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OREGON
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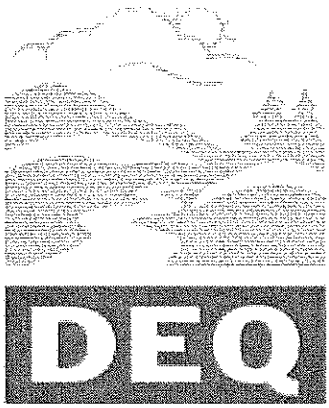
MATERIALS



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Department of Environmental Quality

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MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. N, June 5, 1981, EQC Meeting

Consideration of Adopting Proposed Plant Site Emission Limit and New Source Review Rules and Proposed Revocation of the Following Existing Rules:

a) Special Permit Requirements for Source Locating In or Near Nonattainment Areas, OAR 340-20-190 through 198.

b) Criteria for Approval of New Sources in the Portland Special AQMA, OAR 340-32-005 through 025.

c) Specific Air Pollution Control Rules for the Medford-Ashland AQMA, OAR 340-30-60 and 110.

d) Prevention of Significant Deterioration, OAR 340-31-105, definitions 1 through 11, 13 and 14, and 17 through 22; 340-31-125; 340-31-135 through 195.

Background

On April 24, 1981, the Commission held a public hearing concerning proposed revisions to the Plant Site Emission Limit Rules and the New Source Review Rules. Fifteen people presented oral testimony at the hearing and many of these people also submitted written comments. A brief summary of the testimony outlining the major issues was provided to the Commission in a memorandum dated May 4, 1981. Subsequently members of the Commission requested that the staff address specific questions concerning points raised in the testimony.

Alternatives and Evaluation

The issues receiving the most comment and which involve policy questions are discussed below. Responses to questions raised by Commission members are specifically identified.

Issue 1

Plant Site Emission Limits should not be based on actual emissions as proposed but rather on plant design capacity. This comment was made by several commentors and a member of the Commission asked for a discussion of this point.

The proposed rules would require that Plant Site Emission Limits be based on actual emissions during the 1977-1978 baseline period or another period if it is more representative of normal source operation. Existing permit limits may be used for the Plant Site Limit if they are within 10 percent of the actual emissions. Plant Site Emission Limits could be established at higher levels to accommodate needed production increases up to capacity if it is shown that no air quality standard or Prevention of Significant Deterioration (PSD) increment would be exceeded in an attainment area or that a growth increment or offset is provided in a nonattainment area. The advantages of this approach are the following:

A. In attainment areas the Plant Site Emission Limit, as proposed, would be consistent with the Prevention of Significant Deterioration baseline requirements of the Clean Air Act and EPA rules. Using plant capacity in attainment areas would render the Plant Site Emission Limit useless for administering a PSD increment tracking and allocation system because the Federal regulations clearly require a baseline of actual emissions in the baseline year.

   A Plant Site Emission Limit based on plant capacity or some level significantly above actual emissions could also allow PSD increments or air quality standards to be exceeded when emissions increased without the Department, the affected community, or even the source knowing that such an event had occurred. This approach would clearly be illegal under the Clean Air Act and EPA rules.

B. In nonattainment areas, the Plant Site Emission Limits, as proposed, would be consistent with the SIP control strategy data bases. Establishing Plant Site Emission Limits based on plant capacity would require that all of the SIPs be redone since they are based on actual emissions from point sources. If point sources are allowed emissions greater than the actual emissions, further control strategies would be required to compensate for the potential increase in emissions above the baseline. Such additional control strategies would likely be very costly and may not even be available in airsheds such as Medford which are already overloaded. An emission allowance higher than actual emissions could allow already unacceptable air quality conditions to worsen.

C. The Plant Site Emission Limit Rule, as proposed, establishes a baseline of actual emissions for administering "offset", "banking", and "bubbling" programs which is compatible with EPA requirements. EPA requires that these programs be established on the same basis as the SIP control strategies. Establishing Plant Site Emission Limits on a plant capacity basis would render these limits useless for the

purpose of administering offset, banking, and bubbling programs.

D. A Plant Site Emission Limit based on actual emissions clearly and specifically defines the allowable emissions for each permit holder which are within airshed capacity and facilitates tracking of progress toward attainment and maintenance of standards. This requirement is an essential step in developing an effective air management program, just as it was when waste discharge limits were set for Oregon river basins years ago. Establishing Plant Site Emission Limits on a plant design capacity basis can be subjective and may not be definable or verifiable, particularly in cases involving fuel switching or increased hours of operation.

E. The proposed rule would not prevent a source from receiving an increase in the Plant Site Emission Limit at the time the limits are initially established or at a future time provided that airshed capacity is available.

Alternatives:

An alternative to Plant Site Emission Limits based on actual emissions or plant capacity would be to have no Plant Site Emission Limits. This approach would have the following disadvantages:

A. Existing permitted emission levels would allow increases in emissions from the baseline levels which could cause exceedances of air quality standards or PSD increments. Such increases could nullify control strategies in nonattainment areas.

B. No mechanism for administering offset, banking and bubble programs would be available.

Another alternative would be to follow the suggestion of one commentor that a 20 percent operating margin should be added on top of the actual emission baseline when establishing Plant Site Emission Limits. This approach has the following disadvantages:

This alternative has all of the disadvantages that setting Plant Site Emission Limits on a plant capacity basis would have. The SIPs would have to be redone on a higher baseline and in some cases air quality standards or PSD increments could be exceeded without the source or the Department knowing.

Discussion:

The proposed rules are intended to provide flexibility in establishing Plant Site Emission Limits. A baseline year prior to the baseline period can be used for establishing actual emission rates if it is more representative of normal source operation. Existing permit limits can be used if they are within 10 percent of actual emissions. If PSD increments, growth margins, or offsets are available, Plant Site Emission Limits can be set higher than the actual emissions. Net emission increases above the

actual emission baseline which are less than the significant emission rate levels would be allowed without air quality analysis or offsets. Redoing the SIP control strategies or providing for priority allocation of growth margins for sources operating below capacity in the baseline period does not seem practical or necessary. In order to further clarify the intent of the rules and to satisfy the comments of several of the commentors, the following changes are proposed.

OAR 340-20-305 Definitions

Definition 1 "Actual Emissions" section a: Delete the sentence ["The Department shall allow the use of a different period upon a determination that it is more representative of normal source operation".] and place in definition 3.

Definition 3 "Baseline Period": Replace the present definition with the following: "Baseline Period" means either calendar year 1977 or 1978. The Department shall allow the use of a prior time period upon a determination that it is more representative of normal source operation.

OAR 340-20-310 "Criteria for Establishing Plant Site Emission Limits" Section 1. For existing sources, PSELs shall be based on the baseline emission rate for a particular pollutant at a source and may be adjusted upward or downward pursuant to Department Rules.

If an applicant requests that the Plant Site Emission Limit be established at a rate higher than the baseline emission rate, the applicant shall demonstrate that:

a. The requested increase is less than the significant emission rate increase defined in OAR 340-20-225(22) or,

b. Provide an assessment of the air quality impact pursuant to procedures specified in OAR 340-20-240 to 245. A demonstration that no air quality standard or PSD increment will be violated in an attainment area or that a growth increment or offset is available in a nonattainment area shall be sufficient to allow an increase in the Plant Site Emission Limit to an amount not greater than the plant's demonstrated need to emit as long as no physical modification of an emissions unit is involved.

c. Increases above baseline emission rates shall be subject to public notice and opportunity for public hearing pursuant to the Department's permit requirements.

OAR 340-20-320 "Temporary PSD Increment Allocation" Delete Section c. ["No observable or measurable impact on air quality is created."]

Issue 2

The major new source cutoff criteria for nonattainment areas should be higher than the "significant emission rate" level. Several commentors suggested higher levels and a Commission member asked if this suggestion had merit.

The proposed rule establishes the cutoff for both major new sources and major modifications in nonattainment areas and areas adjacent to nonattainment areas at the "significant emission rate" level (25 tons per year for particulate and 40 tons per year for VOC). EPA would allow 100 tons per year for new sources but would still require significant emission rate levels for modifications. The proposed rule establishes cutoffs for attainment areas at the same level as EPA.

The advantages of using significant emission rate levels in nonattainment areas are the following:

A. The "significant emission rate" levels were developed by EPA based on modeling that demonstrated a significant impact caused by such emissions. It makes sense that any emission increase that has a significant impact, whether the increase results from a new source or a modification, should be subject to New Source Review in a nonattainment area. EPA was forced to use different cutoffs for new sources and modifications by court interpretations even though these different cutoffs make no technical sense.

B. By providing the same cutoff criteria for new sources and modifications, equity would be provided for both new and existing sources.

C. Sources locating adjacent to nonattainment areas that would potentially impact the nonattainment area are also proposed to be subject to the "significant emission rate" criteria, thereby providing equity for those sources locating inside and those adjacent sources having a significant air quality impact on nonattainment areas.

D. It is estimated that, on the average, two additional new sources per year will be subject to the proposed criteria over the number that would be subject to the 100 ton/year EPA criteria. These two additional sources will not add significantly to the Department's workload.

Alternatives:

The cutoff criteria for new sources could be raised to 50 tons/year or 100 tons/year for new sources in nonattainment areas. The cutoff could not be raised for modifications without becoming less stringent than EPA requirements. The disadvantages of this approach are the following:

A. Some sources which have a significant impact would escape review.

B. The more stringent cutoffs for modifications could put existing sources at a disadvantage.

Discussion:

The Department believes that the proposed cutoff criteria provide equity and are necessary for the protection of Oregon airsheds.

Issue 3:

The Emission Reduction Credit Banking rules are too restrictive and should be liberalized by (a) allowing shutdowns and curtailments to be bankable, (b) eliminating the discounting provisions, and (c) eliminating the 10 year maximum banking period. Several commentors discussed these points and a Commission member asked for an evaluation of these issues.

The proposed banking rule does not allow long-term banking of shutdowns and curtailments. Shutdowns and curtailments can be used within one year for contemporaneous offsets, however. The proposed rule has provisions which require discounting of banked credits when new rules are adopted and also allows the Commission to discount banked credits if no other strategies for attainment are available. The maximum banking period is 10 years unless extended by the Commission.

The advantages of the proposed banking rule are the following:

A. The proposed banking rule is a limited program which allows the Department to move cautiously into the banking area without establishing unlimited airshed "rights" that cannot be recovered if air quality worsens. Totally eliminating the discounting provisions would establish permanent air pollution "rights" for those sources that participate in the bank.

B. Source shutdowns and curtailments are not bankable under the proposed rules. It was felt that the Department should not promote the permanent shutdown or curtailment of facilities unless those offsets are provided to another proposed project within one year. The premature closure of a facility may accrue a valuable banking credit to the owner without any investment in equipment to control emissions by the owner and without returning any economic benefit to the community.

C. The proposed rules would encourage those industries that have growth plans to improve technology or move to more efficient processes in order to establish emission reductions for banking. Such industries would have a significant degree of certainty that those banked reductions could be used for future plant expansion.

Alternatives:

The banking rules could be made less restrictive by allowing shutdowns and curtailments to be bankable, eliminating the discounting provisions, and/or eliminating the 10 year maximum banking period. The disadvantages of this approach would be the following:

A. The Department and Commission would lose control of the banking program such that permanent air pollution rights are established.

B. Without the discounting provision those emission reductions needed to demonstrate progress toward attainment and maintenance of standards

could be banked and used to offset emission increases at any time.

C. The 10 year limit on banking establishes a reasonable period of time for a source to utilize the banking credit after which time the credit would revert to a permanent improvement in air quality. The Commission could extend the 10 year period if a source had a reason for requesting an extension.

D. If these provisions are relaxed the banking rule may be less stringent than EPA guidelines and could result in disapproval by EPA.

Discussion:

Many commentors disapproved of the provision in the banking rule (provision 6 of OAR 340-20-265) which would allow the Commission to discount banked emissions when no other strategies are available. The Department agrees that this provision may provide a needless disincentive and therefore to satisfy these comments it is proposed that this provision be replaced by a moratorium on withdrawals from the bank as follows.

OAR 340-20-265(6) The Commission may declare a moratorium on withdrawals of emission reduction credits from the bank if it is established that reasonable further progress toward attainment of air quality standards is not being achieved and no other control strategy is available.

Issue 4

Several commentors contended that the Alternative Emission Controls provision (bubble) should allow bubbling of BACT, LAER, NSPS, and NESHAPS requirements.

The Proposed rules would not allow relaxation of BACT, LAER, NSPS, or NESHAPS limitations which were established in a previously issued new source permit. The New Source Review rule does allow future modifications of existing sources to escape BACT or LAER where no significant increase in emissions occurs at the plant site. The advantages of this approach are the following:

A. This provision is consistent with EPA guidance on bubbling. Relaxation of this requirement would risk EPA disapproval.

B. Only the relatively few sources that were subject to BACT, LAER, NSPS, or NESHAPS would be affected by this provision.

C. The technology forcing aspect of the BACT and LAER provisions would not be relaxed for those sources that received permits under those provisions in the past.

D. The NSPS and NESHAPS requirements are specifically required by the Clean Air Act and cannot be relaxed. It would not be desirable to allow a new plant to be constructed without meeting these requirements or for an existing plant to bubble out of such requirements.

Issue 5

One commentor testified that exemption from offsets should not be allowed for resources recovery facilities.

The proposed rules provide that Resource Recovery Units may be granted an exemption provided that all offsets that are reasonably available have been obtained. The advantage of this approach is that this provision may help to recover valuable material and energy resources. This exemption is allowed by EPA rules.

Issue 6

One commentor testified that the required emission offset ratio should be 1:1.3 rather than 1:1.

The proposed rules require equivalent or greater emission offsets such that a net air quality benefit is provided. The advantage of this approach is that the requirement of net air quality benefit will in most cases result in a greater than 1:1 offset ratio which is appropriate for the particular pollutant and geographical area.

Issue 7

Several commentors testified that the requirement for fine particulate to be offset with fine particulate is not appropriate since we have a Total Suspended Particulate (TSP) standard.

It is widely agreed that the present TSP standard is not adequate to protect against adverse health effects. The proposed rule requires that respirable particulate emissions be offset with respirable particulate. The advantage of this approach is that large particulate could not be traded for respirable particulate, thereby preventing increases in the level of pollutant that actually causes adverse health effects.

Issue 8

Several commentors testified that the reserved control strategies to protect the Portland Ozone SIP are not needed.

The proposed rules reserve six control strategies to prevent them from being used as offsets until the time that Portland Ozone SIP is completed.

This provision may not be justifiable in light of recent calculations concerning the 0.12 ppm ozone standard attainment strategies. Also provision 5 of the banking rule (OAR 340-20-265) provides for discounting of banked emissions if new control strategies are adopted. If provision 5 is adopted as presently worded, then OAR 340-20-280 Reserved Control Strategies should be deleted.

Issue 9

One commentor testified that separate Plant Site Emission Limits should not

be established for combustion sources, process sources, and fugitive sources as allowed in OAR 340-20-310(3). A Commission member also questioned this provision.

This provision is designed to facilitate emission calculations for dissimilar emission units within a particular source and to speed up permit processing for such permit modifications as fuel switching. This provision would also make it easier for the Department to manage bubbling of dissimilar pollutant emissions. This provision does not limit bubbling or offsetting within the total plant site.

Issue 10

One commentor testified that the rules should provide flexibility so that other agencies such as LRAPA can develop growth management strategies which could be more stringent.

The proposed rules do not limit the authority of local jurisdictions to adopt additional, more stringent measures.

Issue 11

One commentor testified that PGE turbines had zero operation during the baseline period.

The proposed rule provides that PSD increments and the emission rates associated with their usage can be allocated at the time the Plant Site Emission Limit is negotiated. The Plant Site Emission Limits have already been established for these turbines taking into account PSD increment consumption. The proposed rules would require no changes to these existing limits.

Issue 12

One commentor testified that the baseline concentration is defined such that PGE-Boardman would fall into the increment rather than the baseline contrary to a 1975 letter received by PGE from EPA stating that the facility would fall into the baseline.

The proposed rules follow EPA's baseline criteria. The 1977 Clean Air Act Amendments and subsequent court rulings have altered the baseline criteria since the 1975 letter. It is the understanding of the Department from discussions with EPA that PGE's 1975 letter may no longer be valid. A relaxation of the proposed criteria would mean that the State rule would be less stringent than EPA requirements and therefore might be disapproved by EPA. PGE should contact EPA directly to resolve this matter.

Issue 13

Several commentors requested clarification of the fact that the Lowest Achievable Emission Rate (LAER) applies only to nonattainment pollutants. It is therefore proposed that the language "... for each nonattainment

pollutant" be added to the end of the first sentence of OAR 340-20-240 Section 1.

Issue 14

The Jackson County Commissioners commented that a VOC growth increment for Medford should not be adopted until the question of the 0.08 ppm State ozone standard is resolved.

The VOC growth increment was adopted by the Commission in 1979 as part of the Medford ozone SIP which is based on the 0.12 ppm Federal standard. Since the Department was directed by the Commission to develop SIPs based on the 0.12 ppm standard, it seems appropriate to let the present growth increment stand until such time as a new state strategy is developed to achieve the 0.08 ppm ozone standard.

Issue 15

Several commentors contended that the 30 kilometer buffer zone around ozone nonattainment areas is not appropriate and should be replaced by modeling to measure significant ozone impact.

Unfortunately, there are no acceptable procedures for modeling VOC emissions from point sources to predict ozone impacts. The Department therefore recommends that the 30 kilometer buffer ozone concept be retained unless an applicant can demonstrate through some other means that a proposed source would have no impact in the nonattainment area.

Issue 16

One commentor contended that the requirements for Additional Impact Analysis (OAR 340-20-245 section 6) is excessive and unworkable.

This provision is required by EPA and was taken verbatim from the EPA regulations.

Issue 17

One commentor contended that the requirement for short-term, seasonal, and yearly time periods for calculating offsets is overly stringent.

This provision is included in the Net Air Quality Benefit section (OAR 340-20-260 section 2) to insure that the offsets are appropriate to both the short-term and long-term air quality standards.

Issue 18

One commentor contended that the requirement for Statewide compliance of sources owned or operated by an applicant in a nonattainment area (OAR 340-20-240 section 2) is unnecessary.

This provision is specifically required by the Clean Air Act and is not optional for the State.

Issue 19

One commentor wrote that the definition of "Baseline Concentration" (OAR 340-20-225 definition 2) should be consistent with the definition of "Baseline Emissions".

The definition of baseline concentration must be specific and well defined to establish a baseline for performing air quality analysis. Baseline emissions is defined much more broadly to accommodate production variations. It is not necessary for baseline concentration and baseline emissions to be defined on precisely the same time frame. This approach is consistent with EPA definitions.

Issue 20

One commentor contended that the setting of significant emission rates for pollutants not listed in Table 1 of OAR 340-20-225 definition 22 should be subject to rulemaking and opportunity for public and technical review.

The cases where pollutants other than those listed in Table 1 are emitted will be associated with specific permit applications under review by the Department. The public notice and opportunity for hearing procedures of the permit regulations should provide adequate opportunity for review by interested parties. If a separate rulemaking process is required the permit application under consideration would be significantly and unnecessarily delayed.

Issue 21

One commentor contended that the 10 day period allowed for applicants to submit responses made by the public after the close of the public comment period is not adequate and should be changed to 10 "working" days (OAR 340-20-230(3)(F)).

It is proposed that the word working be inserted with the understanding that permit issuance will be delayed by that additional amount of time.

Issue 22

One commentor contended that emissions from the construction phase of a new source or modification should be exempt from all requirements including BACT and LAER.

The proposed rule would exempt emissions from the construction phase of a project from all requirements except BACT and LAER (OAR 340-20-250(2)). Generally, construction emissions should be small and temporary. However, in the case of major projects, construction emissions could involve extensive dust problems or the installation of temporary sources. Also, such projects could continue for a number of years. Such construction sources should be subject to BACT or LAER depending on whether the area is attainment or nonattainment.

Issue 23

One commentor contended that the period allowed for "contemporaneous" offsets should be increased from one year to five years (OAR 340-20-260(4)). Several other commentors stated that the meaning of the term "permanent" shutdown or curtailment is not clearly defined and that some plant modifications may be in the planning stages for more than one year. A Commission member asked for a justification for holding the contemporaneous period to one year.

The proposed rules allow one year for contemporaneous offsets and allow certain other emission reductions to be banked for ten years. It is not necessary to have a five year contemporaneous period in addition to the banking provision. The Department proposes to remedy the problem of planned expansions which extend over periods longer than one year by adding the following language at the end of OAR 340-20-265(4). The one year limitation for contemporaneous offsets shall not be applicable to those shutdowns or curtailments which are to be used as internal offsets within a plant as part of a specific plan. Such a plan for use of internal offsets shall be submitted to the Department and receive written approval within one year of the permanent shutdown or curtailment.

Issue 24

Several commentors testified that there are no defined limits for air conveying systems. A Commission member asked why there are no such limits.

The Plant Site Emission Limit Rule, as proposed, will allow the Department to establish specific limits for air conveying systems as part of the total plant site emission limit. It has been difficult in the past to write rules applying to air conveying systems because of the wide range of different uses and operating conditions. The Department is continuing to address this problem as part of the Medford SIP and intends to consider revisions to the present air conveying system rules.

Issue 25

One commentor stated that the word "demonstration" which is used in OAR 340-20-260 Net Air Quality Benefit was not defined. A Commission member asked if this term was defined elsewhere in the rules or by past practice.

The term "demonstration" is used in the rules in the context of a "demonstration that standards are not violated". The term is simply intended to have the dictionary definition of "proof". There are many ways of providing such demonstrations including modeling, engineering calculations, or other logical and reasonable arguments.

Summation

1. A revised New Source Review rule must be adopted in order for Oregon's State Implementation Plans to be fully approved by EPA.

2. A revised rule for Prevention of Significant Deterioration must be adopted in order for Oregon to receive delegation of that program from EPA.

3. A revised Plant Site Emission Limit rule must be adopted to adequately define the basis for setting permit limits and to provide for adequate management of airshed capacity in both attainment and nonattainment areas.

4. The Department has reviewed the testimony received during the public comment period and at the April 24, 1981, public hearing. Several key policy questions are at issue that have great bearing on the ability of the Department to effectively manage airshed capacity, implement desirable regulatory reforms, and keep the overall ownership and control of airshed rights within the public sector. The Department has reached the following conclusions and recommendations:

   a. Plant Site Emission Limits must be based on an actual emissions baseline adjusted upward or downward in accordance with specific criteria in order to provide for adequate administration of nonattainment control strategies, PSD increment consumption and banking, bubbling, and offset programs.

   b. Basing Plant Site Emission Limits on plant capacity could allow sources to unknowingly and illegally exceed PSD increments or air quality standards.

   c. Basing Plant Site Emission Limits on plant capacity would require that the nonattainment SIPs be redone on a higher baseline and that more control strategies be added.

   d. The proposed Plant Site Emission Limit rule allows considerable flexibility for sources to obtain higher emission limits at the time Plant Site Emision Limits are initially set if the airshed capacity is available or can be made available through offsets.

   e. The cutoff criteria for major new sources and modifications locating in or adjacent to nonattainment areas should be the significant emission rate criteria. Any higher level would allow significant impact on the nonattainment areas.

   f. The proposed banking rule, with the modifications included in response to comments, provides a means for sources to reserve offset credits for future growth without permanently giving away the public's airshed rights. Several rule changes were made in response to comments including adding a provision allowing for submittal of shutdown or curtailment plans extending beyond the one year period and changing the uniform discounting requirement to a moratorium.

   g. Several other minor proposed revisions to the draft rules have been made in response to comments and are shown in the attachments for the Commission's consideration.

Director's Recommendation

I recommend that the Commission consider the comments received at the public hearing and during the comment period and consider adopting the proposed rules and revoking the existing rules for Plant Site Emission Limits and New Source Review.

Bill

William H. Young

Attachments 1. Proposed Rules for Plant Site Emission Limits
2. Proposed Rules for New Source Review
3. Existing Rules Proposed for Revocation
4. Notice of Public Hearing and Statement of Need for Rulemaking

L.Kostow:ib
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May 18, 1981
AI1077

DRAFT PLANT SITE EMISSION LIMIT RULES

340-20-300 Requirement for Plant Site Emission Limits

Plant site emission limits (PSEL) shall be incorporated in all Air Contaminant Discharge Permits except minimal source permits and special letter permits as a means of managing airshed capacity. All sources subject to regular permit requirements shall be subject to PSELs for all Federal and State regulated pollutants. PSELs will be incorporated in permits when permits are renewed, modified, or newly issued.

The emissions limits established by PSELs shall provide the basis for:

1. Assuring reasonable further progress toward attaining compliance with ambient air standards.

2. Assuring that compliance with ambient air standards and Prevention of Significant Deterioration increments are being maintained.

3. Administering offset, banking and bubble programs.

4. Establishing the baseline for tracking consumption of Prevention of Significant Deterioration Increments.

340-20-305 Definitions

1. "Actual Emissions" means the mass rate of emissions of a pollutant from an emissions source.

   a. In general, actual emission as of the baseline period shall equal the average rate at which the source actually emitted the pollutant during a baseline period and which is representative of normal source operation. [The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation.] Actual emissions shall be calculated using the source's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

   b. The Department may presume that existing source-specific permitted mass emissions for the source are equivalent to the actual emissions of the source if they are within 10% of the calculated actual emissions.

   c. For any newly permitted emission source which had not yet begun normal operation in the baseline period, actual emissions shall equal the potential to emit of the source.

2. "Baseline Emission Rate" means the average actual emission rate during the baseline period. Baseline emission rate shall not include increases due to voluntary fuel switches or increased hours of operation that have occurred after the baseline period.

3. "Baseline Period" means either [the average of] calendar years 1977 or [and] 1978. The Department shall allow the use of a prior time period upon a determination that it is more representative of normal source operation.

4. "Normal Source Operation" means operations which do not include such conditions as forced fuel substitution, equipment malfunction, or highly abnormal market conditions.

5. "Plant Site Emission Limit (PSEL)" means the total mass emissions per unit time of an individual air pollutant specified in a permit for a source.

340-20-310 Criteria for Establishing Plant Site Emission Limits

1. For existing sources, PSELs shall be based on the baseline emission rate for a particular pollutant at a source and may be adjusted upward or downward pursuant to Department Rules. [Applications to increase PSELs above the baseline

emission rate, may be approved only if PSD increments, growth increments, or emission offsets are available.

When the requested emission increase is greater than the significant emission rate specified in OAR 340-20-225(22), the applicant shall provide an assessment of the air quality impact pursuant to procedures specified in OAR 340-20-240 to 2451.

If an applicant requests that the Plant Site Emission Limit be established at a rate higher that the baseline emission rate, the applicant shall demonstrate that:

a. The requested increase is less that the significant emission rate increase defined in OAR 340-20-225(22) or,

b. Provide an assessment of the air quality impact pursuant to procedures specified in OAR 340-20-240 to 245. A demonstration that no air quality standard or PSD increment will be violated in an attainment area or that a growth increment or offset is available in a nonattainment area shall be sufficient to allow an increase in the Plant Site Emission Limit to an amount not greater than the plant's demonstrated need to emit as long as no physical modification of an emissions unit is involved.

c. Increases above baseline emission rates shall be subject

to public notice and opportunity for public hearing pursuant to the Department's permit requirements.

2. PSELs shall be established on at least an annual emission basis and a short term period emission basis that is compatible with source operation and air quality standards.

3. PSELs may be established separately within a particular source for process emissions, combustion emissions, and fugitive emissions.

4. Documentation of PSEL calculations shall be available to the permittee.

5. For new sources, PSELs shall be based on application of applicable control equipment requirements and projected operating conditions.

6. PSELs shall not allow emissions in excess of those allowed by any applicable Federal or State regulation or by any specific permit condition unless specific provisions of 340-20-315 are met.

7. PSELs may be changed pursuant to Department rules when:

   a. Errors are found or better data is available for calculating PSELs,

b. More stringent control is required by a rule adopted by the Environmental Quality Commission,

c. An application is made for a permit modification pursuant to the Air Contaminant Discharge Permit requirements and the New Source Review requirements and approval can be granted based on growth increments, offsets, or available Prevention of Significant Deterioration increments.

d. The Department finds it necessary to initiate modifications of a permit pursuant to OAR 340-14-040.

340-20-315 Alternative Emission Controls (Bubble)

Alternative emission controls may be approved for use within a plant site such that specific mass emission limit rules are exceeded provided that:

1. Such alternatives are not specifically prohibited by a permit condition.

2. Net emissions for each pollutant are not increased above the Plant Site Emission Limit.

3. The net air quality impact is not increased.

4. No other pollutants including malodorous, toxic or hazardous pollutants are substituted.

5. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) where required by a previously issued permit and New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP where required, are not relaxed.

6. Specific mass emission limits are established for each emission unit involved such that compliance with the PSEL can be readily determined.

7. Application is made for a permit modification and such modification is approved by the Department.

340-20-320 Temporary PSD Increment Allocation

PSELs may include a temporary or time-limited allocation against an otherwise unused PSD increment in order to accommodate voluntary fuel switching or other cost or energy saving proposals provided it is demonstrated to the Department that:

a. No ambient air quality standard is exceeded.

b. No applicable PSD increment is exceeded.

[c. No observable or measurable detrimental impact on air quality is created.]

c. [d.] No nuisance condition is created.

d. [e.] The applicant's proposed and approved objective continues to be realized.

Such temporary allocation of a PSD increment must be set forth in a specific permit condition issued pursuant to the Department's Notice and Permit Issuance or Modification Procedures.

Such temporary allocations must be specifically time limited and may be recalled under specified notice conditions.

Draft New Source Review

Regulation

Air Quality Division

Department of Environmental Quality

May 15, 1981

Introduction-

The purpose of this proposed regulation is to update the New Source Review provisions of the State Implementation Plan. In addition, the new source requirements of the Prevention of Significant Deterioration provisions have been incorporated into this regulation.

AI601

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AI601

340-20-220 Applicability

1. No owner or operator shall begin construction of a major source or a major modification of an air contaminant source without having received an Air Contaminant Discharge Permit from the Department of Environmental Quality and having satisfied OAR 340-20-230 through 280 of these Rules.

2. Owners or operators of proposed non-major sources or non-major modifications are not subject to these New Source Review rules. Such owners or operators are subject to other Department rules including Highest and Best Practicable Treatment and Control Required (OAR 340-20-001), Notice of Construction and Approval of Plans (OAR 340-20-020 to 032), Air Contaminant Discharge Permits (OAR 340-20-140 to 185), Emission Standards for Hazardous Air Contaminants (OAR 340-25-450 to 480), and Standards of Performance for New Stationary Sources (OAR 340-25-505 to 545).

340-20-225 Definitions

1. "Actual emissions" means the mass rate of emissions of a pollutant from an emissions source.

a. In general, actual emissions as of the baseline period shall equal the average rate at which the source actually emitted the pollutant during the baseline period and which is representative of normal source operation. [The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation.] Actual emissions shall be calculated using the source's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

b. The Department may presume that existing source-specific permitted mass emissions for the source are equivalent to the actual emissions of the source if they are within 10% of the calculated actual emissions.

c. For any newly permitted emission source which had not yet begun normal operation in the baseline period, actual emissions shall equal the potential to emit of the source.

2. "Baseline Concentration" means that ambient concentration level for a particular pollutant which existed in an area during the calendar year 1978. If no ambient air quality data is available in an area, the baseline concentration may be estimated using modeling based on actual emissions for 1978.

The following emission increases or decreases will be included in the baseline concentration:

a. Actual emission increases or decreases occurring before January 1, 1978, and

b. Actual emission increases from any major source or major modification on which construction commenced before January 6, 1975.

3. "Baseline Period" means either [the average of] calendar years 1977 or [and] 1978. The Department shall allow the use of a prior time period upon a determination that it is more representative of normal source operation.

4. "Best Available Control Technology (BACT)" means an emission limitation (including a visible emission standard) based on the maximum degree of reduction of each air contaminant subject to regulation under the Clean Air Act which would be emitted from any proposed major source or major modification which, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques

for control of such air contaminant. In no event, shall the application of BACT result in emissions of any air contaminant which would exceed the emissions allowed by any applicable new source performance standard or any standard for hazardous air pollutants. If an emission limitation is not feasible, a design, equipment, work practice, or operational standard, or combination thereof, may be required. Such standard shall, to the degree possible, set forth the emission reduction achievable and shall provide for compliance by prescribing appropriate permit conditions.

