The draft report concludes with a recommendation to implement a phased woody waste disposal and recovery program. A two-year voluntary program is suggested, within which Metro would coordinate the program and work with local jurisdictions. A voluntary program would have necessitated a delay in instituting the ban for a two-year period while an acceptable regional program became operational.

B. Intensively Managed Open Burning.

Open burning is a traditional means for disposal of yard debris. During the last fourteen years that a continually postponed phase-out plan for open burning in the Willamette Valley has been in effect, some experience has been obtained concerning the effects and potential benefits of a meteorologically based management system for control of open burning. During this time the major emphasis and goal of the control program has been the total elimination of open burning and development of alternative disposal methods. The date for prohibiting open burning has been postponed many times because suitable alternatives have not been developed.

Alternatives to open burning are still not likely to be available except in the more densely populated urban areas, so management of open burning on a meteorological basis has been promoted by some as a tool to be used in areas when alternatives to open burning are not readily available. Before considering smoke management as a continuing tool for control of open burning, its strengths and weaknesses should be considered.

1. Applications of Meteorological Management to Open Burning.

Meteorological management of open burning has developed a significant following in the northwest during the last decade and a half and has usually been called "Smoke Management". The more familiar applications of smoke management systems have been to slash burning and field burning with a minor application to domestic burning (backyard burning) in the Portland area and the Willamette Valley.

¹Metro Memorandum

a. Slash burning

The slash "smoke management" program in Oregon under the supervision of the State Department of Forestry is without doubt one of the most resource supported system within the state. It is supported by full time meteorological staffs in both the State Department of Forestry and the U.S. Forest Service. These staffs produce highly specialized local weather analyses and forecasts. On the basis of these forecasts, local area Forest and District managers determine when burning can be done safely and cleanly and monitor each slash burn under an elaborate permit system. The burning crews are highly trained professional foresters and fire fighters. The entire program is directed and operated by a highly trained and professional, well staffed system. The slash smoke management program in Oregon generally does an excellent job of minimizing serious slash smoke problems in populated areas.

b. Field Burning Smoke Management.

Another highly developed smoke management program has been operated by the Department of Environmental Quality for the control of field burning smoke within the Willamette Valley. Prior to the Summer of 1980 the program had developed around a limited staff with management responsibilities in addition to the specific meteorological interpretation and forecasting duties necessary for smoke management. However, this program is strongly supported by participation of the Oregon Seed Council and the Rural Fire Districts.

In 1980 the field burning program used two full time meteorologists plus a field manager in the operational elements of the program. The additional personnel did a great deal to ease the management burden and considerably improved the management of the program.

c. Backyard Burning.

Management of domestic burning has been applied to the Willamette Valley since the late 60's. Management has been exercised by making each day either "marginal", meaning burning is allowed or "prohibited", meaning burning is not allowed.

Very simple meteorological measurements and judgments were used to make the determination of "marginal" or "prohibited" conditions. Information readily obtained from the National Weather Service has been used for making these judgments.

To further restrict the amount of domestic burning, spring and fall seasons have been established for backyard burning. In most populated areas of the Willamette Valley, backyard burning is not allowed except during the spring and fall seasons.

The domestic open burning program is operated as a part-time assigned responsibility of one individual so it has not received as much attention or resource commitment as the other smoke management programs.

2. Forecasting.

It has been said that obtaining the best possible objective forecast will lead to improved management control and avoid problems associated with "missed forecasts." Accurate forecasts are certainly necessary to good management control. Equally as important as the forecasts themselves is the interpretation and application of the forecasts to the fires which are allowed.

The interpretation and application of forecasts in the Slash and Field burning programs is managed through an elaborate and closely coordinated permit program. This is an expensive, management intensive process supported by the economic base of the lumbering and agricultural industries.

It is doubtful that the State General Funds would support a similar degree of management for domestic open burning. At the very least the fire districts and the public would have to commit to the support of a full time, seven day a week management staff and accept sudden changes in the burning/no burning decision during the day.

One benefit of an intensive management system would be to provide the dedicated effort to make a careful definition of areas for allowing and prohibiting burning on a daily basis, and monitoring the progress of burning during the day.

3. Burning Volume

One primary reason for the development of intensive smoke management systems in the slash and field burning programs is massive amounts of burning often accomplished in a short period of time. Overwhelming volumes of smoke can be produced.

With respect to domestic burning such large volumes of smoke are not likely but smaller areas, such as a neighborhood, can become annoyingly smokey. This has been a recognized risk of the domestic burning program, especially during the first few days of each burning season. Creating a "checker board" or "odd/even" burning

authorization plan would probably reduce the area wide effect of early season burning but would do little for the local neighborhood. Such a plan would also significantly reduce the opportunity to burn and possibly make it necessary to allow longer burning seasons.

4. Training

Part of the success of the slash and field burning smoke management programs is due to the high state of training of the professional burning crews.

Achieving a similar state of training and capability in domestic burning would be difficult because of the diversity in type and condition of materials and locations and skills of individuals. Public education on burning methods should always be emphasized but can never be expected to achieve the degree of competence of the professional in all individuals.

5. Enforcement

Along with more intensively managed smoke management systems there are increased problems of enforcement.

There is little value in making good burn/no burn decisions if there is poor compliance with those decisions. Monitoring of compliance and enforcement of smoke management decisions could require a substantial manpower force. It is often observed that there are many violations of the existing open burning management decisions. There is no reason to expect a more intensively managed system to be followed any more closely.

6. Municipal Open Burning

One alternative to residential open burning is collection of debris at a central site to be burned later in a single large fire by city crews. The advantages to this concept include:

- (1) More easily controlled burning conditions;
- (2) Fewer actual days of burning necessary;
- (3) Greatly reduced level of monitoring and enforcement necessary;
- (4) Better combustion conditions would result in less total smoke output.

If centralized collection of yard debris is accomplished it is probable that a more cost effective use than open burning would be made of the material. Centralized municipal open burning should probably only be considered as an interim measure.

Summary

It should be possible to reduce substantially overall area air quality impact by intensifying management activities to limit open burning of yard clean up materials to only the best smoke dispersion days, using only the best burning techniques and by spreading burning both spatially and time-wise. However, the effectiveness and viability of such a program are limited by the following:

- (1) Substantially increased resources would be required by both the DEQ and the involved Fire Districts, especially if the burning season is prolonged or made year round, and monitoring of burning progress and enforcement of a complicated burning release system becomes necessary.
- (2) There would be little or no reduction of localized smoke and odor nuisances within a neighborhood.
- (3) The wide variety in types and conditions of materials that would be burned would severely limit or prohibit clean burning.
- (4) The spectrum of individuals who open burn their debris are largely untrained in clean combustion techniques and are prone to burn when they have time rather than when fuel conditions are favorable.

C. Portland Demonstration Project

In 1980 the Department granted a Special Letter Permit to several cities and counties to burn, under controlled conditions, the woody material that came about because of the January 1980 ice storm.

The City of Portland received such a Special Letter Permit. However, when the city conducted the burn several conditions of that permit were violated. The Department assessed a civil penalty for those violations; nevertheless, the penalty was mitigated since the city made a substantial commitment to dispose of the remaining ice storm debris in an efficient and non-polluting manner.

As a result, between 20,000 and 25,000 cubic yards of ice storm-generated yard debris was chipped this year by a contractor to the City of Portland at a temporary storage site at Kelly Butte. Regional Clearing Inc. supervised and implemented the chipping and removal of the material under contract with the Portland Public Works Department. Once chipped, the material was reduced in bulk to approximately 5,000 cubic yards. While the option of using the chipped material as fuel in hog fuel boilers was originally perceived to be the optimal use for this material, (Attachment 9) a more detailed evaluation indicated that the material appeared to be about three times as valuable to nursery enterprises for use as mulching material. The material could have been sold at \$3 per

cubic yard for use as fuel in a hog fuel boiler, but preliminary contact with nursery managers has indicated nurseries will pay about \$8 to \$10 per cubic yard for the material to use as mulch. The hesitancy to purchase the material expressed by nursery managers was related to concerns about the availability of the material as a long term supply source and a possible contamination problem. This indicates that nurseries would likely be interested in establishing permanent arrangements to purchase chipped yard debris materials.

The contractor has developed a prototype improved chip sizing technique which was utilized during December 1980, which segregates the chipped material by size into mulch/potting soil type material, hogged fuel boiler sized-chips, and large chunks suitable for use as bark dust.

Regional Clearing Inc. has had the composted material analyzed, and results indicated it was a high quality composting material. Contaminants were not identified as a problem in marketing the material. Regional Clearing Inc. is currently considering the economics of bagging the material and selling it through commercial garden suppliers and nurseries. The cost of coarse chipping, and transportation using the Regional Clearing chipper which requires only one operator, was \$44,000. This translates to a cost of \$1.76 to \$2.20 per cubic yard of woody debris chipped. Additional costs would be incurred for screening, final chipping, etc. in order to further process the material for a hog fuel, land amendment, or other useful product.

D. Estimated Homeowner Cost for Collection of Yard Debris
(Include Disposal and/or Processing Costs)

Presented here is a discussion of the possible costs to an average homeowner for disposal of yard debris. The figures take into account a separate collection, i.e., yard waste collected at a different time than regular household garbage. A segregated collection system is discussed in order to address the potential for resource recovery.

A separate cost estimate for that material that would not necessarily be attractive to an energy recovery project and thus could be incorporated into regular household garbage is also presented. Material that may be incorporated with regular garbage would be grass clippings or leaves. Such material has a low BTU value and should only be considered for recovery as part of a composting, mulching or give-away project. Individual, on-site or neighborhood composting of grass clippings and leaves is an entirely practical alternative way to deal with these materials.

Several disposal practices for yard debris are already being used in the Metro Area. That would include such methods as self-haul to a landfill, currently being picked up as garbage, composting and burning. It is impossible to identify an exact volume and cost to collect yard debris

as a result of a burning ban since there is no true way of estimating the new disposal methods a homeowner may use. However, collection design may attract specific volumes and/or a large participation. A range of volumes are used to give a number of collection estimates. This approach is taken to give a range of low to high so one might see the potentials.

The "case" figures represent neither an absolute upper nor lower limit for collection costs. What they do represent is a best estimate based on assumptions made in each case. Assumptions were based on volume estimates, general route estimates and similar collection services currently operating. Actual collection costs will depend on the variables presented in each case, yet the variable amount could change depending on the system design, i.e. haul miles, volumes, labor, route size, equipment (capital expenses), frequency of service and class of service.

Case I

- Assume:
1. All yard debris generated by the homeowner will be collected for disposal -- approx. 676,066 cu. yds.¹
 2. The collection of yard debris will occur separately from household garbage.
 3. There are 254,037² single family dwellings in Portland Metro Area and these residence types will have the most yard debris to dispose of.
 4. Labor costs--2 men x\$ 29,000.95³ each for a total of \$58,001.90 per 8,500 households. This would allow actual servicing of 300 to 400 households per day (22 working days) given curbside collection for an actual once-a-month collection⁴ (30 crews for Metro Area)
 5. Based on volume estimates, the average homeowner would have approx. 1 1/2 garbage cans per month to get rid of for a total of 16.5 per year⁵
Dumping Cost:⁶
--8,500 residences x 1 1/2 cans per month = 2,056 cu.yd./mon.
--using 25 yd. compactor truck at 2.5 to 1 compaction ratio = 823 cu.yd./mon.
--823 cu.yd./mon. with 25 yd. truck = 33 loads/mon.
--823 cu.yd./mon. at \$2.00 per yard for disposal = (processing) \$1646.00/month or \$19,752/year
 6. Truck cost will depend on type of fuel and capital investment of truck. Assume \$.95⁷ per mile including fuel at 1000 miles per month for 12,000 miles per year. (12 miles on route, average 27 miles for haul to dump and return to garage, 6 miles from garage to route.)
Total = \$950/month or \$11,400/year

Cost to the average homeowner:

--\$58,001.90 + 19,752 + 11,400 = \$89,153.90 total yearly cost

- \$89,153 ÷ 8,500 residents = \$10.50 per year for each "average" resident.
--with 20% overhead -- \$106,984 ÷ 8,500 residents = \$12.59 per year for each "average" resident.

Case II

- Assume:
1. All yard debris that had been burned in the past for disposal, will now be hauled for disposal by a collector-- approx. 84,784 cu. yds. of waste.⁸
 2. The collection of yard debris will occur separately from household garbage.
 3. Same as Case I.
 4. Same as Case I.
 5. Based on volume estimated, the average homeowner would have approx. 1/3 cu.yd. or 2 garbage cans per year to get rid of (.17/month).

Dumping Cost:

- 8,500 residences at .17 cans per month = 233 cu.yd/mon.
--using a 25 yd. compactor truck at 2.5 to 1 compaction ratio = 93.2 cu.yd./mon.
--93.2 cu.yd./mon. with 25 cu.yd truck = 4 loads/mon
--93.2 cu.yd./mon. at \$2.00 per yard for disposal = \$186.40 per month or \$2,236.80 per year
6. Same as Case I.

Costs to average homeowner:

- \$58,001.90 + 2,236.80 + 11,400 = \$71,638.70
--\$71,638.70 ÷ 8,500 residences = \$8.43 per year for each "average" resident.
--with 20% overhead -- \$85,966 ÷ 8,500 residents = \$10.12 per year for each "average" resident.

NOTE: The cost for collection is heavily based on labor & transportation rather than volume. Actual cost for the increase material could be nothing if incorporated with regular household garbage since volumes are so small.

Case III

- Assume:
1. All woody waste yard debris will be collected for resource recovery and hauled by a collector--approx. 114,930 cu. yds.
 2. Same as Case I.
 3. Same as Case I.
 4. Same as Case I.

5. Based on volume estimates, the average homeowner would have approximately 1/2 cu.yd. or 3.1 garbage cans per year to get rid of (0.26 cans/month).

Dumping Cost:

- 8,500 residences at .26 cans per month = 356.5 cu.yd/month
- using a 25 yd compactor truck at 2.5 to 1 compaction ratio = 142.6 cu.yd./mon.
- 142.6 cu.yd./mon. with 25 cu.yd. truck = 6 loads per month
- 12.6 cu.yd. at \$2.00 per yard for disposal = \$285.20 per month or \$3,422.40 per year.

6. Same as Case I.

Costs to average homeowner:

- \$58,001.90 + 3,422.40 + 11,400 = \$72,824.30
- \$72,824.30 ÷ 8,500 residences = \$8.56 per year for each "average" resident.
- with 20% overhead -- \$87,389.16 ÷ 8,500 residents = \$10.28 per year for each "average" resident.

NOTE: Same as Case II.

Summary

There is no such thing as an average homeowner. However, one might try to gauge his actual cost by estimating his total yard waste and then comparing it with the average. Depending on the waste one might try to collect (total vs. previously burned vs. woody waste only), one could expect to pay from \$.64 to \$4.28 per garbage can for disposal. Obviously, the \$.64 reflects the economy of scale while \$4.28 reflects a very specific collection system recovering less volumes. Total collection costs for the Metro Area based on the above three alternatives, not including the 20% overhead, are:

Case I	=	\$2,674,590
Case II	=	\$2,149,161
Case III	=	\$2,184,729

Metro's consultant, Resource Conservation Consultants, also came up with cost estimates for households to have their leaves and grass previously burned, collected. Their annual costs range from \$0.75 to \$2.00 and are displayed in Attachment 10, Table 3.

Information Sources:

1. 1980 DEQ Yard Debris Survey
2. 1976/1977 Building Permit Statistics
3. Rossman's Sanitary Service cost projections

4. Davis, Calif., yard waste collection service
5. 1980 DEQ Yard Debris Survey
6. Rossman's Sanitary Service cost projections
7. Rossman's Sanitary Service and "An Analysis of the Waste Collection Industry in Portland" by RCC.

IV. Yard Debris Utilization
Economic-Energy Balance

With the prospect of an increase in waste disposal due to a ban on burning of yard debris, several alternatives have been studied. One of the most attractive alternatives to date has been the prospect of converting the woody yard debris to a fuel source, hog fuel. Such an alternative would rely heavily on private enterprise while keeping collection costs to the homeowner at a minimum.

Other processing alternatives suggested for yard debris material include soil amendment and ground cover for horticultural purposes. If these alternatives become financially attractive for a part or all of the waste, they should be pursued to reduce landfill impact. However, to recover energy from energy spent, i.e., collection vs. hog fuel product, one would pursue the waste to fuel alternative. Such an alternative appears most attractive when woody material can be segregated from other types of yard debris (leaves, grass and certain prunings).

One firm that is already converting woody yard debris to a hog fuel exists in Houston, Texas. Their operation and analysis was used to take a look at the economic-energy balance for such an operation in Portland. This analysis revealed that one would realize a net energy gain equivalent to 67,760 barrels of fuel oil/year. See Attachment 11 - Table 2.

V. Yard Debris Utilization - Environmental Impacts

Air, Water, Noise, and Solid Waste Impacts of Different Yard Debris Disposal Methods

The environmental effects have been evaluated for three different disposal alternatives. The options evaluated were:

- o Landfilling of material - controlled to protect against groundwater contamination with leachate collection, treatment and disposal; appropriate gas venting measures.
- o Use of materials as hog fuel for wood-fired boilers - controlled to keep emissions as low as practicable.
- o Use of materials as fuel in Metro's planned refuse boiler - controlled to keep emissions as low as practicable; off-stream cooling of heated water.

Generally, noise impacts are the most significant among the potential environmental effects, and those adverse impacts may be mitigable by sound barriers or by the use of quieter chippers.

Air Quality Impacts From Collection Vehicle Traffic

Under the assumptions delineated in Table 2, yard debris haul trucks would produce about 5 tons/year of particulates if each household were to have twice-yearly pickup service. About 20 percent of this or 1 ton per year would be in the form of fine particulate as compared to 460 tons per year of fine particulates from burning the material. Collection vehicles would likely be trucks which currently collect and would still collect from commercial sites and thus some portion of those emissions already exist under current conditions. Therefore the emissions impact from transport appears to be negligible compared to the emissions from open burning. CO and HC emissions from collection trucks would also be low compared to emissions of those pollutants from burning.

Air Quality Impacts From Different Burning Techniques

Landfilling of yard debris would involve no burning and negligible emissions during the site management operations. However the options of burning the debris in boilers would also substantially reduce the emissions. Per the assumptions in Table 2, burning the yard debris in a typical hog fuel boiler would result in an emission rate of about 5 pounds of particulate per ton or only 25 percent of the emissions from open burning. Burning in the Metro refuse boiler would probably produce about 1.5 pounds of particulate per ton or about 8 percent of the emissions from open burning. The ambient air quality impact would probably be less than 10 percent or 3 percent respectively of that from open burning because the hotter concentrated plume from a boiler stack has considerably more loft than the cooler disperse ground level plumes from open burning. Boiler emissions would also be released in relatively unpopulated industrial areas as compared to open burning emissions which occur in residential areas. Thus on a relative impact basis, the particulate air quality impacts, compared to open burning, can be estimated at 0 percent for the open burning impact for landfilling, 10 percent for burning in a hog fuel boiler, and 3 percent for burning in the Metro refuse boiler.

Water Quality Impacts

Burning the yard debris in a boiler would not likely have any adverse impacts on regional water quality. Decomposing wood soaking in water can produce leachate which includes tannins, organics and other chemical constituents. This would not likely pose any significant impact outside of the landfills because the waste is less than 10 percent of the daily household waste stream.

Noise Impacts

Increased noise impacts could be produced by either the collection trucks in neighborhoods or by the chippers at the chipping locations. Neighborhood noise impacts would be similar under any of the three alternatives. Compacting by garbage trucks typically produces noise in the 80 to 85 decibel range. Restricting compacting operations to after 7 a.m. and before 10 p.m. could probably eliminate significant noise impacts in neighborhoods.

The landfilling option would not involve chipping and thus no significant difference from baseline noise conditions would be expected. The estimated 46,000 tons per year of yard debris production the Portland area represents about 5 percent of the amount deposited in Portland area landfills annually. If the yard debris were distributed equally between these two locations, activity rates and noise levels might be expected to increase about 10 percent.

Noise from chippers is the potentially significant noise problem from any of the three alternatives. Noise generated under either of the boiler options would be would be approximately the same.

Chipper noise measurements for a pulp core chipper conducted by source testing consultants in Oregon indicate that the L_{50} , L_{10} , and L_1 , * decibel readings are about 60, 71, and 76 decibels at a distance of 250 feet from a chipper. These values increase to 66, 77, and 82 decibels, respectively at a distance of 125 feet.

The industrial and commercial noise standards for existing or new operations are L_{50} , L_{10} , and L_1 , levels of 55, 60, and 75 decibels respectively. This means that some special arrangements might be needed to ensure that noise levels from chippers remain below the noise standards. If the same chippers and operating conditions are assumed as from the available source test data, the chipper would need to be 1000 feet distant from a residence in order to have L_{50} , L_{10} , and L_1 , levels of 48, 59, and 69 decibels which is slightly below the standards of 55, 60, and 75, respectively. Alternatively either a quieter chipper or some noise reducing structure could be employed to maintain levels below DEQ noise standards.

* An L_{50} level of 60 decibels means that noise levels exceed 60 decibels for 50 percent of an average hour.

Solid Waste Impacts

Landfilling of the region's yard debris would use up some fraction of the regions available and operating landfills. The 46,000 tons of yard debris previously burnt annually in the Portland area is 5% of the 800,000 tons per year presently being disposed of in area landfills.

Burning of the region's yard debris in hog fuel boilers would reduce the mass of material to be landfilled by 98 percent.

Table 2

Assumptions Used In Calculating Environmental Impacts From Different Disposal Practices

- o 255,000 single family dwellings.
- o Each dwelling receives monthly service.
- o One truck services 8,500 residences per month in addition to commercial sites.
- o One truck averages 45 miles per day.
- o Fifty trucks are in operation per day.
- o Annual truck miles are 360,000 per year.
- o Truck particulate emission tractors are 8 grams per vehicle mile if road dust is included.
- o A .1 grains per standard cubic foot of exhaust air particulate emission rate is equal to about 5 pounds of particulate per ton of wood.

- o A .1 grains per standard cubic foot particulate emission rate would be expected for most hog fuel boilers.
- o A .03 grains per standard cubic foot particulate emission rate would be expected for the Metro refuse boiler.
- o Open burning particulate emission factors are 20 pounds per ton.

VI. Policy Analysis Section

In the Department's contacts with citizens and local jurisdictions a number of proposals on how to handle open burning and yard debris in the Portland Metropolitan Area have been discussed. The range of possible scenarios here included:

- null alternative
- ban backyard burning
- continue on the seasonal burning basis
- allow backyard burning year round to ensure adequate ventilation and maximum burning conditions to limit pollution build up
- ban backyard burning but allow exemption for large parcels of land, or special circumstances

A brief discussion of these alternatives may be helpful.

A. Null Alternatives

Backyard burning contributes to the ambient levels of smoke in the Portland airshed. Portland now violates federal clean air standards for high concentrations of smoke or particulates. DEQ is responsible for ensuring that Portland meets clean air standards as quickly as possible, and at least by 1987. The DEQ believes that banning backyard burning will improve air quality and has included the ban on backyard burning in the list of air pollution abatement programs that have been filed with the federal Environmental Protection Agency. Those abatement programs must ensure that Portland will meet clean air standards. If the Environmental Quality Commission should decide that a partial or complete ban on backyard burning is not prudent, additional air pollution control measures, possibly tighter industrial controls, will be necessary to ensure Portland will meet and stay within clean air standards.

B. Ban Backyard Burning

The effects of a ban on backyard burning are explored in detail throughout this report. Promiscuous dumping, fire hazards, open burning violations will undoubtedly increase. In other areas where a prohibition has been established such events occurred but decreased rapidly as soon as it became apparent that alternative means for disposing of yard debris were available.

C. Continue Backyard Burning on a Seasonal Basis

The idea of continuing backyard burning on a year-round basis and managing the smoke through a better meteorological control program has been forwarded by several fire departments and individuals. Advocates of the year-round burning season claim that by more selectively choosing burning days, the most beneficial conditions for ventilating the smoke out of the airshed could be picked. Increasing the number of burn days would eliminate the pressure of burning when restrictions are lifted and allow homeowners to ensure that the debris was adequately dried and properly prepared for burning.

The Department does not believe that a year-round backyard burning season will solve the air pollution or smoke nuisances in urban Portland neighborhoods. In fact, some reverting to burning all types of material could occur.

Exact predictions of weather and wind conditions for a 24-hour forecast, although greatly improved over the past decade, is still an inexact science. Even with increased staffing and more sophisticated weather forecasting equipment, the Department does not believe that serious smoke build-up in the city can be avoided by attempting to maximize ventilation conditions. The Department's past experiences with other smoke management programs, most notably the field burning program and the slash burning program has proved that the problems can be reduced but not eliminated.

Even with improved techniques to accurately gauge the ventilation height and radio communication to each burner, the Department has not been able to eliminate serious smoke intrusions in Mid-Willamette Valley communities. Communication about altered burning forecasts to the million Metro area residents would be very difficult, should weather or ventilation conditions alter, as they definitely do.

Enforcement is a key to the success of year round regulated burning to ensure that no or little burning was conducted under adverse meteorological conditions. The majority of the enforcement burden for open burning rules falls to the local fire district. The Department believes the policing force necessary to ensure a high level of performance (burning would be restricted to days of good ventilation and dry material with good burning practices) would be excessive.

D. Ban Backyard Burning But Allow Exemptions for Large Parcels of Land

Even though the boundaries of the backyard burning area are proposed to be reduced substantially from the original four-county ban area, some areas within the proposed boundary may not be suitable for non-burning alternatives for disposal of yard debris. Some very large lots, or areas that are heavily wooded and on very steep hills may make recovery of debris for chipping, mulching or composting impossible.

The Commission or Department could allow variances or special permits from the rules for hardship cases. This would allow those homeowners which find compliance with the burning ban impossible to come to the Department or the Commission on a case-by-case basis for relief. Standards for the variance or permit would need to be set by the Commission and they might include; amount of land involved, proximity of other residents, attempts to use other non-burning methods, accessibility to material, etc. The Department could still regulate these variance or special permit burners according to the proper meteorological conditions, and could require best burning practices for large amounts of material.

VII. Boundary of Prohibition

Establishing a reasonable and manageable boundary is most important. The policy statement of the EQC in OAR 340-23-025 says in part "...it is the policy of this Environmental Quality Commission: to eliminate open burning disposal practices where alternative disposal methods are feasible and practicable,"

Since early 1979 the Department has been working closely with the local government entities to identify and help develop open burning alternatives within each local governmental entity. It is apparent that alternatives will not be readily available except in the highly populated areas. Therefore, in keeping with the Commission policy statement, it is proposed that the boundary where an open burning prohibition will be effective

should be the area where alternatives are likely to be available. This area is the more populated area in and around Portland.

The placement of the proposed boundary was governed by at least three considerations:

- (1) Delineation of high population densities.
- (2) Availability of alternatives.
- (3) Ability to administer the prohibition.

Administratively, control of open burning is a function of the fire departments. The boundary for the open burning ban has been drawn mostly along fire district boundaries which closely follow the Metro boundary. In a few places the boundary has been placed along a city limit or prominent roadway.

A detailed description of the proposed boundary and the rationale for its selection is included in Agenda Item No. K (1), January 30, 1981, EQC meeting.

VIII. Summation

Over the past 18 months the Department together with the City of Portland, City of Lake Oswego, City of Milwaukie, Metro and other communities have spent a considerable amount of time developing the above information. The EQC and the Department felt this effort was necessary as backyard burning has long been an issue of public sensitivity in the Portland area-- on both sides of the issue. The Portland area is one of a few metropolitan centers in the country where the practice of open burning is still allowed.

The positive aspects to burning are:

- a. It provides a cheap method of reducing the volume of yard wastes generated by clean-up and pruning.
- b. It places no burden on already overburdened landfills.

The negative aspects are:

- a. Vegetative burning has been identified as a major source of fine particulate matter and visibility impairment.
- b. Recent studies by the Oregon Graduate Center indicate the presence of cancer-causing compounds in wood smoke.
- c. It causes citizens nuisance complaints each season from eye, nose, throat irritations, odors, and soiling of property.

- d. It wastes a potential energy resource which can be burned as fuel an/or utilized as a potential land amendment.

Other aspects that are pertinent include:

- a. The yard debris survey revealed that by a 2:1 margin people living in single family dwellings, those that produce the vast majority of yard debris, favored a ban. Those supportive of a ban perceived a need to either reduce the nuisance, improve the air quality, or find a beneficial use for the waste.
- b. Large and difficult terrain lots do exist within the urban area and some means should to be included in the rules (Agenda Item No. K (2), January 30, 1981, EQC meeting) for allowing hardship burning where alternatives are not available.
- c. A reasonable and manageable boundary for the prohibition of open burning has been proposed. (Agenda Item No. K (1), January 30, 1981, EQC Meeting). The boundary for prohibition should eventually cover the entire Metro area. The phasing in of the boundary to coincide with the Metro area should be accomplished when the alternative disposal methods and/or recovery program is in place and operable within the proposed reduced area.
- d. On an interim basis, the local entities should be encouraged to provide storage sites for yard debris so that at least the woody material can be processed and not landfilled. As an option if that material cannot be processed, a special permit to burn the material on a controlled basis would be considered (Agenda Item No. K (2), January 30, 1981, EQC meeting).
- e. In reviewing the potential particulate control strategies the cost per ton per year for industrial point source emission controls versus an open burning prohibition should be compared. The costs for industry ranges from \$2,340 per ton per year to \$7,200 per ton per year. Open burning emission control ranges from \$4,700 per ton per year to \$5,800 per ton per year. These open burning costs are directly paid by the public instead of indirectly through cost adjustments in an industry's product.
- f. From our viewpoint, Metro's Waste Reduction Task Force's general policy recommendations, which include: "coordination or leadership of Metro in a promotion and education program for alternative yard debris disposal as well as other aspects of waste reduction; private sector operation of the major program elements; coordination by Metro with local jurisdictions of existing collection systems; and individual homeowner responsibility for program costs", is valid and essential for an area-wide solution to be implemented as quickly as possible.

- g. If all the material that was previously open burned was landfilled, the impact on the existing landfill sites would be an increase of 5%. However, an opportunity exists to implement a Recovery Program, especially for woody wastes, that would decrease the waste currently being landfilled. Yard debris presently going into a solid waste site would then be a resource, not a waste. Woody waste materials currently going to the landfills represents approximately 17% of the total municipal waste generated. This material could potentially be diverted to energy production or other useful purposes.
- h. Individual on-site or neighborhood composting of grass clippings and leaves is an entirely practical alternative way to deal with these materials.


WILLIAM H. YOUNG

- Attachments 1^a "Alternatives to Open Burning of Domestic Yard Debris Appendix not included.
- Attachment 2 Portland Air Quality Advisory Committee Resolution, October 9, 1979.
- Attachment 3 Agenda Item K., February 22, 1980, EQC Meeting.
- Attachment 4 Correspondence from local jurisdictions.
- Attachment 5^a Draft "Metro Yard Debris Recover Program" Executive Summary and Table of Contents.
- Attachment 6 Agenda Item No. N., December 19, 1980, EQC Meeting
- Attachment 7 Residential Burning Prohibition: What's Happening Around the U. S.
- Attachment 8 Portland Metropolitan Area - Yard Debris Survey.
- Attachment 9 Portland Demonstration Project: Kelly Butte - Regional Land Clearing - Hog Fuel Value
- Attachment 10 Metro's Resource Conservation Consultants Household Costs Estimates.
- Attachment 11 Yard Debris Utilization: Economic - Energy Balance.

^aFull Reports for Public Perusal at DEQ, Portland Office.

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"Alternatives to Open Burning
of Domestic Yard Debris"

Appendix not included.

Alternatives to Open Burning of Domestic Yard Debris

PREPARED FOR:

PORTLAND AIR QUALITY MAINTENANCE
AREA ADVISORY COMMITTEE

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1. Introduction

The Solid Waste Division's involvement in developing alternatives to open burning of domestic yard debris is a result of the efforts undertaken by the Portland Air Quality Maintenance Area Advisory Committee (PAQMAAC). Their efforts are directed at documenting the problems associated with open burning and justifying and presenting alternatives via the DEQ. Transitions from open burning to alternative disposal methods will develop only if firm compliance schedules on burning are developed and enforced by DEQ. Since a ban on burning would result in a potential solid waste disposal problem, the Solid Waste Division was asked to determine the probable impact of a burning ban on existing solid waste collection and disposal systems and to identify and evaluate various alternatives.

In identifying possible alternatives, factors such as economics, public and industry attitudes, environmental effects, yard debris as a resource, material characteristics and existing circumstances were considered. Only those potential alternatives considered to be feasible within the scope of these factors were identified and evaluated in this report.

A number of communities (Seattle, Berkeley, Sacramento City and County and Gladstone for example) have implemented yard debris collection and disposal programs. For the most part (excluding Berkeley) they initially took a segmented approach to the problem (i.e., established a collection system but did not develop a means to use the material other than in a landfill). Now, many of the cities, such as Seattle, are looking to material utilization as a means of decreasing the amount of solid waste to be disposed and thereby increasing landfill life.

A unique situation exists in the PAQMA in that a specific time period has been proposed to allow local governments to develop a holistic approach to dealing with domestic yard debris collection and utilization or disposal. Ultimately, an alternative should be selected which provides for the best practicable management of this material. Yard debris accumulation is a seasonal activity with highs occurring during the spring and fall months. Any approach to developing an alternative to open burning should include provisions for volume fluctuations.

The alternatives and recommendations presented here are in response to the needs of the Portland metropolitan area, but they may be applied elsewhere. The suggestions made are the culmination of ideas from other operational projects and thus could have application in a wide variety of situations similar to the Portland area. These alternatives should by no means limit the development of other comprehensive approaches to achieve the stated goal.

The Solid Waste Division was asked to estimate the volume of domestic yard debris generated in the Portland metropolitan area. In pursuit of this information, it became evident that there was no available volume data for this area. Accordingly, several other communities were surveyed to get a rough estimate of what their volume increases were following a ban on open burning. From their responses it was concluded that urban areas would probably see a solid waste volume increase of somewhere around 30 - 40%.

However, additional activities to dispose of yard debris prior to a ban on burning, which are community specific, may reduce the volume increases felt after such a ban. To assist in determining a record of the present volume of material being generated, the Metropolitan Service District (MSD) has also agreed to estimate the volume of yard debris presently entering the landfills and that which is being burned. (Refer to MSD's domestic yard debris report.)

Fire permits were suggested as a means of measuring yard debris volume. Fire departments use the open burning permit system primarily to educate the public as to when, how, and what can be burned. No records of the volume of material burned are normally kept. Only one of the counties could even report the specific number of permits issued. Based on this skimpy data it was roughly estimated that 200,000 domestic burns occur each year in the urban areas of the City of Portland, Washington, Multnomah and Clackamas Counties.

11. Recommended Practice for a Comprehensive Domestic Yard Debris Collection and Disposal Program as an Alternative to Open Burning

In evaluating public comments relative to alternative development, it is obvious that no one alternative will satisfy everyone. Some physical and financial burdens will be placed on the individual to prepare, transport and properly dispose of domestic yard debris no matter what the alternative. However, we must realize the need for environmental balance and every individual must accept some responsibility in protecting that balance.

Cost, available resources, public and private attitudes, and environmental effects were considered in developing a recommended alternative to open burning of domestic yard debris. A recent survey to evaluate public attitudes toward government and business show a strong public commitment to free enterprise and free market systems. Thus, an emphasis is placed on the private development of alternatives to open burning. Local governments may best serve their constituents by acting as a coordinator of alternative development by encouraging private businesses and/or community involvement into the process of collection and disposal of domestic yard debris.

At present, there isn't a comprehensive program in the Portland metropolitan area for collection and disposal of domestic yard debris. There are, however, a few segmented efforts to provide assistance in leaf and bush disposal (i.e., Portland's fall leaf collection and Hillsboro's chipper service). In the event of a ban on open burning, such segmented efforts would be a starting point for individual communities to expand upon while maintaining their own autonomy or for initiating a new comprehensive metropolitan program coordinated by MSD.

A. Collection

Recommended Practice: Yard debris would be kept separate from other domestic refuse. For yard debris other than limbs, branches and prunings, existing commercial refuse collectors could collect the material from individual residences and transport it to the composting or disposal site of choice. Sites should be located near the metro area to facilitate convenient dumping and low cost operation. The shorter a distance to the dumping site, the greater the potential for reduced operational cost and service fees.

A user fee, as supported by the collectors survey, would be the most equitable means of payment for services rendered. User fees would exclude those individuals who don't use such a service and would allow one the choice of self-hauling. One could expect to pay a collection fee of \$1 - \$2 per bag, box, bundle or can not to exceed 60 pounds. Any collection service should be offered weekly to prevent excessive accumulation of yard debris.

Limbs, branches and prunings should be separated from both yard debris and municipal garbage for chipping. A separate chipping service should be set up to provide two functions: (1) pre-processing for composting or pelletizing operations and (2) volume reduction for landfilling. Such a service could be offered on an individual request basis or as a neighborhood project. There are a number of chipper services throughout the Portland metropolitan area in addition to some chippers that the cities are operating. Fees for chipping service run from \$25 - 40 per hour.

B. Compost

Recommended Practice: Compost all acceptable domestic yard debris and sewage sludge. Several composting projects are operating throughout the United States and have proven to be a viable alternative to open burning of yard debris. If markets are adequately developed, it is possible that a compost project or a number of projects could accept and process most all the vegetative yard debris and a large amount of the digested sewage sludge produced in the Portland area.

Before starting any compost project, serious consideration must be given to securing markets. Lack of firm markets is the primary reason that many composting projects have failed. Compost is a product with several potential market applications, but it must compete with other well established products. It may be used for agricultural, horticultural and for a variety of other applications as a soil amendment. The nutritive value of compost will vary according to the type of wastes composted and the method used, but it is generally low compared to synthetic chemical fertilizer. Initial studies indicate vermiculture (worm growing) increases the nutritive value of composted woodwaste and sewage sludge. It should also be noted that composting has an additional economic incentive for development through the state's tax credit program for the private sector and grant/loan program for local governments.

In utilizing sewage sludge, precautions need to be taken to prevent utilization of sludge with high concentrations of cadmium (concentrations in excess of 25 mg/kg dry weight) and other heavy metals. An analysis should be done on the digested sludge prior to delivery at the compost site(s). This preliminary analysis will allow the compost operator to reject the sludge prior to delivery if it is high in heavy metals or other hazardous materials. Digested sludge is normally pathogen-free, but the heat generated during composting provides additional assurance that the final product will be biologically safe.

A compost project site should ideally be located on-site at the main landfill serving specific geographical areas or at sewage treatment plants. By locating near the landfills and treatment plants, one could capitalize on existing hauling patterns and projected transfer site operations. Location of a composting project on a landfill or sewage treatment site should not negate the possibility of private operation of the compost project. Several smaller composting projects may achieve better local acceptance than one large site.

Operation of a compost project may be conducted by the local government (such as the Berkeley project) or by private enterprise. There are currently three separate attempts within or near the metropolitan area to establish an ongoing compost project. The projects have some differences, but all have the same goal of organic waste utilization. The three projects are described in Appendix F, G, and H.

III. Financial Aid for Project Development

Two financial incentives are available from the state for the development of alternative solutions to the collection and utilization of domestic yard debris. The incentives differ in who can qualify. One provides an incentive for the private development of solid waste recovery systems, and the other provides financial support to local government for planning and implementation of solid waste programs.

Special funding to local governments for developing solid waste alternatives is authorized under Oregon Administrative Rules (OAR 340-82-005-055) entitled "State Financial Assistance to Public Agencies for Pollution Control Facilities for the Disposal of Solid Waste". Funding is administered by the DEQ's Solid Waste Division. Local government's planning and implementation of projects for the development of alternatives to open burning of domestic yard debris would be eligible for grants and low-interest loans. Since an open burning ban would affect all local governments in the MSD area, it may appear most reasonable for any alternative selected to be coordinated by MSD. (See Appendix A.)

Financial incentives to private entrepreneurs are available through legislation originally adopted in 1967. The program known as "Pollution Control Facility Tax Relief", encourages the construction and installation of facilities to utilize solid waste to produce energy or other useful products. Tax credits are available for 100% of the cost of a facility which produces an item of real economic value from solid waste. In 1977, amendments expanded the definition of a solid waste facility to include additions to existing facilities which will increase the production or recovery of useful materials or energy over the amount currently being produced. This program is also administered by the Solid Waste Division (refer to Appendix B).

IV. Collection Alternatives

Alternative: Collection Under Government Contract

Private collectors would be under contract with a local government to provide a collection service for a specified geographical area. Such a service would be made available to all residents in the designated area.

A collection service for domestic yard debris is operated in a similar fashion to that for household waste. Collection would occur on a weekly or bi-weekly basis, picking up yard debris as it is set on the curbside. Such collection would prevent excessive accumulation of debris and establish a pattern for ease of citizen participation. Material preparation standards (e.g., bundle size) would be established by the collector.

An appropriate means of determining a contract fee for a residential area would be to base the fee on the total number of single family dwellings and calculate a separate fee for multi-family dwellings. An accurate account of such dwellings may be surveyed via the water department (i.e., count the number of water meters). Such a method of cost determination does not, however, take into account those that wouldn't use the service or other volume fluctuations.

A second method of fee determination would be for the collector to record all residences served and submit a monthly tabulation for reimbursement. Two variations of this system are discussed below. Actual costs are very similar to that of domestic garbage collection.

- Example: 1. The City of Gladstone, Oregon is currently in contractual agreement with Gladstone Disposal Co. to have domestic yard debris collected once a week. Currently the City pays Gladstone Disposal Company approximately \$17,000 per year for this service. With a population of 9,350 in 1978, it costs the taxpayer \$1.82/capita/year for domestic yard debris collection. (See Appendix C for contract agreement.)
2. The City of Seattle contracts with private collectors for pickup of domestic yard debris. The collector records the residences served, then the City bills the residence and reimburses the collector. Their reason for such a system is that it divides the potential market among the collectors and insures a service for the resident.

Advantages:

- * A consistent weekly service is available to every resident.
- * Undue hardships would not be imposed on individuals with fixed incomes if the service is tax supported.

Disadvantages:

- * Volume fluctuations would make it difficult to fix costs and establish equitable fees.
- * A tax supported service would create a system where all tax payers would pay for the service whether they use it or not.

Alternative: Individual Collection Agreements with Private Collectors

The individual would be responsible for subscribing to existing garbage collection services for the pickup of domestic yard debris. Such a service would be conducted in a similar manner to household garbage collection. Material preparation standards would be established by the collector.

By using the services of existing garbage collectors, capital outlay would be minimal and should be attractive to the public. Actual costs for a domestic yard debris collection service would be very similar to existing garbage collection costs. Survey results from collectors in the Multnomah, Clackamas and Washington County areas indicate estimated service charges of \$1 - \$2 per bag, 32 gal. can, bundle or box of domestic yard debris. Actual cost may vary depending on the collection process. (See garbage collector's survey, Appendix L).

Advantages:

- * Equitable system; the individual pays only for the disposal of what he produces.
- * Utilizes an existing service with some modifications.
- * User may subscribe to a one-time service.
- * Popular solution due to its private, as opposed to public, involvement of collection services.

Disadvantages:

- * Increased burden on those with fixed incomes.
- * If waste was not collected separately from domestic garbage, it would be hard to separate later. Most debris would end up in the landfills.

- * Does not adequately address the collection of large limbs, branches or prunings.
- * Precludes chipping on-site if chipper service not offered.

Alternative: Collection by Government Agency

This method of collection would involve the creation of a solid waste collection operation within a public works department. If a department didn't have adequate equipment, one could expect a considerable amount of capital outlay to initiate a yard debris collection program.

Several communities provide this service, an example is given below. None of the communities surveyed that provided yard debris collection provided a free service. A user fee was charged to all who used the service. Complete assessment evaluations were required from time to time to insure that the existing rate schedules were sufficient to cover costs of the program.

Essentially, the program would consist of one packer truck with a two-man crew assigned to specific routes. A number of routes and crews would have to be established to provide a weekly service throughout the individual communities, certain material preparation rules would have to be established for consistent fee scheduling and ease of pickup.

Example: The County of Sacramento, California, implemented a rubbish collection program in 1971 following a ban on domestic burning of such material. One advantage the County had was that they were in the business of garbage collection prior to the rubbish collection program.

For projected costs, fee schedules, pilot project studies and program balance sheets, see Appendix D. (Please note Regulations for Refuse Collection Service for Single Family and Duplex Dwellings). The County of Sacramento currently landfills its collected waste as a means of disposal.

Advantages:

- * Additional services (i.e., chippers) could be incorporated into the collection system to achieve a comprehensive program.
- * Program would be easier to bear for those on fixed income.
- * Services available to everyone on a routine basis, weekly or biweekly.

Disadvantages:

- * Competition with local businesses.
- * Large capital outlay required to initiate program for accounting and physical operations.
- * Public attitudes do not favor new government programs.
- * Segmented service; coordinating services would be difficult due to the number of local governments involved in the Portland metropolitan area.

Alternative: Public Transport

Public transportation of yard debris material to a transfer or disposal site would require the individual to rely on his own resources for removal of his yard debris. The individual would collect and transport his material to a central collection point (transfer site) for the neighborhood or geographical area. A dumping fee may or may not be charged depending on the extent of government subsidy.

Example: Currently there are a number of Oregon counties utilizing transfer sites. Each site serves a specific geographical area and usually accepts a wide variety of materials. When the collection boxes are filled, the material is then transferred via truck to the sanitary landfill or, in some cases, to a recovery project site. Attendants are necessary to insure proper dumping and material separation (if required).

MSD has proposed and researched the development of a transfer site program for the metropolitan area. For further information relative to cost projections, etc., contact MSD.

Advantages:

- * Would give individuals a flexible disposal option due to daily availability of the transfer site.
- * Allows lower collection costs to the individual.
- * Allows easy incorporation of chipping activities at the transfer site for pre-processing and volume reduction of limbs, branches and prunings.

Disadvantages:

- * Places a hardship on those without a means of transportation.
- * Acquisition of appropriate transfer sites may be difficult.

Alternative: Neighborhood Projects

Neighborhood projects would consist of a neighborhood cooperative effort for yard debris collection. Most neighborhood projects are primarily concerned with limbs, branches and prunings disposal. Other types of waste items such as grass clippings and leaves are normally incorporated into the household garbage or collected by the city's public works department.

Typically, neighborhood projects establish one or more collection points for brush accumulation. A brush chipper is usually located at these collection points for volume reduction. A few individuals will take the chips for garden or other horticultural uses, which reduces the total volume to be disposed.

Local governments and neighborhood organizations can play a major role in coordinating project activities. Cooperative efforts can provide pickup for those without the means to transport their debris to the collection point. The pride of community involvement runs high in such a project in that people are solving their own waste problem while helping others to do the same. Brush clean-up projects are coordinated on a seasonal basis to coincide with peak brush periods.

Example: 1. The City of Salem (Appendix E)

The City of Salem sponsors an annual campaign to provide the citizens with an opportunity to clean up their homes, yards, basements and garages, and dispose of the refuse free of charge. Out of the hotel/motel tax monies, \$5000 is budgeted each year for campaign coordination and public notice efforts.

Fourteen of the 15 neighborhood associations, excluding the central business district, participated in the campaign. Twelve collection sites were located throughout the city, some providing chipper service while others were strictly collection points. Various collection companies and service organizations volunteered their efforts to assist in collection and disposal (see Appendix E).

2. Woodlawn-Vernon Neighborhood Clean-Up Project coordinated a collection program which allowed residences to bring their brush to a park site. An Informational flier was distributed throughout the neighborhood to inform people that they could bring their tree limbs, branches and prunings to a park where a chipper would be operating.

Approximately 15% of the brush received was chipped and transported to a nursery. The remaining brush was hauled to the landfill due to the short operating time of the chipper. Since this project was the neighborhood's first, certain inadequacies were realized, (such as the operating time of the chipper) and would probably be corrected if there were to be another project. Cost of operating the chipper ran approximately \$25/hr.

Advantages:

- * Low cost, utilizes personal resources.
- * Available to all neighborhood residences with the means for transport.
- * Convenience of chip return to the residents for utilization.

Disadvantages:

- * Volume fluctuations may cause problems.
- * Chipped material not returned to the resident must be disposed of at additional cost.
- * Most projects to date only address tree limbs, branches and prunings. They do not adequately serve to collect grass clippings and leaves on a routine basis.
- * Some individuals may not have the means to transport their material.

Alternative: Chipper Service

As a supplement to grass and leaf collections, a private or tax supported chipper service could be offered to collect limbs, branches and prunings. Such a service will reduce the volume of waste, pre-process bulky wood waste for disposal or utilization and increase the homeowner's alternative choices for debris disposal.

There are a number of tree service businesses in the Portland metropolitan area in addition to some public agencies that are currently operating a chipper service for various programs. Trailer-mounted brush chippers are usually towed behind a pickup truck. A container could be mounted on the truck to transport the chipped waste if the homeowner should not wish to retain it. Chips not claimed by the homeowner are currently either disposed of at the landfill or used by nurseries.

A county, city or private chipping program would have to be planned, publicly announced, and advertised in the local news media. Service calls would have to be scheduled through the operators to promote efficient use of equipment and personnel. Possibly a one or two week period in the spring and fall could be designated and coordinated with routine yard debris collection.

Example: The City of Hillsboro began providing a chipper service a few years ago. Since this program began, the city reports a significant decline in open burning. The city charges a flat hourly rate with a \$3.50 minimum service charge. Most calls require 5 to 10 minutes of actual work. Most residents desire to keep the chipped waste for compost, mulch or for landscaping. The charge has been calculated to cover fuel, operating costs, and city labor to keep the program self-sufficient.

Advantages:

- * Volume reduction and pre-processing for alternative disposal methods.
- * Supplementary to additional collection efforts of domestic yard debris.
- * A number of local communities are currently offering a chipper service to their residents.

Disadvantages:

- * Additional disposal cost may place undue hardships on individuals with fixed incomes.

V. Disposal Alternatives

Alternative: Energy Recovery From Yard Debris

Domestic yard debris, in its totality, is a poor fuel source due to its high moisture content and low Btu value. As one separates out specific materials with a lower moisture content, the Btu value would increase. However, the increase in Btu gained by material segregation probably would not be enough to consider any segregated material as a single energy source without mechanical processing. In addition, it is questionable whether a sustained volume exists to develop long-term markets for such material only.

Consideration may be given to inclusion of chipped limbs, branches and prunings with existing hog fuel. A mixture would dilute the debris, thus lowering the collective moisture content and allowing for a better burn. The debris would contribute little to the Btu value of a combined wood waste fuel, but would provide for a means of disposal with adequate source controls.

Yard debris could potentially be processed in a resource recovery plant for production of a refuse derived fuel (RDF). Many of the same problems would exist as with mixing with hog fuel. Moisture content is high and the bulk characteristics of yard debris make it difficult to include a large amount in a resource recovery plant. Some form of pre-processing would be a minimal requirement to avoid problems with the conveyor feed belts. To date, there isn't a resource recovery plant in operation to serve the Portland metropolitan area, but one is proposed. Further information regarding the proposed resource recovery project can be obtained from the Metropolitan Service District.

Aside from industrial applications, another method of energy recovery from limbs, branches and prunings would be the utilization of such debris in domestic wood burning stoves during the winter months. A public education program would be necessary to develop utilization habits and inform the public as to the best time and way to burn the material. For example, the hotter a fire and the dryer a fuel, the better the combustion and the higher the Btu yield.

Advantages:

- * Limited energy recovery from a waste material.
- * Reduction in the volume of material going to landfills.
- * Yard debris can be incorporated into the mainstream of domestic waste for collection and resource recovery if strict material preparation standards are met.
- * Tax credit incentives available to industry for energy recovery, excludes the use in a wood stove or fireplace.
- * Grants and loans available to the local governments for alternative development.

Disadvantages:

- * Inefficient fuel due to moisture content.
- * Dependent on dilution with domestic garbage or wood waste for better combustion.
- * Pre-processing, i.e., chipping required.
- * Processing equipment is costly to purchase and maintain.

Alternative: Fuel Recovery of Domestic Yard Debris via Pelletizing Process (Woodex)

The product, a pellet 1/4" in diameter and about 3/4" long, is created from fibrous organic material such as wood waste, straw, yard debris, or any combination of the three. The process for converting organic material into a fuel pellet is under U.S. Patent. Fiber is pulverized to about the consistency of face powder, moisture reduced to approximately 20% and the dried particulates forced at high pressure through a standard pelletizing mill.

In utilizing domestic yard debris, a mixing ratio of 70% debris and 30% wood waste gives the best Btu value for industrial applications. The heat value of the Woodex pellets (8,500 Btu + 500 Btu) is similar to that of low grade coal and provides an alternative fuel for industrial and domestic applications. For the Portland metropolitan area, a pelletizing mill would have to be constructed, bio-mass sources developed (domestic yard debris and wood waste) and markets established.

Example: Bi-Solar Research and Development Corp. (See Appendix K) Woodex.

Advantages:

- * Energy recovery from solid waste.
- * Tax credit incentive to the private sector.
- * Can utilize all domestic yard debris produced in the metropolitan area, if plant is adequately sized.
- * Potential for variable market applications.
- * Low pollution characteristics

Disadvantages:

- * May need supplemental fibrous material (wood waste).
- * Substantial capital outlay required.

Alternative: Landfill

Landfilling is not necessarily the best method of solid waste disposal but is generally the most economical and available. Such a method of disposal would negate any type of resource recovery and would decrease the projected landfill life due to increased volumes. Most communities that are landfilling their domestic yard debris either have sufficient area not to be concerned about landfill life or are currently seeking alternative disposal methods to keep domestic yard debris out of the landfills.

If landfilling were chosen as an alternative to open burning, and if strict material preparation standards were followed, domestic yard debris collection could easily be included with domestic garbage collection. Some garbage collectors currently offer this service to their customers.

At present, there are four landfills serving the metropolitan area that accept domestic yard debris from the public. The four landfills are Rossman's in Oregon City, the Hillsboro landfill and La Velle's and St. Johns in Portland. All but the St. Johns landfill are scheduled to close prior to 1982. St. Johns will operate to 1985. MSD is currently in the process of siting a new landfill, but not with the expectation of accepting the total volume of yard debris that would result from a ban on backyard burning.

For more information concerning waste volume projections and the landfill situation in the Portland metropolitan area, contact MSD.

Advantages:

- * Simplistic solution to the disposal of domestic yard debris, minimal capital outlay utilizing existing and proposed landfill sites.

Disadvantages:

- * The potential for energy recovery or product development is wasted.
- * Additional equipment may be necessary to properly landfill some yard debris which is bulky or otherwise difficult to compact and cover.
- * Extremely difficult to secure new landfill sites.

Alternative: Composting

A composting project consists of a controlled biological decomposition process utilizing domestic yard debris (carbon source) and possibly sewage sludge (nitrogen source) to produce a product for agricultural or horticultural uses. A compost product is generally thought of as a good soil amendment for conditioning, but its nutritional value to plants is debatable.

Many homeowners practice composting on a small scale for disposal and utilization of their organic wastes. In the event of a ban on backyard burning, communities may wish to encourage individual composting as an alternative to debris pickup and off-site disposal--obvious savings would be incurred. Information on the operation of a single family compost pile, in addition to other recycling information, is available through DEQ's Recycling Information Office at 229-5555.

By producing and marketing compost from solid waste individuals could qualify for the State's tax credit program. Any compost project serving the public would require a permit from DEQ. A composting project is considered a "disposal site" under Oregon law and must be operated in accordance with DEQ standards.

Currently, we are aware of two individuals in or near the Portland metropolitan area who are considering or operating compost pilot projects. Each project would like to compost sewage sludge with either wood waste or domestic yard debris. Certain requirements such as adequate digestion of the sludge and wood chip size are necessary to ensure safe and efficient composting. NOTE: Composting would probably generate enough heat to eliminate pathogens in sewage sludge.

Cloudburst Inc. of Portland has prepared a fairly comprehensive report entitled, "An Examination of Composting Alternatives to Landfilling Organic Wastes." (See Appendix F.) The report presents a fairly intensive study of operational procedures and financial costs of composting projects. Any individual or local government wishing to pursue a compost project should be able to get a fairly good start by referring to this paper, or contacting Cloudburst Inc. and/or the Solid Waste Division of DEQ.

- Example 1: "The Bait Box", operated by Bob Paeth Jr.
(See Appendix G).
- Example 2: "Windfell Farms", operated by Steve Talbott
(See Appendix H).
- Example 3: "City of Berkeley Composting Project",
operated by the City of Berkeley (See
Appendix I).
- Example 4: "DEQ Recycling Switchboard Individual
Composting Guidelines" (See Appendix J).

Advantages:

- * Solid waste is utilized to produce a soil amendment for agricultural or horticultural purposes.
- * Reduces volume of organic material entering the landfill, thus extending landfill life.
- * Two waste items that are normally difficult to dispose of, yard debris and sewage sludge, would have an outlet for continual disposal.
- * Minimal environmental impact with proper operation.
- * Financial incentives for development (tax credits and grant/loans).

Disadvantages:

- * If sewage sludge is utilized, it may be difficult to convince potential markets of its safety.
- * Some capital outlay would be necessary for equipment acquisition.
- * Personnel would be required for full time operation.

VI. Appendix

- A - State Financial Assistance to Public Agencies for Pollution Control Facilities for the Disposal of Solid Waste
- B - Pollution Control Facilities Tax Relief
- C - City of Gladstone Contract Agreement with Local Collector
- D - County of Sacramento Domestic Yard Debris Collection
- E - Salem's Neighborhood Cleanup Day
- F - Cloudburst Inc. Report on Composting Alternatives
- G - The Bait Box - A Worm Composting Pilot Project
- H - Windfell Farms - A Composting Project
- I - City's Composting Project (Berkeley)
- J - DEQ Recycling Office "Composting: Recycling Life"
- K - Bio-Solar Research - Development Corp., "Woodex" Pelletized
- L - Garbage Collectors Survey (Multnomah, Washington and Clackamas Counties)

Portland Air Quality Advisory Committee

Resolution - October 9, 1979

Portland Air Quality Advisory Committee

P.O. Box 1760
Portland, Oregon 97207
(503) 229-6092

RESOLUTION ON BACKYARD BURNING*

WHEREAS, the MSD boundaries were determined on the basis of urban density, and backyard burning is a hazard to more people within these boundaries than without; and

WHEREAS, the Columbia Willamette Air Pollution Advisory Committee hearings in 1971 indicated that the urban areas generally favored no burning, and most of the resistance came from rural areas; and

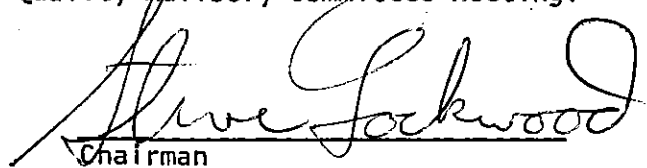
WHEREAS, the MSD is the administrative body responsible for solid waste management within the boundaries and can coordinate solid waste alternatives to backyard burning; and

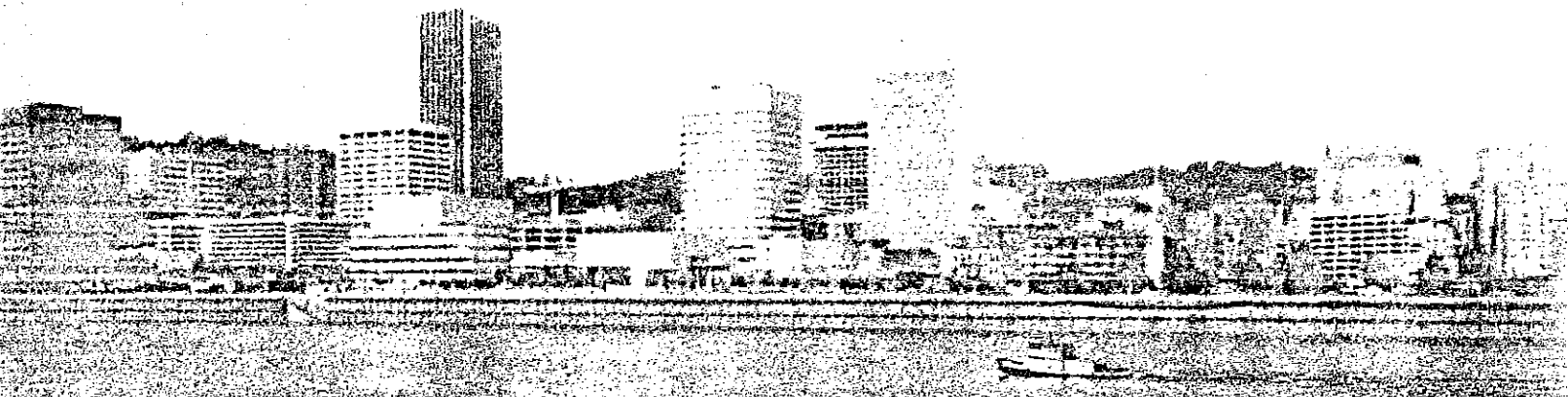
WHEREAS, disposal alternatives are more fully developed within the MSD than without: The whole area is serviced by garbage haulers; a number of wood chippers are available; some communities have leaf pickup; and Portland has neighborhood clean-ups;

RESOLVED that the Air Quality Advisory Committee recommend to the DEQ and EQC that the open burning rules be amended so that the area in which backyard burning will be prohibited after December 31, 1980 be the MSD.

* Backyard burning here refers to spring and fall burning of wood, needle, and leaf debris.

Adopted at the October 9th Portland Air Quality Advisory Committee Meeting.


Chairman



Portland Air Quality Advisory Committee

P.O. Box 1760
Portland, Oregon 97207
(503) 229-6092

October 16, 1979

2
EPA Reg

Dept. of Environmental Quality
RECEIVED
OCT 24 1979

NORTHWEST REGION

William H. Young, Director
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Joe B. Richards, Chairman
Environmental Quality Commission
P. O. Box 10747
Eugene, Oregon 97401

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
OCT 23 1979

OFFICE OF THE DIRECTOR

At our October 9 meeting, our committee passed a resolution which recommends a limiting of the area in which spring and fall burning of yard debris will be banned by December 31, 1980. The greatest need for a burning ban is in the urban areas; yet, the complaints of the rural areas keep a ban from going into effect. Therefore, the Open Burning Subcommittee felt that a boundary change in the rules will make compliance more likely.

Our committee's position on open burning is that alternative disposal methods need to be developed and coordinated. We would like to see the December 31, 1980 burning ban limited to an area which has a reasonable change of providing alternatives by that deadline. After considering fire district, AQMA and MSD boundaries, the latter seemed most appropriate.

At our October 9 meeting we discussed the fact that fire districts would be split. Tom Bispham felt that the districts would be unhappy because people would complain to them. Our committee noted this disadvantage. However, the new law eliminating the requirement for fire departments to give permits for backyard burning will mean less contact between the departments and the public on this issue.

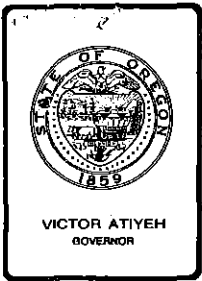
Another point made in favor of the resolution was that residents within the MSD boundaries must already have auto emission tests. They are aware that being in an area of urban density and receiving greater services, they must accept certain restrictions.

The attached resolution passed unanimously.

Sincerely,


Steve Lockwood, Chairman
Portland Air Quality Advisory Committee

Agenda Item K, February 22, 1980, EQC Meeting



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207
522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. K, February 22, 1980, EQC Meeting

Informational Report: Open Burning Status Report--Review of 1979 Fall Burning Season, Available Alternatives and Rule Revision

Background

On June 29, 1979, the Environmental Quality Commission adopted the currently effective Rules for Open Burning and requested the Department to report back to the Commission with:

1. An evaluation of the fall open burning season.
2. An estimate of available alternatives to open burning.
3. A review of the rules to improve understandability.

1. Domestic Open Burning Season, Fall, 1979

Burning Days

The backyard burning season in the fall of 1979 started earlier than in previous years adding about three and a half weeks to the length of the season. The burning decision criteria were more restrictive than in previous years so the number of days in which burning was allowed was not significantly different than previous years. There were 37 days of burning allowed from October 1 to December 13, 1979, and 39 days from October 27 to December 17, 1978.

The hoped for good early season burning weather was not available this fall. While the first half of October was dry, it was mostly unsuitable for burning in the Portland area because of a combination of high east winds causing fire danger and poor ventilation on other days. After the rain started, ventilation factors improved, but the advantage of having dry material was lost.



contains recycled materials

Decision Criteria

The decision criteria were based on a calculation designed to control open burning in the Willamette Valley. Specific consideration was then given to the forecast for the Portland area, visibility in Portland and other valley locations and the 6 a.m. nephelometer measurement from downtown Portland. The nephelometer measurement is strongly indicative of fine particulate concentrations. With respect to the nephelometer measurement, unless it was clear from the forecast that excellent ventilation was expected, burning was prohibited in the Portland area when the nephelometer reading was 1.5 or greater. The nephelometer measurement has not been available in previous years. It is currently being used to help tailor the burn decision to the Portland area.

The staff has initiated the development of a new objective decision criterion. A series of complex factors have been developed involving pressure gradients, visibility observations, temperature lapse rates, atmospheric thicknesses, and jet stream locations. The combination of these factors shows some promise of being useful in making burn decisions in the Portland area. Much developmental work remains to be done before such a system is ready to use.

Questionnaire

In an effort to assess the effect of the change in the burning season on the public and operations of local fire districts, a questionnaire was mailed to every affected fire district within the Willamette Valley. A total of 125 questionnaires were mailed out and 68 were returned. The results are tabulated in Attachment 1. There appears to be general public approval of the longer season. In Lane County the new rules actually shortened the burning season which met with objection from those areas.

Although nearly half of those responding to the questionnaire indicated the changes did not have much effect on the burning program or public response, about an equal number indicated there was a favorable improvement.

2. Development of Alternatives to Open Burning

The Department has been working with the Portland Air Quality Advisory Committee (PAQAC) in the development of alternatives to open burning in the Portland area. In September, 1979, DEQ's Solid Waste Division completed a report entitled "Alternatives to Open Burning of Domestic Yard Debris." Possible alternatives to open burning include:

A. Pickup and haul to a landfill site.

This is considered the least desirable of all the alternative systems. It will be expensive and will add an estimated 800,000 or more cubic yards per year to our landfills in the Portland area. The pick-up and haul system would probably use a combination of public and private vehicles for hauling. This alternative will use a valuable portion of our landfill capacity, gasoline supply, tax dollars and manpower. Yet it is the only alternative which is now being used to any extent.

B. Air curtain pit incineration.

This is a slight modification of the previous alternative which would substitute incineration for the landfill. It has never been seriously tried in this area although one city has discussed the possibility. This disposal method does not promise to be any less expensive than the landfill but would avoid using valuable landfill space.

C. Chipping and utilization as a hogged fuel supplement.

This system would perhaps make the best economic sense but the required total energy program has not been laid out. It is doubtful if the energy recovered would equal the expenditure of energy and manpower involved in collection, chipping and transportation. A requirement of this system is that the supply needs to be guaranteed and regular in order to develop a market and use for the product. A centralized agency is also required to handle the collection, production and marketing. The requirements of supply, production and marketing have been the main hindrances to the development of a hogged fuel supply. There are no immediate prospects to use this waste material as a hogged fuel. MSD may eventually be in a position to start supplying a hogged fuel supplement but they are several years away from such a position.

D. Chipping and composting.

This alternative is favored by the Department's Solid Waste Division. It is probably adaptable to a smaller scale of operation than development of the hogged fuel supplement, but would require developing an end use or market for the finished compost. Some composting operations may be developed on a municipal scale but it is not likely that such operations will be in place by next year. We will know more about the extent to which composting will be used when more cities submit their plans later this spring.

An Open Burning Workshop to which all the city and county governments of the area were invited was held on September 13, 1979, at Portland State University. In October, 1979, the PAQAC recommended that the total ban on open burning be limited to the boundaries of the Metropolitan Service District (Metro). Attachment 2 is a copy of this recommendation and a copy of the Metro area boundary.

The Department has contacted all city and county governments within Clackamas, Multnomah, and Washington counties requesting a local plan to develop alternatives and establish compliance schedules. Responses have been received from Portland, King City, Tualatin, Clackamas County, Lake Oswego, Milwaukie, and Hillsboro; but approved alternative plans are not available at this time because plans must first be presented to city councils for local approval. The only city with an operational alternative in place is Gladstone. Gladstone uses a pick-up program utilizing their franchised garbage collectors. King City and Tualatin have proposed that if a ban is implemented this would be the alternative that they would choose.

Hillsboro has analyzed costs for purchase, maintenance, and operation for a chipper, truck, and sweeper. Their estimates do not include costs for composting, landfilling, incineration, enforcement, supervision, and other support. They estimate \$200,000 first year costs plus \$100,000 per year costs for future operation but they would be unable to implement the program before the fall of 1981.

The city of Portland is developing a comprehensive plan. It will not be available until after April 30, 1980. Other cities and counties are expected to respond too late for their comments to be included in this report.

The more rural areas generally have not developed any cost effective solid waste disposal alternative of their own and are not supportive of the ban because of the lack of acceptable alternatives. Generally those areas have larger individual problems with large volumes of solid waste.

Question Numbers 3 and 4 in Attachment 1 was an attempt to measure public awareness of the coming ban on open burning and efforts to develop alternatives. Although the precise results of the poll may not truly represent public knowledge, it is perhaps significant that fire chiefs perceive almost no public recognition of current efforts to provide alternatives to open burning. In a few of the districts where there is an applicable program underway to develop alternatives fire chiefs were unaware of those efforts by the city government in the area.

Recently the PAQAC recommended that "the December 31, 1980, open burning ban go into effect with the provision that the DEQ may give an extension to a city or county which has made a good faith effort in developing alternatives, excluding the use of sanitary landfills, and which has a DEQ approved work program but which will not have alternative disposal methods ready by that date."

The Department expects to review local governmental programs and time schedules to develop alternative disposal methods from February 15, 1980, to April 30, 1980. Based on these submittals the open burning rules will be revised according to the following schedule:

- | | |
|-------------------|---|
| March-May, 1980 | - Receipt of programs and time schedules from local governments. |
| March-June, 1980 | - Rewrite Open Burning Rules to improve clarity and revise boundaries for burning ban as necessary. |
| July-August, 1980 | - Approve local government plans for implementing ban. |
| August, 1980 | - Authorization for public hearings on Open Burning Rules. |
| September, 1980 | - Hold public hearings around the state on new Open Burning Rules. |
| November, 1980 | - Propose adoption of new Open Burning Rules. |

3. Rule Revision

The Commission requested the staff to investigate ways to make the open burning rules more understandable. Several approaches were considered which involved a rewriting and indexing system. None of these approaches seemed to totally fulfill the objective of simplifying the rules unless the geographical differences for various types of burning were eliminated. This was concluded to be undesirable. Part of the problem arises because the rules are written in terms of prohibiting a practice. If a practice is not specifically prohibited then by inference it is permitted. Beyond that, exceptions to the prohibited practices are listed. An outline of the types of burning and area definitions used in the rules serves to illustrate the problems:

I. Types of Burning

- A. Commercial Waste--Rule refers to area definition in II, A below
- B. Industrial Waste--Rule refers to entire state
- C. Construction and demolition wastes (includes nonagricultural land clearing)--Rule refers to area definition in II, A and II, B below.
- D. Domestic waste--Rule refers to area definitions in II, A, 5 and II, B below.
- E. Agricultural burning--Rule refers to a different section of the rules, "Agricultural Operations." OAR 340-26-005 through 26-030.
- F. Forest slash disposal--Rule refers to Smoke Management Plan operated by Department of Forestry under ORS 477.515
- G. Recreational and ceremonial fires--Permitted entire state
- H. Instructional fires, private and public--Permitted entire state
- I. Official weed abatement fires--Permitted entire state.

II. Area Definitions

- A. Open burning control area
 - 1. Cities with a population of 4,000 or more. There are 56 such cities in Oregon.
 - 2. Coos Bay area defined by township and range lines.
 - 3. Rogue Basin area defined by township and range lines.
 - 4. Umpqua Basin area defined by township and range lines.
 - 5. Willamette Valley area defined by certain counties.

- B. Special Control Areas in the Willamette Valley specifying areas around cities with a population of 1,000 and up, plus some specially defined areas in Multnomah and Washington Counties.

The rules are structured so that prohibited practices are listed separately for each type of burning such as commercial, industrial, or domestic with geographical application of the rule following each of these subheadings. The rule becomes complex because the geographical delineations are varied and inconsistent between subheadings. The situation does not become any clearer when one starts classifying geographical areas and describing the types of burning which can be done in each. In fact in the latter case the rules become more voluminous and cumbersome than before.

One answer to the problem would be to write a new legal description summary section to precede the open burning rule section. The description summary could be patterned after the do's and don'ts summaries put out by the Motor Vehicles Department or Fish and Wildlife. An example might be something like the following:

Domestic waste burning covers the burning of trash, waste, and yard trimmings which collect around your house from your normal activities. This is sometimes called "backyard burning." As a general rule, if you live anywhere in Oregon outside of the Willamette Valley and there are no local rules prohibiting burning, you may burn domestic waste anytime by obtaining a fire permit from your local fire department.

If you live in Multnomah, Clackamas, Washington, Yamhill, Polk, Marion, Linn, Lane, or Benton Counties, there may be rules making it illegal to burn domestic waste.

Backyard burning is always illegal if you are within the Metropolitan Service District around Portland in Multnomah, Clackamas, and Washington Counties.

If you are outside the Metropolitan Service District but within six miles of (city names) or within three miles of (city names) you may burn only yard trimmings during the spring and fall seasons, from March 1 to June 15 and from October 1 to December 15.

If you live in the Willamette Valley counties but are not included in one of the areas mentioned above, you may burn domestic waste any time by following the rules of your local fire District.

Alternatively, the open burning rules could be written with a separate section for each county like so many little states. In some cases counties could be grouped but each city of 4,000 or more population would have to be named. There are nine counties in the state which do not have at least one city of 4,000 or more population. This method of setting up the open burning rule would be quite lengthy and it might be difficult to make changes without error. It would have the advantage that almost anyone can determine which county he is in and could then find all of the types of burning listed for his county. A sample of this organization follows:

Definitions, types of burning.