5. "Commence" means that the owner or operator has obtained all necessary preconstruction approvals required by the Clean Air Act and either has:

   a. Begun, or caused to begin, a continuous program of actual on-site construction of the source to be completed in a reasonable time, or

   b. Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the source to be completed in a reasonable time.

6. "Construction" means any physical change (including fabrication, erection, installation, demolition, or modification of an emissions unit) or change in the method of operation of a source which would result in a change in actual emissions.

7. "Dispersion Technique" means any air contaminant control procedure which depends upon varying emissions with atmospheric conditions including but not limited to supplementary or intermittent control systems and excessive use of enhanced plume rise.

8. "Emission Reduction Credit Banking" means to presently reserve, subject to requirements of these provisions, emission reductions for use by the reserver or assignee for future compliance with air pollution reduction requirements.

9. "Emissions Unit" means any part of a stationary source (including specific process equipment) which emits or would have the potential to emit any pollutant subject to regulation under the Clean Air Act.

10. "Fugitive emissions" means emissions of any air contaminant which escape to the atmosphere from any point or area that is not identifiable as a stack, vent, duct, or equivalent opening.

11. "Good Engineering Practice Stack Height" means that stack height necessary to insure that emissions from the stack do not result in excessive concentrations of any air contaminant in the immediate vicinity of the source as a result of atmospheric downwash, eddies, and wakes which may be created by the source structure, nearby structures, or nearby terrain obstacles and shall not exceed the following:

a. 30 meters, for plumes not influenced by structures or terrain;

b. $H_G = H + 1.5\ L$, for plumes influenced by structures;
Where H_G = good engineering practice stack height,
H = height of structure or nearby structure,
L = lesser dimension (height or width) of the structure or nearby structure,

c. Such height as an owner or operator demonstrates, after notice and opportunity for public hearing, is necessary to avoid plume downwash.

12. "Growth Increment" means an allocation of some part of an airshed's capacity to accomodate future new major sources and major modifications of sources.

13. "Lowest Achievable Emission Rate (LAER)" means that rate of emissions which reflects a) the most stringent emission limitation which is contained in the implementation plan of any State for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable, or b) the most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent. In no event, shall the application of this term permit a proposed new or modified source to emit any air contaminant in excess of the amount allowable under applicable new source performance standards or standards for hazardous air pollutants.

14. "Major Modification" means any physical change or change of operation of a source that would result in a net significant emission rate increase (as defined in definition 22) for any pollutant subject to regulation under the Clean Air Act. This criteria also applies to any pollutants not previously emitted by the source. Calculations of net emission increases must take into account all accumulated increases and decreases in actual emissions occurring at the source since January 1, 1978, or since the time of the last construction approval issued for the source pursuant to the New Source Review Regulations for that pollutant, whichever time is more recent. If accumulation of emission increases results in a net significant emission rate increase,

the modifications causing such increases become subject to the New Source Review requirements including the retrofit of required controls.

15. "Major source" means a stationary source which emits, or has the potential to emit, any pollutant regulated under the Clean Air Act at a Significant Emission Rate (as defined in definition 22).

16. "Nonattainment Area" means a geographical area of the State which exceeds any State or Federal primary or secondary ambient air quality standard as designated by the Environmental Quality Commission.

17. "Offset" means an equivalent or greater emission reduction which is required prior to allowing an emission increase from a new major source or major modification of a source.

18. "Plant Site Emission Limit" means the total mass emissions per unit time of an individual air pollutant specified in a permit for a source.

19. "Potential to Emit" means the maximum capacity of a source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control

equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. Secondary emissions do not count in determining the potential to emit of a source.

20. "Resource Recovery Facility" means any facility at which municipal solid waste is processed for the purpose of extracting, converting to energy, or otherwise separating and preparing municipal solid waste for reuse. Energy conversion facilities must utilize municipal solid waste to provide 50% or more of the heat input to be considered a resource recovery facility.

21. "Secondary Emissions" means emissions from new or existing sources which occur as a result of the construction and/or operation of a source or modification, but do not come from the source itself. Secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the source associated with the secondary emissions. Secondary emissions may include, but are not limited to:

    a. Emissions from ships and trains coming to or from a facility,

    b. Emissions from off-site support facilities which would be constructed or would otherwise increase emissions as a result of the construction of a source or modification.

22. "Significant emission rate" means emission rates equal to or greater than the following for air pollutants regulated under the Clean Air Act.

Table 1: Significant Emission Rates for Pollutants Regulated under the Clean Air Act

Pollutant	Significant Emission Rate
Carbon Monoxide	100 tons/year
Nitrogen Oxides	40 tons/year
Particulate Matter*	25 tons/year
Sulfur Dioxide	40 tons/year
Volatile Organic Compounds*	40 tons/year
Lead	0.6 ton/year
Mercury	0.1 ton/year
Beryllium	0.0004 ton/year
Asbestos	0.007 ton/year
Vinyl Chloride	1 ton/year
Fluorides	3 tons/year
Sulfuric Acid Mist	7 tons/year
Hydrogen Sulfide	10 tons/year
Total reduced sulfur (including hydrogen sulfide)	10 tons/year
Reduced sulfur compounds (including hydrogen sulfide)	10 tons/year

* For the nonattainment portions of the Medford-Ashland Air Quality Maintenance Area, the Significant Emission Rates for particulate matter and volatile organic compounds are defined in Table 2.

For pollutants not listed above, the Department shall determine the rate that constitutes a significant emission rate.

Any emissions increase less than these rates associated with a new source or modification which would construct within 10 kilometers of a Class I area, and would have an impact on such area equal to or greater than 1 ug/m^3 (24 hour average) shall be deemed to be emitting at a significant emission rate.

Table 2: Significant Emission rates for the Nonattainment Portions of the Medford-Ashland Air Quality Maintenance Area.

	Emission Rate					
	Annual		Day		Hour	
Air Contaminant	Kilograms	(tons)	Kilograms	(lbs)	Kilograms	(lbs)
Particulate Matter (TSP)	4,500	(5.0)	23	(50.0)	4.6	(10.0)
Volatile Organic Compound (VOC)	18,100	(20.0)	91	(200)	--	--

23. "Significant Air Quality Impact" means an ambient air quality impact which is equal to or greater than:

	Pollutant Averaging Time				
Pollutant	Annual	24-hour	8-hour	3-hour	1-hour
SO_2	1.0 ug/m^3	5 ug/m^3		25 ug/m^3	
TSP	0.2 ug/m^3	1.0 ug/m^3			
NO_2	1.0 ug/m^3				
CO			0.5 mg/m^3		2 mg/m^3

For sources of volatile organic compounds (VOC), a major source or major modification will be deemed to have a significant impact if it is located within 30 kilometers of an ozone nonattainment area and is capable of impacting the nonattainment area.

24. "Source" means any building, structure, facility, installation or combination thereof which emits or is capable of emitting air contaminants to the atmosphere and is located on one or more contiguous or adjacent properties and is owned or operated by the same person or by persons under common control.

340-20-230 Procedural Requirements

1. Information Required

The owner or operator of a proposed major source or major modification shall submit all information necessary to perform any analysis or make any determination required under these Rules. Such information shall include, but not be limited to:

a. A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;

b. An estimate of the amount and type of each air contaminant emitted by the source in terms of hourly, daily, seasonal, and yearly rates, showing the calculation procedure;

c. A detailed schedule for construction of the source or modification;

d. A detailed description of the system of continuous emission reduction which is planned for the source or modification, and any other information necessary to determine that best available control technology or lowest achievable emission rate technology, whichever is applicable, would be applied;

e. To the extent required by these rules, an analysis of the air quality impact of the source or modification, including meteorological and topographical data, specific details of models used, and other information necessary to estimate air quality impacts; and

f. To the extent required by these rules, an analysis of the air quality impacts, and the nature and extent of all commercial, residential, industrial, and other growth which has occurred since January 1, 1978, in the area the source or modification would affect.

2. Other Obligations

Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to these Rules or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this section who commences construction after the

effective date of these regulations without applying for and receiving an Air Contaminant Discharge Permit, shall be subject to appropriate enforcement action.

Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within 18 months of the scheduled time. The Department may extend the 18-month period upon satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan and any other requirements under local, State, or Federal law.

3. Public Participation

a. Within 30 days after receipt of an application to construct, or any addition to such application, the Department shall advise the applicant of any deficiency in the application

or in the information submitted. The date of the receipt of a complete application shall be, for the purpose of this section, the date on which the Department received all required information.

b. Notwithstanding the requirements of OAR 340-14-020, but as expeditiously as possible and at least within six months after receipt of a complete application, the Department shall make a final determination on the application. This involves performing the following actions in a timely manner.

A. Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

B. Make available for a 30 day period in at least one location a copy of the permit application, a copy of the preliminary determination, and a copy or summary of other materials, if any, considered in making the preliminary determination.

C. Notify the public, by advertisement in a newspaper of general circulation in the area in which the proposed source or modification would be constructed, of the application, the preliminary determination,

the extent of increment consumption that is expected from the source or modification, and the opportunity for a public hearing and for written public comment.

D. Send a copy of the notice of opportunity for public comment to the applicant and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: The chief executives of the city and county where the source or modification would be located, any comprehensive regional land use planning agency, any State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the source or modification, and the Environmental Protection Agency.

E. Upon determination that significant interest exists, provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source or modification, alternatives to the source or modification, the control technology required, and other appropriate considerations. For energy facilities, the hearing may be consolidated with the hearing requirements for site certification contained in OAR 345, Division 15.

F. Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. No later than 10 working days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Department shall consider the applicant's response in making a final decision. The Department shall make all comments available for public inspection in the same locations where the Department made available preconstruction information relating to the proposed source or modification.

G. Make a final determination whether construction should be approved, approved with conditions, or disapproved pursuant to this section.

H. Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Department made available preconstruction information and public comments relating to the source or modification.

340-20-235 Review of New Sources and Modifications for Compliance With Regulations

The owner or operator of a proposed major source or major modification must demonstrate the ability of the proposed source or modification to comply with all applicable requirements of the Department of Environmental Quality, including New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants, and shall obtain an Air Contaminant Discharge Permit.

340-20-240 Requirements for Sources in Nonattainment Areas

New major sources and major modifications which are located in designated nonattainment areas shall meet the requirements listed below.

1. Lowest Achievable Emission Rate

The owner or operator of the proposed major source or major modification must demonstrate that the source or modification will comply with the lowest achievable emission rate (LAER)[.] <u>for each nonattainment pollutant.</u> In the case of a major modification, the requirement for LAER shall apply only to each new or modified emission unit which increases emissions. For

phased construction projects, the determination of LAER shall be reviewed at the latest reasonable time prior to commencement of construction of each independent phase.

2. Source Compliance

The owner or operator of the proposed major source or major modification must demonstrate that all major sources owned or operated by such person (or by an entity controlling, controlled by, or under common control with such person) in the State are in compliance or on a schedule for compliance, with all applicable emission limitations and standards under the Clean Air Act.

3. Growth Increment or Offsets

The owner or operator of the proposed major source or major modification must demonstrate that the source or modification will comply with any established emissions growth increment for the particular area in which the source is located or must provide emission reductions ("offsets") as specified by these rules. A combination of growth increment allocation and emission reductions may be used to demonstrate compliance with this section. Those emission increases for which offsets can be found through the best efforts of the applicant shall not be eligible for a growth increment allocation.

4. Net Air Quality Benefit

For cases in which emission reductions or offsets are required, the applicant must demonstrate that a net air quality benefit will be achieved in the affected area as described in OAR 340-20-260 (Requirements for Net Air Quality Benefit) and that the reductions are consistent with reasonable further progress toward attainment of the air quality standards.

5. Alternative Analysis

An alternative analysis must be conducted for new major sources or major modifications of sources emitting volatile organic compounds or carbon monoxide locating in nonattainment areas.

This analysis must include an evaluation of alternative sites, sizes, production processes, and environmental control techniques for such proposed source or modification which demonstrates that benefits of the proposed source or modification significantly outweigh the environmental and social costs imposed as a result of its location, construction or modification.

6. Special Exemption for the Salem Ozone Nonattainment Area

Proposed major sources and major modifications of sources of volatile organic compounds which are located in the Salem Ozone

nonattainment area shall comply with the requirements of Sections 1 and 2 of OAR 340-20-240 but are exempt from all other sections of this rule.

7. Growth Increments

a. Medford-Ashland Ozone Nonattainment Area

The ozone control strategy for the Medford-Ashland nonattainment area establishes a growth increment for new major sources or major modifications which will emit volatile organic compounds. The cumulative volatile organic compound growth increment may be allocated as follows:

year	cummulative volatile organic compound growth increment
1980 to 1982	185 tons of VOC
1983	388
1984	591
1985	794
1986	997
1987	1200

No single owner or operator shall receive an allocation of more than 50% of any remaining growth increment in any one year. The growth increment shall be allocated on a first come-first served basis depending on the date of submittal of a complete permit application.

340-20-245 Requirements for Sources in Attainment or Unclassified Areas (Prevention of Significant Deterioration)

New Major Sources or Major Modifications locating in areas designated attainment or unclassifiable shall meet the following requirements:

1. Best Available Control Technology

The owner or operator of the proposed major source or major modification shall apply best available control technology (BACT) for each pollutant which is emitted at a significant emission rate (OAR 340-20-225 definition 22). In the case of a major modification, the requirement for BACT shall apply only to each new or modified emission unit which increases emissions. For phased construction projects, the determination of BACT shall be reviewed at the latest reasonable time prior to commencement of construction of each independent phase.

2. Air Quality Analysis

The owner or operator of the proposed major source or major modification shall demonstrate that the potential to emit any pollutant at a significant emission rate (OAR 340-20-225 definition 22), in conjunction with all other applicable emissions increases and decreases, (including secondary emissions), would not cause or contribute to air quality levels in excess of:

a. Any State or National ambient air quality standard, or

b. Any applicable increment established by the Prevention of Significant Deterioration requirements (OAR 340-31-110), or

c. An impact on a designated nonattainment area greater than the significant air quality impact levels (OAR 340-20-225 definition 23).

Sources or modifications with the potential to emit at rates greater than the significant emission rate but less than 100 tons/year, and are greater than 50 kilometers from a nonattainment area are not required to assess their impact on the nonattainment area.

If the owner or operator of a proposed major source or major modification wishes to provide emission offsets such that a net air quality benefit as defined in OAR 340-20-260 is provided, the Department may consider the requirements of OAR 340-20-245(2) to have been met.

3. Exemption for Sources Not Significantly Impacting Designated Nonattainment Areas.

A proposed major source is exempt from OAR 340-20-220 to 275 if:

a. The proposed source does not have a significant air quality impact on a designated nonattainment area, and

b. The potential emissions of the source are less than 100 tons/year for sources in the categories listed in Table 3 or less than 250 tons/year for sources not in the categories listed in Table 3.

Major modifications are not exempted under this section. Owners or operators of proposed sources which are exempted by this provision should refer to OAR 340-20-020 to 032 and OAR 340-20-140 to 185 for possible applicable requirements.

Table 3: Source Categories

1. Fossil fuel-fired steam electric plants of more than 250 million BTU/hour heat input
2. Coal cleaning plants (with thermal dryers)
3. Kraft pulp mills
4. Portland cement plants
5. Primary Zinc Smelters

6. Iron and Steel Mill Plants
7. Primary aluminum ore reduction plants
8. Primary copper smelters
9. Municipal Incinerators capable of charging more than 250 tons of refuse per day
10. Hydrofluoric acid plants
11. Sulfuric acid plants
12. Nitric acid plants
13. Petroleum Refineries
14. Lime plants
15. Phosphate rock processing plants
16. Coke oven batteries
17. Sulfur recovery plants
18. Carbon black plants (furnace process)
19. Primary lead smelters
20. Fuel conversion plants
21. Sintering plants
22. Secondary metal production plants
23. Chemical process plants
24. Fossil fuel fired boilers (or combinations thereof) totaling more than 250 million BTU per hour heat input
25. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels
26. Taconite ore processing plants
27. Glass fiber processing plants
28. Charcoal production plants

4. Air Quality Models

All estimates of ambient concentrations required under these Rules shall be based on the applicable air quality models, data bases, and other requirements specified in the "Guideline on Air Quality Models" (OAQPS 1.2-080, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, April 1978). Where an air quality impact model specified in the "Guideline on Air Quality Models" is inappropriate, the model may be modified or another model substituted. Such a change must be subject to notice and opportunity for public comment and must receive approval of the Commission and the Environmental Protection Agency. Methods like those outlined in the "Workbook for the Comparison of Air Quality Models" (U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, May, 1978) should be used to determine the comparability of air quality models.

5. Air Quality Monitoring

a. The owner or operator of a proposed major source or major modification shall submit with the application, subject to approval of the Department, an analysis of ambient air quality in the area of the proposed project. This analysis

shall be conducted for each pollutant potentially emitted at a significant emission rate by the proposed source or modification. As necessary to establish ambient air quality levels, the analysis shall include continuous air quality monitoring data for any pollutant potentially emitted by the source or modification except for nonmethane hydrocarbons. Such data shall relate to, and shall have been gathered over the year preceding receipt of the complete application, unless the owner or operator demonstrates that such data gathered over a portion or portions of that year or another representative year would be adequate to determine that the source or modification would not cause or contribute to a violation of an ambient air quality standard or any applicable increment.

Air quality monitoring which is conducted pursuant to this requirement shall be conducted in accordance with 40 CFR 58 Appendix B, "Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring" and with other methods on file with the Department.

The Department may exempt a proposed major source or major modification from monitoring for a specific pollutant if the owner or operator demonstrates that the air quality impact from the emissions increase would be less than the amounts listed below or that the concentrations of the pollutant in the area that the source or modification would impact are less than these amounts.

Carbon monoxide - 575 ug/m^3, 8 hour average
Nitrogen dioxide - 14 ug/m^3, annual average
Total suspended particulate - 10 ug/m^3, 24 hour average
Sulfur dioxide - 13 ug/m^3, 24 hour average
Ozone - Any net increase of 100 tons/year or more of volatile organic compounds from a source or modification subject to PSD is required to perform an ambient impact analysis, including the gathering of ambient air quality data.
Lead - 0.1 ug/m^3, 24 hour average
Mercury - 0.25 ug/m^3, 24 hour average
Beryllium - 0.0005 ug/m^3, 24 hour average
Fluorides - 0.25 ug/m^3, 24 hour average
Vinyl chloride - 15 ug/m^3, 24 hour average
Total reduced sulfur - 10 ug/m^3, 1 hour average
Hydrogen sulfide - 0.04 ug/m^3, 1 hour average
Reduced sulfur compounds - 10 ug/m^3, 1 hour average

b. The owner or operator of a proposed major source or major modification shall, after construction has been completed, conduct such ambient air quality monitoring as the Department may require as a permit condition to establish the effect which emissions of a pollutant (other than nonmethane hydrocarbons) may have, or is having, on air quality in any area which such emissions would affect.

6. Additional Impact Analysis

a. The owner or operator of a proposed major source or major modification shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification. The owner or operator may be exempted from providing an analysis of the impact on vegetation having no significant commercial or recreational value.

b. The owner or operator shall provide an analysis of the air quality concentration projected for the area as a result of general commercial, residential, industrial and other growth associated with the major source or modification.

7. Sources Impacting Class I Areas

Where a proposed major source or major modification impacts or may impact a Class I area, the Department shall provide notice to the Environmental Protection Agency and to the appropriate Federal Land Manager of the receipt of such permit application and of any preliminary and final actions taken with regard to such application. The Federal Land Manager shall be provided an opportunity in accordance with OAR 340-20-230 Section 3 to present a demonstration that the emissions from the proposed source or modification would have an adverse impact on the air quality related values (including visibility) of any Federal mandatory Class I lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increment for a Class I area. If the Department concurs with such demonstration the permit shall not be issued.

340-20-250 Exemptions

1. Resource recovery facilities burning municipal refuse and sources subject to federally mandated fuel switches may be exempted by the Department from requirements OAR 340-20-240 Sections 3 and 4 provided that:

a. No growth increment is available for allocation to such source or modification, and

b. The owner or operator of such source or modification demonstrates that every effort was made to obtain sufficient offsets and that every available offset was secured.

(Such an exemption may result in a need to revise the State Implementation Plan to require additional control of existing sources.)

2. Temporary emission sources, which would be in operation at a site for less than two years, such as pilot plants and portable facilities, and emissions resulting from the construction phase of a new source or modification must comply with OAR 340-20-240(1) and (2) or OAR 340-20-245(1), whichever is applicable, but are exempt from the remaining requirements of OAR 340-20-240 and OAR 340-20-245 provided that the source or modification would impact no Class I area or no area where an applicable increment is known to be violated.

3. Proposed increases in hours of operation or production rates which would cause emission increases above the levels allowed in an Air Contaminant Discharge Permit and would not involve

a physical change in the source may be exempted from the requirement of OAR 340-20-245(1) (Best Available Control Technology) provided that the increases cause no exceedances of an increment or standard and that the net impact on a nonattainment area is less than the significant air quality impact levels.

4. Also refer to OAR 340-20-245(3) for exemptions pertaining to sources smaller than the Federal Size-cutoff Criteria.

340-20-255 Baseline for Determining Credit for Offsets

The baseline for determining credit for emission offsets shall be the Plant Site Emission Limit established pursuant to OAR 340-20-300 to 320 or, in the absence of a Plant Site Emission Limit, the actual emission rate for the source providing the offsets. Sources in violation of air quality emission limitations may not supply offsets from those emissions which are or were in excess of permitted emission rates. Offsets, including offsets from mobile and area source categories, must be quantifiable and enforceable before the Air Contaminant Discharge Permit is issued and must be demonstrated to remain in effect throughout the life of the proposed source or modification.

Offsets may not be provided from the amount of emission reduction required by an air quality regulation or air quality attainment strategy that has been reserved by the Environmental Quality Commission (OAR 340-20-280).

340-20-260 Requirements for Net Air Quality Benefit

Demonstrations of net air quality benefit must include the following.

1. A demonstration must be provided showing that the proposed offsets will improve air quality in the same geographical area affected by the new source or modification. Offsets for volatile organic compounds or nitrogen oxides shall be within the same general air basin as the proposed source. Offsets for total suspended particulate, sulfur dioxide, carbon monoxide and other pollutants shall be within the area of significant air quality impact.

2. For new sources or modifications locating within a designated nonattainment area, the emission offsets must provide reductions which are equivalent or greater than the proposed increases. The offsets must be appropriate in terms of short term, seasonal, and yearly time periods to mitigate the impacts of the proposed

emissions. For new sources or modifications locating outside of a designated nonattainment area which have a significant air quality impact (OAR 340-20-225 definition 23) on the nonattainment area, the emission offsets must be sufficient to reduce impacts to levels below the significant air quality impact level within the nonattainment area. Proposed major sources or major modifications which emit volatile organic compounds and are located in or within 30 kilometers of an ozone nonattainment area shall provide reductions which are equivalent or greater than the proposed emission increases unless the applicant demonstrates that the proposed emissions will not impact the nonattainment area.

3. The emission reductions must be of the same type of pollutant as the emissions from the new source or modification. Sources of respirable particulate (less than three microns) must be offset with particulate in the same size range. In areas where atmospheric reactions contribute to pollutant levels, offsets may be provided from precursor pollutants if a net air quality benefit can be shown.

4. The emission reductions must be contemporaneous, that is, the reductions must take effect prior to the time of startup but not more than one year prior to the submittal of a complete permit application for the new source or modification. This time

limitation may be extended as provided for in OAR 340-20-265 (Emission Reduction Credit Banking). In the case of replacement facilities, the Department may allow simultaneous operation of the old and new facilities during the startup period of the new facility provided that net emissions are not increased during that time period.

340-20-265 Emission Reduction Credit Banking

The owner or operator of a source of air pollution who wishes to reduce emissions by implementing more stringent controls than required by a permit or by an applicable regulation may bank such emission reductions. Cities, counties or other local jurisdictions may participate in the emissions bank in the same manner as a private firm. Emission reduction credit banking shall be subject to the following conditions:

1. To be eligible for banking, emission reduction credits must be in terms of actual emission decreases resulting from permanent continuous control of existing sources. The baseline for determining emission reduction credits shall be the actual emissions of the source or the Plant Site Emission Limit established pursuant to OAR 340-20-300 to 320.

2. Emission reductions may be banked for a specified period not to exceed ten years unless extended by the Commission, after which time such reductions will revert to the Department for use in attainment and maintenance of air quality standards or to be allocated as a growth margin.

3. Emission reductions which are required pursuant to an adopted rule or those that are reserved for control strategies pursuant to OAR 340-20-280 shall not be banked.

4. Permanent source shutdowns or curtailments other than those used within one year for contemporaneous offsets as provided in OAR 340-20-260(4) are not eligible for banking by the owner or operator but will be banked by the Department for use in attaining and maintaining standards. The Department may allocate these emission reductions as a growth increment. <u>The one year limitation for contemporaneous offsets shall not be applicable to those shutdowns or curtailments which are to be used as internal offsets within a plant as part of a specific plan. Such a plan for use of internal offsets shall be submitted to the Department and receive written approval within one year of the permanent shutdown or curtailment.</u>

5. The amount of banked emission reduction credits shall be discounted without compensation to the holder for a particular source category when new regulations requiring emission reductions are adopted by the Commission. The amount of discounting of banked emission reduction credits shall be calculated on the same basis as the reductions required for existing sources which are subject to the new regulation. Banked emission reduction credits shall be subject to the same rules, procedures, and limitations as permitted emissions.

6. The Commission may declare a moratorium on withdrawals of emission reduction credits from the bank [The amount of banked emission reduction credits may be uniformly discounted by action of the Commission] if it is established that reasonable further progress toward attainment of air quality standards is not being achieved and no other control strategy is available.

7. Emission reductions must be in the amount of ten tons per year or more to be creditable for banking. In the Medford-Ashland AQMA emission reductions must be at least in the amount specified in Table 2 of OAR 340-20-225(22).

8. Requests for emission reduction credit banking must be submitted to the Department and must contain the following documentation:

a. A detailed description of the processes controlled,

b. Emission calculations showing the types and amounts of actual emissions reduced,

c. The date or dates of such reductions,

d. Identification of the probable uses to which the banked reductions are to be applied,

e. Procedure by which such emission reductions can be rendered permanent and enforceable.

9. Requests for emission reduction credit banking shall be submitted to the Department prior to or within the year following the actual emissions reduction. The Department shall approve or deny requests for emission reduction credit banking and, in the case of approvals, shall issue a letter to the owner or operator defining the terms of such banking. The Department shall take steps to insure the permanence and enforceability of the banked emission reductions by including appropriate conditions in Air Contaminant Discharge Permits and by appropriate revision of the State Implementation Plan.

10. The Department shall provide for the allocation of the banked emission reduction credits in accordance with the uses specified by the holder of the emission reduction credits. When emission reduction credits are transfered, the Department must be notified in writing. Any use of emission reduction credits must be compatible with local comprehensive plans, Statewide planning goals, and State laws and rules.

340-20-270 Fugitive and Secondary Emissions

Fugitive emissions shall be included in the calculation of emission rates of all air contaminants. Fugitive emissions are subject to the same control requirements and analyses required for emissions from identifiable stacks or vents. Secondary emissions shall not be included in calculations of potential emissions which are made to determine if a proposed source or modification is major. Once a source or modification is identified as being major, secondary emissions must be added to the primary emissions and become subject to these rules.

340-20-275 Stack Heights

The degree of emission limitation required for any air contaminant regulated under these rules shall not be affected in any manner by

so much of the stack height as exceeds good engineering practice or by any other dispersion technique. This section shall not apply with respect to stack heights in existence before December 31, 1970, or to dispersion techniques implemented before that date.

[340-20-280 Reserved Control Strategies

The following categories of volatile organic compound sources are hereby reserved in the Portland ozone nonattainment area for possible use in standards attainment plans and shall not be used for offsets or emission reduction credit banking until such time as the ozone SIP is adopted.

1 - Annual Automobile Inspection Maintenance Program

2 - Architectural Coatings

3 - Gasoline Service Stations, Stage II

4 - Barge and Vessel loading of gasoline and other light petroleum products

5 - Paper coating in manufacturing

6 - Petroleum Base (Stoddard) Dry Cleaners]

shall be exempted from registration as required by ORS 8.320 and OAR 340-20-005, 340-20-010, and 340-20-015.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 47, f. 8-31-72, ef. 9-15-72; DEQ 63, f. 12-20-73, ef. 1-11-74; DEQ 107, f. & ef. 1-6-76; Renumbered from 340-20-033.18; DEQ 20-1979, f. & ef. 6-29-79

Permit Program For Regional Air Pollution Authority

340-20-185 Subject to the provisions of this rule, the Commission authorizes the Regional Authority to issue, modify, renew, suspend, and revoke air contaminant discharge permits for air contamination sources within its jurisdiction.

(1) Each permit proposed to be issued or modified by the Regional Authority shall be submitted to the Department at least thirty (30) days prior to the proposed issuance date.

(2) A copy of each permit issued, modified, or revoked by the Regional Authority shall be promptly submitted to the Department.

Stat. Auth.: ORS Ch.
Hist: DEQ 47, f. 8-31-72, ef. 9-15-72; DEQ 63, f. 12-20-73, ef. 1-11-74; DEQ 107, f. & ef. 1-6-76; Renumbered from 340-20-033.20

Special Permit Requirements For Sources Locating in or Near Nonattainment Areas

Applicability in Nonattainment Areas

~~340-20-190 Rules 340-20-190 to 340-10-192 shall apply to~~ proposed major new or modified carbon monoxide (CO) or Volatile Organic Compounds (VOC) sources in nonattainment areas.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Definitions: Rules 340-20-190 to 340-20-192

340-20-191 As used in rules 340-20-190 to 340-20-192, unless otherwise required by context:

(1) "Alternative Analysis" means an analysis conducted by the proposed source which considers alternative sites, sizes, production processes and environmental control techniques and which demonstrates that benefits of the proposed source significantly outweigh the environmental and social cost imposed as a result of the project.

(2)(a) "LAER" means the rate of emissions which reflects:

(A) The most stringent emission limitation which is contained in the implementation plan of any state for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable, or not maintainable for the proposed source; or

(B) The most stringent emission limitation which is achieved and maintained in practice by such class or category or source, whichever is more stringent.

(b) In no event shall the application of LAER allow a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance(OAR 340-25-535).

(3) "Major New or Modified Source" means any stationary source which emits or has the potential to emit one hundred tons per year or more of CO or VOC and is proposed for construction after July 1, 1979. The term "modified" means any single or cumulative physical change or change in the method of operation which increases the potential to emit emissions of any criteria air pollutant one hundred tons per year or more over previously permitted limits.

(4) "Nonattainment Area" means, for any air pollutant the actural area, as shown in Figures 5 through 11, in which such pollutant exceeds any national ambient air quality standard.

~~(5) "Potential to emit" means the maximum capacity to~~ emit a pollutant absent air pollution control equipment which is not intrinsically vital to the production or operation of the source.

(6) "Reasonable Further Progress" means annual incremental reductions in emission of the applicable air pollutant identified in the SIP which are sufficient to provide for attainment of the applicable national ambient air quality standard by the date required in the SIP.

(7) "SIP" means the Oregon State Implementation Plan submitted to and approved most recently by the EPA pursuant to the Clear Air Act.

(8) "Proposed for Construction" means that the owner or operator of a major stationary source or major modification has applied for a permit from the Department after July 1, 1979.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Requirements — Nonattainment Areas

340-20-192 A construction and operating permit may be issued to a major new or modified source proposing to locate in a nonattainment area only if the following requirements are met:

(1) There is a sufficient emission growth increment available which is identified in the adopted state plan or an emission offset is provided such that the reasonable further progress commitment in the SIP is still met. The EPA Offset Ruling of January 16, 1979, (40 CFR PART 51 Appendix S) will be used as a guide in indentifying specific offset requirements.

(2) The proposed source is required to comply with the LAER. Only the increments of change above the 100 ton/year potential increase of the modified source are required to comply with LAER.

(3) The owner or operator has demonstrated that all major stationary sources owned or operated by such person in the State of Oregon are in compliance or on a compliance schedule with applicable requirements of the adopted state plan.

(4) An alternative analysis is made for major new or modified sources of carbon monoxide or volatile organic compounds.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Applicability in Attainment Areas

340-20-193 Rules 340-20-193 to 340-20-195 shall apply as noted to proposed major new or modified sources located in attainment areas that would have allowable emissions greater than 50 tons/year of CO or VOC which may impact a nonattainment area. (it should be noted that for sources emitting less than 50 tons/year of an air pollutant that rule 340-20-001 still requires application of highest and best practicable treatment and control and rule 340-31-010 provides for denial of construction should such a source prevent or interfere with attainment or maintenance of ambient air quality standards.)

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Definitions — Rules 340-20-193 to 340-20-195

340-20-194 As used in rules 340-20-193 to 340-20-195, unless otherwise required by context:

(1) "Major New or Modified Source" means any stationary source which has allowable emission greater than fifty tons per year of CO or VOC and is proposed for construction after July 1, 1979. The term "modified" means any single or cumulaative physical change or change in the method of operation which increase the emissions of any criteria air

~~pollutant more than fifty tons per year over previously~~ permitted limits.

(2) "Alternative Analysis", "LAER", "Nonattainment Area", "Reasonable Further Progress", and "SIP" have the same meanings as provided in rule 340-20-191.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Requirements

340-20-195 A construction and operating permit may be issued to a major new or modified source proposing to locate in an attainment area only if one of the following requirements are met:

(1) The emissions from the proposed source are modeled to have an impact on all nonattainment areas equal to or less than the significance levels listed in Table 2 of this division; and or

(2) The requirements of rule 340-20-192 are met if the emissions from the proposed source are modeled to have an impact on the nonattainment area greater than the significance levels of Table 2 of this division.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Emission Limitations on a Plant Site Basis

340-20-196 The purpose of rules 340-20-196 to 340-20-198 is to insure that emissions from sources located anywhere in the state are limited to levels consistent with State Implementation Plan data bases, control strategies, overall airshed carrying capacity, and programs to prevent significant deterioration.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Definitions — Rules 340-20-196 to 340-20-198

340-20-197 As used in rules 340-20-196 to 340-20-198, unless otherwise required by context:

(1) "Facility" means an identifiable piece of process equipment. A source may be comprised of one or more pollutant-emitting facilities.

(2) "Source" means any structure, building, facility, equipment, installation or operation, or combination thereof, which is located on one or more contiguous or adjacent properties and which is owner or operated by the same person, or by persons under common control.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Limitation by Permit

340-20-198 For the purposes set forth in rule 340-20-196, the Department may limit by permit condition the amount of air contaminants emitted from a source. This emission limitation shall take form of limiting emissions on a mass per unit time basis including an annual kilograms per year limit and may also include a monthly and daily limit.

Stat. Auth.: ORS Ch. 468
~~Hist: DEQ 16-1979, f. & ef. 6-22-79~~

Conflicts of Interest

Purpose

340-20-200 The purpose of rules 340-20-200 to 340-20-215 is to comply with the requirements of Section 128 of the federal Clean Air Act as amended August, 1977 (Public Law 95-95) (hereinafter called "Clean Air Act"), regarding public interest representation by a majority of the members of the Commission and by the Director and disclosure by them of potential conflicts of interest.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

Definitions

340-20-205 As used in rules 340-20-200 to 340-20-215, unless otherwise required by context:

(1) "Disclose" means explain in detail in a signed written statement prepared at least annually and available for public inspection at the Office of the Director or the Oregon Ethics Commission.

(2) "Commission" means the Oregon Environmental Quality Commission.

(3) "Director" means the Director of the Oregon Department of Environmental Quality.

(4) "Persons subject in Oregon to permits or enforcement orders under the Clean Air Act" includes any individual, corporation, partnership, or association who holds, is an applicant for, or is subject to any permit, or who is or may become subject to any enforcement order under the Clean Air Act, except that it does not include:

(a) An individual who is or may become subject to an enforcement order solely by reason of his or her ownership or operation of a motor vehicle; or

(b) Any department or agency of a state, local, or regional government.

(5) "Potential conflict of interest" includes:

(a) Any significant portion of income from persons subject in Oregon to permits or enforcement orders under the Clean Air Act; and

(b) Any interest or relationship that would preclude the individual having the interest or relationship from being considered one who represents the public interest.

(6) "Represent the public interest" means that, other than an insignificant portion of income, the individual has no special interest or relationship that would preclude objective and fair consideration and action by that individual in the best interest of the general public.

(7) "Significant portion of income" means 10 percent or more of gross personal income for a calendar year, including retirement benefits, consultant fees, and stock dividends, except that it shall mean 50 percent or more of gross personal income for a calendar year if the recipient is over 60 years of age and is receiving such portion pursuant to retirement, pension, or similar arrangement. For purposes of this section, income derived from mutual-fund payments, or from other diversified investments as to which the recipient does not know the identity of the primary sources of income, shall be considered part of the recipient's gross personal income but shall not be treated as income derived from persons subject to permits or enforcement orders under the Clean Air Act.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

Public Interest Representation

340-20-210 At least a majority of the members of the Commission and the Director shall represent the public interest and shall not derive any significant portion of their respective incomes directly from persons subject in Oregon to permits or enforcement orders under the Clean Air Act.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

Disclosure of Potential Conflicts of Interest

340-20-215 Each member of the Commission and the Director shall disclose any potential conflict of interest.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

~~pollutant more than fifty tons per year over previously~~ permitted limits.

(2) "Alternative Analysis", "LAER", "Nonattainment Area", "Reasonable Further Progress", and "SIP" have the same meanings as provided in rule 340-20-191.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Requirements

340-20-195 A construction and operating permit may be issued to a major new or modified source proposing to locate in an attainment area only if one of the following requirements are met:

(1) The emissions from the proposed source are modeled to have an impact on all nonattainment areas equal to or less than the significance levels listed in Table 2 of this division; and or

(2) The requirements of rule 340-20-192 are met if the emissions from the proposed source are modeled to have an impact on the nonattainment area greater than the significance levels of Table 2 of this division.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Emission Limitations on a Plant Site Basis

340-20-196 The purpose of rules 340-20-196 to 340-20-198 is to insure that emissions from sources located anywhere in the state are limited to levels consistent with State Implementation Plan data bases, control strategies, overall airshed carrying capacity, and programs to prevent significant deterioration.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

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340-20-197 As used in rules 340-20-196 to 340-20-198, unless otherwise required by context:

(1) "Facility" means an identifiable piece of process equipment. A source may be comprised of one or more pollutant-emitting facilities.

(2) "Source" means any structure, building, facility, equipment, installation or operation, or combination thereof, which is located on one or more contiguous or adjacent properties and which is owner or operated by the same person, or by persons under common control.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Limitation by Permit

340-20-198 For the purposes set forth in rule 340-20-196, the Department may limit by permit condition the amount of air contaminants emitted from a source. This emission limitation shall take form of limiting emissions on a mass per unit time basis including an annual kilograms per year limit and may also include a monthly and daily limit.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 16-1979, f. & ef. 6-22-79

Conflicts of Interest

Purpose

340-20-200 The purpose of rules 340-20-200 to 340-20-215 is to comply with the requirements of Section 128 of the federal Clean Air Act as amended August, 1977 (Public Law 95-95) (hereinafter called "Clean Air Act"), regarding public interest representation by a majority of the members of the Commission and by the Director and disclosure by them of potential conflicts of interest.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

Definitions

340-20-205 As used in rules 340-20-200 to 340-20-215, unless otherwise required by context:

(1) "Disclose" means explain in detail in a signed written statement prepared at least annually and available for public inspection at the Office of the Director or the Oregon Ethics Commission.

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(3) "Director" means the Director of the Oregon Department of Environmental Quality.

(4) "Persons subject in Oregon to permits or enforcement orders under the Clean Air Act" includes any individual, corporation, partnership, or association who holds, is an applicant for, or is subject to any permit, or who is or may become subject to any enforcement order under the Clean Air Act, except that it does not include:

(a) An individual who is or may become subject to an enforcement order solely by reason of his or her ownership or operation of a motor vehicle; or

(b) Any department or agency of a state, local, or regional government.

(5) "Potential conflict of interest" includes:

(a) Any significant portion of income from persons subject in Oregon to permits or enforcement orders under the Clean Air Act; and

(b) Any interest or relationship that would preclude the individual having the interest or relationship from being considered one who represents the public interest.

(6) "Represent the public interest" means that, other than an insignificant portion of income, the individual has no special interest or relationship that would preclude objective and fair consideration and action by that individual in the best interest of the general public.

(7) "Significant portion of income" means 10 percent or more of gross personal income for a calendar year, including retirement benefits, consultant fees, and stock dividends, except that it shall mean 50 percent or more of gross personal income for a calendar year if the recipient is over 60 years of age and is receiving such portion pursuant to retirement, pension, or similar arrangement. For purposes of this section, income derived from mutual-fund payments, or from other diversified investments as to which the recipient does not know the identity of the primary sources of income, shall be considered part of the recipient's gross personal income but shall not be treated as income derived from persons subject to permits or enforcement orders under the Clean Air Act.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

Public Interest Representation

340-20-210 At least a majority of the members of the Commission and the Director shall represent the public interest and shall not derive any significant portion of their respective incomes directly from persons subject in Oregon to permits or enforcement orders under the Clean Air Act.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

Disclosure of Potential Conflicts of Interest

340-20-215 Each member of the Commission and the Director shall disclose any potential conflict of interest.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 15-1978, f. & ef. 10-13-78

DIVISION 32

CRITERIA FOR APPROVAL OF NEW AIR CONTAMINANT SOURCES IN THE PORTLAND METROPOLITAN SPECIAL AIR QUALITY MAINTENANCE AREA

Purpose

~~340-32-005 The purpose of this division is to provide~~ criteria for the Department to follow in reviewing and approving air contaminant discharge permit applications for new or expanded air contaminant sources, including their proposed site locations and general designs, in the Portland Metropolitan Special Air Quality Maintenance Area; to assure that air quality standards can be achieved and maintained without major disruption to the orderly growth and development of the area.

Stat. Auth.: ORS Ch.
Hist: DEQ 84, f. 1-30-75, ef. 2-25-75

Definitions

340-32-010 (1) "Air contaminant" means a dust, fume, gas, mist, odor, smoke, vapor, pollen, soot, carbon, acid, or particulate matter or any combinition thereof.

(2) "Implementation plan" means the State of Oregon Clean Air Act Implementation Plan described in rule 340-20-047, together with amendments thereto.

(3) "New or expanded air contaminant source" means an air contamination source, as defined in ORS 468.275, whose construction, installation, establishment, development, modification, or enlargement is authorized by the Department after October 25, 1974.

(4) "Portland Metropolitan Special Air Quality Mantenance Area" means that portion of the State of Oregon within the boundaries designated by the Columbia Region Association of Governments as the 1970 Transportation Study Area, as shown on Figure 1 attached (generally, the area bounded by the Columbia River to the north; communities of Troutdale, Pleasant Valley, and Gladstone to the east; Oregon City to the south; and Hillsboro to the west). Legal definition of the maintenance area is on file with the Department.

(5) "Yearly projected average controllable growth" means 215 tons/year of particulate emissions and 715 tons/year of sulfur dioxide from new or expanded air contaminant point sources as follows:

(a) Commercial and industrial fuel combustion sources,
(b) Process loss sources,
(c) Solid waste incinerators,
(d) Wigwam waste burners, and
(e) Power plants.

Stat. Auth.: ORS Ch.
Hist: DEQ 84, f. 1-30-75, ef. 2-25-75

Special Air Quality Maintenance Area

340-32-015 The Portland Metropolitan Special Air Quality Maintenance Area is hereby established as a special air quality maintenance area to which the rules provided in this division shall apply.

Stat. Auth.: ORS Ch.
Hist: DEQ 84, f. 1-30-75, ef. 2-25-75

Criteria

340-32-020 (1) In reviewing applications for air contaminant discharge permits for new or expanded air contaminant sources in the Portland Metropolitan Special Air Quality Maintenance Area, the Department shall consider the potential effect upon air quality of increases in particulate and sulfur dioxide emissions from such new or expanded air contaminant sources and shall approve such permit applications only to the extent that:

(a) Ambient air quality standards will not be exceeded at air sampling stations and adjacent areas between sampling stations for particulates and sulfur dioxide projected by the Department's March, 1974, report on Designation of Air Quality Maintenance Areas to be in compliance with such standards. A copy of the Department's March, 1974, report on Designation of Air Quality Maintenance Areas is on file in the Department's Portland office.

(b) Increases in particulate and sulfur dioxide emissions will not exceed two years of projected average controllable growth (equivalent to 430 tons/year of particulate and 1430 tons/year of sulfur dioxide).

(c) No single new or expanded air contaminant source shall emit particulates or sulfur dioxide in excess of 25 percent of the total allowable emissions (noted in subsections (a) and (b) above). The exact proportion may be determined by the Commission.

(2) The particulate and sulfur dioxide emissions allowable under subsections (a), (b), and (c) above shall be based on net emission increases after taking into account any offsetting emission reductions which may occur within the Portland Metropolitan Special Air Quality Maintenance Area, or portion thereof, which can be:

(a) Assured of implementation, and
(b) Are attributable to the source seeking the permit.

Stat. Auth.: ORS Ch.
Hist: DEQ 84, f. 1-30-75, ef. 2-25-75

Exceptions

340-32-025 New or expanded air contaminant sources projected to emit less than ten (10) tons per year of particulate ~~of sulfur dioxide shall be excepted from this rule~~.

Stat. Auth.: ORS Ch.
Hist: DEQ 84, f. 1-30-75, ef. 2-25-75

and 340-21-040 which concern particulate emission concentrations and process weight.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

Compliance Schedules

340-30-045 (1) The person responsible for an existing emission source subject to 340-30-015 through 340-30-040 shall proceed promptly with a program to comply as soon as practicable with these rules. A proposed program and implementation plan shall be submitted no later than June 1, 1978, for each emission source to the Department for review and written approval. The Department shall within 45 days of receipt of a complete proposed program and implementation plan, notify the person concerned as to whether or not it is acceptable.

(2) The Department shall establish a schedule of compliance, including increments of progress, for each affected emission source. Each schedule shall include the dates, as soon as practicable, by which compliance shall be achieved, but in no case shall full compliance be later than the following dates:

(a) Wood Waste Boilers shall comply with rule 340-30-015 as soon as practicable, in accordance with approved compliance schedules, but no later than January 1, 1980.

(b) Veneer Dryers shall comply with rule 340-30-020 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1980.

(c) Air Conveying Systems shall comply with rule 340-30-025 as soon as practicable, in accordance with approved compliance schedules, but no later than January 1, 1981.

(d) Wood Particle Dryers at Hardboard and Particleboard Plants shall comply with rule 340-30-030 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1981.

(e) Wigwam Waste Burners shall comply with rule 340-30-035 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1980.

(f) Charcoal Producing Plants shall comply with rule 340-30-040 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1982.

(3) Compliance schedule for Charcoal Producing Plants and Wood Particle Dryers at Hardboard and Particleboard Plants shall contain reasonable expeditious interim dates and pilot testing programs for control to meet the emission limits in 340-30-040(1) and 340-30-030, respectively. If pilot testing and cost analysis indicates that meeting the emission limits of these rules may be impractical, a public hearing shall be held no later than July 1, 1980, for Charcoal Producing Plants and January 1, 1980, for Wood Particle Dryers at Hardboard and Particleboard Plants to consider amendments to this limit.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

Continuous Monitoring

340-30-050 The Department may require the installation and operation of instruments and recorders for measuring emissions and/or the parameters which affect the emission of air contaminants from sources covered by these rules to ensure that the sources and the air pollution control equipment are operated at all times at their full efficiency and effectiveness so that the emission of air contaminants is kept at the lowest practicable level. The instruments and recorders shall be periodically calibrated. The method and frequency of calibration shall be approved in writing by the Department. The recorded information shall be kept for a period of at least one year and shall be made available to the Department upon request.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

Source Testing

340-30-055 (1) The person responsible for the following sources of particulate emissions shall make or have made tests to determine the type, quantity, quality, and duration of emissions, and/or process parameters affecting emissions, in conformance with test methods on file with the Department at the following frequencies: Source Test Frequencies

(a) Wood Waste Boilers — Once every year*

(b) Veneer Dryers — Once every year until January 1, 1983, and once every 3 years thereafter.

(c) Wood Particle Dryers at Hardboard and Particleboard Plants — Once every year

(d) Charcoal Producing Plants — Once every year*

*NOTE: If this test exceeds the annual emission limitation then three (3) additional tests shall be required at three (3) month intervals with all four (4) tests being averaged to determine compliance with the annual standard. No single test shall be greater than twice the annual average emission limitation for that source.

(2) Source testing shall begin at these frequencies within 90 days of the date by which compliance is to be achieved for each individual emission source.

(3) These source testing requirements shall remain in effect unless waived in writing by the Department because of adequate demonstration that the source is consistently operating a lowest practicable levels.

(4) Source tests on wood waste boilers shall not be performed during periods of soot blowing, grate cleaning, or other operating conditions which may result in temporary excursions from normal.

(5) Source tests shall be performed within 90 days of the startup of air pollution control systems.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

Total Plant Site Emissions

~~340-30-060 The Department shall have the authority to~~ limit the total amount of particulate matter emitted ~~from~~ a plant site, consistent with requirements in ~~these~~ rules. Such limitation will be applied, ~~where necessary~~, to ensure that ambient air quality standards are not caused to be exceeded by the plant site emissions and that plant site emissions are kept to ~~lowest practicable levels~~.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

New Sources

340-30-065 New sources shall be required to comply with rules 340-30-015 through 340-30-040 immediately upon initiation of operation.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

Open Burning

340-30-070 No open burning of domestic waste shall be initiated on any day or at any time when the Department advises fire permit issuing agencies that open burning is not allowed because of adverse meteorological or air quality conditions.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 4-1978, f. & ef. 4-7-78

Emission Offsets

~~340-30-110 The intent of this rule is to supplement and in~~ some cases be more stringent than the Federal Interpretative Ruling promulgated in the January 16, 1979 Federal Register on pages 3282 through 3285 (40 CFR, Part 51) hereby incorporated by reference (see Exhibit 1). To the extent any provision thereof is in conflict with a more stringent rule of the Environmental Quality Commission, the Environmental Quality Commission rule shall prevail.

(1) Any new or modified source which emits at a rate equal to or graeter than in Table 1 and is proposed to be constructed or operated in the area of the Medford-Ashland AQMA where a state of federal ambient air quality standard is:

(a) Being violated, shall comply with offset conditions, subsections (a) through (d) of section (2);

(b) Not being violated, but by modeling is projected to exceed the incremental air quality values of Table 2 in the area where the state or federal ambient air standard is being violated, shall comply with offset conditions, subsections (a) through (d) of section (2).

(2) Offset Conditions:

(a) The new or modified source shall meet an emission limitation which specifies the lowest achievable emission rate for such a source.

(b) The applicant provides certification that all existing sources in Oregon owned or controlled by the owner or operator of the proposed source are in compliance with all applicable rules or are in compliance with an approved schedule and timetable for compliance under state or regional rules.

(c) Emission offset from existing source(s) in the Medford-Ashland AQMA, whether or not under the same ownership, are obtained by the applicant on a greater than one-for-one basis.

(d) The emission offset provides a positive net air quality benefit in the affected area.

(3) A new source installed and operated for the sole purpose of compliance with OAR 340-30-035 shall be exempt from subsections (1) and (2) of OAR 340-30-110 providing all of the following are met:

(a) The new emission source complies with the applicable emission limitations in effect at the time the notice of construction is received by the Department; and

(b) Annual emissions from the new or modified source do not exceed one-fourth of the annual emission attributed to the wigwam burner in calendar year 1976.

(4) Banking as described in 44 FR 3282 subsection IV(C)(5) (see Exhibit 1) shall not be allowed. However, this restriction shall in no way modify any existing practice of the Department ~~which may be construed as banking~~.

Stat. Auth.: ORS Ch.

Hist: DEQ 9-1979, f. & ef. 5-3-79

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(2) Offset Conditions:

(a) The new or modified source shall meet an emission limitation which specifies the lowest achievable emission rate for such a source.

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(c) Emission offset from existing source(s) in the Medford-Ashland AQMA, whether or not under the same ownership, are obtained by the applicant on a greater than one-for-one basis.

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Stat. Auth.: ORS Ch.
Hist: DEQ 9-1979, f. & ef. 5-3-79

Ozone

340-31-030 Concentrations of ozone at a primary air mass station, as measured by a method approved by and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed 160 micrograms per cubic meter (0.08 ppm), maximum 1-hour average. This standard is attained when the expected number of days per calendar year with maximum hourly concentrations greater than 160 micrograms per cubic meter is equal to or less than one as determined by Appendix H, CFR 40, Part 50.9 (page 8220) Federal Register 44 No. 28, February 8, 1979.

[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the office of the Department of Environmental Quality.]

Stat. Auth.: ORS Ch. 468
Hist: DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 15-1979, f. & ef. 6-22-79; DEQ 7-1980, f. & ef. 3-5-80

Hydrocarbons

340-31-035 Concentrations of hydrocarbons at a primary air mass station, as measured and corrected for methane by a method approved by and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed 160 micrograms per cubic meter of air (0.24 ppm), maximum 3-hour concentration measured from 0600 to 0900, not to be exceeded more than once per year.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 37, f. 2-15-72, ef. 3-1-72

Nitrogen Dioxide

340-31-040 Concentrations of nitrogen dioxide at a primary air mass station, as measured by a method approved and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed 100 micrograms per cubic meter of air (0.05 ppm), annual arithmetic mean.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 37, f. 2-15-72, ef. 3-1-72

Particle Fallout

340-31-045 The particle fallout rate at a primary air mass station, primary ground level station, or special station, as measured by a method approved by and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed:

(1) 10 grams per square meter per month in an industrial area; or

(2) 5.0 grams per square meter per month in an industrial area if visual observations show a presence of wood waste or soot and the volatile fraction of the sample exceeds seventy percent (70%); or

(3) 5.0 grams per square meter per month in residential and commercial areas; or

(4) 3.5 grams per square meter per month in residential and commercial areas if visual observations show the presence of wood waste or soot and the volatile fraction of the sample exceeds seventy percent (70%).

Stat. Auth.: ORS Ch. 468
Hist: DEQ 37, f. 2-15-72, ef. 3-1-72

Calcium Oxide (Lime Dust)

340-31-050 (1) Concentrations of calcium oxide present as suspended particulate at a primary air mass station, as measured by a method approved by and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed 20 micrograms per cubic meter in residential and commercial areas at any time.

(2) Concentrations of calcium oxide present as particle fallout at a primary air mass station, primary ground level station, or special station, as measured by a method approved by and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed 0.35 grams per square meter per month in residential and commercial areas.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 37, f. 2-15-72, ef. 3-1-72

Ambient Air Quality Standard for Lead

340-31-055 The lead concentration measured at any individual sampling station, using sampling and analytical methods on file with the Department, shall not exceed 3.0 ug/m^3 as an arithmetic average concentration of all samples collected at that station during any one calendar month period.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 85, f. 1-29-75, ef. 2-25-75

Prevention of Significant Deterioration

General

340-31-100 (1) The purpose of these rules is to implement a program to prevent significant deterioration of air quality in the State of Oregon as required by the Federal Clean Air Act Amendments of 1977.

(2) The Department will review the adequacy of the State Implementation Plan on a periodic basis and within 60 days of such time as information becomes available that an applicable increment is being violated. Any Plan revision resulting from the reviews will be subject to the opportunity for public hearing in accordance with procedures established in the Plan.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Definitions

340-31-105 For the purposes of these rules:

~~(1) "Major stationary source" means~~:

(a) Any of the following stationary sources of air pollutants which emit, or have the potential to emit, 100 tons per year or more of any air pollutant: Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, Portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300 thousand barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants; and

(b) Notwithstanding the source sizes specified in subsection (1)(a) of this rule, any source which emits, or has the potential to emit, 250 tons per year or more of any pollutant.

(2) "Major modification" means any physical change in, change in the method of operation of, or addition to a stationary source which increases the potential emission rate of any air pollutant (including any not previously emitted and taking into account all accumulated increases in potential emissions occurring at the source since August 7, 1977, or since the time

~~occurring at the source since August 7, 1977, or since the time~~ of the last construction approval issued for the source pursuant to this section, whichever time is more recent, regardless of any emission reductions achieved elsewhere in the source, by either 100 tons per year or more for any source category identified in subsection (1)(a) of this rule, or by 250 tons per year or more for any stationary source.

(a) A physical change shall not include routine maintenance, repair and replacement.

(b) A change in the method of operation, unless previously limited by enforceable permit conditions, shall not include:

(A) An increase in the production rate, if such increase does not exceed the operating design capacity of the source;

(B) An increase in the hours of operation;

(C) Use of an alternative fuel or raw material by reason of an order in effect under Sections 2 (a) and (b) of the federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act;

(D) Use of an alternative fuel or raw material, if prior to January 6, 1975, the source was capable of accommodating such fuel or material;

(E) Use of an alternative fuel by reason of a federal order or rule under Section 125 of the federal Clean Air Act; or

(F) Change in ownership of the source.

(3) "Potential to emit" means the capability at maximum capacity to emit a pollutant in the absence of air pollution control equipment. "Air pollution control equipment" includes control equipment which is not, aside from air pollution control laws and regulations, vital to production of the normal product of the source or to its normal operation. Annual potential shall be based on the maximum annual rated capacity of the source, unless the source is subject to enforceable permit conditions which limit the annual hours of operation. Enforceable permit conditions on the type or amount of materials combusted or processed may be used in determining the potential emission rate of a source.

(4) "Source" means any structure, building, facility, equipment, installation, or operation (or combination thereof) which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control).

(5) "Facility" means an identifiable piece of process equipment. A source is composed of one or more pollutant-emitting facilities.

(6) "Fugitive dust" means particulate matter composed of soil which is uncontaminated by pollutants resulting from industrial activity. Fugitive dust may include emissions from haul roads, wind erosion of exposed soil surfaces and soil storage piles and other activities in which soil is either removed, stored, transported, or redistributed.

(7) "Construction" means fabrication, erection, installation, or modification of a source.

(8) "Commence" as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

(a) Begun, or caused to begin, a continuous program of physical on-site construction of the source, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the source to be completed within a reasonable time.

(9) "Necessary preconstruction approvals or permits" means those permits or approvals required under Federal air quality control laws and regulations and those air quality control laws and regulations which are part of the State Implementation Plan.

(10) "Best available control technology" means an emission limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant which would be emitted from any proposed major stationary source or major modification which the Department, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR part 60 and part 61.

If the Department determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emission standard infeasible, a design, equipment, work practice or operational standard, or combination thereof, may be prescribed instead to require the application of best available control technology. Such standard shall, to the degree possible, set forth the emission reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

(11) "Baseline concentration" means that ambient concentration level reflecting actual air quality as of August 7, 1977, minus any contribution from major stationary sources and major modifications on which construction commenced on or after January 6, 1975. The baseline concentration shall include contributions from:

(a) The actual emissions of other sources in existence on August 7, 1977, except that contributions from facilities within such existing sources for which a Plan revision proposing less restrictive requirements was submitted on or before August 7, 1977, and was pending action by the EPA Administrator on that date shall be determined from the allowable emissions of such facilities under the Plan as revised; and

(b) The allowable emissions of major stationary sources and major modifications which commenced construction before January 6, 1975, but were not in operation by August 7, 1977.

(12) "Federal Land Manager" means, with respect to any lands in the United States, the Secretary of the federal department with authority over such lands.

~~(13) "High terrain" means any area having an elevation 900 feet or more above the base of the stack of a facility.~~

~~(14) "Low terrain" means any area other than high terrain.~~

(15) "Indian reservation" means any Federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

(16) "Indian Governing Body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

~~(17) "Reconstruction" will be presumed to have taken~~ place where the fixed capital cost of the new components exceed 50 percent of the fixed capital cost of a comparable entirely new facility or source. However, any final decision as to whether reconstruction has occurred shall be based on:

(a) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility.

(b) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility.

(c) The extent to which the components being replaced cause or contribute to the emissions from the facility.

A reconstructed source will be treated as a new source for purposes of this section, except that use of an alternative fuel or raw material by reason of an order in effect under sections 2 (a) and (b) of the federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act, or by reason of an order or rule under section 125 of the federal Clean Air Act, shall not be considered reconstruction. In determining best available control technology for a reconstructed source, the following provision shall be taken into account in assessing whether a standard of performance under 40 CFR part 60 is applicable to such source:

Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.

(18)"Fixed capital cost" means the capital needed to provide all of the depreciable components.

(19) "Allowable emissions" means the emission rate calculated using the maximum rated capacity of the source (unless the source is subject to enforceable permit conditions which limit the operating rate, or hours of operation, or both) and the most stringent of the following:

(a) Applicable standards as set forth in 40 CFR part 60 and part 61;

(b) The State Implementation Plan emission limitation; or

(c) The emission rate specified as a permit condition.

(20) "State Implementation Plan" or "Plan" means the Clean Air Act Implementation Plan for Oregon as approved by the Environmental Quality Commission.

(21) "40 CFR" means Title 40 of the Code of Federal Regulations.

(22) "Air pollutant" means an air contaminant under Oregon statutes for which a state or national ambient air quality standard exists.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Ambient Air Increments

340-31-110 (1) This rule defines significant deterioration. In areas designated as class I, II or III, emissions from new or modified sources shall be limited such that increases in pollutant concentration over the baseline concentration shall be limited to those set out in Table 1.

(2) For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Ambient Air Ceilings

340-31-115 No concentration of a pollutant shall exceed:

(1) The concentration permitted under the national secondary ambient air quality standard; or

(2) The concentration permitted under the national primary ambient air quality standard; or

(3) The concentration permitted under the state ambient air quality standard, whichever concentration is lowest for the pollutant for a period of exposure.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Restrictions on Area Classifications

340-31-120 (1) All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated:

(a) Mt. Hood Wilderness;
(b) Eagle Cap Wilderness;
(c) Hells Canyon Wilderness;
(d) Mt. Jefferson Wilderness;
(e) Mt. Washington Wilderness;
(f) Three Sisters Wilderness;
(g) Strawberry Mountain Wilderness;
(h) Diamond Peak Wilderness;
(i) Crater Lake National Park;
(j) Kalmiopsis Wilderness;
(k) Mountain Lake Wilderness;
(l) Gearhart Mountain Wilderness.

(2) All other areas, in Oregon are initially designated Class II, but may be redesignated as provided in this section.

(3) The following areas may be redesignated only as Class I or II:

(a) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

(b) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acreas in size.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Exclusions for Increment Consumption

340-31-125 (1) After notice and opportunity for at least one public hearing held in accordance with procedures established in the Plan, the Department may exclude the following concentrations in determining compliance with a maximum allowable increase:

(a) Concentrations attributable to the increase in emissions from sources which have converted from the use of petroleum products, natural gas, or both by reason of an order in effect under Sections 2 (a) and (b) of the federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) over the emissions from such sources before the effective date of such order;

(b) Concentrations attributable to the increase in emissions from sources which have converted from using natural gas by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act over the emissions from such sources before the effective date of such plan;

(c) Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary activities; and

(d) The increase in concentrations attributable to new sources outside the United States over the concentrations attributable to existing sources which are included in the baseline concentration.

(2) No exclusion under subsections (1)(a) or (b) of this rule shall apply more than five years after the effective date of the order to which subsection (1)(a) refers or the plan to which subsection (1)(b) refers, whichever is applicable. If both such order and plan are applicable, no such exclusion shall apply more than five years after the later of such effective dates.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Redesignation

340-31-130 (1)(a) All areas in Oregon (except as otherwise provided under rule 340-31-120) are designated Class II as of

December 5, 1974.

(b) Redesignation (except as otherwise precluded by rule 340-31-120) may be proposed by the Department or Indian Governing Bodies, as provided below, subject to approval by the EPA Administrator as a revision to the State Implementation Plan.