- (1) Agricultural--(appropriate language)
- (2) Commercial: open burning of any commercial waste which includes waste which is generated...(etc).
- (3) Construction and Demolition: open burning of any construction or demolition waste which includes...(etc).
- (4) Domestic: open burning of any domestic waste which includes...(etc).
- (5) Industrial: open burning of any industrial waste which includes...(etc).

Burning Restrictions by County

Baker... (appropriate applicable text)

Benton... (appropriate applicable text)

Clackamas

- (1) Agricultural: See Rules for Agricultural Operations, OAR 340-26-005 through 26-030.
- (2) Commercial: Open burning of commercial waste is prohibited within Clackamas County.
- (3) Construction and Demolition: Open burning of construction and demolition waste is prohibited within six miles of the city limits of Canby, Gladstone, Happy Valley, Johnson City, Lake Oswego, Milwaukie, Oregon City, River Grove, Tualatin, West Linn, and Wilsonville and also within three miles of the city limits of Estacada and Sandy. Open burning of construction and demolition waste is permitted in all other portions of Clackamas county provided that a permit is obtained from the fire district having jurisdiction of the area.
- (4) Domestic:
 - (a) Open burning of domestic waste is prohibited at all times within the boundaries of the Metropolitan Service District.
 - (b) Outside the Metropolitan Service District but within the rural fire districts of Tualatin, Aurora, Canby, Beaver Creek, Clackamas County No. 56, Boring, and Sandy, the open burning of wood, needle, and leaf materials only from trees, shrubs, or plants from yard clean-up or the property at

which one resides, is permitted during the spring and fall burning periods established as commencing on the first day of March and terminating at sunset on the fifteenth day of June and commencing on the first day of October and terminating at sunset on the fifteenth day of December.

(c) In all other areas of Clackamas County open burning of domestic waste is permitted at any time.

- (5) Industrial: Open burning of industrial waste is prohibited at all times within Clackamas County.

(Similar sections will be necessary for Multnomah, Washington, Yamhill, Marion, Polk, Benton, Linn, Lane, and Jackson Counties.)

. . . (Other counties listed singly or grouped where possible)

Wasco

- (1) Agricultural: Agricultural open burning is not regulated by the Department in Wasco County.
- (2) Commercial: Open burning of commercial waste is prohibited within three miles of the city limits of The Dalles. Open burning of commercial waste is permitted in all other areas of Wasco County but is subject to the rules of the local fire district.
- (3) Construction and Demolition: Open burning of construction and demolition waste is prohibited within three miles of the city limits of The Dalles. Open burning of construction and demolition waste is permitted in all other areas of Wasco County but is subject to the rules of the local fire district.
- (4) Domestic: Open burning of domestic waste is permitted in all areas of Wasco County.
- (5) Industrial: Open burning of industrial waste is prohibited.

Director's Recommendation

It is recommended that the Commission approve the following schedule of action by the Department or provide direction for alternate action desired of the Department staff.

- | | |
|-------------------|---|
| March-May, 1980 | - Receipt of programs and time schedules from local governments. |
| March-June, 1980 | - Rewrite Open Burning Rules to improve clarity and revise boundaries for burning ban as necessary. |
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| November, 1980 | - Propose adoption of new Open Burning Rules. |

Michael Young
for
WILLIAM H. YOUNG

L.D. Brannock
229-5836
February 7, 1980
AP0765.A(d)

- Attachment: 1 Questionnaire for Fire Districts
2 Recommendation of the PAQAC With Map of the Metro Boundry

ATTACHMENT 1

Questionnaire for Fire Districts

ATTACHMENT 1

Department of Environmental Quality

Questionnaire for Fire Districts
Willamette Valley

Backyard Open Burning 1979 Fall Season

Name of District 68 RETURNS

1. Does your fire district represent an urban or rural environment?

Urban 37

Rural 52

Comment SEVERAL DISTRICTS CONSIDERED THEMSELVES BOTH URBAN AND RURAL

2. Compared to previous years, how did people react to the burning season this fall?

A. Complaints about smoke.

More complaints 3

Fewer complaints 34

No change 30

Comment MOST FELT SMOKE COMPLAINTS WERE FEW AND PEOPLE WERE GETTING USED TO THE PROGRAM.

B. Complaints about not enough time to get burning done, too wet, etc.

More complaints 25

Fewer complaints 26

No change 15

Comment SOME FELT THERE WERE TOO MANY WET DAYS; OTHERS FELT THE LONGER SEASON PROVIDED MORE GOOD BURNING WEATHER.

C. People burning on prohibited days.

- More of a problem 7
- Less of a problem 28
- No change 32

Comment WHERE LESS OF A PROBLEM WAS INDICATED IT WAS CONSIDERED THAT THE LONGER SEASON MADE PEOPLE FEEL LIKE THEY HAD A BETTER CHANCE TO BURN. WHEN MORE OF A PROBLEM WAS INDICATED, IT WAS GENERALLY A VOLUNTEER DISTRICT WHERE THE LONGER SEASON MEANT A LENGTHENED SEASON FOR ANSWERING PHONES AND ISSUING PERMITS, ETC.

3. Do people understand it is likely that backyard burning will be permanently prohibited, after December 31, 1980, in the Portland area and after July 1, 1982, in many areas of the remainder of the Willamette Valley?

- Yes 12
- No 44
- Cannot say 13

Comment A VERY STRONG INDICATION OF PUBLIC IGNORANCE ON THIS MATTER. IN SOME CASES, IT WAS INDICATED THAT PEOPLE DO NOT BELIEVE A BAN WILL EVER BE INSTITUTED.

4. Is anything being done in your district to prepare for the time when open burning will be prohibited?

- Yes (describe below) 6
- No 51
- Cannot say 6

Describe/Comment THE SURPRISING THING ABOUT THIS ANSWER IS THAT EVEN IN GOVERNMENTAL JURISDICTIONS WHERE THERE IS SOME EFFORT AT ALTERNATIVES, THE FIRE DISTRICTS SEEM TO BE UNAWARE OF IT.

5. Did the lengthened burning period (one month earlier this fall) change attitudes about the open burning?

- More understanding or tolerance 28
- Less understanding or tolerance 6
- No change in attitudes 30

Comment VERY LITTLE COMMENT. ANSWERS TENDED TO FOLLOW ANSWERS TO QUESTION 2.

6. Does your fire district issue fire permits for each backyard burning season?

- Yes Approximate number of permits for Fall 1979 _____ 36
- No 31

Comment LARGE DISTRICTS DO NOT ISSUE PERMITS. MOST DISTRICTS WHO ISSUE PERMITS ARE IN SMALL RURAL AREAS WITH ONLY A FEW RESIDENTS.

7. Was the open burning season easier or more difficult to manage this year compared to previous years?

- Easier 29
- More difficult 9
- No change 25

Comment ANSWERS AGAIN FOLLOW ALONG LINES OF QUESTIONS 2 AND 5.

8. Describe any increases or decreases in work load for the fire district and any increase or decrease in problems for the fire district which result from the lengthening of the burning season.

Comment SOME SENTIMENT THAT LONGER SEASON MEANS NEED FOR MORE OFFICE STAFFING IN VOLUNTEER DISTRICTS.

9. Any other comments or observations about open burning program and rules and its effect upon fire districts.

Comments STRONG SENTIMENT EXPRESSED FROM RURAL AREAS FOR CONTINUED OPPORTUNITY TO BURN MOSTLY FOR REDUCTION OF FIRE HAZARD.

ATTACHMENT 2

**Recommendation of the PAQAC
With Map of the Metro Boundary**

Portland Air Quality Advisory Committee

P.O. Box 1760
Portland, Oregon 97207
(503) 229-6092

October 16, 1979

Dept. of Environmental Quality

RECEIVED
OCT 24 1979

NORTHWEST REGION

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State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
OCT 23 1979

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Environmental Quality Commission
P. O. Box 10747
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Sincerely,


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Portland Air Quality Advisory Committee

Portland Air Quality Advisory Committee

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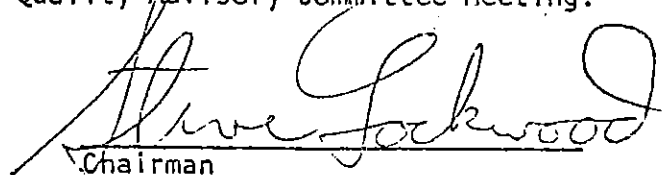
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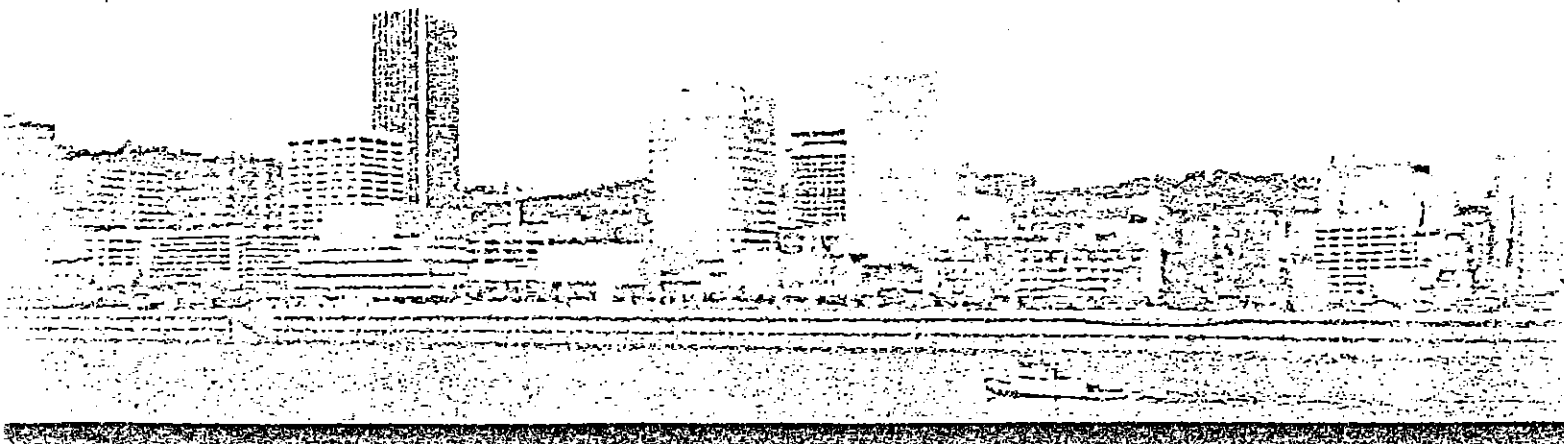
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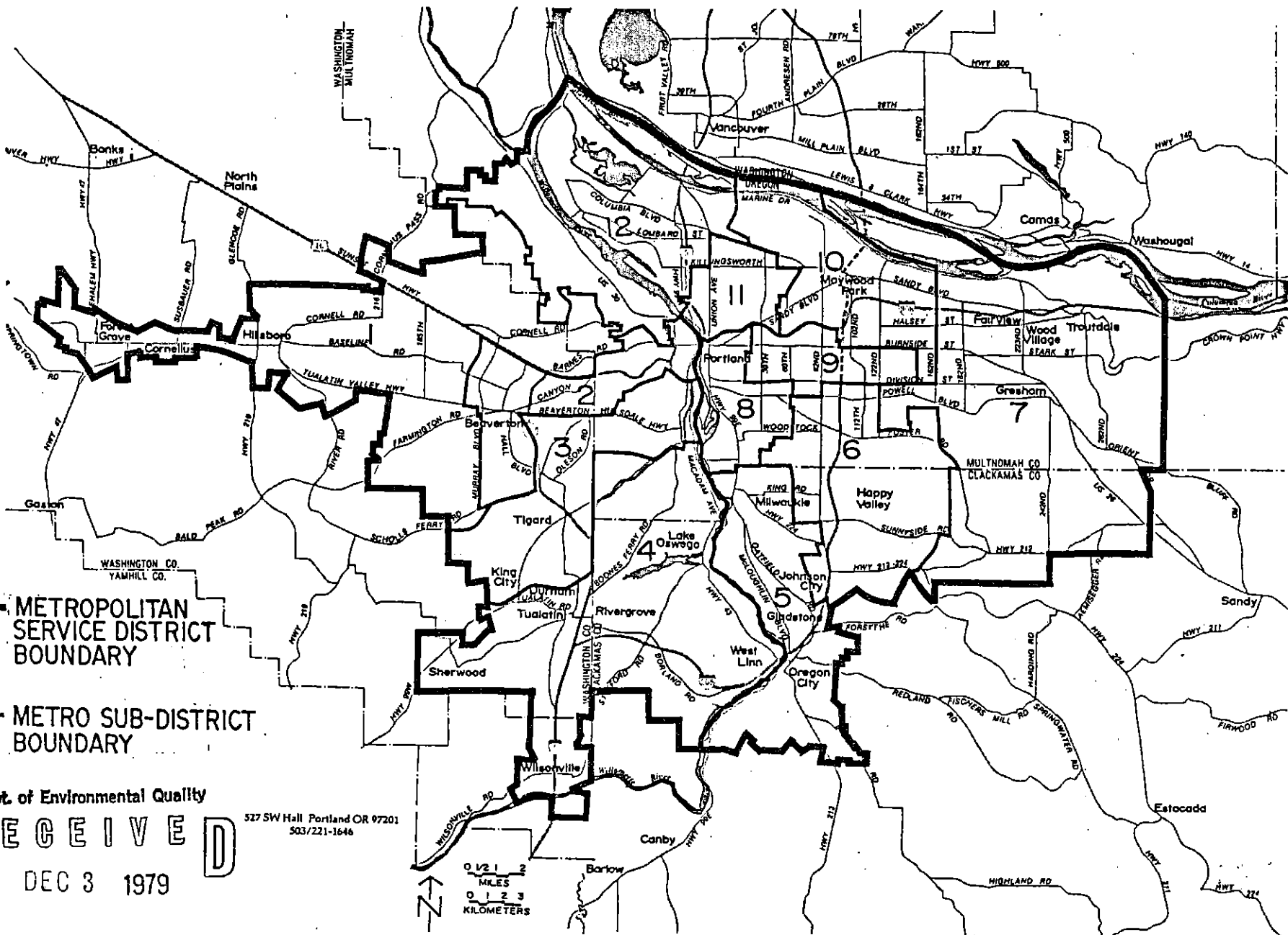
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Adopted at the October 9th Portland Air Quality Advisory Committee Meeting.


Chairman





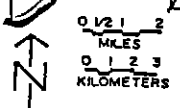
— METROPOLITAN SERVICE DISTRICT BOUNDARY

— METRO SUB-DISTRICT BOUNDARY

Dept. of Environmental Quality

527 SW Hall Portland OR 97201
503/221-1646

RECEIVED
DEC 3 1979



NORTHWEST REGION

State of Oregon
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Management Services Div.
Dept. of Environmental Quality

NOTICE OF ELECTION

RECEIVED
MAR 17 1980

As provided by ORS 468.170(5), a person receiving a Pollution Control Facility Certificate shall make an irrevocable election to take the tax credit relief under ORS 316.097 (personal income tax), or ORS 317.072 (corporation excise tax), or the ad valorem tax relief under ORS 307.405, and shall notify the Department of Environmental Quality, within 60 days after the receipt of such certificate, of his election. This election shall apply to the facility or facilities certified and shall bind all subsequent transferees. Failure to make a timely notification shall make the certificate ineffective for any tax relief under ORS 307.405, 316.097 and 317.072.

Certificate Issued To: Bohemia, Inc.

Certificate No.: 1044 Application No.: T-1134 Date Issued: 02/22/80

As the official representative of the above named certificate holder, I hereby notify the Department of Environmental Quality that I have on this day made the irrevocable election to the (check one)

- Tax Credit Relief under ORS 316.097
- Tax Credit Relief under ORS 317.072
- Ad Valorem Tax Relief under ORS 307.405

Signed by: *Frederick G. Gent*
Frederick G. Gent
Title: Senior VP-Finance & Treasurer
Date: March 12, 1980

State of Oregon
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Management Services Div.
Dept. of Environmental Quality

RECEIVED
MAR 17 1980

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Certificate Issued To: Bohemia, Inc.

Certificate No.: 1051 Application No.: T-1151 Date Issued: 02/22/80

As the official representative of the above named certificate holder, I hereby notify the Department of Environmental Quality that I have on this day made the irrevocable election to the (check one)

- Tax Credit Relief under ORS 316.097
 Tax Credit Relief under ORS 317.072
 Ad Valorem Tax Relief under ORS 307.405

Signed by: Frederick G. Gent
Frederick G. Gent
Title: Senior VP-Finance and Treasurer
Date: March 12, 1980

Correspondence from local jurisdictions

MEMORANDUM



TO: Environmental Quality Commission
P. O. Box 1760
Portland, Oregon 97207

902 ABERNETHY ROAD
OREGON CITY, OREGON 97045
(503) 655-8521

WINSTON W. KURTH
Assistant Director
DON D. BROADSWORD
Operations Director
DAVID J. ABRAHAM
Utilities Director
DAVID R. SEIGNEUR
Planning Director
RICHARD L. DOPP
Development
Services
Administrator

FROM: David G. Phillips - Code Compliance Administrator
Development Services Division

JOHN C. McINTYRE
Director

DATE: September 27, 1979

SUBJ: Open Backyard Burning

Clackamas County requests that the issue of banning backyard burning in the four county area be sent back to the Air Advisory Committee. It is the County's position that several issues should be addressed and a new recommendation made to the Environmental Quality Commission for your consideration.

The issues to be referred are as follows:

1. The necessity of the burn ban needs further review. If the ban will not increase the air quality, then the ban should not occur.
2. The extent of the ban needs review and some specific recommendations regarding the Spring-Fall managed burn in the metro area, the burning of household waste in rural areas of the four counties, and finally the burning of brush and yard trimmings in the rural areas of the four counties. It is the County's position that the Ban on burning brush and yard trimmings in rural areas should not occur because of difficulty of moving the material into the metro area for disposal.
3. The matter of timing as to when this ban occurs needs to be addressed. Currently the solid waste disposal site situation is very critical. The possibility of an additional 900,000 cubic yards of material going into the waste stream is something that cannot be gambled with.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
OCT 02 1979

AIR QUALITY CONTROL



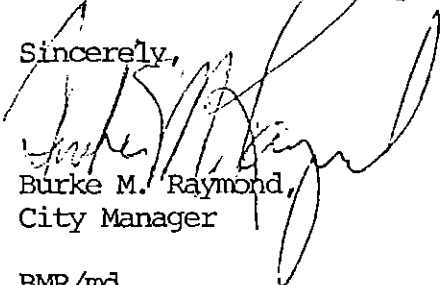
Ms. Jeanne Roy

- 2 -

September 17, 1979

I appreciate the opportunity to correspond with you, and I am sorry that I was unable to attend your meeting.

Sincerely,



Burke M. Raymond,
City Manager

BMR/md

cc: Bill Young, Director of Departmental Quality
Rich Gustavson, Director of MSD
Denton Kent, Chief Administrative Officer, MSD

City of Gresham

150 West Powell Blvd.
Gresham, Oregon 97030
666-3741

Dept. of Environmental Quality
RECEIVED
SEP 25 1979

by Young #4
W. Weatherbee
Albert - NW
DB

NORTHWEST REGION

September 17, 1979

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
SEP 20 1979

Ms. Jeanne Roy, Chairman
Open Burning Sub-committee
Portland Air Quality Advisory Committee
P.O. Box 1760
Portland, Oregon 97207

AIR QUALITY CONTROL

Dear Ms. Roy:

I am sorry I was unable to attend the meeting on Open Burning in the Portland Metropolitan Area.

I would like to make a couple of comments from my experience. Prior to coming to Oregon I served as a City Manager in the Twin City Metropolitan Area of Minnesota where open burning was prohibited. I supported the prohibition of open burning in that metropolitan area, and would support the prohibition of open burning in this area. I do feel that I should comment on some of the difficulties.

As soon as the open burning ban took affect in the Twin City area, there was a profound increase in the solid waste disposal problem. The city that I managed was fortunate in having a 200 acre park in which we were able to set a small portion aside for the recycling of leaves and small clippings from yard clean-ups. We decomposed the organic material and used it as fertlizer in our parks. Other communitis were not so fortunate, and the burning ban precipitated a crisis in the solid waste disposal system. It is my understanding that the Metropolitan Service District is currently having a difficult time locating new solid waste disposal sites, and I would caution that any burning ban which is put into effect should be done with full knowledge on the impact of the increase in solid waste.

I will go so far as to urge you and MSD, and the Department of Environmental Quality to tie any ban on open burning to the implementation of a solid waste disposal program which will be adequate to meet the increase in solid waste. Failure to resolve these issues will result in a high level of frustration on the part of citizens who will be unable to dispose of the leaves, and tree and bush clippings. I don't think any of us want to put the citizen in a double-bind of being unable to burn their wastes, and being unable to dispose of them.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
SEP 20 1979

OFFICE OF THE DIRECTOR

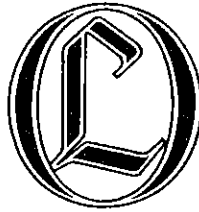
Page 2
Environmental Quality Commission
September 27, 1979

This additional yardage would fill the existing disposal sites much sooner, adding to the problem. If the ban is necessary then it is our position that it should not occur until after the MSD Solid Waste Management Plan is fully implemented.

Thank you for your considerations and if I can assist you or your Advisory Committee in any way, please feel free to contact me.

David G. Phillips by JMC
DAVID G. PHILLIPS - Code Compliance Administrator
Development Services Division

/rn



REG
TRB

CITY OF LAKE OSWEGO

December 3, 1979

Mr. Robert E. Gilbert
Regional Manager, NW Region
Department of Environmental Quality
PO Box 1760
Portland, Oregon 97207

RE: AQ-OPEN BURNING

Dear Mr. Gilbert,

The purpose of this letter is to acknowledge receipt of your letter of November 21 under this subject, by Peter Harvey, City Manager, and to inform you of our current status regarding alternatives to open burning.

First, let me state on behalf of the City, that we will not be able to meet your December 1, 1979 goal. As of this writing we have only begun to consider this problem at the staff level.

Within the next month or two we hope to have a staff report prepared for submission to the City Council for direction. Until then any commitment or proposal on our part would be mere speculation.

I can assure you Bob, that we are moving on this delicate and complex issue as quickly as we make time available. I'll keep you posted on our progress.

Sincerely,


Bill Berger
Fire Chief

Dept. of Environmental Quality

RECEIVED
DEC 6 1979

WB/kmd
copy: City Manager
File

NORTHWEST REGION



Reg
TRB

City Of Hillsboro

205 S.E. Second Ave. □ 648-0821 □ Hillsboro, Oregon 97123

December 6, 1979

Mr. Robert E. Gilbert
Regional Manager
Northwest Region
Department of Environmental Quality
P. O. Box 17604
Portland, Oregon 97207

Dept. of Environmental Quality

RECEIVED
DEC 10 1979

RE: Open Burning

NORTHWEST REGION

Dear Mr. Gilbert:

Pursuant to your letter of November 21, in which you requested that we respond to DEQ a proposal with a time schedule for implementing a non-burning program that would fit the needs of the community, we have at the staff level taken a pretty long and serious look and I will enumerate some of the concerns and constraints that we are now able to identify relevant to the matter.

1. A disposal site, whether incineration, compost or land fill must be implemented prior to any ban and no ban should occur until these disposal sites are assured.

2. The City appears to be the appropriate agency to accomplish collection within the City limits. I do not know who would be appropriate to handle this matter in the unincorporated areas, however, cost associated with this service would need be budgeted most probably through the General Fund. Assuming that probability, Fiscal Year 1981-82 would be the soonest possible time we could accomplish the necessary financing. Sometime the fall of 1981 would probably be the soonest we could provide a full scale service. Additionally, it is obvious that local funding through the budget process is not a guaranteed matter and could either be supplemented by outside funding or paid for by outside funding. It does not appear to be reasonable to place the burden on the property tax roll even without facing the budgetary constraints of local property tax that do exist and will probably get more stringent. Guaranteed funding to the region by the state appears to be the most able method of financing the collection disposal. However, based on past issues, it also appears to be probably one of the least likely.

Mr. Robert E. Gilbert
December 6, 1979
Page 2

3. We have attempted to identify the initial costs and ongoing costs and find them quite substantial. We include herewith a relatively preliminary estimate: Additional capital expense - \$100,000.00 for a chipper, truck and sweeper. Maintenance and operation annually - \$10,000.00 to provide for 1250 hours of operation at \$8.00 per hour for the combined equipment. Labor = \$60,000.00 annually providing for two full time equivalence and two part time employees for four months. This does not include supervision or any other support personnel. Disposal has not been identified in a cost analysis because we find we are unable to provide costs for: a) compost site/equipment/labor; b) landfill site/transportation; or c) incineration site/transfer/transportation/labor, etc. Enforcement - We believe our Community Safety Officers can handle the enforcement responsibilities along with their public education programs. We do find that a mechanism currently exists within our fire code to allow for the discontinuance of open burning.

We think the banning of backyard burning will undoubtedly place a physical as well as a financial burden upon the citizenry, particularly the senior citizens in two ways. The first, being transporting the material to private landfills, which involves physical work and dollars. Secondly, if the City is to pick up this material and transport it to a landfill, it will still mean public dollars and/or some curtailment of other services. Furthermore, if we are to start a program of spring and fall pick up of vegetable materials, we suspect it will become a very time consuming monstrosity such as an annual spring clean-up which we used to do of all sorts of disposables which we have since discontinued.

If we were to only expand our present chipping and disposal program, we would still have to increase rates to offset costs since presently most of the jobs run less than \$10.00 costs to the property owner with the City (rightly or wrongly) assuming substantial portions of the burden.

One alternative we might suggest to you, (whether it be feasible or not), would be to leave the controlled burning as it is now, and increase the control measures as well as the punishment for illegal burning when not allowed or material being burned other than the vegetable materials.

In summary, do not institute a ban until you have solved the disposal method in the various jurisdictions and have provided disposal sites and even if this is to be accomplished, the soonest this City can implement a program would be the fall of 1981 given budget approval or other agency financing of some \$200,000.00 for the first year and

Mr. Robert E. Gilbert

December 6, 1979

Page 3

and some \$100,000.00 escalated by inflation subsequent years until it is time to replace the capital equipment. With these givens and in this simplistic form, the program you desire will function adequately in the City of Hillsboro, but if the costs of collection and disposal are to be borne solely by the residents, it will not be any more popular in Hillsboro than it will in any other part of the metropolitan area.

If it is the department's desire that this matter be formally adopted by the City Council, please advise me by telephone and I will place it on the Council agenda for the 18th of December.

Very truly yours,

CITY OF HILLSBORO

By


E. S. Mills

City Manager

cc: Mayor and Council
Dave Lawrence
Steve Nuttal
Stan Dillon

ESM/gs

CONNIE McCREADY
MAYOR



ROOM 303 - CITY HALL
PORTLAND, OREGON 97204

REG
TRF
CEG

CITY OF PORTLAND
OREGON

December 10, 1979

Robert E. Gilbert, Regional Manager
Northwest Region
Department of Environmental Quality
522 S.W. Fifth Ave.
Portland, Oregon 97204

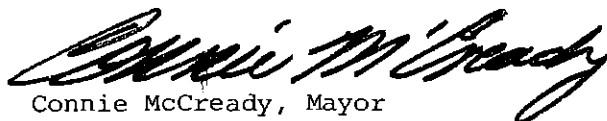
Dear Mr. Gilbert:

In response to your letter of November 20, requesting information on the City of Portland's program for implementing the backyard burning ban, I am forwarding you the attached City Program Goals and Work Program for developing alternatives.

Although this is not a detailed time schedule for actual implementation of a non-burning program, as your letter requested, it does outline the City's approach to the problem. We feel it demonstrates the City's intent to deal with this issue in a manner that will result in the development of an adequate program in response to your Commission's action.

As you can see from our timeline, we anticipate that in February, prior to your discussion with the EQC, we will have additional information and will be glad to provide you with an update at that time. The City had assigned the responsibility for this work to the IPA representative from the Environmental Protection Agency, Maxine Borcharding. Maxine will begin working for the City on December 17, and can be reached at 248-4293 after that date if you have any further questions.

Sincerely,


Connie McCready, Mayor

CMcC:CJK:pab

Attachments

Dept. of Environmental Quality
RECEIVED
DEC 31 1979

NORTHWEST REGION

ALTERNATIVES TO BACKYARD BURNING
CITY PROGRAM GOALS

1. To develop programs for disposal of vegetative yard debris with minimal or no impacts on new and existing land fills.
2. Provide residents with low cost alternative to burning to minimize health and safety hazards from extended storage of combustible materials.
3. Use existing City programs such as the neighborhood clean-ups to the extent possible.
4. Identify and acquire funding to support any new programs or equipment purchases so that fiscal impacts on the City are minimized.

ALTERNATIVES TO BACKYARD BURNING
WORK PROGRAM OUTLINE
CITY OF PORTLAND

TASK A

Determine the amount of additional debris to be disposed of after the backyard burning ban goes into effect. This should include an evaluation of seasonal cycles to determine when peak demand for alternative will occur and how much debris must be disposed of during peak as well as annual totals.

PRODUCT: Technical Memorandum on additional waste needing disposal and the amount of land-fill space that would be used if no alternatives are implemented. Memo should also discuss seasonal cycles and their impacts on capacity requirements of any alternative programs.

SCHEDULE: Completed January 31, 1980

TASK B

Evaluation of possible programs for disposal:

- a. Examine institutional framework for managing alternatives including assigning primary responsibilities to METRO, City, private sector or a private non-profit corporation. This evaluation should include staffing legal and financial impacts of each possible organization arrangement.
- b. Evaluate alternative disposal methods including chipping, composting, mulching, resource recovery and horticulture programs. Special attention should be given to location of deposit sites, creation of potential fire hazards, disposal during periods of large accumulation of debris such as ice storms and possible tie-ins with existing clean-up programs.
- c. Determine cost of each alternative and identify potential funding sources. Costs should be evaluated in terms of cost to user and cost to the public sector.
- d. Evaluate secondary impacts on other programs such as noise, energy and land-use.

PRODUCT: 1. Memo outlining each management system including cost information and a recommendation to City Council on the appropriate role of the City of Portland.

2. Memo describing potential programs to replace backyard burning, examples of where programs have been implemented, and how successful they have been, impacts on other City programs and a recommendation to City Council on what program or mix of programs should be implemented in Portland. Recommendation

should include an evaluation and briefing on possible funding support for any new City activities.

SCHEDULE: Completed March 28, 1980

TASK C

Develop timelines for necessary City Council actions and implementation of program, including timing of equipment purchases, and funding application submissions.

PRODUCT: Appropriate City ordinances instructing specific Bureaus to carry out City program within specified timelines.

SCHEDULE: Completed April 16, 1980

TASK D

Set up mechanism for evaluating progress and effectiveness of City actions.

PRODUCT: Report to City Council and the State Environmental Quality Commission on what the City has done and timelines for future action including what will be completed by the end of 1980 and request for further extensions if necessary.

SCHEDULE: Completed April 30, 1980

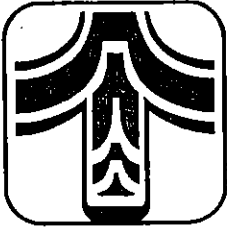
TASK E

Solicit community and City staff input through the program by:

- a. Setting up and staffing a task force of representatives from City Bureaus affected by the backyard burning ban. This would include at a minimum the Bureau of Economic Development, Bureau of Fire, Bureau of Parks and Recreation, Office of Public Works and Office of Neighborhood Associations.
- b. Providing information for neighborhood flyers explaining the ban, its possible alternatives, and requesting comments on proposed alternative programs.
- c. Developing an educational program explaining impacts on City residents.

PRODUCTS: This information should be incorporated into each recommendation to City Council.

SCHEDULE: On going



CITY OF TUALATIN

18880 SW MARTINAZZI AVE. PO BOX 428
TUALATIN, OREGON 97062
(503) 838-8891

REG
FRB
CEG

December 19, 1979

Mr. Robert E. Gilbert
Regional Manager
Northwest Region
Department of Environmental Quality
522 S.W. 5th Avenue
Portland, OR 97207

Dept. of Environmental Quality

RECEIVED
DEC 26 1979

NORTHWEST REGION

Dear Mr. Gilbert:

AQ - OPEN BURNING

This letter puts into writing our telephone discussion regarding the effects that prohibiting backyard burning would have on the citizens of Tualatin.

During the past few years as the City has rapidly urbanized on approximately 70 by 100 foot residential lots, there has been less and less backyard burning apparent. As you leave the City where larger lots and acreage are found, you do see seasonal burning. This may be just a local problem since Tualatin is situated in a valley with not too many deciduous trees.

In addition to this we do have as a condition of granting a franchise to the local garbage collector, semi-annual free pick-ups of trash and debris during the months of April and October of each year. I have noticed that quite a few people take advantage of this by putting their leaves in plastic bags for removal by the garbage collectors.

Since the City of Tualatin is served by the Tualatin Rural Fire Protection District, I am sending a copy of your letter and my response to them in case they have different viewpoints since they do control the burning permits in this area.

If you have further questions, please feel free to call.

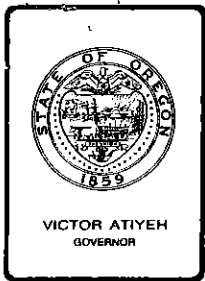
Very truly yours,

Yvonne L. Addington
City Administrator

YLA/ma

CC: Tualatin Rural Fire Protection District

TEB



Forestry Department

CLACKAMAS MARION DISTRICT

RT. 4, BOX 595, MOLALLA, OREGON 97038 PHONE 829-2216

December 28, 1979

Dept. of Environmental Quality

RECEIVED
JAN 4 1980

NORTHWEST REGION

Mr. Thomas R. Bispham
Assistant Regional Manager
Northwest Region
Department of Environmental Quality
5122 S.W. 5th Avenue
Portland, OR 97207

Dear Mr. Bispham:

My response to your letter of December 17, 1979, that outlines the extension of the burning prohibition through 1980, is one of concern. I am concerned for several reasons:

1. As a manager of an agency that has some regulatory responsibility over open burning and conducts open burning (slash) on its own lands from time to time. (We also encourage slash disposal by burning under the Slash Smoke Management Plan as a forest management practice.)
2. Burning prohibitions will cause buildups of trash, etc. in roadside areas, lands of others, back yards. These are unsightly and become fire hazards.
3. Sanitary landfills are NOT available to accommodate the volumes of trash that will develop.
4. With transportation costs soaring and gasoline shortages developing, on site disposal by burning on days when smoke dispersal is good is the most practical.

Because of these and many other important issues, I believe that many factors need to be considered before a total burning prohibition is established. In other words, I very strongly believe that in these times of complex and interrelated issues affecting all of us, that a total burning prohibition is not in best public interest.

I truly believe that the public has demonstrated a willingness to cooperate with the Burn--no burn day arrangement we have used for several years and I definitely feel that the quality of the air has been greatly improved, as a result. But, I fear that if burning is prohibited air quality may actually suffer, roadside dumping will increase, fire hazards will be created, much time, energy and money will necessarily be expended in an unfunded regulatory effort, escaped fires will increase thereby endangering life and property due to no fire prevention communication between resident and responsible agency before ignition.

Surely the public interest can best be served by a compromise that allows controlled open burning to continue on days when the air pollution potential is minimal or non-existent.

I would be happy to discuss this matter with you at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Chan Bunke". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

CHAN BUNKE,
District Forester

CB:clk



City of King City

15390 S.W. 116th Avenue
Portland, Oregon
97223

December 31, 1979

Robert E. Gilbert
Regional Manager, Northwest Region
Department of Environmental Quality
PO Box 1760
Portland, OR 97223

Re: AQ - Open Burning

Dear Mr. Gilbert:

This is in answer to your letter dated December 14, 1979, regarding the issue of backyard burning. It will also verify our telephone conversation on Friday, December 21, 1979 concerning this subject.

There will be little, if any, impact on the City of King City if backyard burning is stopped entirely. Due to the type of community all of our lots are small, requiring minimum care, and all of our garbage and rubbish is now being collected under contract with a private company.

If you have any questions please give me a call on 639-4082.

R.E. Fleer
City Administrator

Dept. of Environmental Quality

RECEIVED
JAN 2 1980

NORTHWEST REGION

*REG
HRP
12/4*



Handwritten initials/signature in the top right corner.

CITY OF RIVERGROVE

P.O. BOX 1104 • LAKE OSWEGO, OREGON 97034

Mr. Robert E. Gilbert
Regional Manager
Northwest Region
Department of Environmental Quality
522 Southwest 5th Avenue
Portland, Oregon

Dear Mr. Gilbert:

Rivergrove City Council discussed the " Alternatives to Open Burning of Domestic Yard Debris " at their January meeting. The Rivergrove Council objects to a nonburning program. Most yards have several fruit trees as well as other trees and shrubs.

Burning should be allowed on days when ventilation is adequate to keep pollution levels within air quality standards.