(2) The Department may submit to the EPA Administrator a proposal to redesignate areas of the State Class I or Class II provided that:

(a) At least one public hearing has been held in accordance with procedures established in the Plan;

(b) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation were notified at least 30 days prior to the public hearing;

(c) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, social and energy effects of the proposed redesignation, was prepared and made available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contained appropriate notification of the availability of such discussion;

(d) Prior to the issuance of notice respecting the redesignation of an area that includes any Federal lands, the Department has provided written notice to the appropriate Federal Land Manager and afforded adequate opportunity (not in excess of 60 days) to confer with the Department respecting the redesignation and to submit written comments and recommendations. In redesignating any area with respect to which any Federal Land Manager had submitted written comments and recommendations, the Department shall have published a list of any inconsistency between such redesignation and such comments and recommendations (together with the reasons for making such redesignation against the recommendation of the Federal Land Manager); and

(e) The Department has proposed the redesignation after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

(3) Any area other than an area to which rule 340-31-120 refers may be redesignated as Class III if:

(a) The redesignation would meet the requirements of section (2) of rule 340-31-130;

(b) The redesignation, except any established by an Indian Governing Body, has been specifically approved by the Governor, after consultation with the appropriate committees of the legislature, if it is in session, or with the leadership of the legislature, if it is not is session (unless State law provides that the redesignation must be specifically approved by State legislation) and if general purpose units of local government representing a majority of the residents of the area to be redesignated enact legislation or pass resolutions concurring in the redesignation;

(c) The redesignation would not cause, or contribute to, a concentration of any air pollutant which would exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and

(d) Any permit application for any major stationary source or major modification, subject to review under section (1) of this rule, which could receive a permit under this section only if the area in question were redesignated as Class III, and any material submitted as part of that application, were available insofar as was practicable for public inspection prior to any public hearing on redesignation of the area as Class III.

(4) Lands within the exterior boundaries of Indian Reservations may be redesignated only by the appropriate Indian Governing Body. The appropriate Indian Governing Body may submit to the EPA Administrator a proposal to redesignate areas Class I, Class II, or Class III: Provided, that

(a) The Indian Governing Body has followed procedures equivalent to those required of the Department under section (2) and subsections (3)(c) and (d) of this rule; and

(b) Such redesignation is proposed after consultation with the state(s) in which the Indian Reservation is located and which border the Indian Reservation.

(5) The EPA Administrator shall disapprove, within 90 days of submission, a proposed redesignation of any area only if he finds, after notice and opportunity for public hearing, that such redesignation does not meet the procedural requirements of this paragraph or is inconsistent with rule 340-31-120. If any such disapproval occurs, the classification of the area shall be that which was in effect prior to the redesignation which was disapproved.

(6) If the EPA Administrator disapproves any proposed redesignation, the Department or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the EPA Administrator.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Stack Heights

~~340-31-135 (1) The degree of emission limitation required~~ for control of any air pollutant under this rule shall not be affected in any manner by:

(a) So much of the stack height of any source as exceeds good engineering practice (see rule 340-31-195), or

(b) Any other dispersion technique.

(2) Paragraph (h)(1) of this section shall not apply with respect to stack heights in existence before December 31, 1970, or to dispersion techniques implemented before then.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Review of Major Stationary Sources and Major Modifications-Source Applicability and General Exemptions

340-31-140 (1) No major stationary source or major modification shall be constructed unless the requirements of rules 340-31-145 through 340-31-185, as applicable, have been met. The requirements of rules 340-31-145 through 340-31-185 shall apply to a proposed source or modification only with respect to those pollutants for which it would be a major stationary source or major modification.

(2) The requirements of rules 340-31-145 through 340-31-185 shall not apply to a major stationary source or major modification that was subject to the review requirements of 40 CFR 52.21(d)(1) for the prevention of significant deterioration as in effect before March 1, 1978, if the owner or operator:

(a) Obtained under 40 CFR 52.21 a final approval effective before March 1, 1978;

(b) Commenced construction before March 19, 1979; and

(c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable time.

(3) The requirements of rules 340-31-145 through 340-31-185 shall not apply to a major stationary source or major modification that was not subject to 40 CFR 52.21 as in effect before March 1, 1978, if the owner or operator:

(a) Obtained all final Federal, State and local preconstruction permits necessary under the State Implementation Plan before March 1, 1978;

(b) Commenced construction before March 19, 1979; and

(c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable time.

(4) ~~The requirements of rules 340-31-145 through 340-31-~~ shall not apply to a major stationary source or major modification that was subject to 40 CFR 52.21 as in effect before March 1, 1978, if review of an application for approval for the source of modification under 40 CFR 52.21 would have been completed by March 1, 1978, but for an extension of the public comment period pursuant to a request for such an extension. In such a case, the application shall continue to be processed, and granted or denied, under 40 CFR 52.21 as in effect prior to March 1, 1978.

(5) The requirements of rules 340-31-145, 340-31-155, 340-31-165, and 340-31-175 shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that:

(a) As to that pollutant, the source or modification is subject to the federal emission offset ruling (41 FR 55524), as it may be amended, or to regulations approved or promulgated pursuant to Section 173 of the Act; and

(b) The source or modification would impact no area attaining the national ambient air quality standards (either internal or external to areas designated as nonattainment under Section 107 of the Act).

(6) The requirements of rules 340-31-145 through 340-31-185 shall not apply, upon written request to EPA by the Governor to a nonprofit health or education institution to be located in Oregon.

(7) A portable facility which has previously received construction approval under the requirements of this section as applicable may relocate without again being subject to those requirements if:

(a) Emissions from the facility would not exceed allowable emissions;

(b) Emissions from the facility would impact no Class I area and no area where an applicable increment is known to be violated; and

(c) Notice is given to the Department at least 30 days prior to such relocation identifying the proposed new location and the probable duration of operation at such location.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Control Technology Review

340-31-145 (1) A major stationary source or major modification shall meet all applicable emissions limitations under the State Implementation Plan and all applicable emission standards and standards of performance under 40 CFR Part 60 and Part 61.

(2) A major stationary source or major modification shall apply best available control technology for each applicable pollutant, unless the increase in allowable emissions of that pollutant from the source or modification would be less than 50 tons per year, 1,000 pounds per day, or 100 pounds per hour, whichever is most restrictive.

(a) The preceeding hourly and daily rates shall apply only with respect to a pollutant for which an increment, or state or national ambient air quality standard, for a period less than 24 hours or for a 24-hour period, as appropriate, has been established.

(b) In determining whether and to what extent a modification would increase allowable emissions, there shall be taken into account no emission reductions achieved elsewhere at the source at which the modification would occur.

(3) In the case of a modification, the requirement for best available control technology shall apply only to each new or modified facility which would increase the allowable emissions of an applicable pollutant.

(4) Where a facility within a source would be modified but reconstructed, the requirements for best available control ~~technology notwithstanding section (2) of this rule, shall not~~ apply to such facility if no net increase in emissions of an applicable pollutant would occur at the source, taking into account all emission increases and decreases at the source which would accompany the modification, and no adverse air quality impact would occur.

(5) For phased construction projects the determination of best available control technology shall be reviewed, and modified as appropriate, at the latest reasonable time prior to commencement of construction of each independent phase of the proposed source or modification.

(6) In the case of a major stationary source or major modification which the owner or operator proposes to construct in a Class III area, emissions from which would cause or contribute to air quality exceeding the maximum allowable increase that would be applicable if the area were a Class II area and where no standard under 40 CFR Part 60 has been promulgated for the source category, the Department shall determine the best available control technology.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979; f. & ef. 6-22-79

Exemptions from Impact Analyses

340-31-150 (1) The requirements of rules 340-31-155, 340-31-165, and 340-31-175 shall not apply to a major stationary source or major modification with respect to a particular pollutant, if:

(a) The increase in allowable emissions of that pollutant from the source or modification would impact no Class I area and no area where an applicable increment is known to be violated; and

(b) The increase in allowable emissions of that pollutant from the source or modification would be less than 50 tons per year, 1,000 pounds per day, or 100 pounds per hour, whichever is more restrictive; or

(c) The emissions of the pollutant are of a temporary nature including but not limited to those from a pilot plant, a portable facility, construction, or exploration; or

(d) A source is modified, but no increase in the net amount emissions for any pollutant subject to a national ambient air quality standard and no adverse air quality impact would occur.

(2) The hourly and daily rates set in subsection (1)(b) of this rule shall apply only with respect to a pollutant for which an increment, or state or national ambient air quality standard, for a period of less than 24 hours or for a 24-hour period, as appropriate, has been established.

(3) In determining for the purpose of subsection (1)(b) of this rule whether and to what extent the modification would increase allowable emissions, there shall be taken into account no emission reduction achieved elsewhere at the source at which the modification would occur.

(4) In determining for the purpose of subsection (1)(d) of this rule whether and to what extent there would be an increase in the net amount of emissions for any pollutant subject to a state or national ambient air quality standard from the source which is modified, there shall be taken into account all emission increases and decreases occurring at the source since August 7, 1977.

(5) The requirements of rules 340-31-155, 340-31-165, and 340-31-175 shall not apply to a major stationary source or to a major modification with respect to emissions from it which the owner or operator has shown to be fugitive dust.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Air Quality Review

340-31-155 The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions, would not cause or contribute to air pollution in violation of:

(1) Any state or national ambient air quality standard in any air quality control region; or

(2) Any applicable maximum allowable increase over the baseline concentration in any area.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Air Quality Models

340-31-160 (1) All estimates of ambient concentrations required under paragraph (1) shall be based on the applicable air quality models, data bases, and other requirements specified in the "Guideline on Air Quality Models" (OAQPS 1.2-080, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, April 1978).

(2) Where an air quality impact model specified in the "Guideline on Air Quality Models" is inappropriate, the model may be modified or another model substituted. Such a change must be subject to notice and opportunity for public comment under rule 340-31-185. Written approval of the EPA Administrator must be obtained for any modification or substitution. Methods like those outlined in the "Workbook for the Comparison of Air Quality Models" (U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, May 1978) should be used to determine the comparability of air quality models.

(3) The documents referenced in this paragraph are available for public inspection at the Department of Environmental Quality's Air Quality Control Division headquarters office.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Monitoring

340-31-165 (1) The owner or operator of a proposed source or modification shall, after construction of the source or modification, conduct such ambient air quality monitoring as the Department determines may be necessary to establish the effect which emissions from the source or modification of a pollutant for which a state or national ambient air quality standard exists (other than non-methane hydrocarbons) may have, or is having, on air quality in any area which such emissions would affect.

(2) As necessary to determine whether emissions for the proposed source or modification would cause or contribute to a violation of a state or national ambient air quality standard, any permit application submitted after August 7, 1978, shall include an analysis of continuous air quality monitoring data for any pollutant emitted by the source or modification for which a state or national ambient air quality standard exists, except non-methane hydrocarbons. Such data shall relate to, and shall have been gathered over, the year preceding receipt of the complete application, unless the owner or operator demonstrates to the Department's satisfaction that such data gathered over a portion or portions of that year or another representative year would be adequate to determine that the source or modification would not cause or contribute to a violation of a state or national ambient air quality standard.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Source Information

340-31-170 The owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or make any determination required under this rule:

(1) With respect to a source or modification to which rules 340-31-145, 340-31-155, 340-31-165, and 340-31-175 apply, such information shall include:

(a) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;

(b) A detailed schedule for construction of the source or modification;

(c) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine that best available control technology would be applied.

(2) Upon request of the Department, the owner or operator shall also provide information on;

(a) The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and

(b) The air quality impacts, and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Additional Impact Analyses

340-31-175 (1) The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.

(2) The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Sources Impacting Federal Class I Areas — Additional Requirements:

340-31-180 (1) Notice to EPA. The Department shall transmit to the EPA Administrator a copy of each permit application relating to a major stationary source or major modification and provide notice to the Administrator of every action related to the consideration of such permit.

(2) Federal Land Manager. The Federal Land Manager and the Federal official charged with direct responsibility for management of Class I lands have an affirmative responsibility to protect the air quality-related values (including visibility) of such lands and to consider, in consultation with the EPA Administrator, whether a proposed source or modification will have an adverse impact on such values.

(3) Denial — impact on air quality-related values. The Federal Land Manager of any Class I lands may present a demonstration to the Department that the emissions from a proposed source or modification would have an adverse impact on the air quality-related values (including visibility) of those lands, notwithstanding that the change in air quality resulting

from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Department concurs with such demonstration, then it shall not issue the permit.

(4) Class I variances. The owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source or modification would have no adverse impact on the air quality-related values of the Class I lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal Land Manager concurs with such demonstration and he so certifies, the Department may, provided that the applicable requirements of this section are otherwise met, issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide and particulate matter would not exceed the following maximum allowable increases over baseline concentration for such pollutants. (See Table 2)

(5) Sulfur dioxide variance by Governor with Federal Land Manager's concurrence. The owner or operator of a proposed source or modification which cannot be approved under section (4) of this rule may demonstrate to the Governor that the source or modification cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for a period of twenty-four hours or less applicable to any Class I area and, in the case of Federal mandatory Class I areas, that a variance under this clause would not adversely affect the air quality related values of the area (including visibility). The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may, after notice and public hearing, grant a variance from such maximum allowable increase. If such variance is granted, the Department may issue a permit to such source or modification pursuant to the requirements of section (7) of this rule; provided, that the applicable requirements of this section are otherwise met.

(6) Variance by the Governor with the President's concurrence. In any case where the Governor recommends a variance in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President. The President may approve the Governor's recommendation if he finds that the variance is in the national interest. If the variance is aproved, the Department may issue a permit pursuant to the requirements of section (7) of this rule; provided, that the applicable requirements of this section are otherwise met.

(7) Emission limitations for Presidential or gubernatorial variance. In the case of a permit issued pursuant to sections (5) or (6) of this rule the source or modification shall comply with such emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentration and to assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less for more than 18 days, not necessarily consecutive, during any annual period. (See Table 3)

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Public Participation

340-31-185 (1) Within 30 days after receipt of an application to construct, or any addition to such application, the Department shall advise the applicant of any deficiency in the application or in the information submitted. In the event of such a deficiency, the date of receipt of the application shall be, for the purpose of this section, the date on which the Department received all required information.

(2) Within one (1) year after receipt of a complete application, the Department shall make a final determination on the application. This involves performing the following actions in a timely manner.

(a) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

(b) Make available in at least one location in each region in which the proposed source or modification would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination and a copy or summary of other materials, if any, considered in making the preliminary determination.

(c) Notify the public, by advertisement in a newspaper of general circulation in each region in which the proposed source or modification would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and the opportunity for comment at a public hearing as well as written public comment.

(d) Send a copy of the notice of public comment to the applicant and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: local air pollution control agencies, the chief executives of the city and county where the source or modification would be located, any comprehensive regional land use planning agency and any State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the source or modification.

(e) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source or modification, alternatives to the source or modification, the control technology required, and other appropriate considerations.

(f) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Department shall consider the applicant's response in making a final decision. The Department shall make all comments available for public inspection in the same locations where the Department made available preconstruction information relating to the proposed source or modification.

(g) Make a final determination whether construction should be approved, approved with conditions, or disapproved pursuant to this section.

(h) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Department made available preconstruction information and public comments relating to the source or modification.

(3) The requirements of this rule shall not apply to any major stationary source or major modification which rule 340-31-150 would exempt from the requirements of rules 340-31-155, 340-31-165, and 340-31-175, but only to the extent that, with respect to each of the criteria for construction approval under the State Implementation Plan and for exemption under rule 340-31-150, requirements providing the public

with at least as much participation in each material determination as those of this rule have been met in the granting of such construction approval.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Source Obligation

340-31-190 (1) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this section or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this section who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action.

(2) Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed with a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

(3) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan and any other requirements under local, state or federal law.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 18-1979, f. & ef. 6-22-79

Stack Heights — Modeling Limits

340-31-195 (1)(a) The degree of emission limitation required for any air pollutant or air contaminant shall not be affected in any manner by:

(A) The use of a stack height that exceeds good engineering practice, or

(B) The use of any other dispersion technique.

(b) The preceding sentence shall not apply with respect to stack heights in existence before December 31, 1970, or dispersion techniques implemented before that date.

(2) The Department shall give public notice about stack heights that exceed good engineering practice prior to issuing an air contaminant discharge permit.

(3) Definitions. As used in OAR 340-31-110 to 340-31-112, unless otherwise required by context:

(a) "Dispersion technique" means any control of air pollutants varying with atmospheric conditions including but not limited to supplementary or intermittent control systems and excessive use of enhanced plume rise.

(b) "Good engineering practice stack height" means that stack height necessary to ensure that emissions from the stack do not result in excessive concentrations of any air pollutant in the immediate vicinity of the source as a result of atmospheric downwash, eddies, and wakes which may be created by the source itself, nearby structures or nearby terrain obstacles and shall not exceed any of the following as appropriate:

(A) 30 meters, for stacks influenced by structures or terrain;

(B) $H_G = H + 1.5 L$

where H_G = good engineering practice stack height;
H = height of structure or nearby structure;
L = lesser dimension (height or width) of the structure or nearby structure; for stacks influenced by structures;

(C) Such height as an owner or operator of a source demonstrates is necessary through the use of field studies or fluid models after notice and opportunity for public hearing.

Stat. Auth.: ORS Ch. 468
Hist: DEQ 14-1979, f. & ef. 6-22-79

Attachment 4

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 SOUTHWEST 5TH AVE.-PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

Prepared: March 2, 1981
Hearing Date: April 24, 1981

NOTICE OF PUBLIC HEARING

A CHANCE TO BE HEARD ABOUT:

Proposed Revision of New Source Review and
Plant Sites Emission Limit Rules

The Department of Environmental Quality (DEQ) is considering revisions to the existing rules regulating the construction of new sources and the modification of existing sources of air pollution. The revisions to the New Source Review rules are necessary to bring the Oregon State Implementation Plan into accord with the Clean Air Act Amendments of 1977. Revisions are also being proposed for the Plant Site Emission Limit rule to provide more specific criteria for establishing emission limits.

A hearing on this matter was originally scheduled for February 18, 1981, but was cancelled to allow additional time for review of the proposed rules. Some changes were made in the originally proposed Emission Reduction Banking and Plant Site Emission Limit rules. The hearing has been rescheduled and will be held before the Environmental Quality Commission at its April 24, 1981, meeting.

WHAT IS THE DEQ PROPOSING?

Interested parties should request a copy of the complete proposed rule package. Some highlights are:

** New Source Review and Prevention of Significant Deterioration requirements are combined into one rule.

** Requirements for new source offsets, Prevention of Significant Deterioration analysis, and banking of emission reductions are established.

** The Plant Site Emission Limit Rule is revised to provide more specific procedures for establishing emission limits.

WHO IS AFFECTED BY THIS PROPOSAL:

Major new sources and major modifications of sources of air pollution and existing sources of air pollution.

HOW TO PROVIDE YOUR INFORMATION:

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 April 23, 1981.

Oral and written comments may be offered at the following public hearing:

City	Time	Date	Location
Portland	10:00 a.m.	April 24, 1981	Oregon Department of Fish and Wildlife Conference Room 506 SW Mill

The Commission may also consider adoption of the rules at the same meeting.

WHERE TO OBTAIN ADDITIONAL INFORMATION:

Copies of the proposed rules may be obtained from:

Lloyd Kostow
DEQ Air Quality Division
Box 1760
Portland, Oregon 97207
229-5186
toll-free 1-800-452-7813

LEGAL REFERENCES FOR THIS PROPOSAL:

This proposal amends OAR 340-20-190 to 198, OAR 340-30-110, OAR 340-32-005 to 025 and OAR 340-31-105 to 195. It is proposed under authority of ORS Chapter 468, including sections 020 and 295.

LAND USE PLANNING CONSITENCY:

The Department has concluded that the proposals do affect land use.

With regard to Goal 6 (air, water, and land resources quality) and Goal 9 (to diversify and impose the economy of the state), the rules are designed to enhance and preserve air quality in the affected area while allowing economic growth, and are considered consistent with the goals.

Goal 11 (public facilities and services) is deemed unaffected by the proposals.

Public comment on any land use issue involved is welcome and may be submitted in the same fashions as are indicated for testimony in this NOTICE OF PUBLIC HEARING.

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Goal 11 (public facilities and services) is deemed unaffected by the proposals.

Public comment on any land use issue involved is welcome and may be submitted in the same fashions as are indicated for testimony in this NOTICE OF PUBLIC HEARING.

It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide Planning Goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflict brought to our attention by local, state, or federal authorities.

FURTHER PROCEEDINGS:

After public hearing the Environmental Quality Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted regulations will be considered for submittal to the U.S. Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's action could come at the same April 24, 1981, meeting, or be deferred to the June 5 meeting.

A Statement of Need and Fiscal Impact Statement are attached to this notice.

AQ0042(n)(1)

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(2), this statement provides information on the intended action to amend a rule.

Legal Authority

Oregon Revised Statutes Chapter 468, including Sections 020 and 295.

Need for Rule

These revisions to the New Source Review and Plant Site Emission Limit Rules are required to correct deficiencies identified by the U.S. Environmental Protection Agency (EPA) and to bring the rules into compliance with Clean Air Act Requirements.

Principal Documents Relied Upon

1. Federal Clean Air Act P.L. 95-95, Amendments of August 7, 1977, Part C Sections 160 through 169 and Part D Sections 171 through 173.

2. Final Rulemaking on approval of Oregon State Implementation Plan, 40 CFR 52, published on June 24, 1980 (45 FR 42265).

3. Prevention of Air Quality Deterioration, 40 CFR 51.24 published on June 19, 1978, and revised on August 7, 1980 (45 FR 52676).

4. Alabama Power Company, et al, Petitioners vs. Environmental Protection Agency, et al, Respondents, Sierra Club, et al, Intervenors; (No. 78-1006) U.S. Court of Appeals for the District of Columbia, Decided December 14, 1979.

5. Emission Offset Interpretative Rule, 40 CFR 51 Appendix S, published on January 16, 1979 (44 FR 3282).

Fiscal Impact Statement

The fiscal impact of these proposed rule revisions on major sources of air pollution is expected to be minimal. Some additional resource impacts may be expected on DEQ to adminster the offset/banking provisions and to assume the Prevention of Significant Deterioration program from EPA.

AQ0042.A (n) (1)

VICTOR ATIYEH
GOVERNOR

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. O, June 5, 1981, EQC Meeting

Water Quality Rule Adoption - Amendment of Water Quality Permit Fees (OAR 340-45-070, Table 2) to Increase Revenues for 1981-83 Biennium

Background and Problem Statement

Oregon Revised Statutes (ORS) 468.065(2) authorizes the Commission to establish a schedule of permit fees for water permits. The first fee schedule was adopted by the Commission April 30, 1976. A three-part fee was adopted, consisting of an application filing fee, an application processing fee, and an annual compliance determination fee.

The Legislature had admonished the Department to adjust fees proportionally to the general fund inflation. In order to meet the fee revenue requirements of the 1981-83 biennium, an increase in fee revenues of about $54,000 is required.

On March 3, 1981, the Commission authorized the Department to hold a public hearing on the proposed fee increase. The hearing was held April 16, 1981. The hearing officer report is attached as Attachment 2.

Alternatives and Evaluation

The permittees who submitted testimony were against an increase in fees. That alternative has been reviewed and rejected because it would require all increased costs due to inflation to be accounted for in general fund revenues. The fee revenues should carry their fair share of the inflation-caused increases.

Another alternative that was considered was an across-the-board percentage increase in all three parts of the fee schedule. That alternative was rejected because the permit processing fees were selectively increased the last biennium.

The annual compliance determination fees have never been increased since they were adopted in 1976. An increase of about 25 percent and then rounding to the nearest $25 will provide the additional revenue required. This alternative appears to be the most satisfactory and equitable and was the alternative distributed to the public and permittees for their review.

The public notice of a hearing was sent on March 16, 1981. A copy was sent to each of the 950 permittees in addition to the standard rule making mailing list. It was also published in the Daily Journal of Commerce and the Secretary of State Bulletin. In response to the notice we received ten letters. All of them objected to any increase in fees. The public hearing was held at 10 a.m., April 16, 1981, at the Department's conference room. No one appeared at the hearing.

Summation

1. ORS 468.065(2) authorizes the Commission to establish a schedule of fees for issuing and enforcing water permits.

2. A three-part fee was adopted April 30, 1976.

3. The Legislature expects the Department to adjust the fee revenues proportional to general fund inflation.

4. The Governor's recommended 1981-93 biennium agency budget requires an increase in water permit fee revenues of about $54,000.

5. The Department proposes to increase the annual compliance determination fee in order to raise the required revenue.

6. The Department received only 10 letters in response to the fee increase public notice. All responses were against a fee increase. None of them suggested an alternative.

Director's Recommendation

Based on the summation, the Director recommends that the Commission adopt the new fee schedule which proposes to modify Table 2 of OAR 340-45-070.

Bill
William H. Young

Attachments: 4

Attachment 1. Revised Fee Schedule
Attachment 2. Hearing Officer Report
Attachment 3. Statement of Need
Attachment 4. Fiscal Impact Statement

Charles K. Ashbaker:l
WL736 (1)
229-5325
May 8, 1981

OREGON ADMINISTRATIVE RULES FOR
PROPOSED REVISED COMPLIANCE DETERMINATION FEES
CHAPTER 340, DIVISION 45

TABLE 2
(340-45-070)

PERMIT FEE SCHEDULE

(1) Filing Fee. A filing fee of $25 shall accompany any application for issuance, renewal, modification, or transfer of an NPDES Waste Discharge Permit or Water Pollution Control Facilities Permit. This fee is non-refundable and is in addition to any application processing fee or annual compliance determination fee which might be imposed.

(2) Application Processing Fee. An application processing fee varying between $50 and $1,000 shall be submitted with each application. The amount of the fee shall depend on the type of facility and the required action as follows:

(a) New Applications

[(1)] (A) Major industries[1] -- $1000
[(2)] (B) Minor industries -- $500
[(3)] (C) Major domestic[2]-- $500
[(4)] (D) Minor domestic -- $250
[(5)] (E) Agricultural -- $250
[(6)] (F) Minor nondischarging -- $175

(b) Permit Renewals (including request for effluent limit modification:

[(1)] (A) Major industries[1]-- $500
[(2)] (B) Minor industries -- $250
[(3)] (C) Major domestic[2] -- $250
[(4)] (D) Minor Domestic -- $125
[(5)] (E) Agricultural -- $125
[(6)] (F) Minor nondischarging -- $100

(c) Permit Renewals (without request for effluent limit modification):

[(1)] (A) Major industries[1] -- $250
[(2)] (B) Minor industries -- $150
[(3)] (C) Major domestic[2] -- $150
[(4)] (D) Minor domestic -- $100
[(5)] (E) Agricultural -- $100
[(6)] (F) Minor nondischarging -- $100

(d) Permit Modifications (involving increase in effluent limitations):

[(1)] (A) Major industries[1] -- $500
[(2)] (B) Minor industries -- $250
[(3)] (C) Major domestic[2] -- $250
[(4)] (D) Minor domestic -- $125
[(5)] (E) Agricultural -- $125
[(6)] (F) Minor nondischarging -- $100

(e) Permit Modifications (not involving an increase in effluent limits): All categories -- $50

(f) Department Initiated: Modifications[3] -- $25

(3) Annual Compliance Determination Fee Schedule:

(a) Domestic Waste Sources (Select only one category per permit) (Category, Dry Weather Design Flow, and Initial and Annual Fee):

[(1)] (A) Sewage Discharge -- 10 MGD or more -- [$750] $950
[(2)] (B) Sewage Discharge -- At least 5 but less than 10 MGD -- [$600] $750
[(3)] (C) Sewage Discharge -- At least 1 but less than 5 MGD -- [$300] $375
[(4)] (D) Sewage Discharge -- Less than 1 MGD -- [$150] $200
[(5)] (E) No scheduled discharge during at least 5 consecutive months of the low stream flow period -- 1/2 of above rate
[(6)] (F) Land disposal -- no scheduled discharge to public waters -- [$50] 1/4 of above rate or $75, whichever is greater.
[(7)] (G) Chlorinated septic tank effluent from facilities serving more than 5 families and temporarily discharging to public waters -- [$50] $75
[(8)] (H) Chlorinated septic tank effluent from facilities serving 5 families or less and temporarily discharging to public waters -- [$30] $50
[(9)] (I) Chlorinated septic tank effluent from facilities serving more than 25 families or 100 people and temporarily discharging to waste disposal wells as defined in OAR 340-44-005(4) --[$30] $50

(b) Industrial, Commercial and Agricultural Sources (Source and Initial and Annual Fee[4]:

(For multiple sources on one application select only the one with highest fee)

[(1)] (A) Major pulp, paper, paperboard, hardboard, and other fiber pulping industry discharging process waste water other than log pond overflow -- [$950] $1200

[(2)] (B) Major sugar beet processing, potato and other vegetable processing, and fruit processing industry discharging process waste water -- [$950] $1200

[(3)] (C) Fish Processing Industry:

[(a)] (i) Bottom fish, crab, and/or oyster processing -- [$75] $100

[(b)] (ii) Shrimp processing -- [$100] $125

[(c)] (iii) Salmon and/or tuna canning -- [$150] $200

[(4)] (D) Electroplating industry with discharge of process water (excludes facilities which do anodizing only):

[(a)] (i) Rectifier output capacity of 15,000 Amps or more -- [$950] $1200

[(b)] (ii) Rectifier output capacity of less than 15,000 Amps -- [$450] $575

[(5)] (E) Primary Aluminum Smelting -- [$950] $1200

[(6)] (F) Primary smelting and/or refining of non-ferrous metals utilizing sand chlorination separation facilities -- [$950] $1200

[(7)] (G) Primary smelting and/or refining of ferrous and non-ferrous metals not elsewhere classified above -- [$450] $575

[(8)] (H) Alkalies, chlorine, pesticide, or fertilizer manufacturing with discharge of process waste waters -- [$950] $1200

[(9)] (I) Petroleum refineries with a capacity in excess of 15,000 barrels per day discharging process waste water -- [$950] $1200

[(10)] (J) Cooling water discharges in excess of 20,000 BTU/sec. -- [$450] $575

[(11)] (K) Milk products processing industry which processes in excess of 250,000 pounds of milk per day and discharges process waste water to public waters -- [$950] $1200

[(12)] (L) Fish hatching and rearing facilities -- [$75] $100

[(13)] (M) Small placer mining operations which process less than 50 cubic yards of material per year and which:

[(a)] (i) Discharge directly to public waters -- [$50] $75

[(b)] (ii) Do not discharge to public waters -- $None

[(14)] (N) All facilities not elsewhere classified with discharge of process waste water to public waters -- [$150] $200

[(15)] (O) All facilities not elsewhere classified which discharge from point sources to public waters (i.e. small cooling water discharges, boiler blowdown, filter backwash, etc.) -- [$75] $100

[(16)] (P) All facilities not specifically classified above [(1-12)] (A-M) which dispose of all waste by an approved land irrigation or seepage system -- [$50] $75

1 Major Industries Qualifying Factors:

-1- Discharges large BOD loads; or
-2- Is a large metals facility; or
-3- Has significant toxic discharges; or
-4- Has a treatment system which, if not operated properly, will have a significant adverse impact on the receiving stream; or
-5- Any other industry which the Department determines needs special regulatory control.

2 Major Domestic Qualifying Factors:

-1- Serving more than 10,000 people; or
-2- Serving industries which can have a significant impact on the treatment system.

3 Those Department initiated modifications requiring payment of fees are those requiring public notice such as:

-1- Addition of new limitations promulgated by EPA or the Department.
-2- Addition of conditions necessary to protect the environment.

Changes in format, correction of typographical errors, and other modifications not requiring public notice, require no fee.

4 For any of the categories itemized above [(1-14)] (A-O) which have no discharge for at least five consecutive months of the low stream flow period, the fee shall be reduced to 1/2 of the scheduled fee or [$50] $75 , whichever is greater.

For any specifically classified categories above [(1-12)](A-L) which dispose of all waste water by land irrigation, evaporation, and/or seepage, the fee shall be reduced to 1/4 of the scheduled fee or [$50] $75 , whichever is greater.

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

ATTACHMENT 2

MEMORANDUM

To: Environmental Quality Commission

From: Charles K. Ashbaker, Hearing Officer

Subject: Report of Testimony Received Regarding Public Hearing Held to Receive Testimony on Proposed Water Quality Permit Fee Increase

Procedures Followed

A public notice was mailed March 16, 1981, to the Department rulemaking mailing list. A copy of the notice was also mailed to each permittee.

The notice was published in the Daily Journal of Commerce and the Secretary of State Bulletin.

A hearing was scheduled for 10 a.m. April 16, 1981, at the 14th floor conference room in the Yeon Building. No one appeared at the hearing. The hearing officer remained until 10:45 a.m. before leaving. A poster was then left at the entrance directing anyone who had testimony to present to the Water Quality Division on the second floor.

Summary of Testimony

Although no one attended the hearing, the Department received eleven letters prior to the hearing. One letter requested more information, nine letters objected to any increase in fees, and one letter indicated they would have no objection to the increase if they could receive more service from the regional office. Those submitting the letters were as follows:

1. Mr. H. Dean Pape' of Pape' Bros. Inc., objected to any increase in fees.

2. John Knutson, Knutson Log Storage, stated that because of the current economy any increase in revenue should come from general funds.

3. John Knutson, Knutson Towboat Company, Inc., same as above.

4. Glory D. Coffey stated she is opposed to any fee increase. The Department must live within its budget.

5. City of Elgin is opposed to any increase.

6. City of Chiloquin is opposed to any increase.

7. City of Eagle Point is opposed to any increase.

8. Pierre Marchand Seafoods, Inc. indicates that present fees should be adequate.

9. Threshold Construction Co., Inc. suggests the Department tighten its belt rather than increase fees.

10. Unified Sewerage Agency of Washington County requested more information about the necessity of a fee increase.

11. City of Pendleton said they would not object to the increase if it would add more personnel to the Eastern Regional Office. They think we are spread too thin.

This concludes that summary of testimony received and is respectfully submitted to the Environmental Quality Commission for their consideration.

Charles K. Ashbaker, Hearing Officer

CKA:l
229-5325
April 17, 1981
WL734 (1)

ATTACHMENT 3

Agenda Item No. _____, June 5, 1981, EQC Meeting

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(7), this statement provides information on the Environmental Quality Commission intended action to adopt a rule.

(1) Legal Authority

ORS 468.065(2) authorizes the Commission to establish a schedule of permit fees.

(2) Need for the Rule

The Department of Environmental Quality budget calls for an increase in fee revenues of about 14% to account for inflation since the fee schedule was last changed in 1979.

(3) Principal Documents Relied Upon in This Rulemaking

a. OAR 340-45-070 Table 2 - Permit Fee Schedule
b. ORS 468.065(2)
c. Current printout of water quality permittees

CKA:l
WG591 (1)
May 8, 1981

ATTACHMENT 4

Agenda Item --- June 5, 1981, EQC Meeting

Fiscal Impact of Rulemaking

The present water permit fees consist of a three part fee schedule; filing fees, permit processing fees, and annual compliance determination fees. The original fees were established in 1976.

The Environmental Quality Commission intends to modify Table 2 of OAR 340-45-070 by increasing the Annual Compliance Determination Fees. These fees have not been increased since they were established in 1976.

The only increase in fees since they were established was an increase in the permit processing fees in 1979. The proposed increase in annual compliance determination fees is to meet an inflationary increase in program costs. There will be no program expansion. In fact there has been a program reduction as part of the reduced level budget.

This increase in fees will impact all permitted facilities which are required to pay an annual compliance determination fee. The increase ranges from 25% to 50%, with an average of about 31%. This amounts to $25 per year for some of the minor sources to a maximum of $250 per year for major industries. Since the fee increase for small industries and cities is only $25 it should not have much of a budget impact.

CKA:ol
WO590 (1)
May 8, 1981

VICTOR ATIYEH
GOVERNOR

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. P, June 5, 1981, EQC Meeting

Proposed Adoption of Geographic Area Rule for Lands Overlaying the Alsea Dunal Aquifer, Lincoln County, OAR 340-71-400(3).

Background and Problem Statement

During the last few years Lincoln County and Department staff have been concerned about the continued installation of septic tank - drainfield systems in the Bayshore-Sandpiper Subdivisions located in Lincoln County north of Waldport. The reason for concern is that the subdivisions overlay the Alsea Dunal Aquifer.

The Alsea Dunal Aquifer has been identified as an aquifer with a potential use as a drinking water source for the area. Based on topography and geology and the known groundwater conditions of the area, its dune sheet has been divided into four groundwater flow basins, Buckley Creek Basin, Hidden Lake Basin, Bayshore Basin, and the South Spit Basin (see Attachment A, Rohleder and Assoc. Report). From this preliminary analysis, only in the central portion of the dune sheet within the Bayshore Flow Basin does a potential exist for groundwater development as a community domestic water supply source. The specific yield of this flow basin is relatively small, believed to have a maximum yield of 300,000 gallons per day. The aquifer presently is not utilized for drinking water supplies.

The subdivisions were platted in the 1960's into urban density lots. In the Bayshore subdivision typical lot sizes range between 5,000 to 7,500 square feet. In the Sandpiper subdivisions typical lot sizes range between 9,500 to 11,000 square feet. There are scattered, developed lots throughout the subdivisions with approximately 300 homes built out of a total of 1,019 lots. In addition, there is a 90-unit motel/condominium complex. The entire development covers approximately 305 acres. An aerial photo of the subdivisions is included under Attachment B.

The southern part of the Alsea Dunal Aquifer where the Bayshore-Sandpiper Subdivisions are located has experienced the greatest problems of rule compliance due to high groundwater tables. Standard septic tank-drainfield systems will function in the rapidly draining sands; however, short-circuiting and inadequate treatment of the sewage before it enters the groundwater occurs with this type of sewage disposal system.

In response to Staff concerns for the groundwater, the Department requested the county to re-evaluate past site approvals in the southern part of the development. This action caused the Department, in conjunction with Water Resources Department personnel, to conduct an on-site evaluation of the entire Bayshore-Sandpiper development. During that review several backhoe test pits were excavated. Groundwater was encountered at approximately five (5) feet in the northern portion of Sandpiper Subdivision. The test pits dug in the southern part of Bayshore Subdivision encountered no groundwater to ten (10) feet. The soil is unconsolidated dunal sand. Past observations through several winter-summer seasons by Lincoln County staff have shown prediction of water levels by conventional soil profile examination to be unreliable. The most reliable method for predicting water level has been actual winter observations. The results of the Department's field observations were finalized in a report. A copy of that report entitled Alsea Dunal Aquifer is attached. (Attachment C).

Alternatives

Department staff have identified four alternatives for the Commission to consider in allowing further development on the platted lots within the Bayshore-Sandpiper Subdivisions.

1. Direct staff to adopt the highest and best practical treatment standards to protect the Alsea Dunal Aquifer for future drinking water purposes.

   This alternative would require the construction of sewage collection lines and a sewage treatment plant with discharge to Alsea Bay. The estimated cost (Attachment D) to construct collection lines, pump stations and treatment plant for a 0.35 mgd plant would be $3,025 to $4,535 per lot. Adoption of this alternative could place a moratorium on future building in the area until the sewage system is constructed and placed in operation.

2. By rule require the installation of pressurized drainfields, seepage beds and sand filter systems. These systems could be used effectively on the majority of the remaining lots. Proposed Rule 340-71-400(3), which would implement this option, is Attachment E.

   Results from experimental systems that have been monitored for nitrates indicate a 50-percent reduction in nitrate levels after treatment with pressurized drainfields and sand filter systems. Staff estimates nitrate levels in the aquifer would increase to a range between 4 to 8 mg/l with the adoption of these system standards.

Current estimated costs for pressurized drainfields and seepage beds are $2,000 to $2,500. Sand Filter systems would range from $4,000 to $5,000.

Staff feels the on-site pressurized drainfield, seepage bed and sand filter disposal systems alternative is the most reasonable and practical since it recognizes the present development that has occurred and will allow development on the remaining lots of record.

Estimated yield of the entire Alsea Dunal aquifer is between 0.5 mgd to 1.5 mgd. From Rohleder's analysis, the potential for groundwater development exists only in the Bayshore Flow Basin, which has a maximum yield of 300,000 gallons per day. There are no foreseeable plans to use the aquifer as a drinking water source. Existing and projected needs through year 2000 can be met from surface streams according to officials from the Seal Rock Water District.

3. Direct staff to allow continued development on conventional septic tank and drainfield systems up to 500 single-family unit equivalents, which equates to an input of nitrate-nitrogen of from 4 mg/l to 6 mg/l, coupled with an order to install sewers and provide sewage treatment as soon as practicable but by no later than December 31, 1985.

4. Direct staff to allow continued development with standard septic tank-drainfields.

   This alternative would offer the cheapest option to the landowners. These systems would cost $1,000 to $2,000. It, however, would pose the greatest risk of contaminating the aquifer with high levels of nitrates.

   Nitrate levels would be expected to rise to 7 to 16 mg/l range. Present nitrate levels are less than 1 mg/l. U. S. Environmental Protection Agency (EPA) drinking water standards have established 10 mg/l nitrate-nitrogen as the upper limit.

At its January 30, 1981 meeting, the Commission authorized a public hearing to take testimony on the proposed Rule referred to in Option 2 above. (Attachment F.)

After proper notice in the Secretary of State's Bulletin and by mailing to the Department's on-site sewage disposal mailing list, a public hearing on the proposed Rule was held at Bayshore on April 30, 1981. A hearing officer's report is attached (Attachment G).

The testimony received at the public hearing, in summary, indicated the following:

(a) Those testifying were in agreement that the Alsea Aquifer is inadequate in size to warrant protection.

(b) The Seal Rock Water District is not interested in developing a water source with less than 1,000,000 gallons per day flow, as the Alsea Aquifer apparently has.

(c) The two-bedroom limitation in the proposed rule was opposed as too restrictive. As a result of the testimony, the proposed rule has been modified to provide for a maximum of three bedrooms per residence.

(d) The need for a system replacement area was questioned.

(e) Continued development with standard gravity septic tank-drainfield systems (Option No. 4 as contained in this report), was supported.

All of the written comments (see Attachment G, Hearing Officer's Report) are of particular importance and should be carefully reviewed. Comments ranged from suggestions on how to alter the proposed rules to continue with the installation of conventional septic tank and drainfield systems to statements that such a groundwater resource must be protected and adopting such rules would conflict with restoring and maintaining the quality of public waters.

Conclusions and Summation

The Department has evaluated the testimony received and concludes as follows:

1. The Bayshore-Sandpiper Subdivisions are platted for urban densities. Existing practices of subsurface sewage disposal are inadequately treating the sewage before it enters the groundwater. The lots were purchased in good faith and the property owners invested in a subdivision which was platted and approved in the early 1960's under completely different subsurface sewage disposal rules, land use goals, and other circumstances.

2. The Lincoln County Comprehensive Plan, Ordinance #138, Air, Land and Water Quality Resources Policy and states:

   "Lincoln County should cooperate in the indentification and monitoring of known aquifers. The quality of aquifers capable of augmenting domestic water supplies shall be protected."

The lands overlaying the Alsea Dunal Aquifer are also within the city of Waldport Urban Growth Boundary.

3. The Alsea Dunal Aquifer is relatively small in volume and yield potential. No individual or community domestic water supply wells presently exist. Estimated yield of the aquifer is between 0.5 mgd to 1.5 mgd. On a preliminary analysis, the potential for groundwater development exists only in the Bayshore Flow Basin, which has a maximum yield of 300,000 gallons per day. The aquifer is not proposed to be used as a drinking water source through the year 2000. Surface streams are expected to be the principal drinking water sources through the forseeable future.

   Nevertheless, there is conflicting information as to water supply considerations (see Attachment G, letter from Seal Rock Water District, Mr. Heinz Neuman; and letter from Lincoln County Planning Department, Mr. Craig Hall). The need for the future use as a public water supply is, therefore, neither established nor ruled out. However, the density of the developments on top of the aquifer makes the use undesirable except as a last resort.

4. Allowing development using most protective on-site sewage disposal systems will lower groundwater quality somewhat; but based on present knowledge and ability to predict nitrate-nitrogen concentrations, usage of these systems will not preclude future use for drinking water. The Department of Land Conservation and Development indicated that continued development on the aquifer could be a conflicting use unless standards are developed that ensure a desired degree of resource protection.

   Calculations shown in Attachment H shows nitrate-nitrogen concentration could range from 3.5 to 8.2 mg/l. It should be noted that these calculations are based on year-around occupancy with flows of 375 gal/day/dwelling. Experience through the experimental systems program indicates that these assumptions are very conservative. The estimated levels are, therefore, "worst" case results.

5. Construction of a sewerage system would be more protective of the groundwater. Costs, however, appear likely to be higher.

6. No public agency exists to implement a sewerage facility plan. Since the area is within the Waldport Urban Growth Boundary, creating a separate special purpose sewage agency would be questionable.

7. If a determination is made in the future to utilize the aquifer for domestic drinking water supply purposes, the aquifer will clear in 3-7 years after a sewerage facility system is built.

8. If a geographic region rule allowing the use of the most protective on-site technology is adopted, the rule should recognize the potential for requiring construction of sewage collection and treatment facilities in the event uses or quality conditions of the groundwater change.

Director's Recommendation

Based upon the Conclusions and Summation, it is recommended that the Commission adopt Proposed Rule, OAR 340-71-400(3), Geographic Area Rule for Lands Overlaying Alsea Dunal Aquifer, Lincoln County, as set forth in Attachment E.

Michael Downs
for
William H. Young

Attachments:
A. Rohleder and Assoc. Report
B. Aerial Plato of Alsea Dunal Area
C. Report, Alsea Dunal Aquifer, April 30, 1981
D. Estimated Cost for Construction of Sewage Facilities for Lands Overlaying the Alsea Dunal Aquifer
E. Proposed Rule 340-71-400(3)
F. Agenda Item No. R, January 30, 1981, EQC Meeting
G. Hearing Officer's Report of Public Hearing
H. Nitrate-Nitrogen Loading Rate Calculations
I. Statement of Need for Rule

R. E. Gilbert:o
229-5292
5/22/81

XO342 (2)

ATTACHMENT A

Rohleder and Assoc. Report

ATTACHMENT A

ROHLEDER ASSOC., INC.
ENGINEERING GEOLOGY
P. O. BOX 211 WALDPORT, OR 97394

1ST DRAFT
8-19-80
JRR

ALSEA DUNE SHEET: GROUNDWATER RECONNAISSANCE

The Alsea Dune Sheet extends along the coast, north of the mouth of the Alsea River for a distance of approximately 14,000 feet (2.6 miles). The maximum width of the dune sheet is 2,200 feet (0.4 miles). The dune area is bounded on the east by a series of small coastal lakes. The total surface area of the dune sheet is approximately 430 acres.

Previous Work

Extensive studies have been made of the larger dune sheets along the Oregon coast at Coos Bay, Florence, and in the Astoria-Seaside area (see references). No detailed groundwater investigations have been conducted on the Alsea Dune Sheet. The area is mentioned by Schlicker, 1973, P. 45:

> "The sand dune area west of U.S. Highway 101 extending nearly 3 miles from Driftwood Beach Wayside south to Alsea Bay probably contains the largest supply of groundwater in Lincoln County. The dunes have appreciable thickness and aerial extent, and in large part are bounded by small lakes abutting their east flanks. Within this area, the dune deposits situated between Hidden Lake and Lotus Lakes should be able to sustain wells of considerable production. Unfortunately, however, much of the groundwater is suspect, if not unfit for domestic purposes, due to the rapidly increasing habitation and use of septic tanks in much of the dune area."

Frank, 1977, P. 10 also mentions the Hidden Lake area:

> "The main dune deposits of the area occur in the South Beach area south of Yaquina Bay and in the area of Hidden Lake near Alsea Bay. Because the dune deposits are generally thin and of small extent, they cannot (as in other parts of the Oregon coast) be relied on to supply large volumes of water. With the exception of a small area in South Beach, the dune sands rarely exceed a thickness of about 15 (5m)

and are deposited directly on marine terrace material. At the contact of the dune sands with the terrace material, water from the dune sands seeps to clifflike faces of marine terraces, at the bottom of which form streamlets whict drain to the ocean. Although the dune sands become partly saturated from the infiltration of winter precipitation, the sands lose much of that water by seepage in late spring and early summer. Consequently, in most cases, dune deposits of the area can be relied on for domestic supplies only. Because of housing in most of the dune area, pollution from septic tanks may cause the water to be unfit for domestic use."

Geologic Setting

The dune sheet consists of a thin layer of blow sand overlying old marine terrace deposits. The marine terrace deposits are chiefly partially cemented sandstones believed to be ancient dune deposits (old stabilized dunes).

The dune sheet is relatively thin (less than 20 feet) in the north and somewhat thicker (as much as 40 to 60 feet) in the south. The topography has been somewhat modified for development, especially in the Bayshore subdivision area. Most of the blow sand has been stabilized by vegetation.

Groundwater

Precipitation on the dune sheet is the principal source of groundwater in the aquifer, although some inflow from the Hidden Lake area may occur during periods of low rain fall.

Most of the precipitation infiltrates the dune sand, although some is lost to evaporation and some is utilized by plants. Water infiltrating the dune sheet passes downward until restricted by the relatively impermeable terraced deposits (sandstone), which lie below the sand. Thus a zone of saturation (water table) above the terrace deposits is formed. Water in the saturation zone moves downslope and outflows, or discharges, along the beach or in the canal near the spit.

In an attempt to define the groundwater flow characteristics of the area, the dune sheet was divided into four flow basins based on topography and geology and the known groundwater conditions of the area. These basins are separated by groundwater divides which generally follow ridges or bedrock contacts.

The Buckley Creek Basin is 90 acres in size and generally includes the eastern slopes of the dune sheet which drain into Buckley Creek, the small lakes, or into the unnamed creek west of the Highway 101 bridge. Most of the groundwater flow is downslope into the creek drainage which flows to the north of Hidden Lake. Groundwater storage capacity is relatively low due to the shallow depth of the dune sheet in this area.

Hidden Lake Basin is 70 acres in size. It includes the portion of the dune sheet in the Sandpiper subdivision adjacent to the beach, and the undeveloped area to the north. Groundwater flows from the ridge and Hidden Lake towards the ocean. Discharge is relatively rapid and storage capacity is low due to the thinness of the dune sheet. Some recharge from the Buckley Creek Basin, through Hidden Lake may occur during periods of low precipitation.

The Bayshore Basin is 230 acres in size. In the northern and eastern portions of the basin (90 acres) the dune sheet is relatively thin; however, in the southern portion of the basin (140 acres) the dune sheet may be as thick as 40 to 60 feet. Although a major portion of the dune sheet is below sea level, the inflow of fresh water from upslope maintains sufficient hydraulic head to prevent infiltration of sea water.

Flow within this basin is from the north and northeast, with most of the discharge into the canal. During the wet season the

surface of the watertable may be at or near the ground surface in the southern portion of this basin. Some discharge onto the beach occurs, especially during periods of maximum precipitation.

The South Spit Basin is 40 acres in size. It is the portion of the dune sheet south of the mouth of the canal. This is probably the thickest portion of the dune sheet. Flow is from the south to the north with most of the discharge into the canal. During periods of maximum precipitation some groundwater is discharged onto the beach on both the ocean and bay sides of the spit.

Potential For Groundwater Development

Of the four groundwater basins contained in the Alsea Dune Sheet, the Bayshore Basin has the greatest potential for groundwater development, due to its larger size and the relative thickness of the dune sheet in the south portion of the basin. In order to produce groundwater the aquifer must have sufficient inflow (recharge) potential and storage capacity to justify the economic expenditure needed to develop the source.

Recharge Potential:

Based on data contained in Sweet's 1977 study of the Clatsop plains (page 13) and assuming an annual rainfall of 80 inches per year, the recharge potential of the dune sheet is 2,400 acre feet per year per square mile. Since the Bayshore Basin is a total of 230 acres (.36 sq miles) the calculated recharge potential for the basin is 862 acre feet per year. Since a portion of the potential would be lost through discharge onto the beach and allowance must be made for low rainfall years, the dependable recharge estimate would be on the order of 50% of the maximum, or 430 acre feet per

year (1.15 ac. ft/day).

Storage Capacity and Specific Yield:

The storage capacity of the dune sheet can be calculated by multiplying the total saturated volume by the porosity of the sand. The specific yield is the portion of the storage capacity which can be removed from the aquifer.

Based on data contained in Sweet's 1977 study of the Clatsop plains (page 11), the following calculations can be made.

Porosity:0.3

Specific yield:20%

Portion of "Bayshore Flow Basin" with thick dune sands: 140 ac.

Assume average saturated thickness of 40 feet

40 feet X .3 X 140 acres = 1680 acre feet of storage

.2 X 1680 ac ft = 336 acre feet of yield

336 ac ft per year equals 0.93 acre feet per day

or

Approximately 3000,00Ø gallons per day

Thus the Bayshore Basin could yield approximately 3000,00Ø gallons of water per day which would be recharged at a slightly higher rate (based on the previously calculated recharge rate of 1.15 ac ft or 375,000 gallons per day).

This is, of course, assumes that there are no serious adverse effects from drawdown (which can also be calculated to be 6 to 12 feet : Frank, 1970, P. 24).

It also assumes that it would be economical to develop a well system for this amount of water supply.

It also assumes that the water supply is needed. Both the City of Waldport and the Seal Rock Water District indicate that

they have sufficient reserve supplies in their existing sources to meet projected demand through the end of this century. (see attached letter from Heinz Neuman dated 25, June, 80 and the Robert E. Meyer, 1978 water supply study.)

Water Quality

Many studies of water quality in the larger coastal dune sheets have been made. Generally quality is good except for high iron and total dissolved solids (and chloride adjacent to the beach). In areas of septic system use dissolved nitrates and bacteria pollutants are a potential problem.

Six shallow test wells were dug in May of 1980 to test the quality of the groundwater in the Alsea Dune Sheet.

Wells numbers 1 & 2 were placed in the portion of the Hidden Lake Basin which is undeveloped. The water in these wells should not be influenced by septic system discharge.

Well number 3 was placed near the southern end of the Bayshore Basin.

Well number 4 was placed approximately 20 feet from an existing active septic system and in an area of relatively high density where nearly half of the lots have existing dwellings. (The density of existing dwellings in this small area is 11 dwellings in 6.8 acres, or 1.6 houses per acre.)

Well number 5 was placed in the flow channel near the discharge area of the South Spit Basin.

The wells were pumped to stabilize the flow and remove silt and sand disturbed during placement. Water samples were collected from each well and tested by the "Water Lab" in Salem on June 1, 1980.

(See Appendix.)

No detectable amount of fecal coliform was found in any of the samples.

Total dissolved solids were sumewhat elevated in the two samples from near Hidden Lake, and the one adjacent to the bay.

Nitrogen-nitrate concentrations were somewhat elevated in samples #4 & #5 (0.4 & 0.6 mg/lt respectively) although they were well within the EPA recommended maximum of 10 milligrams per liter.

Much discussion has been made about the possible adverse effect of septic system discharge on the water quality in the Alsea Dunes Sheet. High $N\text{-}NO_3$ concentrations in the groundwater seem to be the most frequently mentioned pollutants.

Based on the calculated data in Sweet's 1977 study, in order to prevent $N\text{-}NO_3$ concentrations in excess of 5 mg/L it would be necessary to limit density to 0.83 houses per acre.

The density in the Bayshore subdivision is presently 0.89 houses per acre.

If Sweet's calculations are valid the $N\text{-}NO_3$ content should be approaching 5 mg/L in the whole dune sheet and especially the Bayshore and South Spit Basins. The water quality test results do not, however, show concentrations nearly that high (test results: $N\text{-}NO_3$ maximum, 016 mg/L).

The Oregon Department of Environmental Quality is currently funding Mr. Sweet in a detailed water quality monitoring program in the Seaside-Gearhart dune sheet. Although the data has not been completely processed at this time, personal communications with Mr.

Sweet, indicate that based on measured data, he will be recommending a somewhat higher density be allowed in the Seaside-Gearhart area.

If the $N\text{-}NO_3$ concentration is directly proportional and a density of 0.7 houses per acre yields a maximum concentration of 0.6 me/L then a density of 3.35 houses per acre (platted density of Bayshore subdivision; Sandpiper is 2.67 houses per acre) would yield a maximum $N\text{-}NO_3$ concentration of slightly under 3 mg/L (well within the recommended DEQ standards).

Where a zone of areation between the disposal trench and the groundwater table does not occur the possibility of bacterial contamination exists. The current DEQ regulations provide for a minimum separation distance of 4 feet from the bottom of the disposal trench and the highest level attained by the watertable. (D.E.Q., 1979, P. 14)

Due to the groundwater conditions in the South Spit Basin and the Bayshore Basin, minimum separating distance cannot be met in parts of these areas.

In order to identify the areas of seasonally high groundwater tables it would be necessary to conduct a winter monitor program involving the placement of shallow wells into the dune sheet.

Areas of Concern

South Spit Basin - The area west of Alsea Bay Drive, and east of Oceania Drive.

Bayshore Flow Basin - The area east of the canal, and the area east of Oceania Drive from Catamaran Street south to Westward Ho.

Recommendations for Further Study

This study represents a reconniassance of the groundwater

conditions of the Alsea Dune Sheet. Prior to any planning for, or development of, the groundwater resources, much detailed study of the subsurface conditions must be undertaken.

20 to 30 groundwater monitor wells should be installed.

Several deep wells should be drilled for production and groundwater flow testing.

A detailed computer model of the groundwater system should be developed for use in predicting the effects of water withdrawal, and to insure that adequate supplies exist to warrant the economic investment in a water system.

In order to determine which areas in the South Spit Flow Basin and the Bayshore Flow Basin can meet the minimum separation distance (between disposal trenches and groundwater), a series of watertable monitor wells should be installed and monitored throughout the wet season. This data could be supplimented through the use of seismic and earth restivity techniques.

Summary

The Alsea Dune Sheet covers a total of 430 acres, 250 acres of which consists of a thin layer of low sand overlying older marine terrace deposits, and 180 acres of which consists of a somewhat thicker layer of blow sand.

A preliminary analysis of the geohydrology of the Alsea Dune Sheet indicates that a potential for groundwater development exists only in the central portion of the dune sheet within the "Bayshore Flow Basin".

A maximum yield of 300@,000 gallons per day of water could be obtained from the "Bayshore Flow Basin" if the assumptions

contained in this report are correct.

Water sample testing indicates that existing housing density and septic system installation does not constitute a hazard to groundwater quality.

Further investigations including flow testing and watertable monitoring is needed both to assess the water development potential and to identify areas of high groundwater hazards.

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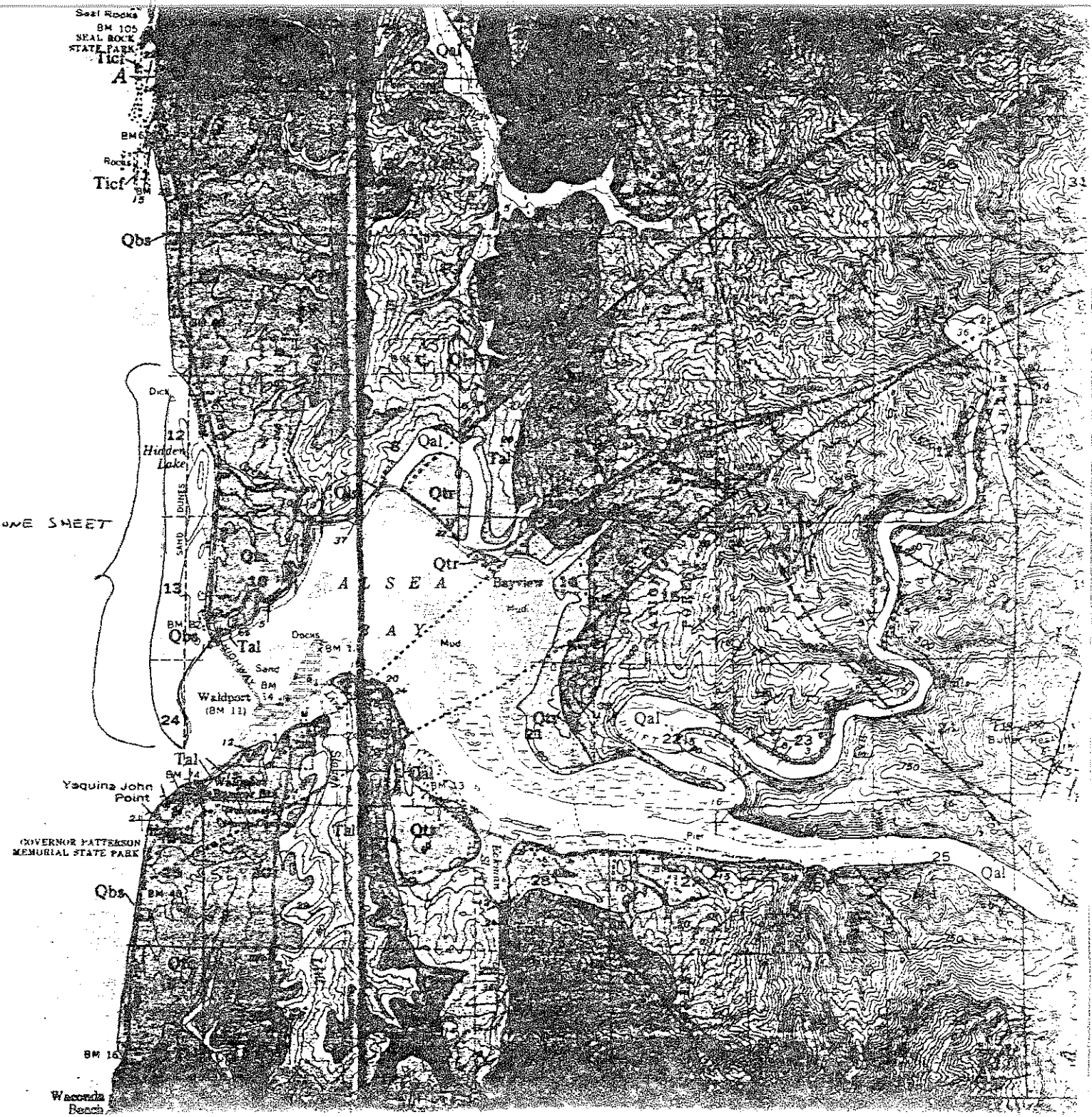
USGS MISC INV MAP I 866

SCALE 1" = 1 mi



PROPERTIES OF THE AQUIFER

...nitions used in this report are as follows:

...rmeability is the capacity of soil or rock materials to transmit water under pressure. A laboratory determination of permeability may be made by observing the rate of percolation of water through a sample of known length and cross-sectional area.

Coefficient of permeability is defined as the rate of flow of water, in gallons per day, through a cross-sectional area of 1 square foot under a hydraulic gradient of 1 foot per foot and at a water temperature of 60 degrees F.

Porosity is the ratio of the volume of the void spaces to the total volume of a rock or aggregate sample. When all voids are filled with water, porosity represents the upper limit of saturation—that is, the total water-holding capacity of soil or rock material.

Specific retention of a rock is the percentage of its volume that is occupied by water that will not drain from the rock by gravity and which therefore will not be yielded to wells.

Specific yield of a rock is the ratio of the volume of water that will drain from the rock by gravity to its own volume, stated as a percentage. The specific yield approximates the percentage of water that a given volume of rock will yield to wells. (The reader will note that the hydrologist and geologist for brevity include unconsolidated materials like sand under the inclusive term, rock.)

Coefficient of transmissibility is the rate of flow of water, in gallons per day, at the prevailing water temperature, through each vertical strip of aquifer 1 foot wide having a height equal to the thickness of the aquifer, under a unit hydraulic gradient (1 foot per foot).

Coefficient of storage of an aquifer is defined as the volume of water released from or taken into storage per unit of surface area of the aquifer per unit change in the component of head normal to that surface.