Yours truly,

Lawrence Morrison
Council President
City of Rivergrove

Dept. of Environmental Quality

RECEIVED

JAN 16 1980

NORTHWEST REGION

Rivergrove City Council/rm

REG
IRB



City of Troutdale

104 Kibling Street (503)685-5175
Troutdale, Oregon 97080

February 1, 1980

Mr. Tom Bispham
Department of Environmental
Quality
P. O. Box 1760
Portland, OR 97207

Dear Mr. Bispham:

Pursuant to our telephone conversation of February 1, this is to advise you that we will be unable to meet the deadline for developing a proposal with a time schedule for the implementation of a non-burning program for the City. We received Bob Gilbert's letter on January 28, 1980 requesting that we submit our community's proposal by February 15, 1980. Unfortunately such a short time period, combined with the fact that we are in the midst of budget preparation does not give us adequate time to do justice to such a proposal.

It is our intention to cooperate with your agency in the elimination of the open-burning problem which exists in the metropolitan area and would suggest that March 15 would be a better deadline date for us for the submission of our proposal.

Sincerely yours,

CITY OF TROUTDALE

W.C. Bivin, Director
Public Works

WCB/vjk

Dept. of Environmental Quality

RECEIVED
FEB 5 1980

NORTHWEST REGION

REG
FEB

CITY OF MILWAUKIE



PUBLIC WORKS DEPARTMENT
in the City Hall • phone 659-5171

February 14, 1980

Department of Environmental Quality
522 S.W. 5th, Box 1760
Portland, Oregon 97207

Attn: Tom Bisphan

Enclosed is a copy of my report recommending alternatives to the backyard burn ban to be imposed January 1982. City Council has not yet acted on this report.

If I can provide further assistance, please contact me at 659-5171.

Sincerely,

Randy Westrick
Parks and Recreation Superintendent

cc: Ken Whorton
City Manager

RW/jj

Dept. of Environmental Quality

RECEIVED


FEB 19 1980

NORTHWEST REGION

CITY OF MILWAUKIE
M E M O R A N D U M
PUBLIC WORKS DEPARTMENT

DATE: February 13, 1980

TO: Tom McDowell, Caretaker, North Clackamas Park
Sara Hite, Human Services Coordinator

FROM: Randy Westrick 
Parks and Recreation Superintendent

SUBJECT: Distribution of Firewood for Emergency Needs

As requests are made to the City for firewood for emergency purposes, all will be referred to Sara Hite, Human Services Coordinator. Sara will determine the validity and urgency of the need and coordinate other volunteers as needed to help meet the need. At this point Tom McDowell, Caretaker, North Clackamas Park, should be informed as to who will be entering the park and what time they can be expected to arrive.


A general guideline as to how much wood each individual will be allotted should be one pick-up load (loaded to the top of the box) or an equivalent amount in a trailer per individual need. It should be kept in mind that this fuel source is to help people through emergency situations. It is not intended that it should be relied upon as a permanent fuel source.

RW/jj

CITY OF MILWAUKIE
M E M O R A N D U M
PUBLIC WORKS DEPARTMENT

DATE: February 13, 1980

TO: City Council
Parks and Recreation Commission

FROM: Randy Westrick 
Parks and Recreation Superintendent

SUBJECT: Storm damage clean up and hazardous tree removal at NCP

As you are probably aware, North Clackamas Park has been closed due to tree damage incurred during the mid-January ice storm. This storm left many of the oak and ash trees at NCP quite hazardous as it left many broken and hanging branches. For this reason we felt it prudent to close the park until these dangers could be removed. The contractor hired to perform the required hazard removal services completed work this week leaving the Parks and Recreation Department with a massive clean up project. The contractor, as part of the contract, removed any trees which might pose a future hazard to the public using the park. This resulted in the loss of approximately ten trees in picnic area "B" and forty trees (mostly ash) in picnic area "A". These trees ranged in size from 24 to 36 inches at the trunk. All were badly in need of removal with some containing up to 50% to 60% rotted material in the trunk. Many trees were rotted completely from the base to the crown.

The Parks and Recreation Department does not have plans to replace the lost trees. Replanted trees in this picnic area would probably not survive due to its heavy use. Also, the crowns on the remaining trees will fill out providing healthier remaining trees and these filled crowns will replace most of the shade lost with removal of the hazard trees.

NCP will be open to the public again February 25. This will coincide with the opening of programs at the Community Center. At this time, our clean up operations will not be complete. We expect to be completed with these efforts in late March. Groups helping with our clean up efforts include the Boy Scouts, Job Corps, Clackamas County Community Corrections Program, and the National Guard. Wood suitable for use as firewood will be stockpiled for emergency needs within our community.

cc: Steven M. Hall

RW/jj

CITY OF MILWAUKIE
M E M O R A N D U M
PUBLIC WORKS DEPARTMENT

TO: Steven M. Hall
Public Works Director

DATE December 27, 1979

FROM: Randy Westrick *Randy*
Parks and Recreation Superintendent

SUBJECT: Alternatives to Backyard Burning

Attached are alternatives we can consider for handling of materials currently disposed of through outdoor burning. To possibly ease some of the urgency associated with DEQ's backyard and burn ban I would like to clarify its effective date. The ban on backyard burning will be in effect as of January 1, 1981. An extension of one year was approved by the Environmental Quality Commission to allow local governments to develop alternatives. This should allow us to locate funding sources for our program and also give us Fall of 1980 to "dry run" our alternative before the ban take effect in 1981.

After considering the potential alternatives, questions still remain concerning the volume of material which will be generated by the community. This uncertainty makes it quite difficult to estimate the amount of land, manpower, and equipment necessary to undertake a composting operation. We should consider this type of operation after we have a better handle on the volumes of material we will be concerned with. McFarlane's bark had indicated an interest in material for their composting operation. Other businesses interested in such material include farms, nurseries, and mills (log fuel).

Alternatives to Backyard Burning

Alternative #1: Handle only material generated on City grounds

I. Transportation of Material

- A. The City would transport material to processing location (As we currently do now to burn material.)

II. Processing Material

- A. All material could be chipped except that which could be used as firewood at the senior center.
- B. Material could be transported to private concern for processing (E.G. McFarlane's Bark)

III. Disposal of Material

- A. Stockpile for future composting
- B. Transport to private concern for composting

IV. Expenses

- A. Chipper
 - 1. Purchase: \$9,000 - \$12,000
 - 2. Rent: 12 weeks; \$1,500
- B. Manpower: Same as disposal by burning (method currently in use).

V. Funding

- A. 30% funding available from DEQ for equipment
- B. General Fund
- C. Others

VI. Advantages

- A. Debris not disposed of in landfill
- B. Free disposal for the City available
- C. No additional manpower required

VII. Disadvantages

- A. Community needs for alternative to backyard burning unmet
- B. Addition expenses required for chipper

Alternatives to Backyard Burning

Alternative #2: Handle City grounds generated material and material from private residences

I. Transportation of Material

- A. Public transports material to pre-determined central collection stations. Stations would be open at pre-determined times for a two week period in Spring and Fall.
- B. During each collection period one Saturday would be devoted to curbside collection of tree trimmings and leaves.
- C. Debris generated on City grounds would be transported per Alternative #1

II. Material Processing

- A. All material would be chipped except that which could be utilized as firewood at the Senior Center.

III. Material Disposal

- A. Stockpile for composting
- B. Transport to private concern for composting
- C. Return material to resident after chipping

IV. Expenses

- A. Chipper purchase: \$9,000 - \$12,000
- B. Chipper rental: 16 weeks; \$4,000
- C. Manpower
 - 1. Extra work for community material: \$800.00
 - 2. Saturday work for curbside collection: \$400.00
 - 3. Community groups (can offset City costs)
 - 4. No additional manpower is foreseen for City generated debris

V. Funding

- A. DEQ 30% grant for equipment
- B. General Fund
- C. User fees
- D. Others

VI. Advantages

- A. Debris not disposed of in landfill
- B. Free disposal of material available
- C. Community alternative to backyard burning provided
- D. Tie-in with neighborhood councils, community service groups, recycling groups, etc. a possibility
- E. Curbside pick up provides service for people who do not have means to transport debris

F. User fee can be incorporated to offset expenses

VII. Disadvantages

A. Additional expenses to City for chipper

B. Expenses to City for additional manpower. (Volunteer coordination and supervision, operation of machinery, supervision of collection stations, etc.)

Alternatives to Backyard Burning

Alternative #3: Pick up and disposal by private collector

I. Transportation of Material

A. Garbage collection services would collect debris

B. City generated material would be handled as outlined in Alternative #1.

II. Processing and Disposal

A. Private collection services would be responsible for disposal (most likely in landfill)

III. Expenses

A. Additional cost for debris: \$1.50/can or bundle for garbage collection subscribers

B. Additional cost to City: additional costs for more refuse containers could be incurred depending on franchise agreements

IV. Funding

A. Private subscribers: costs borne by individual users

B. City: general fund, franchise agreements

V. Advantage

A. Consistent weekly service available

B. Users pay for service

C. Utilizes existing system

D. Provides community-wide alternative to backyard burn ban

VI. Disadvantages

A. Increased burden on those with fixed incomes

B. Difficult to dispose of large volumes of debris

C. Disposal of debris in landfill

These alternatives can be used in various combinations or can be scaled down. For example, in alternative #2 collection stations might only be open on weekends with curbside collection only once per year. Or alternatives #2 and #3 could be combined where the City contracts with the collection companies to conduct the curbside collection portion of the program.

I would recommend adoption of alternative #2. It seems to be the most versatile in that it meets community needs through a number of resources. Suggestions of other City staff are welcome.

cc: Al Jones
Fire Chief
Ken Whorton
City Manager

RW/jj

AQ - Open Burning

REG
TRB



City of Troutdale

104 Kibling Street (503)885-5175
Troutdale, Oregon 97080

March 12, 1980

Dept. of Environmental Quality

RECEIVED
MAR 14 1980

Mr. Robert E. Gilbert, Regional Manager
Department of Environmental Quality
P. O. Box 1760
Portland, OR 97207

NORTHWEST REGION

Dear Mr. Gilbert:

In response to your letter re: AC - Open Burning, dated January 21, 1980, I have studied the alternatives to open burning of domestic yard debris and found that, for the time being at least, it is most in the City's interests to allow its current solid waste franchisee to collect yard debris by individual agreement and haul it to the nearest operating landfill.

At present, our solid waste franchise ordinance has only a general provision for special pick-ups under which yard debris can be collected; however, the franchisee has assured me that he has the capability of providing this service at reasonable cost, in spite of the added cost and inefficiency due to the continuing closure of the Obrist Pit landfill. In addition, we are working on an amendment to our franchise ordinance which will spell out in detail the terms of the yard debris collection agreement. As soon as the Troutdale City Council passes this amendment, a copy of it will be forwarded to you. In the meanwhile, I hope that this letter will serve as a sufficient interim proposal.

As I told Tom Bispham in a telephone conversation, the City of Troutdale has very limited resources to devote to more sophisticated alternatives in this matter, but if an alternative such as mulching should become feasible in the future, I am sure Troutdale would be very interested in pursuing it. For now, I regret that the City is constrained from doing more.

If I can be of any further assistance, please feel free to call or write me.

Yours truly,

CITY OF TROUTDALE

W. Craig Lunde, Administrative Intern
Public Works Department

WCL/vjk

AQ-Program - Open Burning



CITY OF OREGON CITY
INCORPORATED 1844
7th & JOHN ADAMS STREETS
OREGON CITY, OREGON 97045

May 12, 1980

Dept. of Environmental Quality
RECEIVED
JUN 2 1980
NORTHWEST REGION

To: Oregon City Commission
From: Alfred Simonson, General Manager

Attached please find a summary of labor and equipment costs of the Street Department spring brush pickup for this year.

The Department of Environmental Quality Air-Quality Maintenance have indicated that all backyard burning of brush and leaves now being scheduled for each spring and fall is to be discontinued as of January 1, 1981. With the discontinuance of backyard burning next year, we would project as much as a 50% increase in this brush pickup cost to the City if we continue our present policy.

D.E.Q. has not officially indicated that it will not participate financially to support alternate methods of brush and leaves removal. They have asked that I forward these costs on to them for their review and indicate the City's position on expanding the present or alternate methods of disposal.

ALFRED SIMONSON
General Manager

Attach.

cc: Department of Environmental Quality
Air-Quality Maintenance

BRUSH PICK UP

SRING 1980

April 14 thru 25 1980

PERSONNEL.....\$3,299.83

EQUIPMENT.....\$4,000.00

Labor..... 320 hrs.

Equipment.....Backhoe..... 80 hrs.

10 yd. Truck..... 80 hrs.

5 yd. Truck..... 80 hrs.

1 ton Truck..... 80 hrs.

Bobby L. Smith

BOBBY L. SMITH

STREET SUPERINTENDENT

CITY OF OREGON CITY

TRB
Req



WASHINGTON COUNTY

ADMINISTRATION BUILDING — 150 N. FIRST AVENUE
HILLSBORO, OREGON 97123

BOARD OF COMMISSIONERS

MILLER M. DURIS, Chairman
JIM FISHER, Vice Chairman
VIRGINIA DAGG

DANIEL O. POTTER
COUNTY ADMINISTRATOR
ROOM 418
(503) 648-8676

May 20, 1980 Dept. of Environmental Quality

RECEIVED
MAY 27 1980

Mr. Robert E. Gilbert
Regional Manager
Northwest Region
Department of Environmental Quality
522 SW Fifth Avenue
Portland, Oregon 97207

NORTHWEST REGION

Dear Mr. Gilbert:

RE: Your letter of May 13, 1980
Open-Burning Ban

The Board of Commissioners of Washington County is in receipt of your letter of May 13, 1980, regarding the proposed open-burning ban.

Your letter indicates that state financial assistance for purchase of equipment is doubtful, but that local jurisdictions need to plan for a proposed open-burning ban to be effective in 1980. This obviously implies the need to develop a process for disposal of materials formerly burned and for the financing of such system including possible interim treatment of materials before disposal.

Washington County has no funds to undertake a new state-mandated function. We have no real knowledge as to the volume of material that would need to be handled except we have reason to believe it would be enormous and treatment would be very expensive, both in terms of capital cost as well as in ongoing maintenance and operation costs. We know of no place to ultimately dispose of the tremendous volume of materials that would be generated.

We believe the placement of an open-burning ban would ensure that such materials would wind up on obscure roadways. The storage of such material on private lots could only serve as breeding places and homes for rats, mice, mosquitoes, nutria, opossums, and other disease-carrying creatures.

The use of the Metro boundary as an area where the ban is to be placed is of serious question. This would apparently mean that agricultural and forest practices which involve burning of massive amounts of straw, slash, and other debris could continue while the home owner in a more urban setting would be required to dispose of yard debris on a fee basis or by some equivalent process. Such a process does nothing to enhance the air quality in the air shed. It does create a travesty based on location only and allows one individual to burn debris while a home owner a block removed is prohibited from burning.

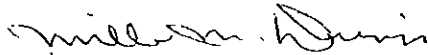
Department of Environmental Quality
Page 2
May 20, 1980

Again, Washington County has no budgeted resources to purchase equipment to reduce the volume of materials that would need to be disposed of in the Metro area; we would expect a mountain of debris. We know of no place to dispose of this type of material that would meet your office's criteria.

We are dumbfounded that the Department of Environmental Quality appears to be ordering the County to resolve a problem that we have no resources to resolve. You indicated you will expect a written summary of alternatives at the May 30, 1980 meeting at the Metro office. We have no program, have not funded a program, have no ability to fund a program, and do not anticipate any ability to develop or fund a program. Any such funding would have to come from other legislatively mandated services.

We do plan to have representation at your May 30 meeting.

Sincerely,



Miller M. Duris, Chairman
Washington County
Board of Commissioners

MMD:ew

cc: Bill Young, DEQ
Mike Sandberg, Health Department



City of West Linn

May 30, 1980

CITY HALL
WEST LINN OREGON
97068

Department of Environmental Quality
522 SW 5th Avenue
Portland, Oregon 97207

Attn: Robert E. Gilbert
Regional Manager

Re: AQ Open Burning Ban

RECEIVED
DEPT. OF ENVIRONMENTAL QUALITY
JUN 2 1980
NORTHWEST REGION

Dear Mr. Gilbert,

In response to your letter of May 13, 1980, the City of West Linn proceeded to investigate alternate methods of handling and/or treating the combustible wastes generated within the City. Our prime concern in addressing the program remains, "What are the rules and regulations to be imposed by State agencies?"

It is the intent of the City to adopt the regulations of the State once they are promulgated. We have been seeking a "hog-fuel" use of all combustibles by the Crown Zellerbach Corporation at their mill in West Linn. It is anticipated that this use source will be implemented once the framework of quality has been established.

The methodology of controlling combustibles, stockpiling, and financing, have yet to be determined. There may be constraints on these formats which would preclude a favorable program being prepared at this time.

Respectfully Submitted,
City of West Linn

J. Wayne Daigle
J. WAYNE DAIGLE
City Engineer

cc: Clifford L. Sanders,
City Administrator

JWD:djn

DRAFT "Metro Yard Debris Recovery Program"

Executive Summary and Table of Contents

DISCLAIMER

The attached report has been reviewed by the Metropolitan Service District and approved for duplication. Approval does not signify that the contents necessarily reflect the views and policies of the Metropolitan Service District, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

DRAFT

METRO
YARD DEBRIS RECOVERY PROGRAM

PREPARED FOR:
METROPOLITAN SERVICE DISTRICT
527 S.W. HALL
PORTLAND, OREGON 97201

SUBMITTED BY:
RESOURCE CONSERVATION CONSULTANTS
1615 N.W. 23RD AVENUE
PORTLAND, OREGON 97210

SEPTEMBER 30, 1980

PREFACE

This document was prepared for the Metropolitan Service District (METRO) to assist the agency in the development of an implementation plan for the recovery and disposal of yard debris.

The plan is necessitated by a proposed ban on the burning of yard debris in the Portland metropolitan area scheduled for January 1, 1981. In addition, existing landfills are not able to handle increasing volumes of material. As the solid waste authority for the region, METRO has assumed responsibility for coordinating a regional program to alternatively dispose of yard debris.

The document is presented in three chapters:

1. National Practices Survey - a review of yard debris recovery systems in the United States and a listing of criteria for planning a successful program.
2. Local Jurisdiction Programs and Potential Markets - a summary of current yard debris collection and disposal practices in the METRO region, a review of local jurisdiction plans for recovery programs, and an evaluation of local markets for available material.
3. Implementation Plan - a presentation of potential systems and a recommended program for implementation.

The executive summary provides a review of the major facts regarding national and local programs and market conditions. It also describes the recommended plan and cost estimates for a comprehensive regional yard debris recovery program.

EXECUTIVE SUMMARY

Yard debris encompasses several types of materials with varying physical properties. It includes green materials such as leaves, which are initially dry and of high volume, grass clippings, weeds and leafy prunings, which have a high moisture content and are of dense volume; dirt; rocks; and woody waste, comprised of twigs, branches, tree limbs and stumps. Woody wastes are usually bulky and when newly fallen, have a high moisture content.

The national survey of yard debris programs reveals that many communities have been successful in planning and implementing alternative treatment of these materials. While the reasons for initiating treatment programs vary, those most often cited include:

- the adoption of air quality standards which prohibit open burning of debris.
- limited landfill space which restricts the disposal of bulky unprocessed wastes.
- desire to treat yard debris as a resource rather than a waste.
- necessity for finding a solution for disaster related debris.

Because the communities have limited landfill space and encounter great opposition to the siting of new facilities, reducing the volume of the debris - via chipping, shredding, grinding, baling or composting - is a widely employed treatment. Disposition

of the materials after processing includes:

- use as an intermediate landfill cover.
- application as a mulch in landscape plantings and gardens.
- use as a bulking agent in sewage sludge composting.
- use for control of soil erosion in land reclamation projects.
- transformation into compost and use as a soil conditioner.
- use as an energy source for hog fuel boilers.
- employment as a constituent of commercially produced potting soil.

Traditionally, responsibility for disposing of yard debris has been divided between private property owners and government agencies. The type of yard debris program depends on the space available to the homeowner or municipality. In all instances, yard debris are handled separately from other wastes.

Program details range from simple to complex. Less complicated systems may consist of shredding or chipping wastes and using them as landfill cover or selling them for hog fuel. Other programs may include composting the debris, followed by shredding, screening and bagging of the materials for sale or pickup by citizens.

Once the various types of yard wastes are mixed together, treatment by a single method becomes difficult. For example, woody wastes can be reduced in volume by chipping. But if they are mixed with grass clippings or dirt - materials which clog equipment -

chipping is more difficult. Conversely, grass clippings can be used as a mulch or composted, but if combined with twigs or other woody wastes, they decompose very slowly and cannot be used as easily for mulch or compost.

No municipally managed debris program could be located which operated at a profit. Some communities are able to recoup their expenses by charging citizens a fee for dumping their unprocessed woody wastes. Other communities recover expenditures by selling their chipped, ligneous materials to a variety of private users. Shredded, composted leaves are usually given to residents who are willing to pick them up.

In addition to a survey of yard debris programs on a national scale, a review of local conditions was conducted. Since METRO has management responsibility for regional solid waste disposal, it was important to find out what city and county agencies were doing, what plans had been made in preparation for the burn ban, and what assistance, if any, they might request from METRO.

At the present time, there is little recovery and processing of yard debris either by residents or by municipalities. While burning is the primary means of treatment, collection of residential debris is not a major problem since most communities have franchised or private waste collectors who are willing to collect extra debris on a cost per can basis.

Other current methods of collection include renting a dropbox, self delivery to a landfill site, hiring a private landscaping firm or participating in local community clean-up days.

Additionally, most communities have public works departments which clear public roadways or offer chipping or collection services on request.

Once collected, residential yard debris are taken directly to a landfill for disposal, although an indeterminate amount of composting and chipping is undertaken. Of the 27 jurisdictions surveyed, nearly two-thirds stated that the proposed ban on open burning would result in severe disposal problems for their areas.

Most city and county governments within the METRO area have been attempting to develop burning alternatives with varying degrees of success. Proposed options include:

- municipal leaf composting programs
- seasonal clean-up projects
- central chipping operations
- curbside yard debris pickup services.

However, the potential for expanded service is inhibited by shrinking tax revenues and anticipated large volumes of yard debris. In particular, it is the larger amounts of woody wastes - especially those generated by orchardists and in heavily wooded or landscaped communities - which cause planning difficulties. The costs of transporting sizable quantities of woody wastes require

that they not be trucked far from their point of generation. This will mean organization of processing programs - chipping and shredding - within the METRO area.

Twenty of the jurisdictions were interested in a regional plan for recovering yard debris. Most jurisdiction representatives expressed a willingness to share in features of a program such as equipment, collection, processing, disposal and marketing.

Cooperation between neighboring communities can include sharing of equipment, storage and processing sites and responsibility for disposition of materials. Potential roles for METRO were defined and supported in the following priority:

- coordinate program
- loan or lease equipment
- provide promotion and education
- provide central storage and processing sites
- develop model franchise language

Prior to initiating operation of a yard debris recovery program, markets and alternative disposal or end use methods should be identified and secured. A precise determination of prospective markets for recovered yard debris requires two essential points of information:

1. the volume available for marketing.
2. the composition and characteristics of the material.

At present, available information on these two issues is incomplete. Estimations of annual yard debris volume generation in the METRO region range from 48,000 tons to 128,000 tons. Typically, leafy

material and grass clippings comprise a larger portion of total yard debris by weight than does woody material.

Processing of yard wastes for marketing generally calls for a separation of green materials (leaves and grass) from woody wastes. Although green materials may be used without processing for mulching, the primary demand is for composted material. Woody wastes may be chipped and composted in combination with leaves and grass but the demand is higher if the chips are marketed separately as hog fuel or ground cover.

Market demand for yard debris may come from three sources:

- residential - residents utilize self-generated material or obtain processed materials for gardening purposes. Current demand is difficult to determine, but it appears promising as evidenced by citizen requests for chips from both public and private tree maintenance services. This demand may grow with the establishment and promotion of central facilities offering a source of compost or wood chips.
- municipal - parks departments, maintenance bureaus and utilities have demand for recovered yard debris from the public sector. Accumulations of leaves and wood chips from street and park maintenance are delivered to citizens upon request, used as mulch or composted for landscaping and nursery use, or landfilled if contaminated with dirt, gravel or litter. These agencies may have a net demand greater than their own generation and reuse to satisfy either community needs or the requests of the public for material.

Other municipal sources of demand may include the use of wood chips derived from yard debris as the bulking agent for sewage sludge composting or using ground yard debris as daily cover in landfills during winter months. The resource recovery facility in Oregon City, projected to begin operation in 1984, may require that all of the woody wastes generated in the region be routed for use as fuel in the plant.

- commercial - commercial demand may originate both at the intermediate level (nurseries, landscapers) and at the end level users (hog fuel purchasers). The primary use for green materials

is in compost but the marketability depends on the ability to provide a reliable product both in terms of supply and quality control. Large-scale compost producing markets operate in Seattle, but no market has been established as yet in the Portland area. Smaller scale markets such as nurseries and landscapers are hesitant to use a yard waste compost for top soil because of contamination potential.

Four major uses for chipped woody wastes generated from tree and shrub trimmings are hog fuel, ground cover, mulch and compost. It appears that the hog fuel market represents the strongest demand for yard debris material in the region. Four local firms expressed an interest in the woody material. Over the long range, a market for a large supply of compost may be developed.

In the meantime, a minimum debris control program is necessary based on the following assumptions:

1. There is an immediate need for a system to adequately handle increasing amounts of yard debris resulting from the ban on burning.
2. Pressures on existing landfills prohibit the disposal of increased volumes of unprocessed material.
3. A workable solution must be based on proven examples of yard debris recovery programs in the U.S. as well as the unique conditions of the local area.
4. There is a need to determine the volume and composition of yard debris prior to developing a comprehensive and long range program.
5. Green materials (leaves, grass clippings, weeds and leafy prunings) may be easily mixed with regular garbage for pick-up or separated for composting at the residence or by a neighborhood organization.
6. Woody wastes (twigs, branches, limbs, stumps and trunks of trees) are bulky and difficult to handle for the homeowner, collector or landfill operator. However, the material is relatively easy to segregate and the market potential for processed material is promising.

The advantages and disadvantages of collection, storage, processing and disposal or end use alternatives were evaluated and potential systems for yard debris recovery and disposal were then developed. Five options were organized on the basis of potential end users of the material:

1. disposal of processed yard debris: reduce volumes and landfill material until stable markets are established and the volume and composition of available material is known.
2. citizen use: backyard composting of green material.
3. municipal use: compost green material for gardening uses and chip woody wastes for mulch or landfill cover.
4. commercial use: develop large scale compost market for green material and chip woody wastes for sale as hog fuel.
5. decentralized processing sites: develop small scale markets in local areas for neighborhood or municipally generated yard debris.

An implementation plan for the recovery and disposal of yard debris in the METRO region was then developed using elements of the five potential systems in a level of operation compatible with the needs of METRO, local jurisdictions and citizens.

The program is designed to collect, store, process and utilize only woody wastes during the first year while a data base of volume and composition figures is developed for future program planning over five years. The program will be phased in during the remainder of the fiscal year - January through June, 1981.

Woody wastes will be collected and transported by the homeowner, private and franchised waste haulers, private industry sources such as chipping or landclearing services, or by municipal parks or street cleaning crews. The phased six-month program focuses on woody wastes which currently accumulate separate from other materials or which can be easily separated by the generator prior to collection. A formal commitment is required by local jurisdictions to collect the separated yard debris as the program continues.

Storage of woody wastes will be at a separate drop-off area at the processing site - a designated portion of a landfill site or a specific area at a transfer station. METRO should provide for the first of these sites at the St. Johns landfill. Additional sites in accessible locations will be arranged with operators of other landfills and local jurisdictions.

Processing will focus on size reduction by chipping or grinding. Existing municipal equipment can be utilized to process debris prior to delivery at the landfill site. Such loads may be charged reduced disposal rates due to savings in processing costs. METRO will purchase equipment to provide grinding on-site at St. Johns and periodically visit other storage sites to process accumulated material. Wood suitable for firewood will be separated and cut to size.

At a minimum, processed debris will be landfilled. Residential and municipal gardeners will be encouraged to pick up chipped material at no charge. Firewood will also be set aside for free pickup by citizens. METRO should pursue the development of markets for the material including use as intermediate landfill cover and hog fuel.

Promotion by METRO of alternative methods, supplies and uses of processed woody wastes is necessary. Local jurisdictions can assist by promoting efforts in their communities. Haulers may wish to notify customers that pick-up service for separated woody wastes is available. Education is another important program

component. Substantial volumes of green materials may be easily composted by citizens at their home or in neighborhood and community projects. Information and workshops will be provided by METRO with assistance from local jurisdictions.

Local jurisdictions and private industry may utilize existing hauling and chipping equipment. METRO will pursue options for the purchase of suitable processing equipment. The Royer Woodsman Shredder, mounted either on a wheeled or crawler tractor, is recommended. A truck with trailer capable of hauling the tractor/shredder unit will be necessary to transport the equipment to various sites. A loan or lease program may also be initiated for on-call use of a second piece of equipment by local jurisdictions.

No additional staff are required by local jurisdictions or private industry in the operation of the program. METRO staff requirements are as follows:

- Administration
 - Solid Waste Technician
 - Urban Economist
 - Secretary
- Promotion and Education
 - Public Information Specialist
- Operations
 - Equipment Operators (2)
 - Laborer

Only the Solid Waste Technician, Public Information Specialist and Secretary positions need to be filled upon program approval. One Equipment Operator and the Laborer positions should be filled after the arrival of the equipment. The second equipment operator can be hired after the municipal assistance component is implemented. The Urban Economist should investigate the market feasibility for processed material following the first six months

of operational history and data collection and be employed only as long as market development is needed.

In terms of regulation, local jurisdictions with franchised waste collection will need to revise their ordinances to assure inclusion of yard debris and to prepare for separated collection. METRO may assist by developing model franchise language. Other areas of regulatory revision may include the modification of landfill certificates and METRO's Code to allow for separate storage and processing of woody wastes.

As the agency with solid waste authority for the tri-county urban area, METRO is placed in the role of coordinating a regional yard debris recovery program. METRO will have staff, sites, equipment and resources to operate and promote the program. Recognition of the problems of local jurisdictions and provision of services as needed are coordinating activities. Municipalities may assist by using existing resources to facilitate collection and coordinate community projects to utilize yard debris.

A final responsibility of METRO is maintaining records on the volume and composition of yard debris collected, processed and utilized for program evaluation and future market development.

The total cost of the recommended METRO processing and planning activities is described below. Budget assumptions include:

- use of equipment on a 2080 hour year.
- supervision of equipment operators performed by existing METRO landfill management staff.
- no site acquisition or lease costs.
- salaries at entry rate of METRO 1980 Pay Plan.
- sixty percent salary overhead (fringe, payroll costs, office expenses, miscellaneous costs).
- no estimate of the cost of inflation or salary increases.
- no interest rate calculation; equipment purchase by METRO user fees. If Oregon Pollution Control Bond funds are used, an interest rate of 7.2-7.5% would be charged.

Total Program Cost Estimates

Equipment

Two tractor mounted Woodsman 6003-P shredders	\$100,000
@ \$50,000 each	16,000
Truck and trailer; used	800
Tools and chainsaws	<u>800</u>
	\$116,800
Annual cost over five years	<u>\$ 23,360</u>

Operation and Maintenance

Supplies (gloves, rainsuits, etc.)	\$ 1,000
Site maintenance	3,000
Insurance	2,000
Tractor fuel (5 gal. diesel/hr.; 4160 hrs./yr.; \$1.05/gal.)	21,840
Truck fuel (4 mi./gal.; 5000 mi./yr.; \$1.20/gal.)	1,500
Tractor and Woodsman operation & maintenance @ \$3/hr.	12,480
Truck operation & maintenance @ \$1/hr.	520
	<u>\$ 42,340</u>

Site Development

Engineering	\$ 4,000
Preparation and construction	20,000
Signs, fencing, sheds	6,000
	<u>\$ 30,000</u>
Annual cost over five years	<u>\$ 6,000</u>

Labor

Equipment Operators (2.0 FTE @ \$16,033 each plus OH)	\$ 51,306
Laborer (1.0 FTE @ \$15,275 plus OH)	24,440
Solid Waste Technician (1.0 FTE @ \$16,033 plus OH)	25,653
Public Information Specialist (.5 FTE @ \$8,017 plus OH)	12,827
Secretary (.25 FTE @ \$3,280 plus OH)	5,248
Urban Economist (.25 FTE @ \$6,486 plus OH)	10,378
	<u>\$129,852</u>

Promotion/Education

Bus ads (400 interior @ \$3; 100 exterior @ \$15)	\$ 2,700
Radio announcements (production cost; free airplay)	3,000
Television announcements (production cost; free airplay)	8,000
Fact sheets (two-sided; 8½ x 11; 100,000 copies)	1,800
Workshop materials	2,000
	<u>\$ 17,500</u>

Summary of Estimated Program Costs

Equipment		\$116,800
Annual cost over five years	\$23,360	
Operation and Maintenance		42,340
Site Development		30,000
Annual cost over five years	\$ 6,000	
Labor		129,852
Promotion/Education		17,500
	Total Cost: First Year	<u>\$336,492</u>
	Annual Cost: Five Years	\$219,052

To gauge the immediate costs to METRO of program implementation, a six-month budget was developed for the remainder of fiscal year 1980-81. It allows for phasing in staff and activities as equipment arrives and program components are negotiated. Budget assumptions remain the same as for the total program budget. The annual fiscal year maintenance cost does not assume costs of inflation, salary increases or program changes.

Summary of Estimated Program Phase In Costs:
Through Fiscal Year 1980-81

Equipment	\$116,800
Operation and Maintenance	16,880
Site Development	30,000
Labor	51,472
Promotion/Education	17,500
Total Phase In Cost	<u>\$232,652</u>
Annual Fiscal Year Maintenance Cost	\$189,692

Revenue to offset costs of the program may be secured from disposal fees for woody wastes at collection sites. Funds for purchase of equipment can be sought from the state. Fees for use of equipment by local jurisdictions may cover labor and operation costs. It is proposed that program costs be shared by both METRO and the Department of Environmental Quality. This recognizes the fact that costs associated with mitigating an air quality problem should not rest entirely with the solid waste generator.

In conclusion, the phased woody wastes disposal and recovery program has been designed to serve two purposes in an economically and environmentally sound manner:

- provide an immediate solution to an impending solid waste disposal problem.
- prepare for a comprehensive yard waste recovery program.

A two-year voluntary program is recommended. Within this time period METRO would coordinate the program and work with local jurisdictions. Since there is currently no viable alternative to the burning ban, it is suggested that the Environmental Quality Commission delay instituting the ban for this two-year period until an acceptable regional program is operational.

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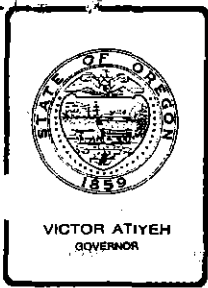
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Agenda Item No. N, December 19, 1980, EQC Meeting



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. N, December 19, 1980, EQC Meeting
Public Hearing for Rule Adoption to Allow a Spring
Backyard Burning Season (OAR 340-23-045)

Background

At its June 1979 meeting, the Environmental Quality Commission (EQC) granted an extension of the spring and fall backyard burning periods through 1980. In granting this extension, the Commission directed staff to establish reasonable programs with local governments which would permit the prohibition of backyard burning after December 31, 1980.

The efforts to fully assess the feasibility of prohibiting backyard open burning and to establish reasonable alternative disposal programs has met with a number of obstacles. The Department is continuing to develop the following information: volume of material involved; the environmental impacts; the energy/economic impacts of various alternatives; and an assessment of the public's attitude. The Department is committed to seeking wide public review and comment on the final assessment. To meet this commitment additional time is needed to complete the report, distribute to the public, conduct hearings and evaluate public comment. It is projected that the final report will be completed by February 1, 1981, and that a request for public hearing will be made at the February EQC meeting. The hearings would be held in March and April and a final report and recommendation made to the Commission in June.

Since the final report will not be completed until May and alternatives to burning will not be available during the 1981 spring clean-up period, it is the Department's belief that the Department's open burning rule should be revised to allow a spring burn period in 1981. This can be done by changing the date listed in OAR 340-23-045(6) (a) from December 31, 1980, to June 30, 1981.



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Authority

Oregon Revised Statute (ORS) 468.020 Rules and Standards (1) states:

"In accordance with the applicable provision of ORS 183.310 to 183.500, the commission shall adopt such rules and standards as it considers necessary and proper in performing the functions vested by law in the commission."

The Notice of Public Hearing (Attachment A), a Statement of Need for Rulemaking (Attachment B), and a copy of the revised rule (Attachment C) (OAR 340-23-045), are attached to this report.

Summation

1. In June 1979, the EQC adopted OAR 23-045(6) (a) (Attachment C) which prohibits open burning of domestic waste in Clackamas, Columbia, Multnomah and Washington counties after December 31, 1980.
2. The date cited in item 1 was granted with the stipulation that the Department establish reasonable programs with local governments which would permit the imposition of a burning ban in the near future.
3. The Department has expended considerable staff time in attempting to assess the overall impact of a burning ban and in developing reasonable alternatives to burning. However, as of this date, information critical to a public understanding of this issue is still being developed to describe waste material volume, environmental impact, energy/economic impact, other burning alternatives, and public attitude.
4. The Department estimates that the final report will be completed by February; that a request for public hearings will be presented to the EQC February meeting; the public hearings can be conducted in March and April and that a final report and recommendation can be made to the Commission in June.
5. The Department is committed to providing the public time to conduct a full review of our assessment of this matter. The staff is opposed to reducing the public review period in order to bring this matter before the Commission at an earlier date.
6. In light of the above schedule, new disposal accommodations other than burning will not be available to the public during the spring yard clean-up period.