FROM BROWN 1963 GROUND WATER RESOURCES OF THE COASTAL SAND-DUNE AREA NORTH OF COOS BAY, ORE. USGS WATER SUPPLY PAPER 1610-D

Table 2.--Sources and significance of common chemical constituents of water

Constituent	Recommended limits for drinking water[1/] (mg/L)	Principal sources	Significance with respect to use
ilica (SiO_2)	--	Dissolved from almost all soils and rocks in the area.	May form scale in pipes used in zeolite-type water softeners and in boilers.
on (Fe)	0.3	Common iron-bearing minerals present in most rocks in the area.	More than about 0.3 mg/L may stain laundry and utensils. Larger quantities may color and impart objectionable taste to water.
anganese (Mn)	.05	Manganese-bearing minerals.	Same objectionable features as iron. Causes dark-brown or black stain.
alcium (Ca) and magnesium (Mg).	--	Dissolved from almost all soils and rocks in the area.	Principal causes of hardness and the major constituents in scale deposits.
odium (Na) and potassium (K).	--	do	Large amounts in combination with chloride may give water a salty taste. Excessive amounts of sodium may reduce soil permeability and limit use of water for irrigation. Potassium is essential for proper plant nutrition.
icarbonate (HCO_3)	--	All carbonate minerals in the presence of carbon dioxide especially abundant in soil and atmosphere.	In combination with calcium or magnesium, causes carbonate hardness resulting in the deposit of boiler scale when used with hot-water facilities.
ulfate (SO_4)	250	Gypsum, iron sulfides, and other sulfur compounds. Also commonly present in many industrial wastes.	Sulfates of calcium and magnesium form hard scale and are cathartic and unpleasant to taste.
hloride (Cl)	250	Chloride salts, largely NaCl, in the consolidated rocks of marine origin.	In high concentrations imparts salty taste and may accelerate corrosion in pipes and other fixtures.
luoride (F)	1.4-2.4	Occurs in trace amounts in many soils and rocks.	Optimum concentrations tend to reduce decay of children's teeth; large amounts may cause mottling of the enamel of teeth.
itrate (NO_3, as N).	10	Decayed organic matter, sewage, and nitrates in soil.	Values higher than local average may suggest pollution. An excess of 10 mg/L in drinking water may cause methemoglobinemia, the so-called "blue-baby" disease in infants.
osphate (P)	--	Occurs naturally in varying concentrations. Also found in soaps and detergents.	Phosphate is essential to all forms of life. In certain forms, phosphates can interfere with coagulation processes at water-treatment plants.
oron (B)	--	Occurs in trace amounts in some of the rocks in in the area.	Essential in small amounts for proper plant nutrition. Unsuitable in quantities of more than 4 mg/L for even the most tolerant plants.
rsenic (As)	.1	do	Prolonged consumption of water containing an excessive amount of arsenic may cause chronic poisoning.

1/ Environmental Protection Agency (1972).

21 FROM "WATER RESOURCES OF LINCOLN COUNTY COASTAL AREA, OREGON USGS OPEN-FILE REPORT 1977

BAYSHORE AND SANDPIPER SUBDIVISIONS

SUMMARY OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS DATA

	Gross Acres	Platted Lots	Existing Dwellings	Systems w/o Houses	Permit Not Comp.	App. No Act.	Denial
13-12-12-DA	8.6	28	7	3	0	5	2
13-12-12-DD	21.6	73	29	4	0	12	3
13-11-7-CC	27.4	64	16	1	1	11	0
13-11-7-CB	14.4	27	0	0	0	27	0
13-12-13-AA	28.9	120	40	3	2	28	2
13-12-13-AD	29.8	103	42	1	5	25	0
13-11-18-BC	32.1	95	33	2	2	17	3
13-12-13-DA	45.9	178	33	5	6	28	15
13-11-18-CB	12.2	54	14	0	2	7	4
13-12-13-DD	40.2	122	37	5	3	39	3
13-12-24-AA	37.2	94	10	2	6	21	9
.3-12-24-AD	35.4	111	25	3	3	29	2
TOTAL	334.	1069	286	29	29	249	39

Note: Based on information on file with the Lincoln County Sanitarian, July 1980

ALSEA DUNE SHEET

DENSITIES

Sand Dune Area 430 Acres

Portion in Small Lots 370 Acres

		LOT DENSITY		DWELLING DENSITY	
	Acres	#Lots	Lots Per Acre	# Dwellings	Houses Per Acre
Sandpiper	72	192	2.67	52	0.72
Bayshore	262	877	3.35	234	0.89
Other	36	50	1.39	14	0.39
Total	370	1119	3.0	300	0.81

ALSEA DUNE SHEET

GROUNDWATER BASIN DATA

Basin	Size	Existing Dwellings	Density: Houses/Acre
Buckley Creek	90 Acres	31	0.34
Hidden Lake	70 Acres	38	0.54
Bayshore	230 Acres*	199	0.87
South Spit	40 Acres	32	0.8
Total	430	300	

* Includes: 90 acres - shallow dune sand deposits over sandstone
140 acres - deeper dune sand deposits

SEAL ROCK WATER DISTRICT
P. O. Box 195
SEAL ROCK, OREGON 97376

June 25, 1980

Chris Nelson, AICP
6550 S.W. Parkhill Dr.
Portland, OR 97201

Re: Proposed Sandpiper Shores Development.

Dear Mr. Nelson:

This is to confirm the several points of our conference of June 19, 1980 which also included Mr. Joseph P. Rohleder on referenced proposed development:

1. The district has the capacity to provide domestic water services to proposed development.

2. The district will accept conveyance of distribution system upon satisfactory completion of construction, testing and disinfection of system.

3. Possible ground water in the Bayshore/Sandpiper area is not included as a source of raw water supplies to meet districts long range planning needs! The district is not aware of any documented data pertaining to this possible ground water source that provides reliable planning information for justifying expenditure of district funds on engineering studies!

4. Interim and long range planning for additional raw water sources includes:
   a. Development of a 10 cfs application for water at Drift Creek, a tributary of the Alsea River.
   b. Participation in development of the Big Rock Creek Dam source that is included as part of the Lincoln County Comprehensive Water Development plan approved in 1974. The Bureau of Reclamation is in the process of conducting an appraisal study of this proposed dam site to serve all Central Lincoln Coun-y future water needs.

On September 17, 1979 the district submitted a written statement to the Lincoln County Planning Commission summarizing district service facilities, daily and peak day water usages, number of active users, annual growth rate, etc. to correct erroneous Planning Department data being used as a basis for staff recomendations as it pertained to the capabilities of the Seal Rock Water District to provide water services.

Sincerely,

Heinz Neuman, Executive Secretary

cc: Joseph P. Rohleder, Geologist
Oscar Granger, Lincoln County Planner

SOURCE OF SUPPLY

The City of Waldport's source can provide an ample supply of water through the year 2000. Re-evaluation of the firm available low flow estimate of 2.2 cfs for the combined flows available from Eckman Creek and the North and South Forks of Weist Creek appear to be reasonably accurate. A steady flow of 2.2 cfs would provide 1.42 MGD, still in excess of the peak daily domestic requirements of 0.72 MG for the year 2000.

Without a history of flow records on Eckman Creek, low flow estimates cannot be very precise or reliable. The need for knowing how much water is available at low flow will become more critical as the need for more water increases. Installation of permanent flow recording equipment on Eckman Creek would be valuable for future planning and management of the City's water supply. This will require the installation of a weir and a level recorder.

FROM: WATER SUPPLY STUDY 1978 ADDENDUM - ROBERT E MEYER, CONSULTANTS

ALSEA DUNE SHEET

TEST WELL LOCATIONS

	Map & Tax Lot #	Ground Elevation	Elevation of the Surface of the Water Table 6/1/80	7/12/80
1	13-12-12-DA North	49	47.2	47.0
2	13-12-12-DA South	49	47.5	46.8
3	13-12-13-DA TL 4300	17	11.4	9.5
4	13-12-13-DD TL 11400	11	3.9	3.2
5	13-12-24-AA TL 10700	10	2.8	2.0
6	13-12-24-AD TL 10700	12	2.4	2.0

(b) For preventing surging of flow through the aeration settling compartments;

(c) For providing access to each compartment or unit for spection and maintenance; and

(d) For convenient removal of solids.

(6) It shall be a part of a subsurface or alternative sewage posal system meeting the approval of the Department.

(7) No permit shall be issued for the installation of any obic sewage treatment facility unless the responsibility for ration and maintenance of it and the disposal system of ich it is a part is vested in a public entity, such as a city, nty, county service district, sanitary authority, or other blic entity which the Department determines as having per statutory authority and adequate resources to carry out h responsibility, or unless other arrangements meeting the roval of the Director have been made which will insure ntinuous and adequate operation and maintenance of the ility and disposal system. Each permitted installation shall inspected by the responsible public entity at least every ee (3) months and checked for necessary corrective intenance.

(8) A supply of parts for repair or replacement of all alled units must be locally available for the expected life of units.

[Publications: The publication(s) referred to or incorporated by rence in this rule is available from the office of Secretary of State Department of Environmental Quality.]

Stat. Auth.: ORS Ch. 454 & 468
Hist: DEQ 98, f. 9-2-75, ef. 9-25-75; DEQ 124, f. 10-29-76, ef. 11-1-76

pecial Areas

340-71-[illegible] (1) Disposal Trenches. No disposal trench shall installed where any of the following conditions are present cept as provided in section (2) below:

NOTE: Measurements are to be taken on the downhill side the test pit.

(a) An impervious layer is less than thirty-six (36) inches ow the surface of the ground. A twelve (12) inch separation st be maintained between the impervious layer and the tom point of the effective sidewall of the disposal trench.

(b) A restrictive layer is less than thirty (30) inches below surface of the ground. A six (6) inch separation must be intained between the restrictive layer and the bottom point the effective sidewall of the disposal trench.

(c) An area where the highest level attained by a perma- t water table or permanently perched water table will be hin four (4) feet of the bottom point of the effective sidewall the disposal trench, except in defined areas that have been subject of a groundwater study and where the Department determined that degradation of ground water supplies or alth hazards would not be caused. Diagram 7A shows an ceptable design where such water table will be five (5) feet or re but less than five and one-half (5-1/2) feet below the face of the ground. Water table levels may be predicted ring periods of dry weather utilizing one of the following teria:

(A) Where water movement is laterally restricted, mottling nsisting of various shades of gray and red specks, splotches, d/or tongues throughout the soil caused by alternated uration and desiccation, or dark, highly organic layers of yish low chroma layers may be found at the highest asonal level of the water table. Some soils including, but not ited to, certain salt affected soils and low iron bearing soils y not show signs of mottling even though they become turated under laterally restrictive conditions for extended riods of time.

(B) Where water movement is laterally unrestricted, and ottling is not evident, predictions of the highest seasonal level of the water table where possible shall be based on past observations by the Director or his authorized representative. If such observations have not been made, or are not conclusive, application for a permit shall be denied until appropriate observations can be performed as prescribed in subsection (1)(c)(C) of this section.

(C) Where the Department or its authorized representatives require, water level investigations shall be performed during:

(i) The winter months where mottling is present, and exact confirmation of water level is desired, or where water levels are expected, and no mottling is present or where parent material or other factors may be causing mottling.

(ii) July, August, and September in irrigated areas where elevated ground water levels are expected or where parent materials or other factors may be causing mottling.

(iii) Periods of runoff in artificially drained areas which may be subject to influence from runoff.

(d) An area where the highest level attained by a temporarily perched water table would be less than twenty-four (24) inches below the surface of the ground or would cause temporarily perched ground water to come in contact with the absorption facility's effective sidewall. Water table levels may be predicted during periods of dry weather utilizing criteria set forth in subsections (1)(c)(A), (B), and (C) of this section.

(e) Slope exceeds twenty-five (25) percent or the values in Table 4A.

(f) Where coarse grain material is located within thirty-six (36) inches of the natural ground surface and the installation and utilization of a disposal trench would cause degradation of the quality of public waters. A minimum separation distance of eighteen (18) inches shall be maintained between coarse grained materials and the bottom of the trench. Diagram 7A shows an acceptable design where coarse grain material is thirty (30) or more inches but less than thirty-six (36) inches below the natural ground surface.

(g) An area where an accumulation of surface water will occur for a period of two (2) consecutive weeks or longer.

(h) An area that has been filled or the soil has been modified, except in subdivisions or lots approved by the appropriate governing body prior to January 1, 1974, lots or parcels in rural zoning classifications designated by the county and approved by the Department, or individual lots for repair of existing systems, provided in the case of the aforesaid subdivisions or lots approved prior to January 1, 1974, the native soil and fill material shall consist of weakly structured soils such as sand, sandy loam, or loamy sand.

NOTE: Any site filled or modified must meet all provisions of these rules prior to and after filling or modification.

(i) On unstable land forms or areas influenced by unstable land forms.

(j) An area that will be covered by asphalt or concrete, or where vehicular traffic will be allowed to drive over the field after installation.

(k) An area subjected to excessive saturation due to, but not limited to, artificial drainage of ground surfaces, driveways, roads, and building roof drains.

(2) Rural Areas. For single family dwellings or other equivalent sewage flow uses permitted by the zone proposed to be constructed in certain rural zoning classifications designated by the county and approved by the Department, the installation of a disposal trench shall be considered and may be allowed where the soil profile depth to an impervious layer is less than thirty-six (36) inches, where the soil profile depth to a restrictive layer is less than thirty (30) inches, where temporarily perched water would be within twenty-four (24) inches of ground surface or would come into contact with the disposal trench, where permanently perched ground water or the permanent water table would be less than four (4) feet below

VICTOR ATIYEH
Governor

Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5209

June 25, 1980

Mr. Bill Zekan, R.S.
Permits, Utilities & Resources
Subsurface Section
Public Service Building
210 S. W. Second
Newport, OR 97365

RE: SS-Bayshore Subdivision, T13S
Lincoln County
North Coast Branch Office

Dear Bill:

This letter is a follow-up to our conversation regarding lots in Bayshore Subdivision with site approval that have, or may have, a permanent water table not meeting current rules.

There are apparently a number of lots in Bayshore that have written site approval for which system construction permits have been requested, or could be. The approvals may not have properly addressed the question of depth to permanent water table.

Comments:

1. Lots where you observe permanent water less than the rules require, even though site approval may have been granted, can't be issued system construction permits. The permit must be denied.

   ORS 454.655(4) (attached) and OAR 340-71-015(4) (attached) state that permits can only be issued if the proposed construction will be in accordance with the rules of the Environmental Quality Commission.

   The County has no authority to waive mandatory requirements of the rules. The Department also has no authority to waive rules except as provided in the variance statutes and rules.

2. Lots where you suspect a high water table will be present during the winter season without soil mottling must also be denied pending appropriate winter observation.

3. Based on the file information of water table observations, the area affected runs at least from Mackey Street south to the end of the spit and east of Oceania Drive.

4. As soon as time allows, I need to know how many permits to construct systems are in effect in the area described. It would also help to know how many systems have been finaled.

5. Permits that expire in the affected area should be treated the same as those with only site approval.

6. Although sands saturated for extended periods will show signs of mottling, I would advise not relying on the absense of water and mottling to approve a site, especially toward the south end of the spit. For example, on June 5, 1980, we checked T13S, R12W, Sec 24AD, TL 1400; beside a septic tank, in the excavation, and found water at 83 inches. There was no apparent soil mottling.

If you have any questions, please give me a call at 842-6637.

Sincerely,

John L. Smits

John L. Smits, R.S.
Environmental Analyst

JLS:lmm
Enclosures

cc: C. H. Gray, Northwest Region, DEQ
T. J. Osborne, Subsurface Section, DEQ
R. C. Paeth, Regional Operations, DEQ

WATERLAB
2609 12th S.E.
Salem, Oregon 97302
(503) 363-0473

June 9, 1980

TEST RESULTS

TO: Joe Rohleder
P.O. Box 211
Waldport, OR 97395

DATE COLLECTED: 6/1/80

COLLECTED BY: Customer

SOURCE: Test wells:

#1	P2238-80	1.8'	Depth to top of Water Table, 6/1/80 (in ft. below the surface)
#2	P2239-80	1.5'	
#3	P2240-80	5.6'	
#4	P2241-80	7.1'	
#5	P2242-80	7.2'	
#6	P2243-80	9.6'	

LAB REPORT #	Fecal Coliform*	Chloride	pH	Nitrate	Total Dissolved Solids
P2238-80	less than 1	80.1	6.525	less than 0.1	438
P2239-80	less than 1	59	5.944	less than 0.1	488
P2240-80	less than 1	54	5.955	less than 0.1	125
P2241-80	less than 1	56	6.673	0.4	158
P2242-80	less than 1	52	6.140	0.6	112
P2243-80	less than 1	38	6.265	0.21	492

*# of colonies per 100 milliliters

All amounts except pH and Fecal coliform listed in milligrams per liter.

STATE OF OREGON
Department of Environmental Quality
North Coast Branch Office 842-6637
DEPT. TELEPHONE

INTEROFFICE MEMO

TO: Bill Zekan, R.S.
Lincoln County

DATE: June 6, 1980

FROM: John L. Smits

SUBJECT: SS - Lincoln County General
Sandpiper Shores - Proposed Subdivision
T.13S., R.11W, Sec. 7, and T.13S, R.12W, Sec. 12
Movement of sand-cutting and filling
Lincoln County

On May 8, 1980, I spoke with T. Jack Osborne, Administrator of the Departments subsurface sewage disposal program regarding the above listed subdivision proposal. The developer, Gene Smith, had requested a statement of the department's position on movement of sand to render hummocky sand soil surfaces workable.

This memo will serve as a statement of our position:

1. Up to (1) one ft. of hummocky surface may be leveled to allow installation of standard subsurface waste disposal trenches. This applies to semi-stabilized sand dunes only.
2. The site cut or filled (1) ft. must meet all other subsurface rules before and after cutting or filling as related to depth to water table, slope, etc.
3. Vegetation must be removed before the sand is moved to prevent adverse effects on disposal trench operation.
4. Following sand movement, the site must immediately be revegetated with appropriate species such as European beach grass.

It will not be necessary to evaluate soil test pits on each proposed disposal system site of Sandpiper Shores. We should arrange to meet a backhoe on-site and evaluate pits located on specified landscape positions.

The developers proposal to create surveyed building sites for dwellings with disposal trench systems to serve each lot located in common area, described by recorded utility easements, is a good proposal. This type of development should serve to protect disposal trench sites from encroachment by homesites. We will not be faced with the typical problem of best homesite locations also being the best or only location for systems.

As we have indicated to Mr. Smith, one condition of subdivision approval for subsurface sewage disposal will be the requirement that a soil stabilization plan be developed in conjunction with the soil conservation service.

In my opinion, we are familiar enough with the proposed subdivision site to recommend to the Lincoln County Planning Commission that the subdivision is feasible regarding subsurface sewage disposal. The final determination of suitable areas and total lot numbers will depend on further site work.

If you have any questions, please contact me at 842-6637, or 3600 East 3rd Street, Tillamook, OR 97141.

(over)

1387

ATTACHMENT B

Aerial Photo of Alsea Dunal Area

ATTACHMENT B is too large to reproduce. It is available for review at the DEQ headquarters, 522 S. W. Fifth Avenue, Portland, Oregon.

ATTACHMENT C

Report, Alsea Dunal Aquifer, April 30, 1981

ATTACHMENT C

Department of Environmental Quality

ALSEA DUNAL AQUIFER

Public Hearing April 30, 1981

Background

In the 1960's, the Bayshore and Sandpiper (Attachment 1) subdivisions were platted within the Alsea Dune Sheet, which extends along the coast north of the Alsea River for a distance of 2.6 miles, north of Waldport in Lincoln County. Typical lot sizes ranged between 5,000 to 7,500 square feet. Consideration was given to serving the Bayshore development with sewers and a sewage treatment facility with discharging of the treated effluent to Alsea Bay. In 1969, engineering plans and specifications and a Waste Discharge Permit were approved and issued for this proposed method of handling the sewage. In late 1969, the subdivision obtained approval and proceeded developing using subsurface sewage disposal systems. In 1973, based on legislative initiative, substantial changes occurred in the subsurface sewage disposal program. During the last few years, Lincoln County and Department personnel have been concerned about the continued installation of septic tank-drainfield systems in the Bayshore-Sandpiper subdivisions. Basically, the concern centered on the existence of a shallow groundwater table and possible groundwater seeps contaminated by inadequately treated sewage.

On January 30, 1981, the Environmental Quality Commission (EQC) (Agenda Item No. R - Attachment 2) authorized a public rule-making hearing to be held in Waldport to take testimony on the question of whether to adopt a permanent geographic area rule for the lands overlaying the Alsea Dunal Aquifer area in Lincoln County, namely proposed rule OAR 340-71-400(3) as set forth in Appendix A.

Alsea Dunal Aquifer

Lincoln County, during its land use planning effort, contracted with Rohleder Assoc., Inc., Engineering Geology to conduct a reconnaissance of the groundwater conditions of the Alsea Dune Sheet. The preliminary analysis revealed the following information.

"The Alsea Dune Sheet extends along the coast, north of the mouth of the Alsea River for a distance of approximately 14,000 feet (2.6 miles). The maximum width of the dune sheet is 2,200 feet (0.4 miles). The dune area is bordered on the east by a series of small coastal lakes. The total surface area of the dune sheet is approximately 430 acres, 250 acres of which consist of a thin layer of blow sand overlying older marine terrace deposits, and 180 acres of which consist of a somewhat thicker layer of blow sand.

"A preliminary analysis of the geohydrology of the Alsea Dune Sheet indicates that a potential for groundwater development exists only in the central portion of the dune sheet within the "Bayshore Flow Basin."

"A maximum yield of 300,000 gallons per day (gpd) of water could be obtained from the "Bayshore Flow Basin" based on the assumptions contained in the draft report entitled "Alsea Dune Sheet: Groundwater Reconnaissance" (Rohleder Assoc., Inc.).

"Assuming an average saturated thickness of 40 feet, the storage capacity of the "Bayshore Flow Basin" is 547.4 million gallons (MG). The recharge rate is 375,000 gpd."[1] Assuming a groundwater flow velocity of about 5 to 17 ft./day, the aquifer would take from 2800 days (approx. 7.7 years) to 823 days (approx. 2.3 years) to completely regenerate itself.[2]

"Present indications from both the City of Waldport and the Seal Rock Water District is that they have sufficient water supplies in their existing sources to meet projected demand through the end of this century."[1] These indications are expressed in a letter from the Seal Rock Water District, Henry Neuman, Executive Secretary, dated June 25, 1980 (Attachment 5) and City of Waldport, Water Supply Study, 1978 Addendum--Robert E. Meyer, Engineers (Attachment 6).

Water Quality

During the groundwater reconnaissance study done by Rohleder Assoc., Inc., six shallow test wells were dug in May of 1980 to test the groundwater in the Alsea Dune Sheet. A map and description of the location of the wells are included in Attachment 7. No detectable levels of fecal coliform were found in any of the samples. Total Dissolved Solids (TDS) were somewhat elevated in the two samples from near Hidden Lake, and the one adjacent to the bay.

Nitrate-nitrogen concentrations were elevated in wells #4 and #5 to 0.4 and 0.6 mg/l, respectively.

If the area was to continue to be developed utilizing conventional septic tank and drainfield systems, nitrate-nitrogen levels would be expected to approach 10.14 mg/l.

If the area was developed with low pressure distribution systems or sand filter systems, this level would be 50% of the above figure or 5.07 mg/l. These levels are calculated based on the following assumptions:

a. 250 gpd/dwelling unit
b. 60 mg/l total -N in effluent
c. 370 acres in dune sheet (portion presently divided into small lots)

[1] "Alsea Dune Sheet: Groundwater Reconnaissance" Draft Rohleder Assoc., Inc. (Attachment 3)
[2] "Carrying Capacity of the Clatsop Plains Sand-Dune Aquifer," H.R. Sweet, p. 11 (Attachment 4)

Detailed calculations are shown in Attachment 8.

Issues

At issue is what groundwater quality protection is necessary. In April 1980 (revised August 1980) and on March 13, 1981, the EQC approved as an interim policy as follows:

The following statements of policy shall guide federal agencies and state agencies, cities, counties, industries, citizens, and the Department of Environmental Quality staff in their efforts to protect the quality of groundwater:

PLANNING POLICIES

(1) (A.) It is the policy of the EQC that impairment of the natural quality of groundwater by pollution from man's activities be prevented or controlled within practicable limits to protect presently recognized beneficial uses and assure protection of the resource for beneficial use by future generations.

(2) (H.) The Department should attempt to identify sensitive aquifers (areas where shallow aquifers underlay industrial sites, urbanizable areas, developing or planned rural residential concentrations, etc.), and assure that appropriate studies and planning actions are undertaken to protect groundwater quality.

(3) (I.) In order to assure maximum reasonable protection of public health, the public should be (made aware) informed that groundwaters--and most particularly local flow systems or shallow groundwaters-- should not be assumed to be safe for domestic use unless quality testing demonstrates a safe supply. Domestic water drawn from shallow aquifers should be tested frequently to assure its continued safety for use.

(4) (J.) The Department (should seek the) will assist(ance) and (cooperation of) cooperate with the Water Resources Department to identify and characterize aquifers . (and) The Department will seek the assistance and cooperation of the Water Resources Department to design an ambient monitoring program adequate to determine long-term quality trends for significant groundwater flow systems. The Department will also seek the advice, assistance, and cooperation of local, state, and federal agencies to identify and resolve groundwater quality problems.

(5) (G.) The EQC recognizes that orderly financing and implementation of a long-range groundwater improvement and protection plan may necessitate some increased quality degradation for a short period of time. The EQC may approve (an overall) a groundwater protection plan which allows limited short-term further degradation provided:

(a) (1.) Beneficial use impairment will not be significantly increased,

(b) (2.) Public health risk is not significantly increased,

(c) (3.) Irreparable damage to the groundwater resource does not occur,

(d) (4.) The (comprehensive) groundwater protection plan has been duly adopted as part of the comprehensive plan by the responsible local government,

(e) (5.) A financing plan has been developed and adopted to assure implementation, and

(f) (6.) The responsible local government has committed to implement the program in accordance with a timetable which is included in a stipulated or other joint agreement with the EQC.

PROGRAM POLICIES

(6) (B.) Consistent with general policies for protection of surface water, highest and best practicable treatment and control of sewage, industrial wastes, and landfill leachates, shall be required so as to minimize potential pollutant loading to groundwater. Among other factors, energy, economics, public health protection, potential value of the groundwater resource to present and future generations, and time required for recovery of quality after elimination of pollutant loadings may be considered in arriving at a case-by-case determination of highest and best practicable treatment and control. For areas where urban density development is planned or is occurring and where rapidly draining soils overlay local groundwater flow systems and their associated shallow aquifers, the collection, treatment and disposal of sewage, industrial wastes and leachates from landfills will be deemed highest and best practicable treatment and control unless otherwise approved by the EQC pursuant to (C.) (7) or (D.) (8) below.

(7) (C.) Controls more stringent than those identified in paragraph (B.) 6. above may be required (if) to the extent demonstrated necessary by DEQ to assure protection of beneficial uses. Designation of a sole source aquifer pursuant to the (f) Federal Safe Drinking Water Act will be recognized as one possible situation necessitating (mechanism for) establishment of more stringent controls.

(8) (D.) Less stringent controls than those identified in paragraph (B.) 6. above may be approved by the EQC for a specific area if a request, including technical studies (show) showing that lesser controls will adequately protect beneficial uses(.) is made by representatives of the area and if the request is consistent with other state laws and regulations.

(9) (E.) Disposal of wastes onto or into the ground in a manner which allows potential movement to groundwater shall be authorized and regulated by (either a) the existing rules of the Department's Water Pollution Control Facility (WPCF) Permit, (a) Solid Waste Disposal Facility Permit, or (an) On-site (Subsurface) Sewage Disposal System Construction Permit, whichever is appropriate.

(a) (1.) WPCF permits shall specify appropriate groundwater protection requirements and monitoring and reporting requirements. Such permits shall be used in all cases other than for those covered by Solid Waste Disposal Facility Permit or On-site (subsurface) sewage disposal permits.

(b) (2.) Solid Waste Disposal Facility Permits shall be used for landfills and sludge disposal not covered by NPDES or WPCF permits. Such permits shall specify appropriate groundwater protection requirements and monitoring and reporting requirements.

(c) (3.) On-site Sewage Disposal System Construction permits shall be issued in accordance with adopted rules. It is recognized that existing rules may not be adequate in all cases to protect groundwater quality. Therefore, as deficiencies are documented, the Department shall propose rule amendments to correct the deficiencies.

(10) (F.) Where groundwater quality is being degraded by waste disposal practices, the Department will require individual sources to improve or modify waste treatment and disposal practices as necessary to reduce the pollutant loading to groundwater. Such requirements will be implemented by permit condition or repair order as appropriate. For areas where an areawide approach is essential (rather than an individual approach), the Department will seek cooperation of the responsible local government to develop and implement a groundwater protection plan to abate the problem. A stipulated or other joint agreement should be used in such cases to delineate the planned correction program and timetable. The Department will resort to more formal pollution abatement actions such as abatement orders, civil penalties, etc., only if voluntary compliance efforts within a specified time frame are not successful.

(11) In order to minimize groundwater quality degradation potentially resulting from nonpoint sources, it is the policy of the EQC that activities associated with land and animal management, chemical application and handling, and spills be conducted using the appropriate state of the art management practices ("Best Management Practices").

(12) The EQC recognizes and supports the authority and responsibilities of the Water Resources Department and Water Policy Review Board in the management of groundwater and protection of groundwater quality. In particular, existing programs to regulate well construction and to control the withdrawal of groundwater provide important quality protective opportunities. These policies are intended to complement and not duplicate the programs of the Water Resources Department.

Alternatives

The Department has identified four alternatives that the EQC may wish to consider in allowing further development on the platted lots within Bayshore-Sandpiper subdivision. These alternatives include:

1. Adopt the highest and best practicable treatment standards to protect the Alsea Dunal Aquifer.

   This alternative would require the construction of collection lines and a sewage treatment plant with discharge to Alsea Bay. The estimated cost to construct collection lines, pump stations and treatment plant for a 0.25 mgd plant would be about $2,000-3,000 per lot owner, plus plumbing costs for each existing individual residence. Adoption of this alternative would place a moratorium on future building in the area until a sewage system was constructed and placed in operation.

2. Require the installation of pressurized drainfield, seepage bed and sand filter systems. These could be used effectively on the majority of the remaining lots of record prior to January 1, 1981. A geographical area rule for the lands overlaying the Alsea Dunal Aquifer area in Lincoln County (OAR 340-71-400(3)) has been drafted and is set forth in Appendix A.

   Results from experimental systems that have been monitored for nitrates indicate a 50 percent reduction in nitrate levels after treatment with pressurized drainfields and sand filter systems. We would estimate nitrate levels in the aquifer to approach 5 mg/l with the adoption of these types of system standards.

   Current estimated costs for pressurized drainfields are $2,000 to $2,500. Sand Filter systems would range from $4,000 to $5,000.

3. Allow continued development on conventional septic tank and drainfield systems up to 500 single family unit equivalents which equates to an input of nitrate-nitrogen of approaching 5 mg/l, coupled with an order to install sewers and provide sewage treatment as soon as practicable, but by no later than December 31, 1985.

4. Allow continued development with standard septic tank-drainfields.

This alternative would offer the cheapest option to the landowners. These systems would cost about $1,000. It, however, would pose the greatest risk of contaminating the aquifer with high levels of nitrates and bacteria.

Nitrate-nitrogen levels would be expected to rise to the 10 mg/l range. Present nitrate levels are less than 1 mg/l. U. S. Environmental Protection Agency (EPA) drinking water standards have established 10 mg/l nitrate-nitrogen as the upper limit.

Evaluation

The EQC authorized a public rule-making hearing to be held to take testimony on the questin of whether to adopt a permanent geographic area rule for the lands overlaying the Alsea Dunal Aquifer area in Lincoln County, namely proposed rule OAR 340-71-400(3) as set forth in Appendix A. Nevertheless, comments ought to be made on the array of alternatives listed above.