7. Because new alternative disposal methods are not available, the Department believes that the Department's open-burning rule should be revised to permit a spring burning period between March 1, 1980, to June 15, 1980.

Director's Recommendation

Based upon the Summation, it is recommended that the Environmental Quality Commission adopt the proposed revised rules contained in Attachment C.

Bill

William H. Young

Attachments: Open Burning Rule
Statement of Need for Rulemaking

T.R. Bispham:g
RS61 (1)
229-5342
December 2, 1980



ATTACHMENT A

Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

Prepared: 10/20/1980

Hearing Date: 12/19

NOTICE OF PUBLIC HEARING

A CHANCE TO BE HEARD ABOUT:

PROPOSED REVISION OF OPEN BURNING RULES

The Department of Environmental Quality is proposing a revision to its Open Burning Rules to postpone the date for prohibiting backyard burning in Clackamas, Columbia, Multnomah, and Washington Counties for a 180-day period from December 31, 1980, to June 30, 1981.

WHAT IS THE DEQ PROPOSING?

A public hearing before the EQC to consider postponing the ban on backyard open burning in Multnomah, Clackamas, Washington, and Columbia Counties for 180 days and allow a spring open burning period from March 1, 1981, to June 15, 1981.

The Department will be recommending that one more spring open-burning period be allowed, March 1 - June 15, 1981, to allow time to better identify:

- a. Alternatives to backyard open burning.
- b. Comparison of open burning to:
 1. Costs of alternatives
 2. Environmental effects of alternatives
 3. Effect of the alternatives on the energy resource.

The Department will also be recommending that the Environmental Quality Commission direct the staff to schedule a series of public hearings as soon as full information on alternatives can be made available to the public, but within the 180-day extended burn period, to receive public testimony on whether or not backyard open burning should be permanently banned, and if so, in what areas and under what conditions.

Therefore, the only action the Department is proposing at the December 19, 1980, hearing is to amend the date contained in existing rules to:

- ** Allow a 1981 spring open burning period in the four county Portland Area, from March 1, 1981 to June 15, 1981. (Only testimony pertaining to the question of whether or not one more spring open burning period should be held will be received and considered at this hearing.)



Contains
Recycled
Materials

FURTHER EXPLANATIONS

The Department was originally scheduled to hold public hearings in early December to receive testimony on proposed revised open burning rules. The proposed rules, if adopted would prohibit backyard open burning within an area roughly equivalent to the MSD area, but excluding rural areas and Hillsboro and Forest Grove.

At the time the December hearings were initially proposed it was expected that information on availability, costs and impacts of alternatives to open burning would be available for dissemination to the public. Because of the complexity of this problem and the involvement of a number of State and local entities and public interest groups, this information could not be assembled in time for the public to receive and evaluate prior to December hearings.

Therefore, the Department decided to ask the Commission to postpone the public hearings on the proposed extensive revisions to the open burning rules. Since the new rules would not be effective and alternatives to open burning would not be identified in time for the public to know what it should do with its backyard debris next spring, it was decided that one more open burning period was probably necessary to:

- ** Allow more time for identifying and reporting information to the public on availability, cost and energy impacts of alternative methods of disposal and
- ** Allow more time for public review of this information and comment on future extensive revisions to the rules including a possible permanent ban on backyard open burning in the Portland area.

Additional hearings will be scheduled within the next few months to fully discuss and decide this issue.

WHO IS AFFECTED BY THIS PROPOSAL:

- ** Citizens of Clackamas, Columbia, Multnomah, and Washington County who have an interest in "backyard burning."
- ** Local governmental agencies in the above four counties who are or have been involved in planning for open burning ban, especially fire districts in these counties.

WHERE TO OBTAIN ADDITIONAL INFORMATION:

After November 1, 1980, interested persons may request a copy of the proposed rule change and background material from the Department of Environmental Quality Offices in Portland at:

Department of Environmental Quality
Air Quality Division
522 S.W. 5th Avenue, Box 1760
Portland, Oregon 97207
(503) 229-5836
Toll Free 1-800-452-7813

PUBLIC HEARING

A public hearing will be held before the Environmental Quality Commission at their regular December meeting in Portland.

<u>City</u>	<u>Time</u>	<u>Date</u>	<u>Location</u>
Portland	10 a.m.	Dec 19	Regular December meeting of the Environmental Quality Commission in Portland. 522 SW 5th Avenue, DEQ Conference Room 1400. (Persons may request to be notified. Call Portland 229-5836 or toll free 1-800-452-7813.)

Written comments should be sent to the Department of Environmental Quality, Air Quality Division, Box 1760, Portland, Oregon 97207, and should be received prior to December 19, 1980.

Oral and written comments may be offered at the above public hearing.

LEGAL REFERENCES FOR THIS PROPOSAL:

This proposal amends 340-23-045. It is proposed under authority of ORS Chapters 183 and 468 including Sections 468.020, 468.290, 468.295, and 468.450.

This proposal does not affect land use as defined in the Department's coordination program with the Department of Land Conservation and Development.

FURTHER PROCEEDINGS:

After public hearing the Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted regulations will be submitted to the Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's deliberation should come December 19, 1980, after the public hearing at their regularly scheduled Commission meeting.

A Statement of Need and Fiscal Impact Statement are attached to this notice.

Agenda Item _____, December 19, 1980, EQC Meeting

Statement of Need for Rulemaking

Pursuant to ORS 183.335(7), this statement provides information on the Environmental Quality Commission's intended action to adopt a rule.

1) Legal Authority

ORS Chapters 183 and 468 including ORS 468.020, 468.045, 468.290, 468.295 and 468.450.

2) Need for the Rule

The proposed rule change postpones the date for an open burning prohibition from December 31, 1980, to June 30, 1981, in order to:

1. Provide more time to identify suitable alternatives to open burning and the environment/economic impacts of such a rule.
2. Provide a spring domestic open burning period from March 1, 1981, to June 15, 1981.

3) Fiscal Impact

Based upon past records of fire permits issued during the spring burn period in the Portland Metro area, it is estimated that 30,000 - 60,000 individuals conduct backyard burning. Should a ban be imposed at this time, these individuals would be faced with increased garbage hauling costs or dumping fees should they haul the material themselves.

4) Land Use Consistency Statement

This is not relevant.

5) Principal Documents Relied Upon in the Rulemaking.

- a) Department staff report and recommendation to the EQC (December 19, 1980).
- b) Copy of open burning rule.

TRB:g
RS61.AT (1)
229-5342
November 24, 1980

ATTACHMENT C

Requirements and Prohibitions by Area

340-23-045 (1) Lane County: The rules and regulations of the Lane Regional Air Pollution Authority shall apply to all open burning conducted in Lane County, provided that the provisions of such rules and regulations shall be no less stringent than the provisions of these rules.

(2) Solid Waste Disposal: Open burning at solid waste disposal sites is prohibited statewide except as authorized by a Solid Waste Permit issued as provided in OAR Chapter 340, Sections 340-61-005 through 340-61-085.

(3) Commercial Waste: Open burning of commercial waste is prohibited within open burning control areas except as may be provided in subsection 7 of this section.

(4) Industrial Waste: Open burning of industrial waste is prohibited statewide except as may be provided in subsection 7 of this section.

(5) Construction and Demolition Waste: Except as may be provided in this subsection and in subsection 7 of this section, open burning of construction and demolition waste, including non-agricultural land clearing debris, is prohibited within all Open Burning Control Areas except that such burning is permitted:

(a) In Multnomah County east of the Sandy River.

(b) In Washington County in all unincorporated areas outside of rural fire protection districts.

(c) In areas of all other counties of the Willamette Valley Open Burning Control Area outside of Special Control Areas.

(6) Domestic Waste: Open burning of domestic wastes is prohibited in the Willamette Valley Open Burning Control Area, except:

(a) Such burning is permitted until [~~December-31-1980~~]

June 30, 1981:

(A) In Columbia County.

(B) In the Timber and Tri-City Rural Fire Protection District and in all areas, outside of rural fire protection districts in Washington County.

(C) In the following rural fire protection districts of Clackamas County:

(i) Clarkes Rural Fire Protection District.

(ii) Estacada Rural Fire Protection District No. 69.

(iii) Colton-Springwater Rural Fire Protection District.

(iv) Molalla Rural Fire Protection District.

(v) Hoodland Rural Fire Protection District.

(vi) Monitor Rural Fire Protection District.

(vii) Scotts Mills Rural Fire Protection District.

(viii) Aurora Rural Fire Protection District.

(ix) All portions of the Clackamas-Marion Fire Protection District within Clackamas County.

(D) In Multnomah County east of the Sandy River.

(E) In all other parts of Multnomah, Washington, and Clackamas counties, for the burning of wood, needle and leaf materials from trees, shrubs or plants from yard clean-up on the property at which one resides, during the period commencing on the first day in March and terminating at sunset on the fifteenth of June and commencing on the first day in October and terminating at sunset on the fifteenth of December.

(b) Such burning is permitted until July 1, 1982:

(A) Outside of Special Control areas in the counties of Benton, Lane, Linn, Marion, Polk and Yamhill counties.

(B) Within Special Control Areas of Benton, Lane, Linn, Marion, Polk, and Yamhill counties for wood, needle and leaf materials from trees, shrubs or plants from yard cleanup on the property at which one resides, during the period commencing on the first day in March and terminating at sunset on the fifteenth of June and commencing on the first day in October and terminating at sunset on the fifteenth of December.

(c) Domestic open burning is allowed under this section only between 7:30 a.m. and sunset on days when the Department has advised fire permit issuing agencies that open burning is allowed.

(7) Open Burning Allowed by Letter Permit: Burning of commercial, industrial and construction and demolition waste on a singly occurring or infrequent basis may be allowed by a letter permit

issued by the Department, provided that the following conditions are met:

(a) No practicable alternative method for disposal of the waste is available.

(b) Application for disposal of the waste by burning is made in writing to the Department, listing the quantity and type of waste to be burned, and all efforts which have been made to dispose of the waste by other means.

(c) The Department shall evaluate all such requests for open burning taking into account reasonable efforts to use alternative means of disposal, the condition of the particular airshed where the burning will occur, other emission sources in the vicinity of the requested open burning, remoteness of the site and methods to be used to insure complete and efficient combustion of the waste material.

(d) If the Department is satisfied that reasonable alternative disposal methods are not available, and that significant degradation of air quality will not occur as the result of allowing the open burning to be accomplished, the Department may issue a letter permit to allow the burning to take place. The duration and date of effectiveness of the letter permit shall be specific to the individual request for authorization of open burning, and the letter permit shall contain conditions so as to insure that the burning is accomplished in the most efficient manner and over the shortest time period attainable.

(e) Within the boundaries of Clackamas, Columbia, Multnomah, and Washington counties, such letter permits shall be issued only for the purpose of disposal of waste resulting from emergency occurrences including, but not limited to, floods, windstorms, or oil spills, provided that such waste cannot be disposed of by any other reasonable means.

(f) Failure to conduct open burning according to the conditions of the letter permit, or any open burning in excess of that allowed by the letter permit shall cause the permit to be immediately terminated as provided in OAR 340-14-045(2) and shall be cause for assessment of civil penalties as provided in OAR 340-12-030, 340-12-035, 340-12-040(3)(b), 340-12-045, and 340-12-050(3), or for other enforcement action by the Department.

Residential Burning Prohibition:

What's Happening Around the U. S.

Residential Burning Prohibition:

What's Happening Around the U.S.

Sacramento, CA - Pop. 254,413

- Open burning prohibition date - July, 1971
- Purpose of the ban - air quality
- Yard debris collection - municipal, user fee
- Disposal method - landfill
- Cost to homeowner - 1974 \$3.25/month for 2 garbage cans and unlimited yard debris.

Columbus, OH - pop. 539,677

- Open burning prohibition date - approx. 1975
- Purpose of the ban - air quality
- Yard debris collection method - municipal bulk pick-up on a daily basis and spring clean-up program
- Disposal methods - landfill
- Cost to homeowner - part of the city tax

Minneapolis, MN - pop. 434,400

- Open burning prohibition date - July 1, 1971
- Purpose of the ban - air quality
- Yard debris collection - both municipal and private hauler under contract
- Disposal methods - landfill
- Cost to homeowner - \$5 per month for everything (garbage, appliance, yard debris, etc.)

Omaha, NE - pop. 347,328

- Open burning prohibition date - 1970
- Purpose of the ban - air quality
- Yard debris collection system - Not organized, by private collector or homeowner
- Disposal method - landfill
- Cost to homeowner - Not available

Denver, CO - pop. 514,678

- Open burning prohibition date - 1974
- Purpose of the ban - air quality
- Yard debris collection system - municipal collection
- Disposal method - landfill
- Cost to the homeowner - city taxed

Kansas City, MO - pop. 507,087

- Open burning prohibition date - 1968
- Purpose of the ban - air quality
- Yard debris collection system - 1/2 by city, 1/2 by contract
- Disposal method - landfill
- Cost to the homeowner - city income tax .5 of 1 percent

Des Moines, IA - pop. 200,587

- Open burning prohibition date -- limited ban in 1970, allows for two burn seasons a year
- Purpose of the ban - air quality
- Yard debris collection system - municipal
- Disposal method - landfill
- Cost to the homeowner - \$5 per residence per month for everything up to 12 containers

Seattle, WA - pop. 530,831

- Open burning prohibition date - No ban, year-round burning allowed by permit only*
- Yard debris collection system - private collection under municipal contract
- Disposal method - landfill
- Cost to the homeowner - user fee

Medford, OR - pop. 28,454

- Open burning prohibition date - 1 year trial from March 1980 - March 1981
- Purpose of the ban - air quality and nuisance
- Yard debris collection system - municipal collection or self-haul
- Disposal method - landfill
- Cost to the homeowner - 30 cents/bundle (garbage bag)

Eugene, OR - pop. - 76,346

- Open burning prohibition - 1972 by city council
- Purpose of the ban - air quality and nuisance
- Yard debris collection - municipal collector, self-haul
- Disposal method - landfill
- Cost to the homeowner - \$1.25 for additional garbage can or self-haul

* The permit system for open burning in Seattle is extremely restrictive and only approximately 60 permits are issued each year. In addition to the stringent standards that must be met as set forth in the permit, a permit fee of \$20 is assessed. The cost in time and money is such that citizens subscribe to a collection service or self-haul the material for disposal.

Historical perspective...

California - Backyard burning falls under the jurisdiction of local agencies rather than a state agency. Thus, burning ban decisions are made at the local levels. Metropolitan areas such as Los Angeles, San Francisco and San Diego have banned backyard burning practices a number of years ago (10 or more). Smaller urbanized communities such as Sacramento and Stockton implemented burning bans within the last ten years. Burn bans typically were imposed within communities that have a garbage collection system capable of also picking up yard debris.

Washington - Similar to California, air quality decisions such as burning bans are left to local jurisdictions. There exists a number of strategies within the state and they appear to reflect community interests. The strategies range from a total ban like the city of Everett maintains, to seasonal burns, to a year-round burning period on a permit basis such as in Seattle (see Seattle listing).

Summary -

The Portland metropolitan area is one of a few urban areas that maintains yard debris burn periods. In surveying urban areas around the U.S., there appears to be two main considerations in implementing a ban on open burning. First, it becomes an air quality issue, i.e., does it create an air quality problem? Secondly, it becomes a collection and disposal question, i.e., can existing collection systems adjust to handle yard debris? The answer to both of these questions has been yes in those communities surveyed.

Landfills are the common means of yard debris disposal for those communities surveyed. However, after a burn ban had been implemented, a number of communities have looked toward alternative uses for yard debris, i.e. compost. Berkeley and Seattle are two good examples of communities studying an alternative approach to reduce volume going into the landfills.

The logistics for collection and disposal of yard debris had not been completely worked out prior to burn bans. However, collection system capabilities were generally understood before the actual ban.

Public reaction to burn bans was minimal in those cities listed here. There was some initial outcry, but what little opposition did exist subsided rapidly when people realized they could still get rid of their yard debris.

Portland Metropolitan Area - Yard Debris Survey

8

1980
Portland Metropolitan Area
Yard Debris Survey

By
Mark W. Hope

Oregon Department of Environmental Quality
Solid Waste Division
P.O. Box 1760
Portland, Oregon
January 1981

Acknowledgements

Special thanks goes to Bill Bree (DEQ) for his data analysis work. Without Bill's computer work we still might be tabulating data.

Initial input for development of the survey was provided by an interagency task force on yard debris quantification. The task force provided the objectives from which to design and review the survey. Participants were Maxine Borcharding of the City of Portland, Wayne Coppell of Metro, Tom Bispham of DEQ (NW Region) and myself.

Numerous people worked behind the scenes to help produce the survey. Special appreciation goes to Vi Treadwell and Patricia Underwood for their long hours spent at coding responses, and Graciela Arrastia who keypunched the 1683 coded surveys and Statewide Mailing Lists.

Yard Debris Survey

- I. Introduction
- II. Executive Summary
- III. The Survey
- IV. Survey Results
- V. Volume Estimates
- VI. Cross Tabulations
- VII. Appendix
 - A. "Where Does Your Yard Debris Go?" and Cover Letter

Introduction

The yard debris survey was conceived as a means to estimate yard debris volumes and disposal practices in the Portland Metropolitan Area. Four objectives were initially identified as a framework for constructing the survey. They were:

- To determine how many people burn yard debris and what type of debris they burn.
- To determine the total yard debris generated by single family residences in the Portland Metropolitan Area.
- To evaluate current disposal practices and determine what generators might do after a burning ban is implemented.
- To determine the impact a burning ban might have on area landfills given the material normally burned might be disposed of in the landfill.

Essentially, the final survey results addressed the four basic objectives. In addition, attitude and waste generation patterns could be evaluated to determine the impacts of a ban on open burning of yard debris. As will be discussed later, one could now begin to relate geographic location, lot size, own vs rent, burning habits and ban support as to how these factors translate into impact on the community as well as the individual.

The following survey analysis is done on a statistical basis. The analysis of the survey is presented without conjecture to allow the data and its cross tabulation to address the subject as clearly as possible. In other words, the results speak for themselves and further interpretations may be misleading or false.

Executive Summary

The "Yard Debris Survey" results are fairly consistent with past hypotheses concerning volumes of material burned and waste disposal habits. Perhaps the most surprising result of the survey was the degree to which the public supported the ban. Those individuals that responded to the survey supported a ban on backyard burning habits 2 to 1. This point is consistent with the number of individuals who burn vs those that don't. In addition, those who previously burned or self hauled would join a collection system 2 to 1.

In looking at landfill impact, the true impact would be hard to determine. No one knows what percentage of that waste previously burned will wind up in the landfill rather than composted or disposed of in some other way. Overall, it appears that 35% of the residents burn varying amounts of their yard debris. Based on volume estimates, the material they do burn is approximately 12.5% of the total amount of yard debris generated by homeowners. Approximately half, as determined by the survey, of all waste generated in yard maintenance activities winds up in the landfill. If all material previously burned were to go to the landfill, one would expect to see yard debris landfill volumes increase by 26%.

An estimated total municipal waste generation rate for the Portland Metropolitan Service District is 800,000 tons per year. The survey estimates roughly 42,000 tons of yard waste has been previously burned. The impact of a burning ban would equate to 5% of the total municipal waste generation and would more than likely go unnoticed at the landfills.

One should be cautious in reporting or quoting the figures presented in this survey as gospel. The information provided from the survey is the public's best estimate of volumes. Such estimates may be somewhat nebulous and are a "best guess" response. However, volume estimates made by the public have shown to be somewhat consistent with modeling techniques used to estimate volumes.

The Survey

The survey was conducted by mail to a total of 4,996 residences among ten test areas throughout the Portland Metropolitan Area (see Table 1). Test areas were chosen to represent the general make-up of the metropolitan area while taking into account possible unique circumstances within specific communities. Only two communities deviated from the whole and will be discussed later regarding support of a burning ban. Gresham is the only community showing a much lower return rate than the average and it is speculated, due to approximately 30 surveys being returned by the same person without a geographical response, that a part of Gresham's mailing was lost.

Each test area was randomly sampled, i.e., every 7th resident, to allow for a reliable statistical basis for evaluating the data and projecting the data for the approximately 254,037 single family dwellings in the Metro Area. In the sampling, the survey was to be sent to single family dwellings (SFD) only. Our success rate at addressing only SFD was excellent as exemplified by the fact that of all the returns (1,683 total), SFD's made up 94.7%. Overall, 34% of those surveyed returned their questionnaires for evaluation.

Survey Results of
1980 Yard Debris Survey

1. Did you burn yard debris during the spring burn season or do you plan on burning during the fall burn season?

- Of those surveys returned, 97% responded to this question.
- 65% indicated that they didn't burn.
- 35% indicated that they did burn.

NOTE: Questions 2, 3, & 4 deal with a particular waste type, i.e., yard debris other than leaves and grass, leaves, and grass, respectively. The intent is to evaluate disposal methods for each waste type since the waste may dictate to a certain extent the disposal method. Each possible response within Questions 2, 3, & 4 are viewed as a separate question and the respondent was to estimate his percent of participation in any given method. In short, the respondent indicated what percentage of his yard debris he disposed of by one or more methods.

2. How do you dispose of your yard debris other than leaves and grass?

--Of those surveys returned, 98 to 99% responded to this question.

a. Did or did not use method:

<u>Method of Disposal For Possible Response</u>	<u>% of Respondents That</u>	
	<u>Did Not Use Method</u>	<u>Did Use Method</u>
Haul to landfill	59%	38%
Picked up as garbage	45%	51%
Hauled by contractor	90%	8%
Composted	72%	24%
Hauled other ways	90%	8%
Burned	68%	28%

b. Of those that did use a particular method, the level of participation (i.e., how much yard debris other than grass and leaves did they dispose of in this way):

<u>Method</u>	<u>% of Respondents That Did Use Method</u>	<u>Volume of Debris (% of total) Disposed of by Method</u>			
		<u><25%</u>	<u>25-50%</u>	<u>51-75%</u>	<u>76-100%</u>
		Haul to landfill	38%-----29%	14%	8%
Picked up as garbage	51%-----37%	14%	4%	46%	

(Table 1)
Residential Land Debris Survey Test Areas

Test Area	Community	Zip	# Surveys Sent (Total SFD Area)	# Returned	% of Total		
					Sent vs Area	Return vs Sent	Return vs Area
#1	St. Johns	203		236	12	31	4
	N. Portland	217	763				
	Albina	211	(6174)				
#2	Irvington	212	724	284	12.5	39	5
	Alameda	213	(5775)				
#3	Eastmoreland	202	767	274	14	35	5
	Woodstock & Johnson Creek	206	(5319)				
#4	West Hills	221	109	39	13	36	5
			(831)				
#5	Oregon City	045	469	122	16	26	4
			(2813)				
#6	Lake Oswego	034	723	249	15	34	5
			(4725)				
#7	Beaverton	005	512	147	10	29	3
			(5001)				
#8	Hillsboro	123	394	123	13	31	4
			(3067)				
#9	Forest Grove	116	193	50	15	26	4
			(1301)				
#10*	Gresham	030	342	26	11	8	1
			(3047)				
Total = 4996				1550			
#11**	Missing Data		4996	133	13	3	.003
			(38,053)				
Total = 4996				1683			

* Suspect surveys lost in the mailing.

** Group 11 represents surveys that were returned without a means of identifying their geographical origin. It has no comparison to test areas 1-10.

Hauled by contractor	8%-----35%	15%	10%	39%
Composted	24%-----43%	20%	6%	32%
Hauled other ways	8%-----33%	8%	9%	50%
Burned	* 28%-----24%	17%	10%	49%

*Example: To read: Of those 28% who burned yard debris other than leaves and grass, 24% disposed of less than 25% of this total waste type in this manner.

3. How do you dispose of your fall leaves?

--Of those surveys returned, 98 to 99% responded to this question.

a. Did or did not use method:

<u>Method of Disposal For Possible Response</u>	<u>% of Respondents That</u>	
	<u>Did Not Use Method</u>	<u>Did Use Method</u>
Put in street	85%	12%
Haul to landfill	80%	17%
Picked up as garbage	64%	32%
Burned	79%	17%
Composted	55%	40%
Other	92%	5%

b. Of those that did use a particular method, the level of participation (i.e., how much leaves did they dispose of in this way):

<u>Method</u>	<u>% of Respondents That Did Use Method</u>	<u>Volume of Debris (% of total) Disposed of by Method</u>			
		<u><25%</u>	<u>25-50%</u>	<u>51-75%</u>	<u>76-100%</u>
		Put in street	12%-----23%	20%	9%
Haul to landfill	17%-----21%	20%	6%	54%	
Picked up as garbage	32%-----22%	13%	5%	60%	
Burned	17%-----19%	20%	9%	52%	
Composted	40%-----20%	13%	4%	64%	
Other	5%-----17%	7%	4%	72%	

4. How do you dispose of your grass clippings?

--Of those surveys returned, 98 to 99% responded to this question.

a. Did or did not use method:

<u>Method of Disposal For Possible Response</u>	<u>% of Respondents That</u>	
	<u>Did Not Use Method</u>	<u>Did Use Method</u>
Put in street	95%	3%
Haul to landfill	82%	15%
Picked up as garbage	66%	30%
Burned	92%	6%
Composted	45%	51%
Other ways	90%	8%

b. Of those that did use a particular method, the level of participation (i.e., how much grass did they dispose of in this way):

<u>Method</u>	<u>% of Respondents That Did Use Method</u>	<u>Volume of Debris (% of total) Disposed of by Method</u>			
		<u><25%</u>	<u>25-50%</u>	<u>51-75%</u>	<u>76-100%</u>
		Put in street	3%-----36%	8%	5%
Haul to landfill	15%-----23%	14%	4%	60%	
Picked up as garbage	30%-----14%	11%	4%	71%	
Burned	6%-----26%	20%	7%	47%	
Composted	51%-----9%	7%	3%	81%	
Other ways	8%-----10%	9%	2%	80%	

5. If you currently burn or if you currently haul your own yard debris for disposal, would you participate in a collection system that would cost the same or less than self-hauling? (Assume that burning will be prohibited as a future option for disposal.)

--Of those surveys returned, 79% responded to this question.

--68% indicated they would support a collection system.

--32% indicated they would not support a collection system.

6. Please estimate the amount of yard debris you generate and dispose of.

--Of those surveys returned, 90% responded to this question.

<u>System for Reporting</u>	<u>% Not Reporting</u>	<u>% Reporting</u>	<u>% Not Participating</u>	<u>Mean</u>
6a) Cans or bags/month	49%	41%	10%	1.375
6b) Pickup truck loads/yr	55	35	10	1.256
6c) Cubic yards/yr	64	26	10	2.371

7. During what season do you typically dispose of the most yard debris.

--Of those surveys returned, 97% responded to this question.
 --Many respondents either prioritized their seasonal generation rates or checked more than one response. The results indicate which season acquired the highest rate of response.

<u>Season</u>	<u>% of Respondents That Indicated A High Disposal Period</u>	<u>% of Respondents That Did Not Indicate A High Disposal Period</u>
Spring	45%	55%
Summer	33	67
Fall	55	45
Winter	4	96

8. Do you support a ban on back yard burning if collection and disposal are available?

--Of those surveys returned, 95% responded to this question.
 --64% support the ban.
 --36% oppose the ban.

9. Estimate the percentage of the different types of yard debris being generated by your yard maintenance activities in a typical year.

--Of those surveys returned, 92% responded to this question.
 --Note: This response is reported in a similar fashion to Questions 2, 3, & 4.

a. Did or did not have waste type:

<u>Type</u>	<u>% of Respondents That</u>	
	<u>Did Not Have Waste Type</u>	<u>Did Have Waste Type</u>
Woody	31%	59%
Pruning	14	75
Leaves	21	68
Grass	20	70
Other	76	16

- b. Of those that did have a particular waste type, the amount of waste compared to their total yard waste generation (i.e., what % of say woody waste is of their total waste):

Waste Type	% of Respondents That Did Have This Waste Type	Volume of Waste Type By % of Respondents			
		<25%	25-50%	51-75%	76-100%
Woody	59%-----69%	22%	5%	4%	
Pruning	75%-----61%	29%	6%	6%	
Leaves	68%-----68%	24%	4%	5%	
Grass	* 70% -----34%	* 37%	18%	12%	
Other	16%-----85%	10%	4%	2%	

*Example: To read: Of the 70% who responded to having grass as a waste type, 37% of those individuals claim that grass clippings make up 26-50% of their total yard waste generated.

10. If you self-haul your yard debris for disposal, how far do you haul it?

--Of those surveys returned, 50% responded to this question.

- a. Frequency of response:

% who responded	Miles							
	0.5	1	2	5	7	10	20	25 or more
	4.2	4.8	20.3	26.5	15.8	21.3	6.1	1.1

11. Do you own or rent the place where you live?

--Of those surveys returned, 99% responded to this question.

--91% indicated they owned their place of residence.

--9% indicated they rented their place of residence.

12. Is your residence a single family home, a duplex, a condominium, an apartment, or something else?

--Of those surveys returned, 99% responded to this question.

Housing Type	% of Respondents
Single family dwelling	94.7%
Duplex	2.8
Condominium	0.5
Apartment	0.7
Other	1.3

13. What size is your lot?

--Of those surveys returned, 97% responded to this question.

	Lot Size						
	<50x100	50x100	100x100	100x200	200x200	1 acre	>1 acre
% who responded	8.6	44.0	28.2	11.9	2.1	2.3	2.8

* See Appendix A for a copy of the cover letter and actual survey.

Volume Estimates

The following discussion is an effort to estimate the total volume and characteristics of yard debris generated by single family dwellings within the Portland Metropolitan Service District's boundaries. It should be noted that the figures presented in this evaluation may not necessarily represent the actual volume being produced in the area. However, it is an effort to further define the waste stream and offers further statistical data with which to compare past modeling projections made about the Metro area.

In order to determine volume estimates, survey questions 2, 3, 4, 6 and 9 were used. With the help of computer statistical evaluations, means were developed with which to calculate volumes. Three separate volume estimates were calculated using the results from questions 6A, 6B and 6C, respectively. A major assumption to keep in mind is that each estimate represents a total volume by itself. This was done for two reasons: (1) 97% or more of the respondents indicated only one method of volume estimate, and (2) those who did not respond to a particular method were calculated into the mean.

Keep in mind that gross volume estimates include all yard debris waste being generated for disposal, not just that going to a landfill. Material is also being disposed of in other ways such as composting and burning.

I. Gross volume estimates for the Portland Metropolitan Area's single family dwellings (SFD)^a based on survey question 6.

6A. Garbage cans or bags/month = mean 1.375
1.375 (mean) x 12 (months) = 16.5 (1 SFD yearly output)
16.5 x 254,037 (SFD's) = 4,191,610 (garbage cans & bags/yr.)
4,191,610 ÷ 6.2 (cans/cu.yd.) = 676,066 cu.yd./yr.
Total Volume 1 = 676,066 cu.yd./yr.

6B. Pickup truck loads per year = mean 1.256
1.256 (mean) x 254,037 (SFD) = 319,070 (pickup loads/yr.)
319,070 (loads) x 2 (cu.yd./load) = 638,140 cu.yd./yr.
Total Volume 2 = 638,140 cu.yd./yr.

6C. Cubic yards per year = mean 2.371
2.371 (mean) x 254,037 (SFD) = 602,322 cu.yd./yr.
Total Volume 3 = 602,322 cu.yd./year

a SFD for Metropolitan Service District was extracted as an estimate from "1976/1977 Building Permit Statistics by Census Tract."

II. Volume estimates by waste type based on mean values of question 9.

Volume 1 total = 676,066 cu.yd./year
 Woody waste (17%) = 114,931 cu.yd./year
 Prunings (25%) = 169,016 " "
 Leaves (20%) = 135,213 " "
 Grass (33%) = 223,102 " "
 Other (5%) = 33,803 " "

Volume 2 total = 638,140 cu.yd/year
 6% less for each waste category figured for Volume 1

Volume 3 total = 602,322 cu.yd/year
 11% less for each waste category figured for Volume 1

III. Leaves disposal method by volume based on questions 3, 6, & 9.

<u>Disposal Method</u>	Adjusted Mean (Q3)	Volume (cu.yd.)		
		#1 <u>135,213</u>	#2 <u>127,628</u>	#3 <u>120,464</u>
Put in street	9.5%	12,845	12,125	11,444
Self haul to landfill	13.5%	18,254	17,230	16,263
Picked up as garbage	24.5%	33,127	31,269	29,514
Burned	13.5%	18,254	17,230	16,263
Composted	32.5%	43,944	41,479	39,151
Hauled in other ways	6.5%	8,789	8,296	7,830

IV. Grass disposal method by volume based on questions 4, 6, & 9.

<u>Disposal Method</u>	Adjusted Mean (Q4)	Volume (cu.yd.)		
		#1 <u>223,102</u>	#2 <u>210,587</u>	#3 <u>198,766</u>
Put in street	2.5%	5,578	5,265	4,969
Self haul to landfill	12.0%	26,772	25,270	23,852
Picked up as garbage	26.0%	58,007	54,753	51,679
Burned	5.0%	11,155	10,529	9,938
Composted	46.5%	103,742	97,923	92,426
Hauled in other ways	8.0%	17,848	16,847	15,901

V. Yard debris other than grass & leaves disposal method by volume based on questions 2, 6, & 9.

<u>Disposal Method</u>	Adjusted Mean (Q2)	Volume (cu.yd.)		
		#1 <u>283,974</u>	#2 <u>268,019</u>	#3 <u>252,975</u>
Self haul to landfill	24.5%	69,574	65,665	61,978
Picked up as garbage	30.5%	86,612	81,746	77,157
Hauled by contractor	5.5%	15,618	14,741	13,914
Composted	13.5%	38,336	36,182	34,152
Hauled in other ways	6.5%	18,458	17,421	16,443
Burned	19.5%	55,375	52,264	49,330

VI. Total waste disposed of by method (includes leaves, grass, woody waste, & prunings) for a one-year period based on questions 2, 3, 4, 6, & 9.

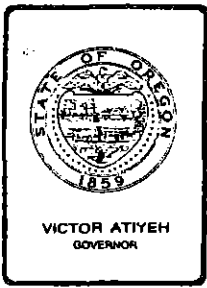
<u>Disposal Method</u>	#1 (error <1%)	Volume #	
		#2 (error <1%)	#3 (error <1%)
Put in street	18,423 cu.yd.	17,389 cu.yd.	16,413 cu.yd.
Self haul to landfill	114,600	108,165	102,093
Picked up as garbage	177,746	167,767	158,350
Burned	84,784	80,023	75,531
Composted	186,023	175,585	165,729
Other (disposal methods)	45,095	42,564	40,174
Hauled by contractor	15,619	14,741	13,914
Other yard debris	33,776	31,907	30,118

Cross Tabulations

A number of questions/responses on the survey have little relevance until one begins to cross tabulate the information with the help of a computer. Several of the more important cross tabulations are identified here to allow insight into the attitudes and disposal habits of the homeowner/renter regarding yard debris disposal. The cross tabulations are presented in the form of a question.

- A. If a resident burned some amount of his yard debris, did he support a ban on burning? (Q1 & Q8)
--35% of those that did burn said Yes.
- B. If a resident doesn't burn some amount of yard debris, did he support a ban on burning? (Q1 & Q8)
--79.8% of those that didn't burn said Yes.
- C. Does geographic location, i.e., NE Portland vs Beaverton, affect individuals' attitudes toward a ban on open burning? (Zip & Q8)
--All test areas except Hillsboro and Forest Grove support a burning ban. In those areas that support the ban, support ranges from 55-80%. Hillsboro and Forest Grove were against the ban 47% and 44%, respectively.
- D. Is a resident more likely to burn the larger his lot size? (Q1 & Q13)
--Indeed, the larger the lot the more likely a resident would burn yard debris for disposal. The range began with 15% of those with a lot size smaller than 50 x 100 do burn to 88% of those with a lot size greater than one acre burn some amount of yard debris. The turning point as to where more burn than don't is the 100 x 200 lot size.
- E. Is a resident more likely to support a ban the smaller his lot size? (Q8 & Q13)
--The answer is Yes. 75% of those with lot sizes less than 50 x 100 or 72% of those with lot sizes 50 x 100 support the ban while those residents with more than one acre don't support the ban by 83%.
- F. Depending on lot size, would a resident be more inclined to join a collection system? (Q5 & Q13)
--Lot size owners of 200 x 200 or less were more inclined to join a collection system. Support ranged from 65%-74%. Keep in mind those who responded to the collection system question had previously either burned or self hauled material.

Appendix "A"



Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207

October '80

Dear Resident,

Regulations adopted by the Environmental Quality Commission in 1979 prohibit the open burning of yard debris in the Portland metropolitan area after December 31, 1980. Yard debris is defined as material commonly associated with gardening activities such as brush, prunings, grass clippings, leaves, etc. The prohibition is part of the effort to meet air quality standards set for this area.

The Department of Environmental Quality (DEQ) is providing assistance to local governments in their planning for alternatives to open burning of yard debris once the ban goes into effect. Local planners are now looking at how to collect yard debris, how to transport it, what beneficial uses the material could be put to and what additional disposal methods may be necessary.

We are sending you this questionnaire to get your help in developing information on the volume of yard debris typically generated and current method(s) of disposal. This information will be used to assess the impact of the burning ban on current and future garbage disposal systems in the metro area. The information you provide will also assist in planning for efficient and economical alternatives to backyard burning.

Your assistance is appreciated and I would like to thank you on behalf of the DEQ.

Sincerely,

Mark W. Hope
Solid Waste Division

MWH:h



Where does your yard debris go?

INSTRUCTIONS

Read the questions carefully. For some questions it may not be possible to be precise so please give us your best estimates. Check or enter the appropriate response to each question. (see examples) There may be more than one response per question. After completing the questionnaire, place it in the enclosed self-addressed envelope and mail within five days. No postage is necessary.

example--How do you currently dispose of Fall leaves?

- a. 80% Put them in the street for pick-up.
- b. Burn them.
- c. 20% Self-haul or have them hauled to a disposal site.

example--During which season do you dispose of the most yard debris?

- a. Spring
- b. ✓ Summer
- c. Fall
- d. Winter

PLEASE ENTER YOUR ZIP CODE HERE ----- 97 _____

1. Did you burn yard debris during the spring burn season or do you plan on burning during the Fall burn season?

- a. Yes
- b. No

2. How do you dispose of your yard debris other than leaves and grass? (Indicate by % (percent) your disposal method, i.e. 90% self haul and 10% have my garbage collector pick it up.)

- a. Self-haul the material to a landfill.
- b. Have my regular garbage collector pick-up the material.
- c. Have a private contractor (gardener, landscaper, etc.) collect and dispose of the material.
- d. Compost it.
- e. Other (please specify) _____
- f. Not applicable.
- g. Burn

(over)

3. How do you dispose of your Fall leaves? (Indicate by % your disposal method.)

- a. Put them in the street for city pick-up.
- b. Self-haul or have them hauled to a disposal site.
- c. Either incorporate them into regular household garbage or put them out seperately for my garbage collector to pick-up.
- d. Burn them.
- e. Compost or mulch them.
- f. Other (please specify) _____
- g. Not applicable

4. How do you dispose of your grass clippings? (Indicate by % your disposal method.)

- a. Put them in the street for city pick-up.
- b. Self-haul or have them hauled to a disposal site.
- c. Either incorporate them into regular household garbage or put them out seperately for my garbage collector to pick-up.
- d. Burn them.
- e. Compost or mulch them.
- f. Other (please specify) _____
- g. Not applicable

5. If you currently burn or if you currently haul your own yard debris for disposal, would you participate in a collection system that would cost the same or less than self-hauling? (Assume that burning will be prohibited as a future option for disposal.)

- a. Yes
- b. No

6. Please estimate the amount of yard debris you generate and dispose of- (answer one or more if appropriate)

- a. per month, garbage cans or bags.
- b. per year, pick-up or trailer loads.
- c. per year, total cubic yards (3'x3' pile or 1/2 pick-up truck or 4 garbage cans/bags is equal to one cubic yard.)

7. During which season do you typically dispose of the most yard debris?

- a. Spring
- b. Summer
- c. Fall
- d. Winter

8. Do you support a ban on back yard burning if collection and disposal are available?

- a. Yes
- b. No

(turn to the next page)

9. Estimate the percentage of the different types of yard debris being generated by your yard maintenance activities in a typical year. (total volume)

- a. ____ % Woody waste (limbs and branches 1/2 inch diameter or larger)
- b. ____ % Prunings (hedges, rhododendrons, roses, etc.)
- c. ____ % Leaves
- d. ____ % Grass clippings
- e. ____ % other

10. If you self-haul your yard debris for disposal, how far do you haul it? (check your best approximation, 1 mile equals 20 city blocks)

- a. ____ 1/2 mile
- b. ____ 1 mile
- c. ____ 2 miles
- d. ____ 5 miles
- e. ____ 7 miles
- f. ____ 10 miles
- g. ____ 20 miles
- h. ____ 25 or more miles

11. Do you own or rent the place where you live?

- a. ____ Own
- b. ____ Rent

12. Is your residence a single family home, a duplex, a condominium, an apartment, or something else?

- a. ____ Single family home
- b. ____ Duplex
- c. ____ Condominium
- d. ____ Apartment
- e. ____ Something else

13. What size is your lot?

- a. ____ less than 50x100
- b. ____ 50x100
- c. ____ 100x100
- d. ____ 100x200
- e. ____ 200x200
- f. ____ 1 acre
- g. ____ more than 1 acre

FINISHED
THANK YOU

Additional comments:

Portland Demonstration Project: Kelly Butte -
Regional Land Clearing - Hog Fuel Value

KELLY BUTTE
REGIONAL LAND CLEARING

HOG FUEL VALUE

	Btu/lb.	% Moisture	% Ash	Dry Weight Btu/lb.
#1.	5664	21	16	7170
#2.	4224	29	27	5950
#3.	5005	23	18	6500
#4.	7350	2	12	7500

As Collected
average=5560 Btu/lb.

Dry Weight
average=6780 Btu/lb.

As Collected (minus sample #4)
average=4964 Btu/lb.

Metro's Resource Conservation Consultants
Household Costs Estimates



METROPOLITAN SERVICE DISTRICT
527 SW. HALL ST., PORTLAND, OR. 97201, 503/221-1646

January 12, 1981

Rick Gustafson
EXECUTIVE OFFICER

Metro Council
Marge Kafoury
PRESIDING OFFICER
DISTRICT 11

Jack Deines
DEPUTY PRESIDING
OFFICER
DISTRICT 5

Donna Stuhr
DISTRICT 1

Charles Williamson
DISTRICT 2

Craig Berkman
DISTRICT 3

Corky Kirkpatrick
DISTRICT 4

Jane Rhodes
DISTRICT 6

Betty Schedeen
DISTRICT 7

Ernie Bonner
DISTRICT 8

Cindy Banzer
DISTRICT 9

Gene Peterson
DISTRICT 10

Mike Burton
DISTRICT 12

Mr. Mark Hope
Solid Waste Division
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Mark:

The attached report represents the completion of the "Collection Cost Model" of the Yard Debris Recovery Program as provided by Metro's consultant, Resource Conservation Consultants. This information was requested by the DEQ to aid in developing final recommendations to the Environmental Quality Commission for a yard debris program.

Included are the following sections:

- I. Survey of Green Yard Waste Mixed Collection Costs in Selected Areas of the Metro District
- II. Assumptions and Analysis of Costs for a Yard Debris Collection System
- III. Factors Which Affect Productivity and Calculations Necessary to Evaluate Costs of Collection
- IV. Analysis of Hauling Distance and Time From Selected Areas to a Disposal Site

RCC staff has calculated the approximate cost of collecting all leaves and grass, and leaves and grass previously burned when mixed with garbage. The DEQ provided the consultant with selected survey areas, survey results, and volume estimates for the collection cost model.

Please call Metro or RCC to clarify or modify portions of this task.

Sincerely,

Judy Ellmers
Solid Waste Technician

Attachment

cc: Delyn Kies, RCC
1.20.C.2.00

I. Survey of Green Yard Waste Mixed Collection Costs in Selected Areas of the METRO District.

The table below depicts charges for standard garbage collection service and extra collection service for green yard wastes (primarily leaves and grass) in selected areas of the METRO district. The eleven areas correspond to those chosen by the Oregon Department of Environmental Quality staff for their survey of yard debris disposal methods.

The table is intended to amplify Table 3 on page 43 of the draft METRO Yard Debris Recovery Program document prepared by RCC for METRO. Figures are taken from a random telephone survey of haulers in each area during November, 1980. In the unfranchised areas of Portland, an average of costs quoted from two or three hauling companies per area is used.

TABLE 1: Collection Costs for Standard and Extra Service in Selected Areas.

Area	Standard Service (\$)¹		Extra Service (\$)²
	one can	two cans	
Alameda/Irvington	5.50	9.50	5.50/additional can; 1.00/extra can @ curb; 1.50/extra can @ backyard
Albina	5.50	10.50	.75-1.00 min. @ curb at discretion
Beaverton	4.80	8.85	1.50 min./60 lb. bundle.
Eastmoreland	5.25	9.50	at discretion
Forest Grove	5.10	9.50	1.50/extra bag
	(at curb) 4.40	8.05(at curb)	
Gresham	4.90	9.20	.75/half bag; 1.25 min./extra can
Hillsboro	4.85	9.10	2.90/additional can 1.50/extra can
Lake Oswego	4.30	8.00	3.10/additional can 1.35/extra can
Oregon City	4.75	8.75	4.00/additional can 1.00 plus/extra can at discretion
St. Johns	5.50	10.50	2.00/extra can
West Hills	5.50	10.50	1.25-2.00/extra can at discretion
Averages	5.03	9.33	3.88/additional can; 1.31/extra can

¹ weekly service, backyard, 60 lb weight per can.

² "additional" can denotes a regular third, fourth etc. can set out.

"extra" can means an occasional can or equivalent set out. "at discretion" indicates that charges are determined by the driver's judgement of volume, type and bundling of the extra debris.

II. Assumptions and Analysis of Costs for a Yard Debris Collection System.

The Oregon Department of Environmental Quality (DEQ) staff selected eleven test areas for their survey of residential yard debris disposal methods. The areas are intended to represent major portions of the metropolitan district.

A total of 5000 households were in the survey population; 13½% of the houses in each test area were mailed the survey in early November, 1980. The DEQ received 1683 responses, or a 34% return rate.

Table 2 provides a description of the boundaries of the test areas. Information for the table was received by telephone from Mark Hope, DEQ staff.

TABLE 2 : Boundary Descriptions of DEQ Survey Test Areas.

AREA	BOUNDARIES			
	North	South	East	West
Alameda/Irvington	center point: NE 39th at Fremont			
Albina	center point: N. Killingsworth at Williams			
Beaverton	Bytn-Hills. Hwy.	Schools Ferry	Hwy 217	145th
Eastmoreland	Woodstock	County Line	82nd	McLoughlin
Forest Grove	Pacific / city limits		Main/city limits	
Gresham	Burnside	Powell	242nd	202nd
Hillsboro	Cornell	T-V Hwy.	216th	10th
Lake Oswego	Country Club	Tualatin River	Stafford	Lower Boones Ferry
Oregon City	Holcomb Blvd.	Rossmann's	Beaver Creek	Warner
St. Johns	center point: N. Lombard at Dwight			
West Hills	Burnside	Statton	above	Washington Park

The estimations of volume used in calculating costs are drawn from responses to the survey. Assumptions are as follows:

1. Estimated number of garbage cans or bags of yard debris generated and disposed of per year equals 4,190,610 cans.
2. A conversion factor of 6.2 cans per cubic yard is used.
3. Total amount of yard debris produced equals 676,066 cubic yards per year.

4. A figure of 254,000 single family residences in the Metropolitan Service District is used for the total number of households.
5. Estimation by volume of the percentage of different types of yard debris generated in a typical year include:
 - 17% Woody Waste
 - 25% Prunings
 - 20% Leaves
 - 33% Grass
 - 5% Other
6. Of the total volume of leaves, 13.5% were reported as disposed of by burning; 5% of the total amount of grass was reported burned.

Based upon the above raw data and assumptions, the following calculations are made for the volume of leaves and grass generated.

Total leaves = 135,213 cubic yards per year

$$135,213 \text{ cu yd} \times 6.2 \text{ cans/cu yd} = \frac{838,321 \text{ cans}}{254,000 \text{ hshld}} = 3.3 \text{ cans/hshld/yr}$$

Leaves that have been burned = 18,253 cubic yards per year

$$18,253 \text{ cu yd} \times 6.2 \text{ cans/cu yd} = \frac{113,169 \text{ cans}}{254,000 \text{ hshld}} = .45 \text{ cans/hshld/yr}$$

Total grass = 223,102 cubic yards per year

$$223,102 \text{ cu yd} \times 6.2 \text{ cans/cu yd} = \frac{1,383,232 \text{ cans}}{254,000 \text{ hshlds}} = 5.4 \text{ cans/hshld/yr}$$

Grass that has been burned = 11,155 cubic yards per year

$$11,155 \text{ cu yd} \times 6.2 \text{ cans/cu yd} = \frac{69,161 \text{ cans}}{254,000 \text{ hshlds}} = .27 \text{ cans/hshld/yr}$$

As generators pay for waste collection on a can basis, the annual volume is:

Total Leaves & Grass
8.7 cans/hshld/year = 9 cans extra service

Leaves & Grass Burned
.72 cans/hshld/year = 1 can extra service

On the basis of extra service as portrayed in Table 1, Section I, the costs of collecting the anticipated volumes of leaves and grass are presented in the following table.

TABLE 3: Cost Per Year Per Household for Mixed Collection of Leaves and Grass By Selected Area.

Area	\$ Per Year per Household	
	Total Leaves and Grass	Leaves and Grass Previously Burned
Alameda/Irvington	9.00 @ curb; 13.50 @backyd.	1.00 @ curb; 1.50 @ back yard
Albina	6.75 - 9.00 @ curb	.75 - 1.00 @ curb
Beaverton	13.50	1.50
Eastmoreland	at driver's discretion	at driver's discretion
Forest Grove	13.50	1.50
Gresham	6.75 - 11.25	.75 - 1.25
Hillsboro	13.50	1.50
Lake Oswego	12.15	1.35
Oregon City	9.00	1.00
St. Johns	18.00	2.00
West Hills	11.25 - 18.00	1.25 - 2.00
Average	11.79	1.31

III. Factors Which Affect Productivity and Calculations Necessary to Evaluate Costs of Collection

Factors Which Affect Productivity and the Subsequent Cost of Residential Waste Collection:

Community Characteristics

Frequency of Collection
Point of Collection
Waste Material Collected
Crew Size
Collection Procedures

Laws and Regulations

GVW and Axle Loading Limitations
Overall Height and Width Restrictions

Service Area Characteristics

Containers Used or Required
Distance Between Collection Stops
Quantity of Refuse per Stop (weight and volume)
Haul Distance to Disposal Site
Maneuverability Constraints
Topography
Delays
Road Conditions
Climate

Calculations Necessary to Evaluate the Performance and Cost Characteristics of Collection Operations:

1. Calculate the time to collect the first and successive average loads.
2. Convert collection time into collection cost, using local cost factors (labor, fringe, etc.).
3. Determine the tonnage collected.
4. Determine the number of residences served.
5. Determine gross collection cost per ton (#2 divided by #3).
6. Compute net cost of separate collection (collection cost less any revenues or disposal cost savings).
7. Convert net cost into cost/ton (#6 divided by #3) or cost/residence (#6 divided by #4).

Definition of Physical and Cost Variables Used in Collection Model:

Physical Variables

- total time to collect and offload loads (crew min/day).
- vehicle capacity (cu yd).
- average collection time per stop plus travel time to the next stop (min.)
- average density of material in the vehicle (lbs/cu yd).
- average quantity of material per stop (lbs).
- average one-way driving time between route and disposal site (min).
- average disposal time (min).
- total non-productive time per day - includes dispatch, breaks, lunch, yard to route time, and disposal site to yard time (min).

Cost Variables

- cost of collection labor (\$/crew-min).
- cost of collection vehicle (\$/truck-min).
- revenue from materials separately collected (\$/ton).
- disposal savings from materials separately collected (\$/ton).

IV. Analysis of Hauling Distance and Time from Selected Areas to A Disposal Site.

The following table portrays the hauling distance, time and speed from selected areas to the St. Johns Landfill. The eleven areas are those designated by Oregon Department of Environmental Quality staff in their "Where Does Your Yard Debris Go?" survey process.

The zone identification numbers and raw data result from METRO's computer analysis of the Transportation Plan for the Proposed Solid Waste Transfer Plan. Zones correspond generally to census tracts.

Assumptions used in the analysis include:

1. The shortest distance from the center point of each zone to the centroid of the zone containing the St. Johns Landfill is used, as in the existing highway network system.
2. Distances and times are calculated during off-peak hours rather than accounting for time and movement through congestion during peak hours.

Assumptions used in developing the table include:

1. Where two or more zones are located within one selected area, the averaged distance and time are noted.
2. One mile is subtracted from distance figures and two minutes are subtracted from time calculations to adjust for the estimated variance between the disposal site and the centroid of the zone containing the St. Johns Landfill.

TABLE 4 : Hauling Distance, Time and Speed from Selected Areas
To St. Johns Landfill.

Area	Zone	Distance (miles)	Time (minutes)	Avg. Speed (mph)
Alameda/Irvington	94/96/97	11.5	25.6	27.2
Albina	72/80	8.6	19.0	27.4
Beaverton	159/160/161	18.3	33.0	33.1
Eastmoreland	40	17.5	34.0	30.8
Forest Grove	169/170/171	26.5	58.0	27.5
Gresham	116	21.7	44.0	29.6
Hillsboro	164	19.1	43.0	26.8
Lake Oswego	183/185	20.7	38.5	32.1
Oregon City	194/195	25.0	44.0	33.9
St. Johns	84/85/86	5.3	13.0	25.2
West Hills	137	13.5	25.0	32.2
Averages	-----	17.1	34.3	29.6

Yard Debris Utilization
Economic-Energy Balance

11

Yard Debris Utilization
Economic-Energy Balance

With the prospect of an increase in waste disposal due to a ban on burning of yard debris, several alternatives have been studied. One of the most attractive alternatives to date has been the prospect of converting the woody yard debris to a fuel source (hog fuel). Such an alternative would rely heavily on private enterprise while keeping collection costs to the homeowner at a minimum.

One firm that is already converting woody yard debris to a hog fuel exists in Houston, Texas. Their operation and analysis will be used to take a look at the economic-energy balance for such an operation in Portland. There are a number of other alternatives available in Oregon for yard debris disposal. However, the best return for energy can be shown with the hog fuel alternative. Revenue gained from the sale of hog fuel may pay for the processing.

Case I

An urban tree maintenance firm in Houston, Texas, evaluated several alternatives and chose to convert urban waste to energy. The firm collects and needs to dispose of 30,000 tons of wood waste each year. This waste is comprised of chipped material, unchipped branches and logs which are too large to be chipped by the mobile chippers. The firm had exhausted its landfill in the city and had located a new one 28 miles away. The cost for using this new landfill was estimated at \$240,000 annually, not including labor and transportation for the wood waste. Due to the prohibitive cost, the feasibility of converting the wood waste to fuel was investigated.

Using the new landfill represented the simplest alternative. The wood waste would be brought to a central concentration point. The existing city landfill was identified as a choice concentration point. Next, the waste would be loaded into 15-ton trucks, hauled the 28 miles, and unloaded at the new, remote landfill.

The second alternative involved using the lighting and power company's lignite boiler to convert the wood waste to electricity. Again, the wood waste would be brought to the existing landfill. But, a large, permanent chipper would be installed to chip all material into sizes compatible with the firing systems of the boilers. The chipped material would then be loaded into 15-ton trucks and hauled to the power plant, where it would be stockpiled and fed into the boiler as needed. Eventually, a boiler would be located near the concentration yard reducing the hauling distance.

The final alternative consisted of hauling the wood waste to the concentration point, chipping the material, and then selling it to an outside firm to be used as boiler fuel by that company rather than the city's power and lighting company. This alternative had the advantage of utilizing the wood for fuel while not requiring that power company boiler adjustments and stockpiling arrangements be made at the same time as the large chipper was installed and started up.

As Table 1 indicates, delivering the wood waste to the concentration yard requires a substantial portion of the total energy input for each alternative. Therefore, the criterion for selecting an alternative involves examining the remaining costs. As shown, it is much cheaper to chip and haul the material to the power plant than it is to haul the material, unchipped, 28 miles distant. And, this smaller cost ignores any returns from the electricity gained from burning the waste. The alternative of selling the chipped material appears much more attractive than the power plant alternative, since a return is realized from the same amount as inputs. It should be noted that this last alternative includes miscellaneous transportation equivalent to hauling to the power plant.

Parameters used to estimate the costs in Table 1 needed to be measured, estimated from past data, or assumed. The following paragraphs present a discussion of the assignment of values to some of these parameters.

The energy potential is assumed to be that of a green ton of chips at an average moisture content (Murphey & Cutter 1974) for hardwoods, although the material includes softwoods and palms and their leaves and twigs. This material is delivered to the concentration yard requiring a round trip of twenty-five miles. Fuel consumption is assumed to be nine miles per gallon based on the firm's data. The energy content of the fuel is assumed to be 125,000 BTU/gallon. Felling and chipping fuel consumption average 0.41 gallons per ton of green wood. Energy to manufacture the chain saws, chipper trucks and other equipment was estimated by obtaining the weight of these items from manufacturers data, determining the energy used in manufacture, and the projected life and production rate (Smith & Concoran 1976).

The dollar values shown were developed on a per ton of residue basis. Equipment was amortized over experienced service life. The fuel includes both that used in transporting the residue and that used by the remote portable chipper and chain saws. Labor costs were direct costs obtained from a separate municipal operation. The zero value for residue assumes the job had been contracted to remove parts or all of the trees. The residue then was a result of another operation and has no cost. Therefore, it is assumed to be placed on the truck at no cost. Regardless of its negative or zero value at this point, the residue developed a negative value as it was transported to the concentration point.

The energy produced by the fuel chips can be translated into dollars. A barrel of residual fuel oil contains 6.287 million BTU's and is fired at 82.5 percent efficiency versus a 72 percent firing efficiency for wood. The fuel value per day for the residue obtained in this case is equivalent to 122.6 barrels of oil. Similar coal values would be 31.6 short tons. Fuel cost for oil and coal paid by utility companies in 1980 are estimated to be \$3.91 and \$1.52 per million BTU's, respectively (1). The daily residue then will be worth \$2,792.31 and \$1,135.96 when compared to these fossil fuels and is in addition to the lesser costs associated with the power plant option.

Conclusion

The Houston firm chose to chip its wood waste and sell the material to an outside firm at \$1.25 per ton. A seven-year contract has been negotiated.

Table 1. The Economic and Energy Tradeoffs Associated with Three Alternatives for Utilizing Urban Wood Waste (Houston)

Alternative	Cost (Dollars/day)	Energy Cost (mm BTU/day)
I. Haul to Remote Landfill		
1. Fuel, labor and equipment to concentration point	\$12,064.00	15.386 ^a
2. Fee, labor handling and transport to the landfill	<u>411.21</u>	<u>6.208^b</u>
Total Cost	\$12,475.21	21.576
II. Chip and haul to power plant		
1. Fuel, labor, and equipment to concentration yard	\$12,064.00	15.386 ^a
2. Labor, handling, and chipper operation	275.00	20.507 ^c
3. Chipper depreciation	151.00 ^d	
4. Energy gained from the waste	<u>-2,265.00^e</u>	<u>-904.000</u>
Total Cost	\$10,225.00	-868.107
III. Sell to outside firm		
1. Fuel, labor, and equipment to concentration yard	\$12,064.00	15.386
2. Labor, handling, and chipper operation	275.00	20.507
3. Chipper depreciation	151.00	
4. Revenue to firm for chips sold at \$1.25/ton	<u>-152.00</u>	<u> </u>
Total Cost	\$12,348.00	35.893

a Breakdown for this energy cost into its elements are (1) transportation, 69,450 BTU/ton, (2) chipping, 51,250 BTU/ton, (3) equipment, 15,800 BTU/ton, and (4) 113 tons processed per day for a 265-day year.

b Breakdown is as follows: (1) transport, 4.618 mm BTU/day, and (2) handling, 1.590 mm BTU/day.

c Breakdown is as follows: (1) transport, 6.2 mm BTU/day, (2) chipping, 2.904 mm BTU/day, and (3) handling, 11.385 mm BTU/day.

d Initial cost of chipper was \$200,000. It is assumed that its value will decrease (straight line) to zero in five years.

e Energy value was calculated as follows: oil cost = \$20/bbl, oil firing efficiency = 82.5%, wood firing efficiency = 62%, and oil energy = 6 mm BTU/bbl.

From the economic analysis presented in Table 1, the alternative of generating electricity in the city itself appears attractive relative to this selected alternative. It is reasonable to assume that this more attractive alternative will be reviewed at the end of the seven-year contract period.

The analysis of the Houston firm's alternatives and selection criteria indicates that it is feasible from both an economic and energy point of view to convert urban wood waste into energy. As the nation's energy needs become more intense, we can assume that such an alternative will become even more attractive (2).

Case II

Open burning of yard debris has occurred in the Portland area since its early beginnings. Hard data as to yard debris burn and collection characteristics are not available. However, based on a yard debris survey conducted by DEQ, several assumptions can be made in order to study alternatives for disposing of yard debris rather than open burning it. Take note that any alternative disposal method can most likely have the collection system designed around it.

Assumptions:

1. Any land for central collection/processing would be either public or an old landfill site. Thus, capital for site acquisition would be minimal or zero.
2. The largest volume of material burned by the average homeowner consists of woody brush material, not leaves and grass clippings.
3. A collection system will be financed by the homeowner in one way or another, whether it be:
 - user fee assessed by collector, or
 - tax based.
4. DEQ's Yard Debris Survey presents a representative waste and volume characteristic.

Given these basic assumptions in developing a case for the Portland area, one can look to Houston's case as an example to base Portland's economic-energy balance with a few modifications. In the event of a burning ban, collection systems could be designed to guarantee these assumptions by working cooperatively with the collectors and local governments.

Due to the artificially low value of energy (limited resources), any processing of the material into a fuel source would not pay for the collection. Collection fees would be levied in some manner to cover equipment, fuel, labor, and disposal costs. However, if the processed material were marketable, the disposal fee would either be less or nothing, thus resulting in a proportionate reduction in the financial burden of the homeowner.

The Houston firm collects and needs to dispose of 30,000 tons of woody yard debris each year. Comparatively, this volume is 52% of the total projected woody waste generated in the Portland Metropolitan Area. Portland's total waste increase in lieu of a burn ban would be 42,392 tons, based on the Yard Debris Survey. Of this volume increase precipitated by a burning ban, 16,957 tons would actually be woody waste and attractive for fuel recovery.

In looking at the economic incentives for energy recovery, a total woody waste volume estimate of 57,465 tons is used, i.e., that material that had previously been burned and disposed of in other ways. This estimate discounts material generated by park, street and utility maintenance activities that would also be very attractive for use in an energy recovery project.

In the Portland area we can essentially paint three scenarios for dealing with yard debris once it is collected. First, there is the landfill alternative. Such an alternative would provide no return and the material would acquire a negative value from collection to disposal. Nothing would be recovered from an economic-energy point and such an alternative should be considered for either air quality or nuisance abatement benefits only.

A second alternative would be to bring the woody waste to central collection sites and process the material by chipping for use in METRO's resource recovery project (mass burning units). Such an alternative has not been fully evaluated at this point by METRO, yet, preliminary considerations show material to be somewhat attractive for this process. In Houston's second alternative proposal, a local power company was considered as a market for the chipped wood waste. The power company uses lignite boilers and would have to make modifications to accept wood waste. Lignite boilers, like mass burning units, are designed to burn low BTU material, thus one can draw close similarities between the two processes.

A third alternative consists of hauling the material to centralized collection and processing for marketing as a hog fuel. Two Portland area firms have shown preliminary interest in taking this same approach. The ultimate process and equipment used for chipping here will depend on market specifications.

The Portland economic and energy tradeoff evaluation (Table 2) was arrived at by using the formulas presented in the Houston project. When looking at the processing costs, it becomes obvious that such a conversion of wood waste to hog fuel is profitable. The energy gained from utilizing the waste far outweighs the energy spent to collect and process the waste. For 57,465 tons of processed wood waste per year, one could recover energy equivalent to 69,006 barrels of oil per year. The cost in energy to collect yard wood waste figures out to be roughly 1,246 barrels of fuel per year. Given these costs, one would realize a net energy gain of 67,760 barrels of fuel oil/year. ⁽ⁱ⁾

- (i) a. One ton of wood waste has a BTU value of 7.446 mm according to Kelly Butte Demo Project (average BTU/lb 4964)
- b. One ton of wood waste equates to 1.2 barrels of oil given 6.287 mm BTU's/bbl of oil

Table 2. The Economic and Energy Tradeoffs Associated with Three Alternatives for Utilizing Urban Wood Waste in the Portland Metropolitan Area

Alternative	Cost (Dollars/day)	Energy Cost (mm BTU/day)
I. Haul to a Landfill		
1. Fuel, labor and equipment to concentration point	\$24,128.00	29.620 ^a
2. Fee, labor handling and transport to the landfill	<u>822.41</u>	<u>12.416^b</u>
Total Cost	\$24,950.41	42.036
II. Chip and haul to a Resource Recovery Plant		
1. Fuel, labor, and equipment to concentration yard	\$24,950.41	29.620 ^a
2. Labor, handling, and chipper operation	550.00	40.978 ^c
3. Chipper depreciation (2 chippers)	302.00 ^d	
4. Energy gained from the waste	<u>-5,129.46^e</u>	<u>-1,615.782</u>
Total Cost	\$20,671.95	-1,545.148
III. Sell to outside firm		
1. Fuel, labor, and equipment to concentration yard	\$24,950.41	29.620
2. Labor, handling, and chipper operation	550.00	40.978
3. Chipper depreciation	302.00	
4. Revenue to firm for chips sold at \$6.00/unit (g)	<u>-651.00</u>	(See II, 4. for energy gained)
Total Cost	\$25,151.41	70.598

a Breakdown for this energy cost into its elements are (1) transportation, 69,450 BTU/ton, (2) chipping, 51,250 BTU/ton, (3) equipment, 15,800 BTU/ton, and (4) 217 tons processed per day for a 265-day year.

b Breakdown is as follows: (1) transport, 9.236 mm BTU/day, and (2) handling, 3.18 mm BTU/day.

c Breakdown is as follows: (1) transport, 12.4 mm BTU/day, (2) chipping, 5.808 mm BTU/day, and (3) handling, 22.77 mm BTU/day.

d Initial cost of two chippers is \$400,000. It is assumed that their value will decrease (straight line) to zero in five years.

e Energy value was calculated as follows: oil cost = \$20/bbl, oil firing efficiency = 82.5%, wood firing efficiency = 62%, oil energy content is 6.3 mm BTU/bbl.

Summary

When looking at the collection costs, one should keep in mind that garbage collection currently exists in the Portland area. To some degree, a certain amount of woody waste is already being collected and incorporated into regular household garbage. Thus, collection costs may be artificially inflated and ultimately can only be determined by final design of the system.

The figures presented in Table 2 are the best estimates based on available data. One should be warned about taking these figures and designing a system around them. Since Houston's project provided much of the information for the evaluation, geographical differences may affect the final outcome. Any waste to energy project must indeed proceed with further, in-depth analysis of the variables. A demonstration project should first be implemented to test the theory presented here for Portland and to acquire actual markets for the final product.

Other processing alternatives are being suggested for the yard debris material, i.e., soil amendment and ground cover for horticultural purposes. If these alternatives become financially attractive for a part or all of the waste, they should be pursued to reduce landfill impact. However, to recover energy from energy spent, i.e., collection vs. hog fuel product, one would pursue the waste to fuel alternative. Such an alternative appears most attractive when woody material can be segregated from other types of yard debris (leaves, grass & certain prunings).

Literature Cited:

1. American Gas Association, 1979. Gas Use, Abuse, Confusion. Energy Vol. IV (2):4-6.
2. Journal of Arboriculture, April 1980, "Converting Urban Tree Maintenance Residue to Energy," Vol. 6, No. 4, pg. 85-88.
3. Refer to DEQ Yard Debris Survey for detail waste disposal characteristics and volumes.

SC106(1)

January 30, 1981



**CITY OF
SANDY**

P.O. BOX 116
SANDY, OREGON 97055
Telephone 668-5533

Environmental Quality Commission
501 S.E. Mill Street
Portland, Oregon 97201

Gentlemen:

The City of Sandy would like to go on record opposing a total ban on backyard burning in the Sandy area. Sandy is a small commercial area (population 2,950) in the midst of a largely rural area. The closest urban area is Gresham, approximately 11 miles to the northwest, and the closest portion of the MSD boundary, signifying future urban areas, is 3 to 4 miles to the west.

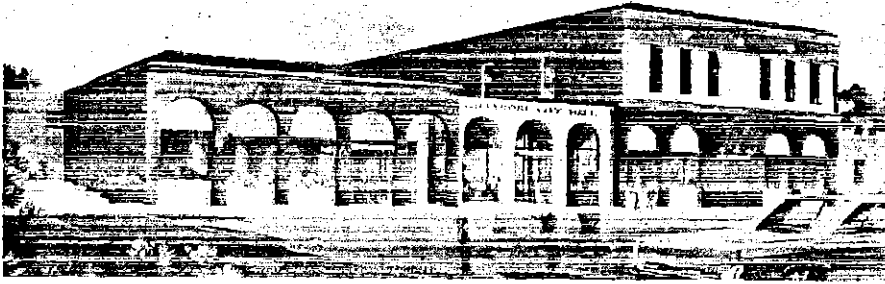
Because of the rural nature of our town, lot sizes are significantly larger than in the metropolitan area, allowing the residual material from burning to dissipate rather than concentrate. Since agricultural burning will not be affected, there is the potential that one household could not burn its minimal amount of debris, while a next door neighbor is burning remnants of agricultural use. Finally, Sandy is approximately 25 miles from the Oregon City landfill, which makes transporting debris a very unattractive proposition.

Sandy has much more in common with other rural centers such as Estacada and Molalla than with the Portland metropolitan area, and we would ask that Sandy be excluded from a ban on backyard burning.

Sincerely,

Roger Jordan
City Manager

jb



EW # 3
K 1 & 2
1-30-81

City Of Hillsboro

205 S.E. Second Ave. □ 648-0821 □ Hillsboro, Oregon 97123

January 30, 1981

Environmental Quality Commission
Dept. of Environmental Quality
522 SW Fifth
Portland, Oregon 97201

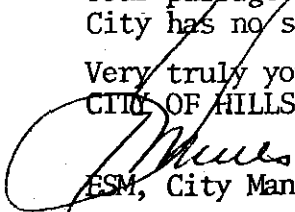
Dear Commissioners:

I wish to take this opportunity on behalf of the citizens of Hillsboro to express support for the recommendation to reduce the area subject to the Department of Environmental Quality's ban on backyard burning. The proposed reduction would eliminate Hillsboro from the ban area, an action which is supportable and justified by the following facts relating to backyard burning and air quality in the Hillsboro area:

1. The amount of particulate matter contributed by backyard burning in the Hillsboro area is a negligible portion of total particulate matter emitted in the Portland area. Wood burning for heat and road dust generated by motor vehicles contribute many times more particulate matter.
2. Few, if any, complaints are received by the Fire Department regarding backyard burning. Any complaints received on backyard burning are most appropriately handled under our nuisance ordinance rather than as an air quality problem.
3. During the last five years, only eleven violations of secondary Federal TSP standards were documented. Of these eleven, only two violations occurred during a burning season, both on days which burning was not allowed. Overall, air quality in the Hillsboro area has remained well within the established standard for Oregon.
4. The only landfill in the Hillsboro area is currently over capacity and is unable to handle an increased volume of backyard debris.
5. No reasonable, economic or funded alternative to backyard burning exists at the present time.

Attached to this letter is a brief statistical analysis of air quality data on total suspended particulate levels in Hillsboro. This data reveals that air quality problems in the Hillsboro area are minimal and that a ban on backyard burning will have an inconsequential effect on alleviating the overall problem. The ban on backyard burning will have a major impact on the City by creating enforcement problems, increasing illegal dumping and further burdening an inadequate landfill. Your passage of this item will be a step towards resolving an issue for which the City has no solution--disposal of yard debris.

Very truly yours,
CITY OF HILLSBORO


ESM, City Manager

Attachment

AMBIENT AIR QUALITY WITH REGARDS TO TOTAL SUSPENDED
PARTICULATES AND BACKYARD BURNING IN HILLSBORO.

Examination of total suspended particulate data obtained from the monitoring station at the Hillsboro Airport reveals a total of eleven instances when the Federal secondary TSP standard (150 ug/m^3) was exceeded. Of these eleven instances, three also exceeded the primary Federal TSP standard (260 ug/m^3). On only one occasion did a violation achieve Federal alert status by surpassing 375 ug/m^3 in a 24 hour period. The table below lists the date and particulate level of each of the 11 occasions.