Since the Commission may be making a judgment not to protect the groundwater for the beneficial use of domestic drinking water supply, the comments from the City of Waldport, Seal Rock Water District, Lincoln County and the Water Policy Review Board and/or Department of Water Resources are extremely important. Each of these entities have a role to play in what that resource ought to be used for and what beneficial uses need to be protected. In order for the EQC to approve the proposed geographic rule support from each of these agencies is necessary.

List of Attachments

1. Map - Alsea Dune Sheet

2. Agenda Item No. R - January 30, 1981, EQC Meeting

3. Draft "Alsea Dune Sheet: Groundwater Reconnaissance," Rohleder Assoc., Inc.

4. "Carrying Capacity of the Clatsop Plains Sand-Dune Aquifer," H.R. Sweet

5. Letter from the Seal Rock Water District, Henry Neuman, Executive Secretary, dated June 25, 1980

6. City of Waldport, Water Supply Study, 1978 Addendum - Robert E. Meyer, Engineers

7. Location of Wells

8. Calculation Nitrate-Nitrogen

ATTACHMENT D

Estimated Cost for Construction of Sewage Facilities for

Lands Overlaying the Alsea Dunal Aquifer

ATTACHMENT D

Estimated Cost for Construction of Sewage Facilities for Lands Overlaying the Alsea Dunal Aquifer

Sewage Treatment Plant:

Assume:

1110 Lots, 2.75 average persons/lot, 80 gal/capita/day.
(1110)(2.75)(80) = 244,200 gal/day
With Allowance for Infiltration, Commercial flows -
Size Treatment Plant for 350,000 gal/day
or 0.35 MGD Design.

Sewage Treatment Plant Cost Estimate (from EPA Technical Report MCD-37 "Construction Costs for Municipal Wastewater Treatment Plants 1973-77")
Figure 6.1 g

Basic Secondary Plant - 1977/78	
Region X	$ 900,000
Add Effluent Polishing @10%	90,000
Add Engineering @13%	128,700
Subtotal	$1,118,700

Assume 12%/year inflation
Since 1977/78 to 1982/83
1982/83 Plant Cost = $1,971,500

Sewers

Assume:

48,000 Lineal Ft of Sewers -
Average in place cost of $30/ft (82 est)
(Pacific City installed 25,000 lin ft @ $17.50/ft)

Assume

5 package Pump Stations at 50,000 each in system (82 est.).
Sewers Cost Estimate

Lines	48,000 (30)	=$1,440,000
Pump Stations		= 250,000
Side Sewers	(110 lots)(300)	= 333,000
		$2,023,000

Outfall

Assume:

short outfall stabilized in Bay (estimate)	$ 200,000

Total -	STP	$1,971,500
	Sewers & PS	2,023,000
	Outfall	200,000
	Total	$4,194,500

or $3780 ± 20%/lot

Costs could range from $3025 to $4535/lot, assuming ± 20% for these rough estimates.

XS342.B

ATTACHMENT E

Proposed Rule 340-71-400(3)

ATTACHMENT E

Proposed Rule

340-71-400(3): Lands Overlaying the Alsea Dunal Aquifer.

(a) Within the area set forth in OAR 340-71-400(3)(c), the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through OAR 340-71-350 and OAR 340-71-410 through OAR 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through OAR 340-71-350 and OAR 340-71-410 through OAR 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

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

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

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

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

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

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

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through OAR 340-71-350 and OAR 340-71-410 through

OAR 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

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

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

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

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

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

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may

be be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in OAR 340-400(3)(c), for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met.

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

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

ATTACHMENT F

Agenda Item No. R, January 30, 1981, EQC Meeting

ATTACHMENT F

VICTOR ATIYEH
GOVERNOR

Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207
522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

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MEMORANDUM

To: Environmental Quality Commission

From: Director

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

Addendum to Staff Report

After further review of this Agenda Item, staff and legal counsel have concluded that the recommendation is procedurally incorrect. The Department's recommendation would result in the Commission, in effect, waiving some of its rules for subsurface sewage disposal, as they affect the area in question. A waiver of rules is inappropriate. The Commission may adopt, may amend, may repeal, and may grant variances to rules, but they may not grant waivers to rules.

It appears to staff that the appropriate procedure to deal with this situation is a geographic area rule similar to the River Road/Santa Clara area and Florence Dunal Aquifer area rules.

A proposed rule has been developed and is attached as Appendix "A".

The proposed geographic area rule adapts the site suitability proposals set forth in Alternative 3 into the style and language of the new subsurface rule package. In this process, two provisions of Alternative 3 were deleted:

(1) Specific reference to disposal trenches was deleted because their construction is impractical due to the lot size, soil conditions, and line spacing that would be required. The seepage bed would take no more area and should be easier to construction.

(2) The provision eliminating the requirement for a replacement area was deleted because it appears possible to have both the initial system and replacement area on even the smallest lots.

Recommendation

It is recommended that the Director's recommendation in Agenda Item R be amended to read as follows:

Based upon the Summation, it is recommmended that the Commission authorize a public rule making hearing to be held in Waldport, to take testimony on the question of whether to adopt a permanent Geographic area rule for the lands overlaying the Alsea Dunal Aquifer area in Lincoln County, namely proposed rule OAR 340-71-400(3) as set forth in Appendix A.

Bill

William H. Young

Attachment: 1
Appendix A, Proposed Rule 340-71-400(3)

TJO:1
XL274 (1)
229-6218
January 23, 1981

APPENDIX A

Proposed Rule

340-71-400(3): Lands Overlaying the Alsea Dunal Aquifer.

(a) Within the area set forth in OAR 340-400(3)(c), the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

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

(B) The lot is found through site evaluation not to comply with all rules, but does meet all of the following when a pressurized seepage bed is utilized:

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

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

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

(iv) Projected daily sewage flows shall be limited to not more than four hundred fifty (450) gallons per lot. New systems for lots of record prior to March 1, 1978, which are inadequate in size to accommodate a four hundred fifty (450) gallons per day sizing may be sized on the basis of three hundred (300) gallons per day, plus seventy-five (75) gallons per day for the third bedroom.

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

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

(C) The lot is found through site evaluation not to comply with all rules, but does meet all of the following when a conventional sand filter without a bottom is utilized:

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

(ii) Sewage flows shall be limited to not more than four hundred fifty gallons per day per lot.

(iii) The sand filter bottom area shall be four hundred (400) square feet.

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

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

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

(b) Within the area set forth in OAR 340-400(3)(c), for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met.

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

VICTOR ATIYEH
GOVERNOR

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. R, January 30, 1981, EQC Meeting

Request for Approval of Sewage Disposal Methods for the Alsea Dunal Aquifer Area in Accordance with the EQC Interim Groundwater Quality Protection Policy Adopted April, 1980.

Background and Problem Statement

During the last few years Lincoln County and Department sanitarians have been concerned about the continued installation of septic tank - drainfield systems in the Bayshore-Sandpiper Subdivisions. These subdivisions are located in Lincoln County near Waldport. The subdivisions happen to be located over the Alsea Dunal Aquifer.

The Alsea Dunal Aquifer has been identified as a small aquifer with a potential use as a drinking water source for the area. The specific yield of the aquifer is relatively small; it is believed to be between 0.5 to 1.5 mgd. No one is presently utilizing the aquifer for drinking water supplies.

The subdivisions were platted in the 1960's into small, urban size lots. Typical lot sizes range between 5,000 to 7,500 square feet. There are scattered, developed lots throughout the subdivision with approximately 300 homes built out of a total of 1,019 lots. In addition, there is a 90 unit condominium complex. The entire development covers approximately 305 acres. An aerial photo of the subdivisions is included under Attachment 1.

The southern part of the Alsea Dunal Aquifer where the Bayshore-Sandpiper Subdivision is located has experienced the greatest problems with high groundwater tables. Standard septic tank-drainfield systems will function in the rapidly draining sands; however, short circuiting and inadequate treatment of the sewage before it enters the groundwater will occur with this type of sewage system.

In response to Lincoln County sanitarians and the Departments concern for the groundwater, the Department requested the county to re-evaluate past site approvals in the southern part of the development. This action caused the Department, in conjunction with Water Resources personnel, to conduct a thorough on-site evaluation of the entire Bayshore-Sandpiper development. During that review several backhoe test pits were excavated. Groundwater was encountered at approximately five (5) feet in the northern portion of the Sandpiper Subdivision. The test pit dug in the southern Bayshore Subdivision encountered no groundwater to ten (10) feet. The soil is unconsolidated dunal sand. Past observations through several winter-summer seasons by Lincoln County sanitarians have shown prediction of water levels by conventional soil profile examination to be unreliable. The most reliable method for predicting water level has been actual winter observations. The results of the Department's field observations were finalized in a report. A copy of that report entitled "On-Site Sewage Disposal Status Report for the Bayshore-Sandpiper Subdivision" is enclosed (Attachment 2).

Alternatives and Evaluation

Department staff have identified five alternatives the Commission may wish to consider in allowing further development on the platted lots within the Bayshore-Sandpiper Subdivisions. The Commission's action is being requested in accordance with the EQC Interim Groundwater Quality Protection Policy adopted April 18, 1980.

1. Direct staff to adopt the highest and best practical treatment standards to protect the Alsea Dunal Aquifer for future drinking water purposes.

   This alternative would require the construction of collection lines and a package sewage treatment plant with discharge to Alsea Bay. The estimated cost to construct collection lines, pump stations and treatment plant for a 0.25 mgd plant would be about $2,000 per lot owner. Adoption of this alternative would place a moratorium on future building in the area until a sewage system was constructed and placed in operation.

   The staff does not feel that these are realistic options because of the level of development that already has occurred and the presence of other reasonable alternatives.

2. Direct staff to allow continued development with standard septic tank-drainfields.

   This alternative would offer the cheapest option to the landowners. These systems would cost about $1,000. It, however, would pose the greatest risk to contaminating the aquifer with high levels of nitrates.

Nitrate levels would be expected to rise to 8 to 10 mg/l range. Present nitrate levels are less than 1 mg/l. U. S. Environmental Protection Agency (EPA) drinking water standards have established 10 mg/l nitrate-nitrogen as the upper limit.

3. Direct staff to require the installation of pressurized drainfield, seepage bed and sand filter systems. These could be used effectively on the majority of the remaining lots. The recommended site suitability standards would be as follows:

   a. Minimum groundwater depths for these systems shall be (3) three feet from the bottom of the disposal trench or bed.

   b. The minimum distance between disposal trenches, center to center, shall be (5) five feet.

   c. Filter fabric shall be used around the filter rock.

   d. Disposal trenches and seepage beds shall be a minimum of 50 feet from surface waters.

   e. Disposal trenches shall be sized at a minimum of 150 square feet per 150 gallons daily waste flow.

   f. Seepage beds shall be sized at a minimum of 200 square feet of bottom area per 150 gallons daily waste flow.

   g. Replacement areas will not be required for site approvals and septic permits.

   h. Sand filter systems without a drainfield (bottomless sand filters) may be used when groundwater depths are a minimum of (1) one foot from ground surface. (Minimum of one (1) foot separation between the bottom of the sand filter and the upper surface of the groundwater).

   Results from experimental systems that have been monitored for nitrates indicate a 50 percent reduction in nitrate levels after treatment with pressurized drainfields and sand filter systems. We would estimate nitrate levels in the aquifer to range between 4 to 6 mg/l with the adoption of these type of system standards.

   Current estimated costs for pressurized drainfields are $2,000 to $2,500. Sand Filter systems would range from $4,000 to $5,000.

   Staff feels the on-site pressurized drainfield, seepage bed and sand filter disposal systems alternative is the most reasonable and practical since it recognizes the present development that has occurred and will allow limited development on the remaining lots of record.

Water Resources staff are in concurrence with this alternative. Alsea Dunal Aquifer is of relatively small volume and yield.

Estimated yield is 0.5 mgd to 1.5 mgd. There are no foreseeable plans to use the aquifer as a drinking water source. Existing and projected needs through year 2000 can be met from surface streams according to officials from the Seal Rock Water District.

4. Direct staff to allow continued development with pressurized drainfield, seepage bed and sand filter system as an interim policy. Hold public hearings in Lincoln County with respect to the permanent policy that ought to be adopted. (i.e. conventional septic tank and drainfield systems, pressurized drainfield - seepage bed - sand filter, sewers - sewage treatment facility).

5. Direct staff to allow continued development on conventional septic tank and drainfield systems up to 500 single family unit equivalents which equates to an input of nitrate-nitrogen of from 4 mg/l to 6 mg/l coupled with an order to install sewers and provide sewage treatment as soon as practicable but by no later than December 31, 1985.

Summation

1. The Bayshore-Sandpiper Subdivisions are platted for urban densities. Existing practices of subsurface sewage disposal are inadequately treating the sewage before it enters the groundwater.

2. The Alsea Dunal Aquifer is relatively small in volume and yield potential. The aquifer is not proposed to be used as a drinking water source through the year 2000. Surface streams are expected to be the principal drinking water sources through the foreseeable future.

3. The Commission could allow continued development of the remaining lots of record within Bayshore-Sandpiper Subdivisions utilizing pressurized on-site sewage disposal systems. This action could be expected to elevate the nitrate-nitrogen levels in the aquifer to the 4 mg/l to 6 mg/l range. These nitrate-nitrogen levels are below the U. S. E.P.A. drinking water standard of 10 mg/l.

4. The Commission has the authority within the Interim Groundwater Protection Policy adopted April, 1980 to approve less stringent sewage treatment standards for areas where urban densities are present and where rapidly draining soils overlay local groundwater bodies. Collection, treatment and disposal of sewage is deemed to be the highest and best practicable treatment and control unless otherwise approved by the Commission.

The Interim Groundwater Protection Policy allows the Commission to permit less stringent controls for a specific area if technical studies show that lesser controls will adequately protect beneficial uses.

Director's Recommendation

Based upon the summation, it is recommended that the Commission authorize the Director to adopt its pressurized drainfield/seepage bed and sand filter system and specific site suitability standards listed under alternative 3 as interim policy and conduct a public hearing as outlined in alternative 4. This sewage treatment standard would apply to all lots of record within the Bayshore-Sandpiper Subdivision. Since this action could be expected to elevate the nitrate-nitrogen levels in the aquifer to the 4 mg/l to 6 mg/l range, the EQC authorizes the Department to conduct a public hearing in Lincoln County to receive public comment on this alternative as well as the other alternatives described in this report.

William H. Young

Attachments: 1. Aerial photos of this subdivisions.
2. On-Site Sewage Disposal Status Report for the Bayshore-Sandpiper Subdivision

CG:g
RG70 (1)
229-5288
January 13, 1980

ATTACHMENT 1

The aerial photos are too large to reproduce. A copy may be inspected at the DEQ Northwest Region Office, 522 Southwest Fifth Avenue, Portland, Oregon.

ON-SITE SEWAGE DISPOSAL
STATUS REPORT FOR THE BAYSHORE SANDPIPER SUBDIVISION

INTRODUCTION

The Bayshore Sandpiper subdivisions are located north of the city of Waldport on the northwest side of Alsea Bay in Lincoln County. The subdivisions were originally platted in the mid-1960's. The total number of platted lots is 1,019. Approximate number of lots that have been built on with subsurface sewage disposal systems is 300. In addition, there is a 90-unit motel/condominium in operation at the southeasterly end of the spit.

The Department took several restrictive steps in June 1980 regarding further development on subsurface sewage disposal systems. This action was prompted by difficulties in predicting water table levels in the dunal sands and concerns over the protection of ground and surface water quality. As a result, several hundred site approvals were held in abeyance pending further review of groundwater conditions in the area.

BACKGROUND INFORMATION

The county records indicate approval of Bayshore, Addition 1 on June, 1963, with subsurface sewage disposal systems. The remaining Additions II through VII occurred from January, 1964, through July, 1965. It is interesting to note, that Robert Fatland, County Sanitarian in April of 1966 (copy attached) felt most of Bay Shore should be served by a community sewer system. A package treatment plant was proposed in 1965 and approved in 1966 to serve the motel and the lowland Bay Shore area (approximately 250 homes). The records indicate the motel was subsequently built with septic tank-drainfield system approved by Lincoln County Health Department. For unknown reasons, the package plant was never built. Then, in December, 1968, the package plant concept was resurrected and a DEQ waste discharge permit was issued on January, 1969. Again, for unknown reasons, the package treatment plant was not built. The area which the sewage treatment plant was to serve is approximately the same area which the Department stopped lot site approvals in June of this year. Lincoln County Planning Department currently zones the Bayshore-Sandpiper area as RA single family residential, excluding mobile homes. Minimum lot size is 15,000 square feet with septic systems and public water. There are small areas zoned tourist commercial above and adjacent to the existing motel.

The Bayshore-Sandpiper development is within the city of Waldport urban growth boundary. There is, however, no plans at present to annex and provide community sewers. The entire development is served by the Seal Rock Water District located north of the subdivision. Their water source is a surface stream that reportedly will provide the area's needs for ten to thirty years.

Since the key element of concern is groundwater protection, we requested Kent Mathiot, of Water Resources Department, to evaluate the groundwater aspects. Bob Paeth, Soil Scientist with the Department, evaluated the possible alternative sewage disposal systems which could be used in the area.

As a result of Mr. Mathiot's investigation, a groundwater report was prepared and sent to the Department for consideration. A copy of that report is attached.

KEY POINT OF MATHIOT'S REPORT ARE:

1. The Alsea dune sheet is a fragile natural environment. The dunes are subject to erosion from wind and wave action and their delicate stability and beneficial characteristics can be destroyed by man's activities.

2. The Alsea dune aquifer is highly susceptible to contamination from a variety of sources commonly associated with the residential development on subsurface sewage disposal systems.

3. The water supply capability of the Alsea dune aquifer has not been fully evaluated but, it appears to have potential as a supplemental drinking water source for the Waldport area.

4. The inherent quality of the existing groundwater is good. The present level of development, however, has most likely resulted in localized water quality degradation, especially in the southern portion of the aquifer.

5. The unplatted dunes just north of Sandpiper should be protected as a supplemental groundwater source. Lot densities of at least (1) acre in size with low-pressure distribution systems should be required in this area.

6. Any additional development on the platted lots should incorporate stringent groundwater safeguards, including low-pressure distribution systems/or sand filter systems, prohibiting of subsurface fuel storage tanks, and encouragement of residences to avoid products and practices that could result in groundwater quality degradation.

7. Water Resources recommends that a disclaimer statement be placed on each on-site and septic permit approvals regarding the unstable nature of dune environments, and the susceptibility of some portions of the dunes to severe flooding and/or erosion.

During field reconnaisance along the beach line, several areas showed evidence of nutrient enrichment along the beach and sea cliff. We plan to sample the seeps next summer to determine if there is fecal bacteria contamination coming from the adjacent septic systems. Those homes found to be discharging sewage on the ground surface will have to make repairs. The corrections required may necessitate the installation of a low-pressure distribution drainfield.

OPTIONS AVAILABLE

In our deliberations with Mr. Mathiot, Water Resources Department, we mutually agreed that there appeared to be three possible options available to the unbuilt lot owners. Those options considered were:

1. Package sewage treatment plant to serve the entire Bayshore Sandpiper development. This system would discharge treated effluent to Alsea Bay.

2. Allow installation of on-site low-pressure distribution or sand filter sewage disposal systems. Low-pressure systems should be allowed only where sufficient vertical separation distances could be maintained from the water table.

3. Restrict development to installation of on-site split-waste sewage disposal systems, i.e., compost toilets, and/recirculating toilets with low-pressure distribution systems for gray water waste such as kitchen, bathing and laundry waste waters (as per proposed 1981 rules).

Option No. 2 was generally felt to be the most reasonable alternative since it provides for limited development while reducing the potential negative impact on groundwater and surface water.

CONCLUSIONS

The southern part of the Alsea Dune sheet aquifer, which includes the Sandpiper Bayshore developments, is platted on small lots and a significant development has already occurred. Some (300) homes plus a motel/condominium of 90 units now exists. Approximately (800) individual lots remain unbuilt.

The Water Resources Department is agreeable to allow development on most of the remaining platted lots. Specialized on-site sewage systems can be used where sufficient vertical separation from the groundwater can be found. Ultimate development of the two subdivisions will have a density of approximately 3.35 and 2.67 houses per acre respectively for Bay Shore and Sandpiper.

This level of development will result in increased contaminant loading and decreased recharge to the aquifer. However, the types of on-site sewage systems proposed for future development should reduce the total contaminant loads significantly from the levels that would be generated by standard systems. We do not anticipate any significant increases in fecal contamination of the aquifer or adjacent surface waters will result from further development with pressurized distribution systems. It is also expected that nitrate and other chemical contaminant levels will be tolerable as long as the southern portion of the aquifer is not developed for water supply purposes.

RECOMMENDATIONS

We recommend that the following on-site sewage disposal systems be allowed on the remaining unbuilt, platted lots:

1. Low-Pressure Distribution Systems, e.g. Pressurized Drainfield or Pressurized Seepage Beds.

   a. Minimum groundwater depths for these systems shall be (3) three feet from the bottom of the disposal trench or bed.

   * b. The minimum distance between disposal trenches, center to center, shall be (5) five feet.

   c. Filter fabric shall be used around the filter rock.

   d. Disposal trenches and seepage beds shall be a minimum of 50 feet from surface waters.

   e. Disposal trenches shall be sized at a minimum of 150 square feet per 150 gallons daily waste flow.

   * f. Seepage beds shall be sized at a minimum of 200 square feet of bottom area per 150 gallons daily waste flow.

   g. Replacement areas will not be required for site approvals and septic permits.

2. Sand filter systems without a drainfield (bottomless sand filters) may be used when groundwater depths are a minimum of (1) one foot from ground surface. (Minimum of one (1) foot separation between the bottom of the sand filter and the upper surface of the groundwater).

3. Undeveloped areas on the northern part of the dune sheet should be developed within the new rules that will be adopted early in 1981. These rules will require low-pressure distribution and limit density to one dwelling unit per acre.

GENERAL COMMENTS

Systems may be installed in the variable grade dunes. Some replacement and movement of sand is permissible to provide level grade for disposal trenches.

These types of systems are for non-commercial residential development only. Any application for high flow (greater than 600 GPD) must have the concurrence of the Department.

*Note: Current rules do not allow the Department to reduce the separation distance between disposal trenches. It is anticipated that a rule change will be in place in April of 1981 to allow discretion on trench separation distance. Seepage beds are currently not authorized disposal systems. The same proposed rule change package will allow their usage in 1981.

Permits issued on the fragile dune areas shall require replanting of dune grasses to minimize erosion over the drainfield.

It is strongly recommended that Lincoln County issue a disclaimer statement to each lot approval granted regarding the dangers of building on unstable land forms, i.e. sand dunes.

RDD20 (2)

LINCOLN COUNTY HEALTH DEPARTMENT

COURTHOUSE • NEWPORT, OREGON 97365 • PHONE 265-5341

MESSAGE

TO Harold Milliken, Asst Chief Sanitary Engineer OSBH

DATE 4-6-66

re: Your letter 3-31-66 Swan-Wooster Engr - Bashore Estates - Sewage.

I'm in the dark as to what Part of Bashores 7 Divisions will be served by this Approved System. most all of the Project should be served - Hope this is the plan - Without Bldg Permits can do nothing now

BY R S Farland RS.

REPLY

DATE 4-8-66

Enclosed is a copy of the layout of sewers and treatment plant Due to lack of street names it still is not to clear as to location. It is immediately north of the bridge.

SIGNED Harold E. Milliken

RECIPIENT KEEP THIS COPY, RETURN WHITE COPY TO SENDER

CHG

VICTOR ATIYEH
GOVERNOR

Water Resources Department

MILL CREEK OFFICE PARK
555 13th STREET N.E., SALEM, OREGON 97310 PHONE 378-8455 or 1-800-452-7813

October 16, 1980

MEMORANDUM

TO: CHARLIE GRAY

FROM: KENT MATHIOT

SUBJECT: ALSEA DUNE SHEET

The following comments are in response to your request for information concerning the hydrogeologic conditions in the area of the Alsea Dune Sheet, and on the general suitability of the dune environment for residential development. My comments are based on a review of pertinent hydrogeologic information and on observations made during a September 23 and 24, 1980 visit to the site.

CONCLUSIONS:

Dune environments are unique, and in their natural state they provide a barrier between the sea and inland areas, constitute excellent ground water aquifers, are very aesthetically pleasing, and provide valuable wildlife habitats. However, the natural state of beach and dune environments and the benefits that can be derived from them can easily be destroyed by improper land use management, and such mismanagement can also endanger the health and welfare of persons living in these areas. The existing development on the Alsea Dune Sheet has significantly degraded the natural environment of that area. If any of the natural benefits of this landform are to be maintained, careful planning and land use management programs must be instigated.

The potential for development of major amounts of ground water from the Alsea Dune Aquifer is limited by the small size (.86 sq mi) of the dune area, and by the threat of poor ground water quality resulting from existing residential development. However, significant portions of the dune sheet are as yet undeveloped, and if adequate steps are taken to limit the affect of future development, the dune aquifer could be maintained as a potential supplemental ground water source.

The dune aquifer is highly susceptible to contamination from surface sources. Contaminants commonly associated with high density residential development include drainfield effluent, runoff from roads, parking lots and driveways, leaking underground fuel storage tanks, dumping or spillage of crankcase oil and other normal household products, and fertilizer and pesticides from gardening and landscaping activities. Contaminated ground water in the dune aquifer will eventually reach and degrade the water quality of the interdune lakes, boat canal, beach seeps, springs and creeks, and to a lesser degree, the quality of water in the near shore areas on the bayside of Alsea Spit.

In addition to the direct contamination of ground water, high density development will significantly reduce the amount of ground water recharge, and thereby increase the impact of the contaminant load.

RECOMMENDATIONS:
Existing conditions of land ownership, and building permit status need to be considered, but the effective total density of development on the dune area should be kept as low as possible. In addition, low pressure distribution (or similar systems) of septic tank effluent should be required on every new facility. Low pressure distribution of effluent has been shown to be an effective disposal and treatment method in rapid draining materials. Test results have shown dramatic reduction in bacterial levels and BOD and a 50% reduction in nitrate levels.

In areas that have not as yet been subdivided, low pressure distribution and a maximum effective density of one dwelling unit per acre should be required.

In addition, the following programs should be carried out:

(1) The water quality of beach springs and streams in the dune area should be checked. If fecal bacteria are detected, a program of dye testing, and where necessary, repairing of failing systems with low pressure systems should be instigated.

(2) Installation of underground fuel storage tanks should be prohibited.

(3) All home owners in the area should be provided with a written description of the nature of dune aquifers, and should be requested to avoid products and practices that could increase the potential for ground water contamination.

(4) An Attorney General's determination should be made of the DEQ's liability in issuing sub-surface permits on a potentially unstable landform. A permit liability disclaimer may be required.

(5) Consideration should be given to requiring future developers of the remaining large parcels of the dune sheet to develop additional detailed information on the hydrogeologic characteristics of the dunal aquifer.

PREVIOUS WORK:
A definitive study of the aquifer characteristics or water supply potential of the Alsea Dune Aquifer has not been conducted. Both Schlicker, 1973 and Frank, 1977 report that the aquifer has potential as a future source of water supply, but neither of these reports include any drilling or aquifer test data. Rohleder, 1980 estimates that a potential 0.5mgd of ground water is available from the southern portion of the dune sheet, but again, the report contains little or no quantitive information on aquifer characteristics.

GEOLOGY:
For purposes of this report the Alsea Dune Sheet is defined as all the land situated between Highway 101 and the Pacific Ocean, and between Driftwood Beach Wayside and the southern tip of the Alsea Bay Spit. The entire area is covered with dune sand ranging in thickness from a few feet to more than 100 feet.

The wind blown deposits are underlain by an undetermined thickness of unconsolidated to semiconsolidated Quaternary marine terrace alluvium, that consist of relatively flat lying layers of sand and silty sand. The upper foot or eighteen inches of the terrace deposits commonly contain considerable organic matter. The contact between the dune sands and the underlying marine terrace sediments is exposed along nearly the entire length of the seaward edge of the dune sheet at a height of five to ten feet above the summer beach. However, along the southern portion of the dunes this contact dips below beach level, and the low sea cliff gives way to an active foredune - typical of a coastal sand spit environment.

The bottom contact of these terrace sediments is not exposed in the dune area, but it is anticipated that they have been deposited on a terrace platform cut into the underlying marine sedimentary bedrock.

HYDROLOGY:
There is little or no ponding or runoff of precipitation that falls on a dune surface. As a result, surface water features normally occur only in those areas where the surface of the dune intersects or drops below the water table. The series of lakes along the eastern edge of the Alsea Dune Sheet, and Buckley Creek that drains the northern most of those lakes, are examples of such features.

There are numerous seeps and springs that break out along the sea cliff at the interface between the dune sands and the marine terrace deposits. These discharges feed the small creeks that flow along the sea cliff and across the beach to the ocean. A considerable amount of ground water was being discharged in this manner at the time of my September 1980 visit to the area.

GEOLOGIC PROCESSES:
The Alsea Dune Sheet is an environment in a state of delicately balanced dynamic equalibrium. Geologically, this landform is in its infancy, and constantly changing in response to variations in sediment supply and transport, vegetation patterns, wind and wave action and other natural forces that are not predictable or even clearly understood.

The shoreline, spit, fore, dune, and deflation plains are subject to wind and wave erosion and accretion, and to wave overtopping and flooding from major storm waves or tsunamis. The active upland dune areas are subject to wind erosion and accretion, and the stabilized dune areas can become reactivated if vegetative cover is removed or otherwise destroyed.

HYDROGEOLOGY:
Although there is little specific information available on the Alsea Dune Aquifer, considerable information has been developed on similar dune aquifers along Oregon's coastline.

Approximately 60% of the precipitation that falls on the dunes can be expected to percolate downward to the water table. It is anticipated that the area of highest water table elevation in the Alsea Dune Aquifer is beneath the central, highest portion of the dunes, and that ground water flow is outward in a more or less radial pattern from that area. This results in ground water being discharged to surface water features around the perimeter of the dune sheet.

Along the northern and central Oregon coast, approximately 2mgd of ground water per square mile can be withdrawn from dune aquifers of adequate thickness without upsetting the recharge and discharge balance of the natural ground water system and related surface water features. The thickness of the dune sands and marine terrace sediments that make up the Alsea Dune Aquifer has not been established. However, it is anticipated that a major portion of the .86 square mile dune complex could be developed, with the available ground water supply ranging between .5 and 1.5mgd.

The inherent quality of ground water in Oregon's dunal aquifers is, for the most part, quite good. However, it is probable that existing development (approximately 1 du/acre) on standard subsurface systems has degraded ground water quality in the southern portion of the Alsea Dune Aquifer. This level of development utilizing standard drainfield systems in rapid draining materials can be expected to cause localized problems with elevated levels of nitrate, and bacterial contamination. Since the number of developed lots is less than one-third the number of lots available for development, the problem can be expected to increase significantly if steps are not taken to reduce the potential contaminant load.

cc: Bob Paeth
John Smits
Bill Zekan

ATTACHMENT G

Hearing Officer Report of Public Hearing

(May 15, 1981, letter from Water Resources Department also included.)

ATTACHMENT G

VICTOR ATIYEH
GOVERNOR

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: Report on Public Hearing Held April 30, 1981, concerning Alsea Dunal Aquifer under Bayshore-Sandpiper Subdivision in Lincoln County

Summary of Procedure

Pursuant to Public Notice, a public hearing was convened at the Bayshore Beach Club, Waldport, on April 30, 1981, at 7:30 p.m. The purpose of the hearing was to receive testimony regarding four (4) alternatives available to the Commission by which future development of the Bayshore-Sandpiper Subdivision may be affected. One of the alternatives is a proposed geographic region rule, OAR 340-71-400(3), which establishes rules for on-site sewage disposal on lots overlying the Alsea Dunal Aquifer in Lincoln County.

Summary of Oral Testimony

Claire M. Edmiston, Seal Rock Water District Commissioner and executive secretary-treasurer of Bayshore Beach Club, Inc., submitted both oral and written testimony. Emphasis was placed on apparent inadequacy of Alsea aquifer to provide domestic water to present or future residents. Cost/benefit ratio of aquifer development makes it economically unsound and the Seal Rock Water District has no intention of using aquifer as a water source. With this in mind there is no need to protect the aquifer. Seal Rock Water District and Bayshore Beach Club, Inc., testimony indicate that they are in favor of Alternative No. 4.