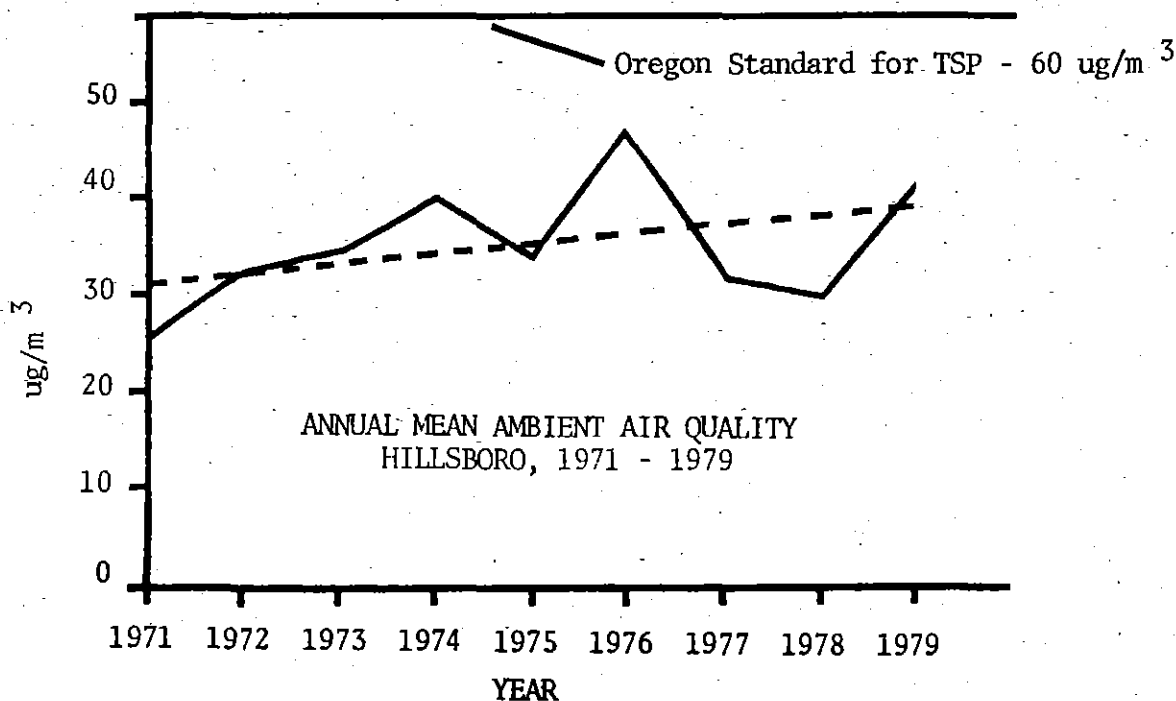
Violations of TSP Standards in Hillsboro - 1975-1979

<u>DATE</u>	<u>TSP LEVEL</u>
January 4, 1979	153 ug/m^3
August 1, 1979	195 ug/m^3
September 29, 1978	220 ug/m^3
* May 12, 1976	170 ug/m^3
July 23, 1976	207 ug/m^3
August 4, 1976	280 ug/m^3
September 3, 1976	210 ug/m^3
* October 15, 1976	180 ug/m^3
September 9, 1975	319 ug/m^3
September 15, 1975	490 ug/m^3
September 27, 1975	222 ug/m^3

* Violation occurred during burning season
Source: Department of Environmental Quality.

Of the violations documented in the last five years, only two have occurred during a period designated for open burning. These two violations exceeded only secondary Federal standards and did not approach primary or alert level standards.

The figure below is intended to show the overall trend in ambient air quality with respect to TSP for Hillsboro during the last nine years. The solid line connects the mean level of TSP for each year from 1971 to 1979.



Since the connected points do not represent a straight line, it is difficult to determine the actual trend in pollution levels over the nine year period. To overcome this problem, a regression line is "fitted" to points on the graph to more clearly show the trend in TSP levels. This averaged value is shown by the dashed line. The dashed line represents the approximate slope, or trend, of the solid line if it were averaged into a straight line. It indicates that the yearly geometric mean level of TSP is increasing gradually in Hillsboro. The "averaged" value of TSP increased from 30.7 ug/m³ to 39.1 ug/m³ or 27 percent during the nine year period. According to data published by DEQ in 1980, backyard burning accounted for only 1.2 percent of all particulate matter emitted from all sources in 1977. Assuming that the percentage of TSP accounted for by backyard burning is fairly representative of other years it seems reasonable to assume that decreasing TSP by 1.2 percent in any given year by banning backyard burning is not going to reverse the trend for gradually increasing TSP each year. Addition or deletion of the Hillsboro area will have even less impact.

SUMMARY

The purpose of this statistical exercise is to bring to attention two important points. First, the number of violations of TSP standards in Hillsboro are so few as to be almost inconsequential. Second, although the general trend is toward gradually increasing TSP levels in the Hillsboro area, a ban on backyard burning would tend to reduce the trend by such a small amount as to be almost imperceptible. Based on these two facts, it seems reasonable to conclude that backyard burning has only a very small effect on the Hillsboro and Portland airshed and allowing it to continue will not have a detrimental effect on overall air quality.



OREGON STATE SENATE

SALEM, OREGON

97310

January 28, 1981

Environmental Quality Commission
P.O. Box 1760
Portland, OR 97207

Re: Subsurface rules proposed by the Department of
Environmental Quality

Dear Commissioners:

In the past few months a great deal of controversy has surrounded the adoption of new administrative rules regarding sub-surface sewage. During this rule making process, the public has attempted to contribute its thoughts regarding the impact of the new rules. In my opinion, the Department of Environmental Quality has considered these suggestions. However, since the DEQ has only recently drafted the final version of the rule package, vital community support has been lost.

I propose a delay in the adoption of the proposed rule package until the March 13th meeting of the Environmental Quality Commission. This delay would allow all involved citizens a chance to assess the implications of the rules. I can understand the desire on the part of the DEQ and the Environmental Quality Commission to implement the new rules, but there are concerns to address.

One of the problems continually mentioned in my district is the advisability of using low pressure distribution in place of gravity flow systems. Opposition stems from the fact that statistical data are not available to verify the need for the extra cost of the low pressure distribution systems. When the extent of estimated costs are further considered, I find myself agreeing with those members of the community raising the issue. I do not see the need to implement administrative rules before information can be gathered concerning the total cost of that rule to the Oregon communities affected. I am sure that DEQ can provide information which projects the cost of the low pressure distribution system over and above the cost of a gravity flow system. This

continued:

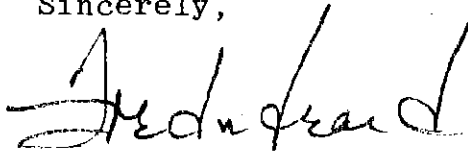
continued: page 2
Environmental Quality Commission

information should then be conveyed to the concerned individuals as a means of assessing the validity of the proposed rule package.

I make this request with all sincerity and ask that these rules be held in abeyance until your March meeting.

Please advise me of your response to my request as soon as possible.

Sincerely,

A handwritten signature in cursive script, appearing to read "Fred W. Heard". The signature is written in dark ink and is positioned above the typed name.

Fred W. Heard
Senate President

FWH:rc



January 23, 1981

902 ABERNETHY ROAD WINSTON W. KURTH
OREGON CITY, OREGON 97045 Assistant Director
(503) 655-8521 DON D. BROADSWORD
Operations Director
DAVID J. ABRAHAM
Utilities Director
DAVID R. SEIGNEUR
Planning Director
JOHN C. McINTYRE RICHARD L. DOPP
Director Development
Services
Administrator

Environmental Quality Commission
Box 1760
Portland, OR 97207

Members of the Commission:

Clackamas County wishes to express its support for the Director's recommendation of January 30, 1981, on agenda items K(1) and K(2).

The Director's recommendation on item K(1) would generally satisfy air quality requirements, reduce incentives for illegal dumping and burning, and provide an equitable and enforceable system.

The Director's recommendation on item K(2) would increase flexibility for local governments, reduce individual hardship, and reduce incentives for illegal dumping and burning.

The County supports adoption of these temporary rules.

DAVID G. PHILLIPS - Code Compliance Representative
Development Services Division

/mb

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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JAN 27 1981

OFFICE OF THE DIRECTOR



CLACKAMAS FIRE DISTRICT NO. 71

656-5262 • 15711 S.E. 90th • P.O. BOX 83 • CLACKAMAS, OREGON 97015

JOE W. PROVOST
FIRE CHIEF

CONRAD R. KRISTENSEN
TRAINING OFFICER

JACK W. WISEMAN
FIRE MARSHAL

January 27, 1981

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
JAN 28 1981

Environmental Quality Commission
Box 1760
522 SW 5th Avenue
Portland, Oregon 97207

OFFICE OF THE DIRECTOR

Commissioners:

Clackamas Fire District #71 contains about 9 square miles of land.

The west boundry has a slight elevation and borders Oak Lodge Fire District. The south boundry is the Clackamas River. Northern boundry is Happy Valley, and it consists of Mather Hill and a wooded area which belongs to the State of Oregon and is a part of Camp Withycombe. The east stops at Tong Road bordering the Boring Fire District.

The western portion is developed with single frame houses that are on 10,000 sq. ft. lots. These lots have large fir trees, fruit trees, hazel brush, and blackberries left over from old farms.

Most of the new houses have trees planted with some 10 ft. to 25 ft. high, and growing at a rate of 18 inches per year.

There is much to burn! Upon taking a tour of the western portion, one can observe a great deal of debris that is waiting for the right condition to burn; accidentally, from children playing with matches, or on a productive burning day.

We protect the City of Johnson City by contract, and in touching base with the Mayor and Manager, they stated they also need debris burn time. That City is west of I-205 and north of the City of Gladstone.

SUMMARY

1. Creating boundries imposes a dollar burden on local tax payers, who support fire departments, because of additional enforcement requirements.
2. The burning ban had extremely bad timing, the dump and local garbage service increased their rates at the same time.

EVERY DAY IS FIRE PREVENTION DAY

3. The burning ban is creating a dumping situation on almost every vacant piece of property in our District. The Fire District has two acres of undeveloped property on SE 130th which "has become a dump". The dumping of brush and other burnable debris on vacant property is going to become a major problem, and will create fire hazards of an explosive nature.
4. The residents in District 71 have indicated the need for debris burning.
5. At any time staff or members of the Commission are close to Clackamas Fire District #71 headquarters, I invite you to take a drive with me around the District and inspect, for yourselves, why we still need controlled burn time.

Respectfully submitted,

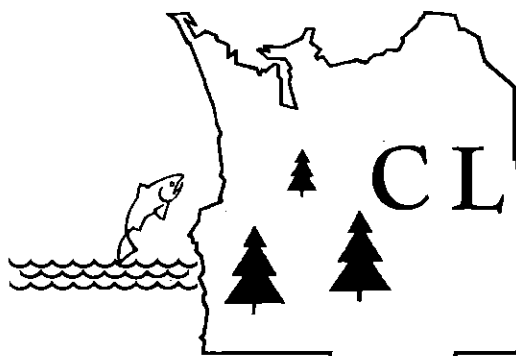


Joe W. Provost
Fire Chief

/dp

cc: Johnson City

cc: EQC +
Young



CLATSOP COUNTY

Courthouse Astoria, Oregon 97103
January 22, 1981

Mr. Jim Richards, Chairman
Environmental Quality Commission
P.O. Box 1760
Portland, Oregon 97207

Re: Proposed Groundwater Quality Protection for Oregon

Dear Mr. Richards:

Clatsop County has reviewed the proposed Groundwater Protection Policy. For the most part the policy statement is well written and readable. The County is concerned about several areas of the report and has the following questions and comments:

- (1) Clatsop County has discussed the significance of the Nitrate Nitrogen ($\text{NO}_3\text{-N}$) standards with a hydrogeologist and other experts on the effects of $\text{NO}_3\text{-N}$ to the health of babies (methemoglobinemia or blue babies). The drinking water standard of 10 mg/l $\text{NO}_3\text{-N}$ appears to be too low. They indicate that in the studies they have reviewed babies that have died from $\text{NO}_3\text{-N}$ concentrations in drinking water that are far, far in excess (over 1,000) of the 10 mg/l standard. Clatsop County feels that 20 mg/l would be a more satisfactory standard than the 10 mg/l and that EQC and DEQ should work to change the standard at the Federal level (in essence extend the proposal mentioned on page 23 to all persons).
- (2) On page 24 the report says that "DEQ has historically used a 5 mg/l planning (modeling) target (e.g. Clatsop Plains)". Clatsop County agrees that a margin of safety is necessary. The County questions the use of a standard that is 50% of the drinking water standard. The 5 mg/l standard used as a planning tool for the Clatsop Plains was an arbitrary figure that the DEQ staff "imposed" when Clatsop County sought to have the moratorium lifted. No reason was given, other than it was one-half (50%) of the standard and that it provided a good margin of safety. We believe that a better figure to use as a planning limit would be a 7.5 mg/l. LCDC Goals require that uses proposed not exceed the

carrying capacity of the resource. Clatsop County, through well monitoring etc., has established its plan based on adequate information. None of the areas released from the moratorium has any wells above 5 mg/l (areas presently in the moratorium resulted from the lack of adequate information and LCDC Goals). Technical information for planning purposes is now precise enough to be able to utilize a smaller margin of error. DEQ also reviews jurisdictional plans to make sure that an aquifer would not be damaged by densities that exceed its carrying capacity.

- (3) Page 60, Clatsop County would like D clarified. D appears to permit other than sewers for (as in B) aquifer areas provided the beneficial uses are protected. Would it also enable the EQC to "write-off" an area, especially if the public were protected through various techniques such as not being permitted to sink wells into the aquifer and restrictions on further development? If D does not permit this, Clatsop County feels that this should be clarified. The language should be changed to reflect what is meant -- whether the entire or a portion of the aquifer is to be protected for beneficial uses. Clatsop County feels that if a portion of the aquifer has already been polluted, lesser standards should be applied to that area only. Management policies that would protect the remainder of the aquifer should be required also.
- (4) Can groundwater that has a level of 1 to 9.99 mg/l of NO₃-N be used for a domestic drinking water source? What level of treatment would be needed?

We thank you for providing this opportunity to testify and for holding the hearing here in Astoria.

Sincerely,



Bob Westerberg, Chairman
ON BEHALF OF THE CLATSOP COUNTY
BOARD OF COMMISSIONERS

cc: Department of Planning and Development
Clatsop County Planning Commission
Clatsop County 208 Public Involvement Committee

CJS:ta



MULTNOMAH COUNTY OREGON

*EQC
Young
Osborne*

DEPARTMENT OF ENVIRONMENTAL SERVICES
2115 S.E. MORRISON STREET
PORTLAND, OREGON 97214
(503) 248-5000

DONALD E. CLARK
COUNTY EXECUTIVE

January 22, 1981

Mr. Bill Young, Director
Department of Environmental Quality
522 S. W. 5th Avenue
Portland, OR 97204

Re: Proposed Rules for On-Site Sewage Disposal

Dear Mr. Young:

The Multnomah County Comprehensive Plan and associated implementation measures for the unincorporated area were acknowledged as in compliance with the State-wide Planning Goals by action of the Land Conservation and Development Commission on October 30, 1980.

The East County Groundwater Plan, adopted as part of the Comprehensive Plan by the Board of County Commissioners, has been approved by the Metropolitan Service District, the Environmental Quality Commission, and acknowledged by LCDC as in compliance with the Statewide Planning Goals.

The Comprehensive Plan and implementing ordinances have the following features related to groundwater quality:

An urban growth boundary is established. The boundary is consistent with the UGB declared by Metro.

Areas outside the UGB are designated rural, natural resource and scenic.

New rural zoning standards change the prior zone minimum lot size to a range from 19 to 76 acres, depending on location and use potentials.

The plan and zoning preclude further urban or suburban developments outside the growth boundary.

Areas inside the UGB are designated urban and urbanizable and must accommodate the major share of new growth.

The plan forecasts population increases and the need for new jobs and dwellings in the urban area to the year 2000.

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Employment, commercial, service and residential areas and needed densities are designated on the basis of the forecasts.

Substantial increases in densities for single and multiple family residential development are planned and companion zoning is applied:

A significant number of single family areas are subject to lot size reductions of 30% to 50%.

The maximum multiple family density has been raised from 20 to 58 units per acre.

The amount of pre-zoned multiple family land has been increased by eight times.

The plan and ordinances establish a strong policy and program of infill to encourage the conversion of suburban patterns to urban land uses and densities. The program facilitates the further development of under-utilized and by-passed lands through innovative zoning, design and land division measures which have been recognized as useful models for other areas of the State.

The plan and implementing ordinances for urbanization and infill rely on existing and planned sewers and on the interim use of on-site disposal in some East County areas, under the adopted and acknowledged Groundwater Plan.

Established development controls for new uses served by interim on-site disposal pending the availability of sewers, include:

Construction of dry sewers, where feasible.

Prior commitment to connect when a sewer is available.

Open space reservation of portions of a site for future lots or apartment construction when sewers are available; interim development is limited to that supported by on-site sewage disposal.

Most of the Central County Service District area in unincorporated Multnomah County was developed by the construction of houses prior to 1967 when the treatment plant was constructed. The County almost immediately constructed sewer trunks and interceptors to the undeveloped northern part of the district. This resulted in the connection to sewers of most new housing built after 1967. Infill residential construction on the unused lots has been permitted, utilizing cesspools in unsewered areas. Commitment for future connection is an approval condition.

The unincorporated area east of the Service District is served by the Gresham Sewage Treatment Plant. Sewers have been constructed to serve much of the new development in this area. Little recent development has occurred in

DEPARTMENT OF ENVIRONMENTAL QUALITY
State of Oregon
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JAN 27 1981

WATER QUALITY CONTROL

the area south of the Service District because of groundwater conditions which are unsatisfactory for subsurface disposal of sanitary wastes.

The proposed prohibition of new cesspools will not decrease the approximately 10 million gallons per day of sewage entering the ground in unincorporated Multnomah County. If the proposed cesspool prohibition is postponed for three years, the sewage from new unsewered development in the area would be very small compared to the total amount of sewage entering the ground. These additions would probably be offset by the connections of existing houses to new sewers which we expect to build in the next three years.

The proposed prohibitions of cesspools will not work to expedite or encourage new sewer construction because approval to construct is dependent upon action of existing home owners. The moratorium would also result in the development of land at lesser densities because larger lots are required for seepage pits. This lesser density disagrees with the Comprehensive Plan and could delay the construction of sewers in some areas. Without a moratorium, ongoing commitments by higher density developers to participate in sewer construction costs could be used to encourage the approval of sewer construction by individual property owners.

The efficiency of seepage pits is a further basis for questioning the benefits of a moratorium. Multnomah County staff has been unable to find proof that the use of seepage pits will decrease the amount of nitrogen compounds entering the groundwater.

The prohibition of cesspools as proposed, would adversely impact Multnomah County's permit process. Effective enforcement of the proposed prohibition would require additional staff, particularly after January 1, 1987, to deal with matters not likely to generate offsetting revenue. Some of the added responsibilities would include added subsurface violations, eviction proceedings, dangerous building removal and probably public assistance in relocation of displaced families.

The County would, in all probability, sustain considerable neighborhood blight from vacated property in unsewered areas with cesspool failures. In addition, the County stands to sustain a substantial loss in property tax revenue resulting from decreased property values. This, in turn, would further reduce the County's capability of providing effective subsurface enforcement.

In consideration of the above, Multnomah County requests the moratorium on the installation of new cesspools be postponed for three years. Further, that no moratorium be enacted preventing the replacement of existing cesspools in unsewered areas. We believe that this request is enforceable and consistent with the proposed Groundwater Quality Protection Policy which was approved as an interim statement of policy by the EQC on April 18, 1980.

Sincerely,

Rená Cusma

RENA CUSMA, Director

Department of Environmental Services

OJD:im

DEPARTMENT OF ENVIRONMENTAL QUALITY

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JAN 27 1981

WATER QUALITY CONTROL

Tillamook County Health Department

January 23, 1981

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JAN 27 1981

COURTHOUSE
TILLAMOOK, OREGON 97141
842-5511 • EXT. 354

Mark Fritzler, DEQ
P.O. Box 1760
Portland, OR 97207

PUBLIC AFFAIRS

Re: Proposed EQC groundwater protection
policy

Dear Mr. Fritzler:

Both Kim Swift, R.S. and I attended the meeting at Newport on the evening of January 21, 1981. I would appreciate your help in directing the following comments to the EQC body.

The Tillamook County Commissioners office and our office are concerned about potential water pollution problems. We are currently working on three projects within the county:

1. A COG 208 study is underway for the Tillamook Bay and the five rivers that comprise it's drainage basin. This study is to identify point sources of surface water pollution that contaminate the bay.
2. This office has just completed a study of the Nedonna Beach area dunal complex. To stop further contamination of the dunal aquifer we issued denials on all undeveloped lots within the deflation plane portion to the subdivision. As a result of our action, residents within the subdivision are working to have the area annexed to the City of Rockaway so that sewers can be extended.
3. As a result of the Nedonna study we have identified nine other dunal areas that require varying degrees of study. Working North to South down the coast line they are:
 - a. Manzanita Section - All development within this area is on sewers. The remainder of the area is public park. We will investigate the public restroom facilities for type of disposal method.
 - b. Nedonna Beach - mentioned previously
 - c. Bay Ocean Spit - Owned by Corps. of Engineers and County. Plans are underway to add vault privneys at high-use locations.
 - d. Cape Meares - Extensive development has occurred and more study is needed.
 - e. Netarts - Oceanside - on sewers
 - f. Cape Lookout Park - A large public campground on the spit needs further investigation.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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JAN 28 1981

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- g. Sand Lake - Three privately owned camps and one public restroom need investigating.
- h. Tierra del Mar - Heavily developed dunal area, similar to Nedonna Beach, requiring study.
- i. Cape Kiwanda - Pacific City - sewers under construction.
- j. Neskowin Area - heavily developed dunal area (approximately 250 homes on 2 miles of dune). A public and private sewer system exists in the area. Two new sewer systems are in planning stages. Several large subdivisions warrant further study.

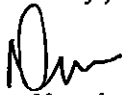
With support from DEQ and the Water Resources Department we, at the County level, can evaluate these areas and move to solve any problems encountered. The EQC can help by requiring the DEQ to enforce current rules which are being ignored, ie:-

- 1. Our study at Nedonna Beach revealed the shallow dunal aquifer to be a permanent water table, as defined in OAR 340-71-030(1)(c).
- 2. I have yet to find a registered geologist who will define a dune complex as a stable landform. OAR 340-71-020(2)(f) prohibits drainfields within unstable land forms.

The current procedures for establishing a moratorium on drainfields within an area are too lengthy and cumbersome and DEQ staff (already shorthanded) are reluctant to start new, long projects. Either the procedure needs streamlined or we need a method of declaring an aquifer contaminated and allowing further development over it.

I hope these comments will encite some discussion at the next meeting of the EQC. If you have questions or require more information please give me a call at 842-5511, ext. 329.

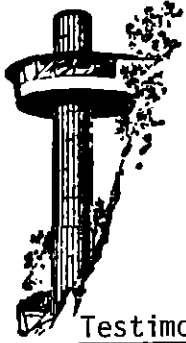
Respectfully,



Douglas Marshall, R.S.
Senior Sanitarian

DM:lsb

cc: Commissioners
DEQ



CITY OF OREGON CITY P. O. Box 631
INCORPORATED 1844

January 28, 1981

Testimony to be Presented at the January 30, 1981 Environmental Quality
Commission Meeting in Support of Tri-Cities Sewer District

The City of Oregon City would like to present the following testimony at the January 30, 1981 public hearing regarding issues affecting the Allocation of Federal Sewage Works Construction Grants During the Fiscal Year 1982; Specifically Certain Provisions of OAR 340-53-005 through 035 Concerning Ranking of Project Components, Discontinuance of Transition Policy, and Possible Reductions in Grant Participation.

We will address these items individually in the order listed.

Item 1 - Ranking of Treatment Works Components: The City of Oregon City supports the staff position and the EQC policy adopted in OAR 340-53-015 (5). We feel that the separate priority ranking of components will allow more projects to be completed, resulting in a higher water quality. We also agree with the grouping of essentially related components on each project.

Item 2 - Transition Policy: Oregon City wishes to go on record as supporting the EQC decision that all projects will be ranked according to priority criteria after October 1, 1981. Prolonging the transition policy is equivalent to doing away with the priority criteria for the remainder of the State, which has been established after much hard work and many public hearings.

Item 3 - Reduced Grant Participation: We concur with EQC staff that any reduction in the grant participation from 75% to 50% is not possible at this time due to present lack of federal rules and guidelines. The City of Oregon City opposes the grant reduction for any agency that has started into the grant process and sold bonds at the 75% level. Reductions in the future should be made applicable only to new grants so that the grantee is aware of the 50% funding from the start of his project.

Thank you for the opportunity to present this testimony.

Don Andersen
Mayor



STATE OF OREGON

INTEROFFICE MEMO

TO: WYYoung

DATE: January 27, 1981

FROM: TRBispham

SUBJECT: AQ - Open Burning Staff Reports

Regarding the agenda item concerning a redefined boundary, K(1), we have found that Happy Valley RFPD was not included under the twice-per-year burning areas. Therefore, the Commissioners will need to be advised to add this area as Item (IX) on Page 4 of the rule and Page 4 of the staff report under (d).

An additional consideration under K(1) is the fact that a portion of Canby and Canby RFPD are shown in the year-round burning area. In fact, they are in the twice-per-year area. The rule correctly states the proper designation and since the map is primarily for discussion purposes, it may not be necessary to identify.

On January 27, 1981, Ray Underwood suggested that we may wish to modify a sentence in Item K(2), Page 8, (C). He believes and I concur that modification as underlined in the following sentence would provide more flexibility in issuing permits:

"A letter permit for yard debris shall be valid
for the calendar year in which it is issued
or for such period as may be stated in the permit."

↓
shorter

/mb

Contains
Recycled
Materials

91-125-1387

SP*75683.125

cc: EQC
Young

Jan. 22, 1981

Environmental Quality Commission
P. O. Box 1760
Portland, OR 97207

Attention: Joe Richards

RE: New rules and regulations for On-Site Sewage Disposal proposed at a
January 6, 1981 meeting at the La Pine Firehall

Dear Mr. Richards:

On January 22, 1981 I received the packet prepared for presentation to your
commission.

On January 6, 1981, Bill Young and his staff assured our group that low-pressure
systems would not be mandatory in our area of rapidly draining materials;
that many of our half-acre parcels would still qualify for standard systems,
under certain conditions.

Young and his staff failed to include in the report the diagrams presented
to us guaranteeing implementation of standard gravity-flow septic tank
systems in rapidly draining materials.

Based on many questions that are still unanswered; a greater clarification
that is needed on many of the proposals; and the need to couch the report
in a logical sequential manner, we request a delay in adoption.

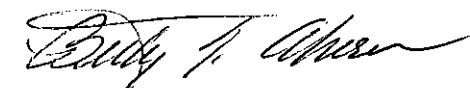
Many of you remember the errors associated with what DEQ called "mottling"
in an earlier report -- an error that caused more than a year of moratorium
for many people in developing their parcels until the method of evaluation
was corrected.

We also object to the added drainfield footage, because it has not been
proven that the added footage is needed.

Also, referring to Page 4, and the paragraph headed "E Bend," the report by
Dick Nichols of the DEQ office continuously refers to "one person said this"
and "one person said that." In essence, if you listen to the tapes recorded
at the meeting you will hear loud applause after the "one person" spoke, a
fact that belies the implication that "one person" was presenting ideas for
consideration.

Nearly a quarter of a million dollars is being spent on a water quality study
for the La Pine area, a study that will be completed in 1982. We are faced
with these new rules and regulations on sewage handling before the facts are
even known in the water study for our type of soil. We strongly recommend
a delay in the adoption of the rules to a date in the future when the DEQ can
show a need for changes, together with an economic impact statement on added
costs.

LA PINE STUDY AREA
CONCERNED CITIZENS ADVISORY COMMITTEE



Betty J. Ahern, Chairperson
52427 River Pine Drive
La Pine, OR 97739
Phone: 536-2252

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
JAN 26 1981

OFFICE OF THE DIRECTOR

WHY:

INCLUDING THIS LETTER
FROM LINDBERG TO ~~THE~~ ^{the} COMMISSION
WITH THE IVANCIE LETTER AND
THE OTHERS MIGHT ~~BE~~ DIFUSE SOME
~~OF~~ OF IVANCIE'S REMARKDS
BY REMINDING THE COMMISSION HE
IS ONLY ONE OF FOUR COMMISSIONERS.

JAG

THE CITY OF
PORTLAND



OREGON

OFFICE OF
PUBLIC WORKS

MIKE LINDBERG
COMMISSIONER

1220 S.W. FIFTH AVE.
PORTLAND, OR. 97204
503 248-4145

December 19, 1980

State of Oregon Environmental
Quality Commission

Dear Commissioners:

The purpose of this letter is to express my personal position to the Commission on the issue of backyard burning.

I support the proposal for an extension of time in recognition of the City of Portland's efforts to date to develop cost effective alternatives to backyard burning. However, I want to emphasize that my support of a 6 mo. extension in implementation date in no way lessens my support of the ban on backyard burning, so long as the data shows a ban improves air quality. While I understand that the subject of appropriateness of the ban itself will be the subject of a separate hearing in the Spring, I feel it is important for me to clarify my position at this time to prevent possible misinterpretation or misunderstanding.

Sincerely,

MIKE LINDBERG
Commissioner
Department of Public Works

ML.dl



City of West Linn

4900 Portland Avenue • West Linn, Oregon 97068 • Phone: 656-4261

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

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January 30, 1981

Environmental Quality Commission
522 Southwest 5th Avenue
Portland, Oregon 97204

OFFICE OF THE DIRECTOR

Re: Public Hearing - January 30,
1981, on issues affecting
Allocation of Federal Sewage
Works Construction Grants.

Gentlemen,

The City of West Linn would like to present these comments in support of the Tri-Cities Sewer District in regards to issues affecting the allocation of Federal Sewage Works Construction Grants during the fiscal year 1982. Specifically certain provisions of O.A.R. 340-53-005 through 035, concerning ranking of project components, discontinuance of transition policy and possible reductions in grant participation.

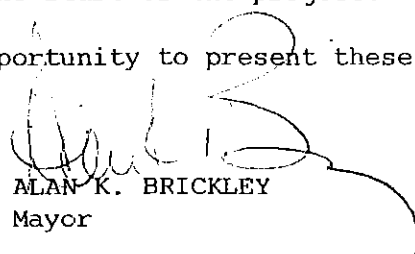
The City supports the items addressed below as adopted in Bend, Oregon in the order listed:

Item I - Banking of Treatment Works Components. The City of West Linn will support the staff position and the EQC policy adopted in OAR 340-53-015(5). The City feels the separate priority ranking of components will allow more projects to be completed therefore resulting in a higher water quality. We also agree with the statement of grouping of essentially related components on each project.

Item II - Transition Policy - The City of West Linn supports the EQC recommendation that all projects will be ranked according to priority criteria after October 1, 1981. We believe prolonging the transition policy is the equivalent of eliminating the priority criteria for the balance of the State, which has been developed after many public meetings and input by many staff members.

Item III - Reduced Grant Participation. The City of West Linn supports the staff recommendation that any reduction in the grant participation from 75% to 50% is not feasible at this time. The City opposes the grant reduction for any agency such as the Tri-Cities Sewer District, who has proceeded into the grant process and has held an election and plans on selling bonds based on receiving 75% funding. If the department recommends reductions in grant levels in the future, these should only apply to new grant applications so the grantee is aware of the grant participation at the start of the project.

We thank you for allowing us the opportunity to present these comments.


ALAN K. BRICKLEY
Mayor

AKB:dn

Item K



CLACKAMAS COUNTY

RURAL FIRE DISTRICT NO. 54

Everett Buttolph
Fire Chief

January 23, 1981

Department of Environmental Quality
Environmental Quality Commission
P. O. Box 1760
Portland, Oregon 97207

Re: RULING ON BURNING BAN BOUNDARY

The Metro boundaries on burning regulations will be unmanageable and unenforceable in this Fire Protection District due to the splitting of the Fire District by its RFPD boundaries.

It is the consensus of the staff and patrons of this district that year 'round burning of clear burning debris & trimmings would be of a lesser air pollutant than the restricted twice a year requirement due to the fact people will be burning unapproved materials in their solid fuel burning appliances at home.

The District will support the Spring/Fall burn periods as an alternate to year 'round burning, but cannot accept the total ban on rural living practices when no provisions for alternate disposal methods have been made available.

Everett L. Buttolph
Everett L. Buttolph,
Fire Chief

ELB:db

CLACKAMAS COUNTY FIRE DEFENSE BOARD

CLACKAMAS COUNTY POSITION ON OPEN BURNING

The Department of Environmental Quality's written policy states, in part, that, consistent with overall public welfare, it is the policy of DEQ to ELIMINATE open burning practices where ALTERNATIVE disposal methods are FEASIBLE AND PRACTICAL.

The fire service supports this policy and asks only that the commission consider its own mandate when reviewing proposed modifications to the open burning rules and regulations.

Many areas within city boundaries and unincorporated, densely populated metropolitan areas have developed, or can develop, realistic, practical, and effective alternative disposal methods for handling vegetation debris. Conversely, some of the area contained within the boundaries of METRO are not metropolitan in nature. Some of these areas will not be metropolitan for many years, due to zoning and sewage restrictions. These rural residential areas, due to lot size or intended use of land, generate large quantities of vegetation debris (blackberry vines, tree limbs, yard trimmings) annually. Much of this debris cannot be efficiently and effectively disposed of, other than by open burning, due to the unavailability of feasible and practical alternative disposal methods.

Grass and garden trimmings can be composted, large limbs can be cut for fire wood. However, without the option of open burning, the remaining material will either become a local fire hazard when piled or abandoned, or will add to the short life span of local solid-waste landfills. To create a hazard to public safety and welfare, add to the existing solid-waste problem within this region, or just plain ignore the obvious in order to provide debatable improvements to air quality is not a realistic approach to the overall environmental problem.

Following the boundaries of METRO, under the false assumption that all property within METRO is metropolitan, is an obvious mistake and will not benefit the public welfare in rural residential portions of METRO. On the other hand, banning open burning in heavily developed portions of METRO where achievable, effective alternative disposal methods are available and the amount of debris generated is limited, is an appropriate action.

Banning open burning of residential yard or lot clean-up debris in a rural residential area where agricultural open burning of similar debris is allowed will be unenforceable, ineffective and will make a mockery of the goals of the air quality authorities. The permit issuing agencies do not have the ability to easily and accurately determine who is inside and who is outside of the METRO boundaries. The fire districts have the address systems within their districts keyed to their existing boundaries. These boundaries would be used to divide areas where burning will be allowed from those areas where burning will not be allowed.

In areas that are not metropolitan in nature and where open burning will be allowed, it should be allowed on a year-round basis and only on those days exceptionally suited regarding air quality, fire protection and good incinerary potential. Having two residential burn sessions with limited burn days adds to the air quality problem in this region. Many residents burn on days that are not best suited for good, clean incineration (rainy days or by attempting to burn wet materials). Residents burn on poor days because they fear that they will not have the opportunity to burn the material before the deadline.

Agricultural debris may be burned on approved days on a year-round basis. Consider the smoke problem that would be generated if all agricultural burning were postponed and then allowed on a given weekend, even though the weather is not best suited for burning. Residential smoke generation would be greatly reduced if residents were allowed to burn clean-up debris on a year-round basis on the days that are exceptional meteorologically related to effective incineration. The amount of debris burned would remain the same, but the smoke would be reduced due to efficient incineration, with the volume on a given day also reduced dramatically.

In summary:

1. DEQ's written policy requires consideration of feasible practical alternative disposal methods being available prior to eliminating open burning in a given area.
2. In order for an open burning ban to be effective, it must be realistic, justifiable and enforceable.
3. The permit issuing agency must have the ability to easily determine burn-ban boundaries.
4. Open burning should be banned in developed urban areas (currently developed not projected).
5. Open burning should be allowed in rural/residential areas.
6. Where open burning is allowed, it should be on exceptional days (air quality/incineration) in conjunction with agricultural burning on a year-round basis.
7. Fire District supports the DEQ/Fire Dist. Boundary as presented by the Director of DEQ TO Environmental Quality Commission per letter 1/9/81 Agenda Item No K(1) page 7

BEAVERCREEK RURAL FIRE PROTECTION DISTRICT
CLACKAMAS COUNTY FIRE DISTRICT NO. 55
BEAVERCREEK, OREGON 97004

503-632-3232

BOARD OF DIRECTORS

A. R. PAULY
PRESIDENT
NEIL CULLISON
VICE PRESIDENT
HERMAN KRAFT
SECRETARY
DAVID KAMRATH
DIRECTOR
CRAIG STENSRUD
DIRECTOR

January 30, 1981

ADMINISTRATION

JACK R. CRESCENZI
FIRE CHIEF
DALE KAMRATH
1ST. ASST. CHIEF
STEVEN L. BIGELOW
ASST. CHIEF/FIRE MARSHAL

POSITION STATEMENT

Beavercreek Rural Fire Protection District #55 is located four miles southeast of Oregon City at the edge of the Portland Metropolitan Service District. Our district encompasses approximately 29 square miles and 9,000 residents. The majority of the district is agricultural with a few areas of single family housing developments.

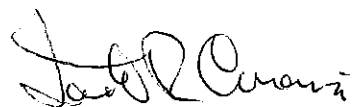
Of prime concern is the burden of enforcement that either a ban on a portion of our district or a complete ban will impose on the limited manpower and financial resources we have available. District #55 is primarily a volunteer department. We do employ a fire marshal, but his duties also include training, plan reviews, and other fire related activities that would reduce his time available for enforcement of DEQ policy.

Another problem we foresee is that if the "burn-ban" boundary divides our district, we will have two separate enforcement policies. In other words, we will have to continually tell people that they can't burn but it's OK for their neighbor.

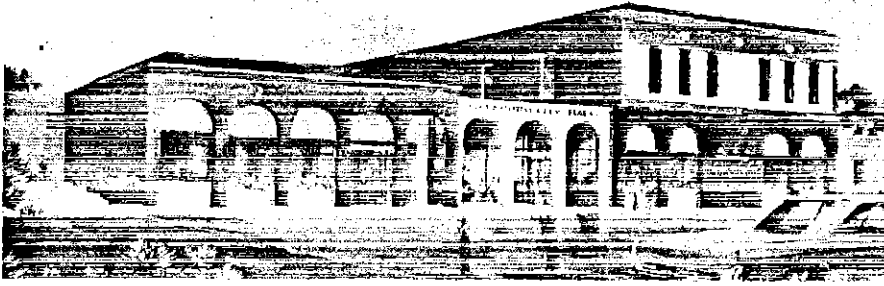
It appears that a complete burn ban for residents might have an adverse effect on the number of chimney fires (and therefore the number of structure fires) we respond to. So far this year, there have been two chimney fires that could be attributed to burning paper, brush and other wood products normally not considered firewood.

We feel that when yard debris is allowed to completely combust during optimal burning conditions (dry, light wind), far less odor, visible smoke, and invisible products of incomplete combustion are released into the air than a comparable amount of fuel burned in a wood stove.

We support the DEQ proposal for seasonal residential burning as an interim action until a realistic and workable solution is reached



Jack Crescenzi
Chief



K-11

City Of Hillsboro

205 S.E. Second Ave. □ 648-0821 □ Hillsboro, Oregon 97123

January 30, 1981

Environmental Quality Commission
Dept. of Environmental Quality
522 SW Fifth
Portland, Oregon 97201

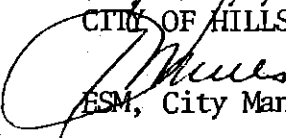
Dear Commissioners:

I wish to take this opportunity on behalf of the citizens of Hillsboro to express support for the recommendation to reduce the area subject to the Department of Environmental Quality's ban on backyard burning. The proposed reduction would eliminate Hillsboro from the ban area, an action which is supportable and justified by the following facts relating to backyard burning and air quality in the Hillsboro area:

1. The amount of particulate matter contributed by backyard burning in the Hillsboro area is a negligible portion of total particulate matter emitted in the Portland area. Wood burning for heat and road dust generated by motor vehicles contribute many times more particulate matter.
2. Few, if any, complaints are received by the Fire Department regarding backyard burning. Any complaints received on backyard burning are most appropriately handled under our nuisance ordinance rather than as an air quality problem.
3. During the last five years, only eleven violations of secondary Federal TSP standards were documented. Of these eleven, only two violations occurred during a burning season, both on days which burning was not allowed. Overall, air quality in the Hillsboro area has remained well within the established standard for Oregon.
4. The only landfill in the Hillsboro area is currently over capacity and is unable to handle an increased volume of backyard debris.
5. No reasonable, economic or funded alternative to backyard burning exists at the present time.

Attached to this letter is a brief statistical analysis of air quality data on total suspended particulate levels in Hillsboro. This data reveals that air quality problems in the Hillsboro area are minimal and that a ban on backyard burning will have an inconsequential effect on alleviating the overall problem. The ban on backyard burning will have a major impact on the City by creating enforcement problems, increasing illegal dumping and further burdening an inadequate landfill. Your passage of this item will be a step towards resolving an issue for which the City has no solution--disposal of yard debris.

Very truly yours,
CITY OF HILLSBORO


ESM, City Manager

Attachment

AMBIENT AIR QUALITY WITH REGARDS TO TOTAL SUSPENDED PARTICULATES AND BACKYARD BURNING IN HILLSBORO.

Examination of total suspended particulate data obtained from the monitoring station at the Hillsboro Airport reveals a total of eleven instances when the Federal secondary TSP standard (150 ug/m^3) was exceeded. Of these eleven instances, three also exceeded the primary Federal TSP standard (260 ug/m^3). On only one occasion did a violation achieve Federal alert status by surpassing 375 ug/m^3 in a 24 hour period. The table below lists the date and particulate level of each of the 11 occasions.

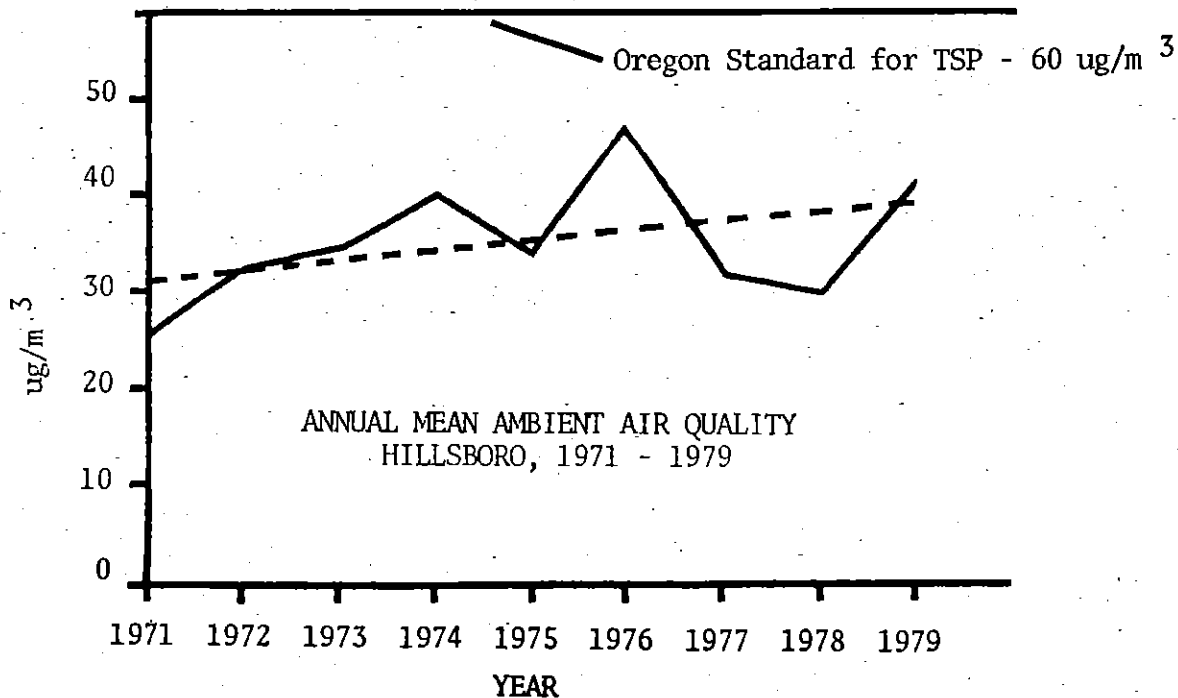
Violations of TSP Standards in Hillsboro - 1975-1979

<u>DATE</u>	<u>TSP LEVEL</u>
January 4, 1979	153 ug/m^3
August 1, 1979	195 ug/m^3
September 29, 1978	220 ug/m^3
* May 12, 1976	170 ug/m^3
July 23, 1976	207 ug/m^3
August 4, 1976	280 ug/m^3
September 3, 1976	210 ug/m^3
* October 15, 1976	180 ug/m^3
September 9, 1975	319 ug/m^3
September 15, 1975	490 ug/m^3
September 27, 1975	222 ug/m^3

* Violation occurred during burning season
 Source: Department of Environmental Quality.

Of the violations documented in the last five years, only two have occurred during a period designated for open burning. These two violations exceeded only secondary Federal standards and did not approach primary or alert level standards.

The figure below is intended to show the overall trend in ambient air quality with respect to TSP for Hillsboro during the last nine years. The solid line connects the mean level of TSP for each year from 1971 to 1979.



Since the connected points do not represent a straight line, it is difficult to determine the actual trend in pollution levels over the nine year period. To overcome this problem, a regression line is "fitted" to points on the graph to more clearly show the trend in TSP levels. This averaged value is shown by the dashed line. The dashed line represents the approximate slope, or trend, of the solid line if it were averaged into a straight line. It indicates that the yearly geometric mean level of TSP is increasing gradually in Hillsboro. The "averaged" value of TSP increased from 30.7 ug/m^3 to 39.1 ug/m^3 or 27 percent during the nine year period. According to data published by DEQ in 1980, backyard burning accounted for only 1.2 percent of all particulate matter emitted from all sources in 1977. Assuming that the percentage of TSP accounted for by backyard burning is fairly representative of other years it seems reasonable to assume that decreasing TSP by 1.2 percent in any given year by banning backyard burning is not going to reverse the trend for gradually increasing TSP each year. Addition or deletion of the Hillsboro area will have even less impact.

SUMMARY

The purpose of this statistical exercise is to bring to attention two important points. First, the number of violations of TSP standards in Hillsboro are so few as to be almost inconsequential. Second, although the general trend is toward gradually increasing TSP levels in the Hillsboro area, a ban on backyard burning would tend to reduce the trend by such a small amount as to be almost imperceptible. Based on these two facts, it seems reasonable to conclude that backyard burning has only a very small effect on the Hillsboro and Portland airshed and allowing it to continue will not have a detrimental effect on overall air quality.

CLACKAMAS FIRE DISTRICT NO. 71

656-5262 • 15711 S.E. 90th • P.O. BOX 83 • CLACKAMAS, OREGON 97015

JOE W. PROVOST
FIRE CHIEF

CONRAD R. KRISTENSEN
TRAINING OFFICER

JACK W. WISEMAN
FIRE MARSHAL

January 27, 1981

Environmental Quality Commission
Box 1760
522 SW 5th Avenue
Portland, Oregon 97207

Commissioners:

Clackamas Fire District #71 contains about 9 square miles of land.

The west boundary has a slight elevation and borders Oak Lodge Fire District. The south boundary is the Clackamas River. Northern boundary is Happy Valley, and it consists of Mather Hill and a wooded area which belongs to the State of Oregon and is a part of Camp Withycombe. The east stops at Tong Road bordering the Boring Fire District.

The western portion is developed with single frame houses that are on 10,000 sq. ft. lots. These lots have large fir trees, fruit trees, hazel brush, and blackberries left over from old farms.

Most of the new houses have trees planted with some 10 ft. to 25 ft. high, and growing at a rate of 18 inches per year.

There is much to burn! Upon taking a tour of the western portion, one can observe a great deal of debris that is waiting for the right condition to burn; accidentally, from children playing with matches, or on a productive burning day.

We protect the City of Johnson City by contract, and in touching base with the Mayor and Manager, they stated they also need debris burn time. That City is west of I-205 and north of the City of Gladstone.

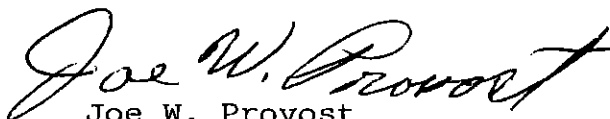
SUMMARY

1. Creating boundaries imposes a dollar burden on local tax payers, who support fire departments, because of additional enforcement requirements.
2. The burning ban had extremely bad timing, the dump and local garbage service increased their rates at the same time.

EVERY DAY IS FIRE PREVENTION DAY

3. The burning ban is creating a dumping situation on almost every vacant piece of property in our District. The Fire District has two acres of undeveloped property on SE 130th which "has become a dump". The dumping of brush and other burnable debris on vacant property is going to become a major problem, and will create fire hazards of an explosive nature.
4. The residents in District 71 have indicated the need for debris burning.
5. At any time staff or members of the Commission are close to Clackamas Fire District #71 headquarters, I invite you to take a drive with me around the District and inspect, for yourselves, why we still need controlled burn time.

Respectfully submitted,



Joe W. Provost
Fire Chief

/dp

cc: Johnson City

BORING FIRE PROTECTION DISTRICT No. 59

Business Phones
663-4638
658-3154
630-3537

P. O. BOX 85 - BORING, OREGON 97009

Emergency Phones
663-4121
658-3153
630-3535

TESTIMONY BEFORE ENVIRONMENTAL QUALITY COMMISSION, January 30, 1981

BY: EARL MEILR, Chairman, Board of Directors
Boring Fire Protection District No. 59

RE: Opposition to Residential Open Burning Ban

The Board of Directors of the Boring Fire District have addressed the Open Burning issue numerous times over the past five years. We have held hearings within our District related to the Open Burning issue. We are convinced that our residents have a legitimate need to dispose of vegetation debris by controlled open burning. Due to the inter-mix throughout our District, both within and outside the Metropolitan Service District, of agricultural operations, "Hobbie Farms" and large lot rural/residential properties, the Board has lobbied for "year around" open burning for both agricultural and rural/residential properties on exceptional burning days based on the air quality, fire danger and clean incineration.

At their January meeting, the Board reviewed the actions taken by the Environmental Quality Commission in December, banning all residential open burning within our Fire District. The Board felt that the action of the EQC was premature and inappropriate as it relates to our District and went on record opposing the burning ban for the following reasons:

1. This District is Rural/Residential in make-up with the majority of the residents large lot property owners with many operating "Hobbie Farms" (which are not recognized by DEQ as legitimate agricultural operations). This Rural/Residential make-up will not change in the near future due to zoning and sewage restrictions on lot size.
2. Quantities of combustible debris generated from the maintenance of the residential large lots and the operation of the "Hobbie Farms" requires periodical disposal.
3. No FEASIBLE and PRACTICAL alternative to open burning are available to the residents.

IN THE OPINION OF THE BOARD OF DIRECTORS, THE OPEN BURNING BAN AS IMPOSED WILL RESULT IN:

1. Uncontrolled and undesirable accumulations of combustible debris adding to and compounding the ground cover fire problem throughout the fire district.
2. Uncontrolled dumping of combustible debris in unauthorized locations, adding to the fire problem during dry conditions.

TESTIMONY BEFORE ENVIRONMENTAL QUALITY COMMISSION
January 30, 1981

Page 2

3. Reduction in the ground cover maintenance of large lots and other open land adding to the ground cover fire problem and increasing the possibility of fire spreading to improvements.
4. Increase in unauthorized burning resulting in more open burning on poor air quality days and/or high fire danger days resulting in increased air pollution and increased fire incidents.
5. Increased public animosity toward regulatory agencies resulting in less co-operation from the general public in controlling the open burning problem.
6. Increased inequities in the open burning system as agricultural debris will continue to be allowed to be burned with similar debris located on adjoining large lot residential or "Hobbie Farm" property being unable to legally burn identical debris in less quantities.
7. Increased liabilities placed on the local fire departments when they are unable to control or enforce the unauthorized burning.
8. Reduced air quality as more unauthorized burning will occur on Poor Air Quality days than under the limited burning system.

The Board also feels that utilizing the MSD boundaries as a Burning Ban Boundary is inappropriate as the MSD boundaries do not coincide with changes in property use, which determine the need to burn residential or "Hobbie Farm" debris. If the Fire Service is expected to act as the enforcement agency, then the existing Fire District boundaries must be used unless there is an actual change in make-up of properties that have or do not have a legitimate need to burn within that district. The MSD boundary as it transverses our Fire District does not meet that criteria.

If the Commission expects the Burn Ban to be effective, they must consider the needs of the residents effected and the legitimate needs of the enforcement agency; otherwise, the Ban will be unenforceable and a mockery to the system.

BORING FIRE PROTECTION DISTRICT No. 59

Business Phones
663-4638
658-1154
650-3637

P. O. BOX 85 - BORING, OREGON 97009

Emergency Phones
663-4121
668-3151
630-3838

TESTIMONY BEFORE ENVIRONMENTAL QUALITY COMMITTEE-January 30, 1981

BY: Matt Shields, Fire Chief, Boring Fire District No. 59

RE: Opposition to Residential Open Burning Ban

Boring Fire District provides fire protection and other related service including the issuing of burning permits to 64 square miles of East Clackamas County. The area within the Fire District is not urban or metropolitan in nature. It is a Rural/Residential area with many of the 5, 10 and 20 acre parcels being utilized as residential property rather than commercial agricultural operations. These rural/residential large lot parcels annually generate large quantities of vegetation debris as a result of required property maintenance. Disposing of this debris should not be considered an "option", it is a "necessity".

All areas of the Fire District, both within and outside the Metropolitan Service District, include an inter-mix of rural/residential and agricultural properties. In 1980, the Fire District issued 4,002 Agricultural Burning Permits compared to 5,112 Residential Burning Permits which attests to the balance of residential and agricultural burning requirements within the Fire District.

To totally ban open burning for rural/residential property owners, many of whom operate "Hobbie Farms" (which DEQ does not recognize as a legitimate agricultural operation), and at the same time allowing adjoining agricultural property to burn similar debris on a "year around" basis without first providing feasible and practical alternatives to open burning is unequitable and will be unacceptable to the majority of the Rural/Residential property owners.

If a total residential burning ban is imposed in the Rural/Residential area, and the residents do not voluntarily cooperate, the burning ban will be unenforceable. Neither the Fire Department or Department of Environmental Quality has the staff to enforce such a ban without the cooperation of the public. Our Fire Department is a part career/part volunteer organization with no paid personnel on duty evenings and weekends. We are able to handle the illegal burning complaints under the current system of Spring/Fall residential burning only through the cooperation of the public as they know they will be given the opportunity to dispose of debris in the Spring and Fall. Under an outright ban, we would lose the cooperation of the public. The outright ban will be the final straw, it will be ignored, they will continue to burn. Without feasible, practical and acceptable alternatives to open burning, rural residents will have no option other than to burn illegally in order to properly maintain their property.

In a recent survey of our residents, the open burning question was addressed along with other issues. Of those residents completing the survey, 90 percent said they would cooperate with burning regulations if they were allowed to burn periodically. 75 percent said they did not feel that a total ban was justified based solely on air quality requirements.

TESTIMONY BEFORE ENVIRONMENTAL QUALITY COMMITTEE
January 30, 1981

Page 2

The existing Metropolitan Service District boundary should not be considered as a burning ban boundary as it does not reflect actual property use, the legitimate need to burn and the lack of available alternatives.

Although the burning ban may be justifiable in the densely populated metropolitan areas, that same justification does not exist in the rural/residential areas, some of which fall within the boundaries of the Metropolitan Service District. The determination on who can and cannot burn must be made on the legitimate need to burn, the property use and the availability of feasible and practical alternative disposal methods. The Boring Fire District supports the modified boundary recommended by DEQ Staff based primarily on Fire District boundary lines.

I would also request that the Environmental Quality Commission direct the DEQ staff to study the air quality and solid waste disposal benefits of combining agricultural and rural/residential open burning on a "year around" basis on exceptional burning days based on air quality, fire danger and good incineration in those areas that open burning will be allowed to continue. By eliminating the Spring/Fall system, residents would not be forced to burn green or wet debris on marginal air quality days and days not suited to fast, clean incineration due to a fixed calendar deadline. Under a "year around" system of open burning on exceptional days, public cooperation would improve, uniform enforcement would be achievable, the inequities of agricultural burning, caused by the lack of uniformity in defining of agricultural operations would be eliminated, and clean incineration of debris would result in an improved air quality for the entire region without transferring an air quality problem to a solid waste and public safety problem.

K

SUGGESTED REVISION OF 340-23-045(7), TEMPORARY RULES FOR BURNING PERMITS.
BY THE OPEN BURNING SUBCOMMITTEE, PORTLAND AIR QUALITY ADVISORY COMMITTEE
JANUARY 30, 1981

Page 7

340-23-045(7)(e) In making its determination under subsection (c) above, the Department shall consider:

(A) The conditions of the airshed of the proposed burning

(B) The other air pollution sources in the vicinity of the proposed burning, including other holders of burning permits
(The shall is substituted for may because the Department should be required to take the listed factors into consideration. The addition to subsection (B) is to ensure that burning permits not be granted in areas already heavily permitted for burning.)

Page 6

340-23-045(7)(b)(I) Payment of a permit fee, in accordance with the schedule listed in subsection (k) of this section, to allow for an on-site inspection of material to be burned.

Page 8

340-23-045(7)(f)(B) The number of actual calendar days on which burning is permitted to take place, not to exceed seven (7), ~~except that a letter-permit for yard-debris shall not contain such-a-limitation.~~

(C) The period during which the permit is valid, not to exceed a period of thirty (30) consecutive days, ~~except-a-permit for yard-debris.~~ The actual period in the permit shall be specific to the needs of the applicant. ~~A letter-permit for yard-debris shall be valid-for-the-calendar year-in which it-is-issued.~~

Page 9

340-23-045(7)(g) Regardless of the conditions contained in any letter permit, each letter permit, ~~except-permits-for-yard debris,~~ shall be valid for not more than thirty (30) consecutive calendar days of which a maximum of seven (7) can be used for burning. The Department may issue specific letter permits for shorter periods.

(The above three revisions make permits for yard debris effective for the same period of time as other burning permits rather than for a year.)

340-23-045(7)(i)(B) Material originating as yard debris which has been collected and stored by a governmental jurisdiction for the purpose of processing but which cannot be processed because of unforeseen circumstances.

340-23-045(7)(i)(C) Yard debris on the property of a private residence where the inability to burn creates a hardship due to volume of material, inaccessibility of the area, and the lack of reasonable alternatives.
(The substitution of and for or makes this rule consistent with the need for the rule as expressed by the Department. (See DEQ Memo on Agenda Item No. K(2), Attachment 2.)

3327 SW Dorsch Rd.
Portland, Ore. 97201
January 30, 1981

Environmental Quality Commission
P. O. Box 1760
Portland, Ore. 97207

Testimony on item K(1) Redefine the residential backyard
burn ban boundary

I am Owen Cramer, a retired forester and fire-research meteorologist, formerly with the U. S. Forest Service Experiment Station here in Portland. My career has dealt primarily with fuels, fire, weather, and smoke beginning with several summers as a lookout spending full time looking for smokes. I have been interested in the matter of backyard burning as a meteorological problem. If the meteorological aspects of this burning are not adequately handled, it becomes an air quality problem. If burning is prohibited, it becomes a solid waste problem.

I presume you will hear objections to redefining the boundary based on the effects of smoke on health. While the presence of polycyclic hydrocarbons in smoke has been established, their actual effect in observed concentrations for observed durations on human health can be questioned. The same kind of smoke and the same kind of hydrocarbons have always been present. In a phone conversation last March 25 with Dr. John Cooper, whose judgement I know you respect, he told me that these potentially bad hydrocarbons are not cumulative in the human body, that small concentrations for occasional short periods were no problem, that he knew of no cases of human health damaged by wood smoke, and that he knew of no air pollution disasters to which wood smoke was a significant contributor.

Forest fire fighters are subject to really dense smoke from generally the same vegetative fuels involved in backyard burning, and they are subjected to it for several days at a time, many times a year. And they may do this for a whole career. I have known many such forest fire suppression specialists and have not heard of any who have suffered more than temporary irritation, as have I, from prolonged periods in really dense smoke. Consequently, I find it difficult to believe that the brief periods of diluted smoke we may experience from backyard burning can have any health effect on the average person. The primary problem with this smoke is that if it accumulates, it reduces visibility. With the limitations you place on burning, there should be no health effects and rarely any visibility effects attributable to backyard burning.

In densely populated areas it is sensible to impose more restrictive limitations on burning that produces a lot of smoke. But it is not reasonable to impose a complete ban on rural areas where individual properties are large, population density is low, and forest and orchard land uses produce a lot of woody residue. I would favor restoring burning to a much greater portion of the metropolitan area. My only objection to this proposal is that it does not provide for limited burning in a lot more of the less densely populated areas where it is really needed. With careful attention to meteorological scheduling of burning, I foresee no problem from smoke resulting from this proposal.



Owen P. Cramer
Fire Research Meteorologist
(retired)



To The Members of the Commission - Jan 30, 1981
At your last meeting at the Multnomah County Courthouse you voted 4-2 to EXTEND backyard burning - yet the next morning newspapers said Environmental Quality Commission you voted 3-2 to STOP IT!!

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

Is this not in violation of the open meeting law?

Louis Weidlich
Director
Neighborhoods Protective Ass'n
PO Box 19224, Portland Oregon 97219

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. N, December 19, 1980, EQC Meeting
Public Hearing for Rule Adoption to Allow a Spring Backyard Burning Season (OAR 340-23-045)

Background

At its June 1979 meeting, the Environmental Quality Commission (EQC) granted an extension of the spring and fall backyard burning periods through 1980. In granting this extension, the Commission directed staff to establish reasonable programs with local governments which would permit the prohibition of backyard burning after December 31, 1980.

The efforts to fully assess the feasibility of prohibiting backyard open burning and to establish reasonable alternative disposal programs has met with a number of obstacles. The Department is continuing to develop the following information: volume of material involved; the environmental impacts; the energy/economic impacts of various alternatives; and an assessment of the public's attitude. The Department is committed to seeking wide public review and comment on the final assessment. To meet this commitment additional time is needed to complete the report, distribute to the public, conduct hearings and evaluate public comment. It is projected that the final report will be completed by February 1, 1981, and that a request for public hearing will be made at the February EQC meeting. The hearings would be held in March and April and a final report and recommendation made to the Commission in June.

Since the final report will not be completed until May and alternatives to burning will not be available during the 1981 spring clean-up period, it is the Department's belief that the Department's open burning rule should be revised to allow a spring burn period in 1981. This can be done by changing the date listed in OAR 340-23-045(6) (a) from December 31, 1980, to June 30, 1981.



Contains Recycled Materials

RECEIVED
FEB 11 9 32 PM 1976
GEORGE YERKOVICH, AUDITOR
CITY OF PORTLAND, ORE.

February 11, 1976

BY lev

c/o George Yerkovich, City Auditor
Mayor Neil Golaschmidt
Members of the City Council
City Hall
Portland, Oregon

Dear Mayor Goldschmidt and Members of the City Council: Commissioner Jordan, Commissioner McCreedy, Commissioner Schwab, and Commissioner Ivancie:

Tomorrow is Abraham Lincoln's Birthday...February 12th, 1809. In this Bi-Centennial year it would seem appropriate to give recognition to our XVth President "Honest Abe" Lincoln. Yet, it does not look as if the Oregon Bi-Centennial Commission nor the Oregon Historical Society think that such a date is of great enough importance to be given notice. We need to pray for them, as well as ^{for} you members of the City Council in these days of "change for a new ERA"??????????

Today the issue before you is in regard to D.E.Q. pollution control standards in the City of Portland. We would ask...are you really not being caught in a trap set up the Oregon State Legislature?? The *Metropolitan Service District crosses into three counties, which is governed by appointed commissioners not elected, nor controlled by the citizens and taxpayers!! What about Federal Government "handouts?"

Federal Clean Air Act

- * We are not aware of any law changing the Oregon State Constitution..
- * BY A VOTE OF THE PEOPLE ...to allow for a taxing structure that takes in parts of Multnomah, Washington, and Clackamas County. -If I am mistaken I wish to be corrected. We are not mistaken on the fact that the board is unelected, but could it have been voted on by the people at some time? In any case it is TAXATION WITHOUT REPRESENTATION, which violates our United States Constitution, and the Oregon Constitution! After all, such a law smacks of tyranny!without justice!

It has been brought out that trucks pollute more than cars, and that cars and other vehicles coming into Portland from outside the area will not have to be inspected. (Article I, section 20 of the Oregon Constitution.) "Equality of privileges and immunities of citizens. No law shall be passed granting to any citizen or class of citizens, privileges or immunities, which upon the same terms, shall not equally belong to all citizens."

- * This has been stressed, but the issue is...that the air pollution
- * ignores property lines, therefore creating a need for regional agencies
- * such as D.E.Q. and CRAG. Under the Oregon Revised Statutes: Article XI-B POLLUTION CONTROL, and adopted by the people May 26, 1970, it shows H.J.R. 14, 1969 allowing financing of pollution control facilities..bonds..sources of revenue..to lend credit, and finally:

* O.R.S., Article XI-H POLLUTION CONTROL

* Under Section 6. "Legislation to effectuate Article. The Legislative Assembly shall enact legislation to carry out the provisions of this Article. This Article shall supersede all conflicting constitutional provisions and shall supersede any conflicting provision of a county or city charter or act of incorporation." (Created through H.J.R. 14, 1969, and adopted by people May 26, 1970.)

* Could this be a hoax or be construed as "treason" for the state legislature to pass such a law? I do not know how it was worded when passed, but I certainly feel that there could be room for legal questions of Constitutionality, to put it mildly!

* Is this service district not possibly setting up a "new government", metropolitan and or regional in scope? Could they be, by passing this law and possibly with concealment of its true intent from the voters, giving "aid and comfort" to appointed bureaucrats who will use our own money to promote "government ownership of the means of transportation" for example?? Will this not be used to promote Tri-Met now...a regional Zoo next? our very freedom next?

Under Article I, Section 24: Oregon State Constitution

"Treason. Treason against the State shall consist only in levying war against it, or adhering to its enemies, giving them aid or comfort.--No person shall be convicted of treason unless on the testimony of two witnesses to the same overt act, or confession in open Court."

** The United Nations Charter "Preliminary Report" gives Section H the heading, "Limitation on Sovereignty." These 'attributes of sovereignty which the commissioners claim 'must be limited' are these:

1. "Nations must renounce the claim to be the final judge in their controversies with other nations and must submit to the jurisdiction of international tribunals....

2. "Nations must renounce the use of force for their own purposes in relations with other nations, except in self-defense. The justification for self-defense must always be subject to review by an international court or other competent body."

3. "The right of nations to maintain aggressive armaments must be sacrificed in consideration for an assurance of the security of all through regional and world-wide forces subject to international law and adequate to prevent illegal resorts to international violence."

4. "Nations must accept certain human and cultural rights in their constitutions and in international covenants.."

5. "Nations must recognize that their right to regulate economic activities is not unlimited. The world has become an economic unit; all nations must have access to its raw materials and its manufactured articles...." ("The Humanitarian Curtain by Claude

Bunzel, Director of Twentieth Century Evangelism, P.O.Box 345, Pasadena, California 91102)

* The real question we are raising is....does not air, noise and other pollution, not really promote world government? We must not be trapped into...let us include all vehicles, because in so doing we may be accepting regional...and World...Government in the future.

(Mrs) Louise Weidlich

"Fear of Pollution Will Drive Men To World Government!"

Panel to ponder delay of burning ban

By DON BUNDY
of The Oregonian staff

A ban on backyard burning that is scheduled to take effect in the Portland area on Dec. 31 will be allowed to smolder for another six months if the Oregon Environmental Quality Commission agrees with a delay recommended by its staff.

The commission will consider delay of the ban Friday at a public hearing in Portland.

The Department of Environmental Quality, which serves as staff for the commission, has recommended the ban be delayed at least until June 15, 1981, to give the DEQ time to complete a study of alternate methods and costs of disposing of backyard debris. The DEQ also wants to conduct public hearings on whether the ban should be imposed at all.

Proponents of the ban believe the delay would remove incentives for cities and counties in the Portland area to develop alternate ways of disposing of backyard debris and that it may result in the discard of the burning ban altogether.

The ban has been an issue in the state for more than 10 years and already has experienced repeated delays. As written, it would ban backyard burning in most of Multnomah, Washington, Clackamas and Columbia counties.

However, DEQ has drafted another proposal that would shrink the size of the affected area to correspond roughly with the boundaries of the Metropolitan Service District, but excluding Hillsboro, Forest Grove, Happy Valley and Borleng. The idea, DEQ officials said, was to restrict burning only in the heavily populated areas, where it creates pollution problems.

The most recent action to delay the ban was in June 1979, when the Environmental Quality Commission voted to postpone implementation until this winter to allow DEQ time to develop other ways to dispose of the debris.

While some cities and counties that would be affected have pushed ahead in developing methods to handle leaves, limbs and yard clippings, others have dragged their feet, and some officials

believe a ban Dec. 31 would be foolhardy without effective alternatives.

Portland Fire Chief Francis Sargent said he and other fire officials in the four counties that would be affected have been meeting with DEQ and have expressed concern that allowing backyard debris to accumulate would present a severe fire hazard.

The Portland chapter of the Sierra Club strongly opposes the delay and maintained in a recent newsletter that "if the ban does not take place Dec. 31 according to schedule, activity by public bodies to get ready for the ban will likely cease."

The Oregon Environmental Council also supports implementation of the ban.

John Charles, executive director of the council, said that it believes viable alternatives to backyard burning already exist, but, "We don't think anything will get done without commitments."

The Portland Air Quality Advisory Committee also supports the ban as a means of reducing pollution.

It is not yet clear what agency would oversee development of alternatives to backyard burning if the ban is put into effect.

B The Oregonian
THURSDAY, DECEMBER 18, 1980

While the Metropolitan Service District has authority over solid waste management in the area, its executive officer, Rick Gustafson, said the service district lacks authority over collection of backyard debris. He said the service district will not take a position on the delay Friday at the hearing, except that it does not want backyard debris to end up in landfills.

However, the service district has contracted for a study that recommends it take the lead in developing alternatives to backyard burning and that the ban be postponed for two years while those alternatives are developed.

Circulated by:
Neighborhoods Protective Association,
P.O. Box 19224, Portland Oregon

**The real question we are raising is...."Does air, noise, and other pollution which crosses over property lines-- through the air, not really promote world government???"
**Could this be implemented under the United Nations Charter

MSD is a Regional Agency!

Beware!
Sub-division of Seattle Region X?



Under Oregon Revised Statutes: Article XI-H POLLUTION CONTROL, (adopted by the people May 26, 1970, it shows H.J.R. 14, 1969, allowing financing of pollution control facilities..bonds..sources of revenue.. to lend credit, and finally:under Section 6 "Legislation to effectuate Article. The legislative Assembly shall enact legislation to carry out the provisions of this Article" and.."supersede conflicting ..provisions."

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City Council calendar number
Portland, Oregon - January 29, 1981

Ordinance

An Ordinance authorizing an application to the United States Environmental Protection Agency for an Air Quality Program Demonstration Grant, estimated at \$64,000, to aid in air quality planning; authorizing controls; and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds:

1. The United States Environmental Protection Agency has made available a demonstration grant to aid in air quality planning.
2. The Council adopted a Parking and Circulation Plan for Downtown Portland (Resolution No. 32794) that included a Parking Management Program and Air Quality Plan.
3. The Council has directed the Bureau of Planning to pursue possible funding sources for implementing the Parking Management Program at an estimated cost of \$56,000.
4. The Council accepted funding for a Street Vacuuming Demonstration Project (Ordinance No. 149749).
5. This project could be greatly enhanced by procurement of additional ambient monitoring information and additional traffic data at an estimated cost of \$36,000.
6. Both projects are eligible for funding under the United States Environmental Protection Agency's Air Quality Grant program, and the City's efforts in these directions can be furthered by a grant in aid of such service.
7. Total cost of the projects is estimated at \$92,000. A local match is required and may be available from the Portland Development Commission through their contribution to the Parking Management Program. Indirect cost will be in the amount of \$413.00.
8. Should the City secure and accept this grant, it will be obligated to comply with the regulations of the United States Environmental Protection Agency.

NOW, THEREFORE, the Council directs:

- a. The Commissioner of Public Affairs and the Commissioner of Public Works shall make application to the United States Environmental Protection Agency for a grant estimated at \$64,000 in aid of air quality planning as per Exhibit A attached to the original only hereof.

*Otem H - Public Forum
(submitted by
Mabel Johnson)*

POLLUTION REPORT
OF

NORTH FORK of DEEP CREEK
at
BORING, OREGON

(point of observation: 1 mile as
crow flies, from headwaters)

1980

January -----
February 15th, 2 P.M. water running dirty
March 13th, 10--10:45 high suds, dark
brown water. 11 a.m. normal
19th. 4 p.m. dark water with chips
and suds
23rd. 4:15 dark brown water, chips
and suds. Clearing 6:15
24th. 4:30 dark brown water, chips
28th. 8:30 , dark brown water.
Clearing 9:30
29th. 9:15, dark brown water, chips
clearing 10:30
April 1st. 12 noon water running dark.
Clearing 2p.m.
2nd. 5:15 blackish water, chips
10th 4:15 water dirty-black, chips
Clearing 6 p.m.
23rd 11 a.m. dark brown water
Clearing 1 p.m.
May -----
June -----
July 17th. 6 a.m. chalky all day
20th. 6 a.m. chalky and muddy
August -----
Sept 15 thru Oct 31 vacation
Nov. 17 polluted water 1 p.m.
18 polluted water 8:30 a.m.
19 3 p.m. dark water
24 12 noon, black-brown water
25 9:15 dark brown-sudsy water
Dec. 22 11 a.m. dark water, 1" chips
12:15 blanket of suds on dark
water.
12:40 suds and increase flow of
water and heavy discoloration
over

1981

Jan. 9. 8:30 a.m. dark brown water. Clearing
10:30
21 9:30 a.m. stream dark brown water.
12:15 clearing
3:45 chalky, green coloration
22 9:30 stream slimy black-brown
water, thick--all day, no clearing
23 8:30 thick, black water, worst
ever seem in 30 years of observatio
1:30 p.m. clearing. 3:30 heavy
discoloration again until dark

In the 4th week of November 1980, Coho
salmon came up the North Fork of
Deep Creek to spawn, the first time
in the 30 years we have known the
stream. In a 50 foot length of stream
5 pairs were seen spawning at the
same time. At one time, 15 of those
magnificent fish were seen resting in
two pools. Any day now steelhead
salmon, also, are due to come up
the North Fork of Deep Creek to
spawn. What percentage of hatch can
the state of Oregon expect from nature's
effort with the above pollution washing
over those helpless eggs?

Someone, somewhere has got to care.

Mabel Johnson
P.O. Box 7
Boring, Or. 97009
663-3428

FAS
HMP

NO TYPE

1-30-81

AP - Monthly Report ACDP

I took time to review the monthly reports for this fiscal year. It still seems to me that based upon information available you should be attempting to issue 20 per month and if not find out why.

Your reported cumulative issuance is in error. If your monthly issues are correct you have issued 119.