Barbara Helgerson, ERA Helgerson Realty, is concerned about the Department's inconsistencies with regard to the rules affecting the Bayshore-Sandpiper Subdivision. Professionalism is at stake where realtor sells lots with septic approval and the Department subsequently changes the rule, thus voiding that approval. Ms. Helgerson's testimony indicates that she is in favor of Alternative No. 4.

Donald P. Vandehey, builder, objects to the Department's apparent inability to stick with a decision. Refers to Department's comment that low-pressure sewage disposal systems were the answer for Bayshore-Sandpiper Subdivision prior to a public hearing being held and a rule allowing such systems being adopted. Comments favor Alternative No. 4 and at most Alternative No. 2.

Lillie Patrick, Dolphin Real Estate, feels that there is no need to preserve the quality of the dunal aquifer because of insufficient amounts of water available to meet demand. Raised question of land subsidence if the water were pumped out for domestic use. Prefers Alternative No. 4 but favors Alternative No. 2 if it means that the property will be developable. Raised concern about costliness of low-pressure systems.

Virgil Comstock, Bayshore Realty, although concerned about the rule changes that occur as technology advances and the hardship that these rule changes invoke on lot owners, made no comment, on the record, as to which of the four alternatives he favors.

Norman Tieslau, current subdivision resident, expressed concern over constantly changing Department regulations, but did not indicate which of the four alternatives he favored.

James Gadinas, realtor, expressed concern over constantly changing Department regulations, but did not indicate which of the four alternatives he favored.

Laura Allen, Bayshore Realty, basically agrees with what others have said and is pleased to see the four alternatives that are being considered. Strongly disfavors 2-bedroom maximum dwelling size imposed by Alternative No. 2. Feels that more 3-bedroom homes are needed in the area. Objects to the Department not honoring previous approvals. Objects to Alternative No. 1 because it imposes building moratorium until sewerage system is constructed.

Other Written Testimony (Attached and made part of the record)

Dennis Helland, Sanitarian, Jackson County

Feels that adoption of the proposed geographic region rule would be contrary to the Department's policy. However, he does not indicate which of the four alternatives he prefers.

Ralph Christensen, Hydrogeologist, Lane County

Feels potential for development of Alsea aquifer is there and, therefore, it should be protected above EPA's safe drinking water standards. His written testimony indicates that he favors Alternative No. 1.

John L. Smits, Environmental Analyst, DEQ

Commented on all four alternatives and favors Alternative No. 2 because it relaxes on-site standards, thus allowing continued development of platted lots while providing reasonable protection of an aquifer with, as of now, an uncertain future as a drinking water source.

Clyde W. Stricklin, Senior Planner, Lincoln County

Feels that further degradation of the aquifer would violate state planning goals. Considers cost of systems provided by Alternative No. 2 would exceed cost of area-wide sewerage system provided by Alternative No. 1. Appears to favor Alternative No. 1.

William J. Zekan, Environmental Manager, Lincoln County

Urges adoption of the geographic region rule, Alternative No. 2, as a compromise safeguarding property owners' rights and health. However, suggests that the Commission (EQC) should encourage area-wide sewerage, Alternative No. 1.

Eugene P. Smith, Sandpiper Village owners' representative

1. Recommends adoption of Alternative No. 2, however, increasing the maximum allowable daily sewage flow from 300 gallons to 450 gallons for lots in excess of 9000 square feet; or

2. Recommends dividing geographical region into two areas, a southern section which includes the "Bayshore Flow Basin" and a northern section which includes Sandpiper Village; applying the 300-gallon limit on the southern portion and the 450-gallon limit on the northern portion.

Joseph P. Rohleder, Engineering Geologist, Rohleder & Associates, Inc.

Basically favors adoption of Alternative No. 2, but with modification of daily allowed sewage flows based upon lot size and density of platted lots. Points out that some information contained in the Department's staff report for the public hearing is based on Department staff conclusions that do not necessarily coincide with Rohleder & Associates, Inc.'s conclusions. Recommends that some lots overlying the aquifer be allowed more than the proposed 300-gallon maximum daily sewage flow limitation. Also recommends that further groundwater assessment and monitoring programs be incorporated into the proposed geographic region rule.

Craig Hall, Planning Coordinator, Lincoln County

Provides information concerning subdivision request heard before Lincoln County Planning Commission in the fall of 1979. Does not indicate which of four alternatives he prefers, but is concerned that the Alsea Dunal Aquifer not be degraded prior to ascertainment of its potential as a water resource.

Board of County Commissioners, Lincoln County

Letter signed by Commissioners Ouderkirk, Strand and Stuart supports written testimony provided above by William J. Zekan, Environmental Manager, Lincoln County. Letter indicates that Commission does not, at this time, support written testimony of Clyde W. Stricklin, Senior Planner, Lincoln County. Board appears to favor Alternative No. 2.

Richard L. Mathews Program Division Manager, Department of Land Conservation and Development

Feels that the current information available on the Alsea Dunal Aquifer warrants that it fall under 1C of Temporary Rule OAR 660-16-000 adopted May 1, 1981. This means that the resource is significant or important and the site must be included in the local government's plan inventory. Items included on the plan inventory must then proceed through the Goal 5 process. Alternative No. 1 appears to most closely relate to Item 2A of the Goal 5 flow chart, that of "no conflicting uses identified" and therefore the aquifer would be managed so as to preserve its original character. Assuming that the remaining three alternatives are under Item 2B of the Goal 5 process, it appears that the Department of Land Conservation and Development is recommending that the Environmental Quality Commission decide whether to preserve the resource site, allow conflicting use or specifically limit conflicting use.

Heinz Neuman, Executive Secretary, Seal Rock Water District

Feels cost/benefit ratio of Alsea Dunal Aquifer development makes it economically unsound and the District has no intention of using aquifer as a water source. Testimony appears to favor Alternative No. 4.

John L. Smits, Environmental Analyst, DEQ

Submitted additional written testimony that deals with the Sandpiper No. 3 subdivision approved by Lincoln County and the DEQ in June of 1979. His concern is that if the proposed geographic region rule is adopted that these previously approved lots will be adversely affected. Suggests several areas in the proposed rule that should be modified to account for the previously approved subdivision.

James E. Sexson, Director, Water Resources Department

Brief letter expressed strong reservations about adoption of proposed geographic rule. Stated that detailed presentation would be forwarded to the Department.

Respectfully submitted,

John H. Rowan

John H. Rowan
Hearing Officer
May 15, 1981

RC134

CLARE M. EDMISTON,
Exec. Sec.-Treas.
Phone: (503) 563-3728

ALLAN A. ARMSTRONG
Resident Director
Phone: (503) 563-3040

Bayshore Beach Club, Inc.

WESTWARD HO & OCEANIA
BAYSHORE
P.O. BOX 995
WALDPORT, OREGON 97394

Reg

May 1, 1981

Mr. Robert E. Gilbert, Regional Manager
Northwest Region, Dept. of Environmental Quality
PO Box 1760
Portland, Oregon 97207

Dear Mr. Gilbert:

At the public hearing held last night at Bayshore with Charles Gray and John Rowan, the comments from the audience clearly expressed the concern of the local residents that the rules change too often and that the preservation of the aquifer is not a relevent issue. To consider any new geographical rule in order to "save" the aquifer for future water supply is simply a matter of refusing to realize that this ground water supply would not be considered by the Seal Rock Water District for the reasons that costs involved, inadequate amount of water available according to the Rohleder study, plus ample other water sources available for future needs would eliminate this as a determining factor.

The Bayshore Board of Directors accepts the report of the Seal Rock Water District that there are no future plans to ever resort to the aquifer in Bayshore as a source of water needs. This, obviously, makes the whole aquifer protection as an excuse to prevent future home building in Bayshore - completely unfeasible.

If a rule has to be formulated, the Board would approve either no change in the present septic tank installations, or, if absolutely necessary, the alternative of pressurized drainfield, seepage bed and sand filter system would be acceptable.

Very truly yours,

Clare M. Edmiston

Exec. Sec.-Treas.

Kerry L. Lay, Administrator

DEPARTMENT OF PLANNING & DEVELOPMENT

April 16, 1981

Linda Zucker
Department of Environmental Quality
P. O. Box 1760
Portland, OR 97207

RE: Adoption of Rule 340-71-400(3). Lands Overlaying the Alsea Dunal Aquifer.

To Whom It May Concern:

The adoption of rule 340-71-400 (3) would be just another example of D.E.Q.'s inability to effectively administer the program it was originally designed to do. Such a proposal is in direct conflict with D.E.Q.'s purpose, which 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 or Oregon". Through its own admission, D.E.Q. has acknowledged that this proposal, if adopted, the aquifer in question would be "likely degraded to a point that it will be unusable as a domestic water source. This, to me, is not restoring or maintaining the quality of public waters.

Adopting such a proposal can only result in an already deteriorating public image and rapidly eroding respect for the Department of Environmental Quality by members of the general public and those of us whose jobs involve protecting public health.

Sincerely,

Dennis D. Helland

Dennis D. Helland, R.S.
County Sanitarian

kc

lane county

May 1, 1981

Environmental Quality Commission
c/o Linda Zucker, Hearings Official
Department of Environmental Quality
P. O. Box 1760
Portland,Oregon 97207

To the Commission and Ms. Zucker,

We are currently engaged in a ground water study in Lane County that is in a sand aquifer that hydrologically is similar to the Alsea Spit Aquifer. Assuming reasonably similar climate and infiltration rates on correspondingly vegetated areas, the Alsea Spit could supply, safely, 1.0 to 1.5 million gallons per day of comparatively high quality water. This is sufficient water to supply up to 65,000 people in an area where ground water resources are very limited, and surface water supplies could become suspect.

The sand spit at Coos Bay has been studied and found to contain, in a very similar hydrogeologic setting, sufficient water to make its development very attractive. In fact, it is my understanding that the amounts of water to be developed are comparable as well.

It is clear that sufficient quantity of water is available, easily recoverable and usable from this aquifer. The area near this aquifer is geologically poorly suited to the recovery of even small to moderate amounts of ground water. The surface water supply is suspect both in quantity and quality, due to various practices in the water shed and climatic variations.

In summary, we feel that the loss of this aquifer and its easily recoverable substantial (though not unlimited) water resource is a breach of the public trust to protect those resources for future needs and generations who as yet cannot speak for themselves. We further feel that economic pressure, not withstanding, that the short-term cost benefit to people of the area now of not protecting this resource will be lost when long-range water shortages occur, and future resource recovery made much more expensive and difficult.

It is the function of governmental agencies to protect and be good stewards of public resources and see that those resources are used to the best benefit for all concerned, including those of the future. We realize the public mood is not in favor of long-term planning and resource protection but that is hardly an argument for prostituting the public trust. We strongly feel this resource should be protected from degradation beyond the safe drinking water standards and development on the aquifer allowed only to the extent that technologies, alternatives and/or density limitations allow to maintain that

DEPARTMENT OF COMMUNITY HEALTH & SOCIAL SERVICES
ENVIRONMENTAL HEALTH DIVISION / 125 E. 8TH AVENUE / EUGENE, OREGON 97401 / PHONE (503) 687-4051

standard. Further, this action would set very poor precedent for the protection of many of the State's minor, yet important water resources.

Respectfully,

Ralph Christensen

Ralph Christensen
Hydrogeologist, Lane County

RC:pg

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207

North Coast Branch
3600 E. Third St.
Tillamook, OR 97141
Ph. (503) 842-6637

May 5, 1981

Linda Zucker
Department of Environmental Quality
P. O. Box 1760
Portland, OR 97207

RE: SS-Proposed Rule Adoption
Alsea Dunal Aquifer
OAR 340-71-400 (3)
Lincoln County
North Coast Branch Office

Dear Ms. Zucker,

The Department's information provided for the Alsea Dunal Aquifer Public Hearing April 30, 1981, identified four alternatives that the Environmental Quality Commission may consider in allowing further development on the platted lots of the Bayshore-Sandpiper Subdivision. The following comments are offered regarding each alternative:

1. Alternative number 1 would require construction of a collection and treatment system to provide the highest and best practicable treatment to protect the aquifer. This alternative would allow development of each platted lot at an estimated cost less than alternative number 2.

   This option would allow lot owners to develop homes with greater than a 300 gallons per day sewage flow rather than a 300 gallons per day limit as expressed in the proposed rule, alternative number 2. Those present at the public hearing voiced strong objection to the 300 gallons per day per lot limit.

   This alternative would halt building in the area for quite some time until a sanitary district is formed, financing plan developed, plans prepared and a sewage treatment plant constructed.

The Seal Rock Water District and the City of Waldport have to date indicated no anticipated need to utilize the Alsea Dunal Aquifer to augment their existing domestic water sources.

In view of the fact that there appears little desire to tap the aquifer for domestic water, the existing septic systems serving the approximately 300 homes are already affecting the aquifer and the length of time needed to construct a collection and treatment system, Alternative number 1 in my opinion is not reasonable.

2. Alternative number 2 consists of the proposed geographic region rule. This rule would in fact relax subsurface system standards. However, the system that could be authorized under the rule would employ current technology. The systems that would be constructed; it is estimated would raise nitrate limits in the aquifer to 5 milligrams per liter. This level has been accepted as a planning limit. This limit is well below the current EPA drinking water standard of 10 milligrams per liter nitrate-nitrogen.

   If this alternative and proposed rule is adopted, nearly all platted lots could be developed; the aquifer would be reasonably protected and development could proceed with the adoption of the rule. The only apparent public objection relates to the discharge limit of 300 gallons per day per lot.

   In my opinion, this alternative is the most reasonable. If adopted, the rule will deal with the reality that this area was platted in the 1960's probably in substantial conformance with the subsurface sewage disposal rules that were in effect.

3. Alternative number 3 refers to allowing continued development using conventional septic tank and drainfield systems up to 500 single

family unit equivalents, with an order to install sewers not later than December 31, 1985. This implies that gravity flow disposal systems would be allowed up to a loading limit. This would require a special rule to allow gravity systems in soils with rapid permeability. Recently adopted on-site waste disposal rules require the use of low pressure distribution systems in soils like those found in the Alsea Dune area.

In my opinion this alternative does not appear to be a reasonable option. Development beyond the 500 dwelling units limit would require construction of sewage collection and treatment facilities that depend on district formation, funding, etc. This method would provide the highest protection of an aquifer that neither the City of Waldport or the Seal Rock Water District is interested in developing.

4. Alternative number 4 seems to propose the continued use of standard gravity fed disposal systems. Current rules require the use of low pressure distribution systems. This alternative therefore, would aquire a special rule to install gravity systems in sand. Gravity systems would not provide protection of the aquifer and nitrate-nitrogen levels would likely exceed the EPA 10 milligrams per liter limit.

   This alternative in my opinion is not reasonable, as it does not provide a reasonable protection of the aquifer in the event the groundwater is needed in the future.

In summary, I support the adoption of proposed rule OAR 340-71-400 (3). The rule proposed relaxes standards to allow development of platted lots to continue, while providing a reasonable level of protection of the aquifer as a potential future water source.

If you have any questions regarding this letter or my opinions,

please do not hesitate to contact me at the North Coast Branch Office, 3600 E. Third Street, Tillamook, OR 97141. You may also call me at 842-6637.

Sincerely,

John L. Smits

John L. Smits, R. S.
Environmental Analyst

JLS:rae
cc: T. J. Osborne, Subsurface Section, DEQ
C. H. Gray, Northwest Region Office, DEQ
Bill Zekan, Lincoln County Sanitarian's Office

why Young Osborne ✓

County of Lincoln

Board of County Commissioners

Courthouse, Room 201
225 West Olive Street
Newport, Oregon 97365
(503) 265-6611, Ext. 263

May 7th, 1981

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
MAY 7 1981
OFFICE OF THE DIRECTOR

Mr. William H. Young, Director
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

Dear Mr. Young:

We have reviewed the two enclosed letters and believe that the letter from William J. Zekan, R. S., Environmental Manager for Lincoln County, is the more appropriate.

Until the Bayshore area has developed further, we do not believe that the comments from the Lincoln County Planning Department apply.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS

Chairman, W. S. Cuderkirk

WSO;j

Commissioner, Albert R. Strand

Commissioner, G. E. Stuart

Enclosures: 2

LINCOLN COUNTY
PLANNING DEPARTMENT

PUBLIC SERVICE BUILDING
210 S.W. 2nd St.
NEWPORT, OREGON 97365

Land Use Planning

Zoning & Subdivision Administration

265-6611
ext. 292

May 1, 1981

Mr. William H. Young, Director
Department of Environmental Quality
Post Office Box 1760
Portland, Oregon 97207

Re: Proposed Rule 340-71-400(3)

Dear Sir:

The Lincoln County Comprehensive Plan, Ordinance #138, Air, Land and Water Quality Resources Policy 8 indicates as follows:

> "Lincoln County shall cooperate in the identification and monitoring of known aquifers. The quality of aquifers capable of augmenting domestic water supplies shall be protected."

Information in the Environmental Quality Commission Staff Report of January 30, 1981 indicates the Alsea Dunal Aquifer is capable of providing domestic water supplies of between .5 MGD and 1.5 MGD.

Second, Statewide Goal #6 indicates, "...Discharges shall not... degrade such resources..."

Third, the background information is faulty at page 2. The source of water for the Seal Rock District is not a small surface stream but is the Siletz River and Mill Creek and is limited to 1 MGD by Agreement with the supplier, the City of Toledo. Only 839 lots were developed out of some 3,000 available in the District; a present capacity of only 333 gallons per day if used. This does not consider future lots created to the end of the century.

There is an opportunity for the District to utilize both the Alsea and Yaquina Dunal Aquifers within its District such that the limited Siletz supply would not be a problem.

Fourth, the proposed rule appears to violate Environmental Quality Commission Planning Policy (1)(A) "...Assure protection beneficial use by future generations."

and Policy (2) (H)"...to protect ground water quality", and Policy (5) (G) allowing short term further degredation since at least three of the six requirements would not be met including:

(d)(4) Development and adoption of a ground water protection plan, and
(e)(5) Development and adoption of a financing plan, and
(f)(6) A commitment for implementation and a time table by local government.

It may be that these could be accomplished in short order. Since the area is within the Waldport UGB and the County has an Agreement with Seal Rock Water but no discussion has been initiated to date.

Finally, the true cost of the proposed rule cannot be determined. While it appears to encourage development, a large but unknown number of lots would require the more expensive experimental sand filter system at $4,000 - $5,000 per lot as opposed to proven conventional sewerage and plant at a cost of $2,000 per lot.

The report at Page 5 goes so far as to suggest the use of a disclaimer on approvals in sand dunes such that an owner may have to buy another system in the future at higher prices if the approved systems are non-functional or are affected by natural and normal erosional forces.

In conclusion, based on the above factors, the Lincoln County Planning Department does not concur with the Department proposed Rule and further concludes that the resulting delay in the provision of sewers and additional cost to residents of further delays is not believed to be beneficial to Lincoln County's present or future residents.

Sincerely,

Clyde W. Stricklin

CLYDE W. STRICKLIN
Senior Planner

cc: Ms. Linda Zucker
Mr. Bill Zekan
Board of County Commissioners

CWS/gg

County of Lincoln

Sub-Surface Section

Public Service Building
210 S.W. 2nd Street
Newport, Oregon 97365
(503) 265-6611, Ext. 253

May 5, 1981

Ms. Linda Zucker
Department of Environmental Quality
P.O. Box 1760,
Portland, Oregon 97207

Re: Proposed Geographic Rule:
340-71-400(3)

Dear Ms. Zucker:

The following are comments submitted by the Lincoln County Subsurface Sewage Disposal Section as regards the adoption of the above referenced geographic rule proposal.

This department's integral involvement in this most difficult and complex situation reflects our concern not only for the public health and welfare of the citizens of Lincoln County, but for the protection of our natural environment as well. It is clear that continued development of this sensitive area by use of standard septic tanks and drainfields will cause serious degradation of the groundwater aquifer in the area. It is also clear that this proposal would be in conflict with certain statewide goals, Environmental Quality Commission groundwater protection policies, and the Lincoln County Comprehensive Plan. What must be weighed in the balance, however, is the long standing committment to the property owners who have invested their money and dreams in an "approved" subdivision, platted in the early 1960's under completely different goals and circumstances. After careful consideration of the alternatives set forth by the Department of Environmental Quality, it is this department's recommendation that the proposed geographic rule (OAR 340-71-400)(3) be adopted as the most practical compromise to an admittedly difficult situation. Along with this recommendation we urge the Environmental Quality Commission to encourage and aid in the provision of an area-wide sewage collection and treatment system. Whenever practical and reasonable, this should remain our goal for the safest and best means of sewage disposal and groundwater protection.

In Mr. Gilbert's April 24th letter requesting related comments he states that "adoption of the geographic rule would be making a judgement that the groundwater aquifer should not be protected from the beneficial use of domestic drinking water supply." I do not agree with

contd.

Ms. Linda Zucker
Department of Environmental Quality.

this statement! Rather, I see the proposed rule as a compromise, applying the highest available technology in sewage disposal technique to a complex "human" problem. With a public sewage system as our ultimate goal and with current advancements in sewage disposal techniques, I believe we can safeguard the health and "rights" of the people of Lincoln County.

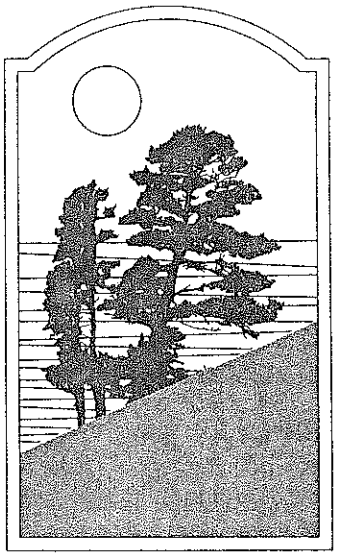
Sincerely,

WILLIAM J. ZEKAN, R.S.
ENVIRONMENTAL MANAGER

WJZ/jl

cc: Mr. William H. Young, Director
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Lincoln County Board of Commissioners.



May 6, 1981

Dept. of Environmental Quality
P.O.Box 1760
Portland, OR. 97207

Attention: Linda Zucker

Subject: Proposed Adoption of
Rule 340-71-400 (3)
Lands overlying the
Alsea Dunal Aquifer.

Dear Sirs:

Representing the owners of Sandpiper Village, Waldport, I wish to express the following concerns and recommendations:

Sandpiper Village
2 minutes north of the bridge

I. Paragraph #1 of your background statement (Public Hearing April 30, 1981) states "Typical lot sizes ranged between 5,000 to 7,500 square feet". While this is probably true of Bayshore, average lot size in Sandpiper Village is in excess of 11,000 square feet.

II. Sandpiper Village and the area North of Sandpiper Village have all been designated for the same treatment as the area South of Sandpiper Village even though the Rohleder Associates Alsea Dune Sheet Reconnaissance indicates that a "potential for groundwater development occurs only in the Central portion of the dune sheet within the 'Bayshore Flow Basin'".

RECEIVED
MAY 11 1981
Water Quality Division
Dept. of Environmental Quality

Recommendations:

I. Adopt the proposed rule with the following changes:
   A. Increase the maximum daily sewage flows (340-71-400 (3) (a)(b) IV) to 450 G.P.D. on lots over 9,000 sq.ft. area that meet the other indicated criteria.

II. Consider dividing the "Geographic Area" into two sections.
   A. The Southern portion of the Alsea Dunal Aquifer which includes "The Bayshore Flow Basin".
   B. The Northern portion of the Alsea Dunal Aquifer which includes Sandpiper Village and is sand overlying "older marine terrace deposits".
      (1) Apply the 450 G.P.D. limits uniformly to this area in accordance with 300-71-400(3).

Very truly yours,

Eugene P. Smith

Eugene P. Smith

EQC
Hearing Section
MAY 1 1981

Sales Representatives:
Tripp & Tripp, Realtors
Box 747, Albany, Oregon
Phone 926-1521

ROHLEDER & ASSOCIATES INC.
ENGINEERING GEOLOGIST
P. O. Box 211
Waldport, Oregon 97394

JOSEPH P. ROHLEDER, PRESIDENT
REGISTERED PROFESSIONAL GEOLOGIST
CERTIFIED ENGINEERING GEOLOGIST
STATE OF OREGON #E265

OFFICE (503) 563-2480
MOBILE PHONE (503) 265-7775
UNIT 7060

May 7, 1981

Mr. William J. Young, Director
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Re: Proposed geographic rule 340-71-400(3): Lands Overlaying (sic) the Alsea Dunal Aquifer

Dear Sir:

Your department conducted a public hearing on April 30, 1981, regarding the above referenced proposed geographic rule change. The staff background report for that meeting relies heavily on a report by Rohleder & Associates Inc. titled Alsea Dune Sheet: Groundwater Reconnaissance. The report cited was a first draft dated July 14, 1980, which was presented to the Lincoln County Planning Commission as a part of a public hearing on a proposed subdivision known as Sandpiper Shores, which is located north of the existing Sandpiper subdivision.

Since I was not aware of the D.E.Q. public hearing until after the fact, I contacted Mr. Charles Grey of your department on May 5, 1980. He indicated that my comments on the proposed geographic rule would be accepted in writing as a part of the record of the public hearing.

I.

The staff background report presented at the public hearing on April 30, 1981, states that typical lot sizes range between 5,000

to 7,500 square feet. Although the lot sizes in much of the older platted subdivisions do range in this general size, this statement is somewhat misleading. The effective lot size is increased by the addition of road right-of-ways and other common area. Additionally, the lot sizes in the newer platted subdivisions such as "Sandpiper III" and "Sandpiper Shores" are much larger than the 7,500 square foot figure.

An analysis of lot density on an area basis was included in the Rohleder & Associates report. The relative densities were shown to be: Bayshore subdivision = 3.35 lots per acre. Sandpiper subdivision = 2.67 lots per acre. Sandpiper Shores subdivision = 1.93 lots per acre. Other small subdivisions = 1.39 lots per acre.

The proposed geographic rule does not take into account lot density on an area by area basis but rather limits the projected daily sewage flow to not more than 300 gallons per lot regardless of whether the lot density is 3.35 per acre or less than 2.0 lots per acre.

In my opinion, the proposed geographic rule should consider the lot density on an area by area basis and should also give credit to lots which were platted to a size larger than the norm in area.

II.

The Rohleder & Associates report divided the Alsea Dune Sheet into 4 flow basins based on topography, geology and known groundwater

conditions of the area. The summary of that report states: "A preliminary analysis of the geohydrology of the Alsea Dune Sheet indicates that a potential for groundwater development exists only in the central portion of the dune sheet within the "Bayshore Flow Basin".

The proposed geographic rule does not take into account the fact that the groundwater conditions and the geology vary considerably from flow basin to flow basin within the dune sheet.

In my opinion, the geographic rule should give some consideration to the groundwater producing potential of the flow basin within which the lot is actually located.

III.

The staff background report for the public hearing has a discussion of water quality on page 2. The first two paragraphs are taken more or less verbatim from the Rohleder & Associates report. The third paragraph states:

> "If the area was (sic) to continue to be developed utilizing conventional septic tank and drain field systems, nitrate-nitrogen levels would be expected to approach 10.14 mg/l."

This paragraph is a conclusion of the staff person preparing the background report and differs considerably from the conclusions of the Rohleder & Associates report. A discussion of water quality was included in the Rohleder & Associates report on pages 6,7,& 8. The conclusions of that discussion were:

> "If the $N\text{-}NO_3$ concentration is directly proportional and a density of 0.7 houses per acre yields a maximum concentration of 0.6 mg/l, then a density of 3.35 houses per acre (platted density of Bayshore subdivision; Sandpiper subdivision is 2.67 houses per acre) would yield a maximum $N\text{-}NO_3$ concentration of slightly under 3 mg/l."

3 mg/l is considerably different than the projected 10.14 mg/l of the D.E.Q. staff background report for the public hearing.

In my opinion, this projected ultimate nitrogen-mitrate concentration disparity points up the need for a more detailed study of the groundwater conditions in the Alsea Dune Sheet.

In conclusion, I feel that the geographic rule should be adopted as proposed to apply to the "Bayshore" and "South Spit" flow basins as identified in the Rohleder & Associates report. In the remainder of the Alsea Dune Sheet (i.e. Buckley Creek Basin and the Hidden Lake Basin) the geographic rule should be modified to include a consideration of the actual size of the lot and the actual density (lots per acre) of platted lots within the flow basin. Furthermore, I would recommend that a more detailed assessment of the groundwater potential of the Alsea Dune Sheet as well as a long term water quality monitoring program be developed as a part of geographic rule 340-71-400(3).

Thank you for the opportunity to comment on the proposed rule. If I can provide further information to you, please feel free to contact me.

Sincerely,

Joseph P. Rohleder

Joseph P. Rohleder, President
Rohleder & Associates Inc.

LINCOLN COUNTY
PLANNING DEPARTMENT

PUBLIC SERVICE BUILDING
210 S.W. 2nd St.
NEWPORT, OREGON 97365

Land Use Planning

Zoning & Subdivision Administration

265-6611
ext. 292

May 6, 1981

Mr. William H. Young, Director
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Sir:

In response to your agency's request for comment concerning adoption of Proposed Geographic Rule 340-71-400(3), I have enclosed materials assembled in conjunction with a subdivision request heard before the Lincoln County Planning Commission during the Fall of 1979.

In review of this data, it is important to recognize that there remains a controversy between the City of Toledo and the Seal Rock Water District in regard to responsibility for the system improvements needed to deliver the District's contracted amount.

The Seal Rock Water District is now in the process of constructing a new 1.0 m.g. reservoir, which adds significantly to the District's storage capacity.

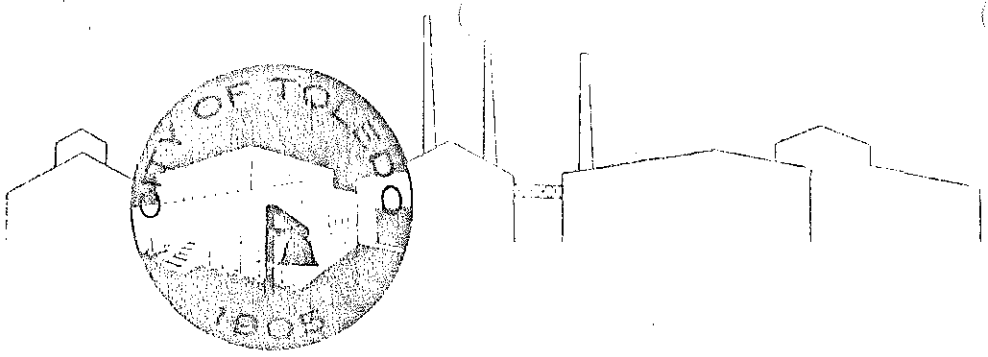
The long term reliability of the Siletz River as a domestic water supply, oversubscribed now during periods of low flow, will only be proven with the development of the Rock Creek impoundment, tributary stream to the Siletz. Of the four municipalities dependent on Siletz River water, Seal Rock Water District is most junior in priority. In this respect, I would urge a most careful evaluation of the potential water resources that the dunal acquifers represent prior to reaching a decision that would degrade those resources.

Sincerely,

Craig Hall

CRAIG HALL
Planning Coordinator

CH:jem
Enclosures
cc: Lincoln County Board of County Commissioners
Bill Zekan



Phone 336-2247
P.O. Box 220
Toledo, Oregon 973

September 7, 1979

Ed Brenneman
500 Bay Shore Dr.
Waldport, Oregon 97394

Re: Water supply, Toledo - Seal Rock

Dear Ed:

We discussed the water supply situation between Toledo and Seal Rock last week. I am writing at your request to outline what steps Toledo is taking to assertain the improvements required to supply Seal Rock Water District with water.

We have few facts known about the demands expected by Seal Rock users. I do know that we run our pumps at full capacity now to keep up with demand at peak times. There have been occasions last summer when both Toledo and Seal Rock were extremely short of water.

To correct immediate problems, the City has spent about $125,000.00 on the Siletz water transmission system this summer. The intake at the river was rebuilt and 2000' of deteriorated line was replaced. Our engineers are now doing a study to determine the hydraulic characteristics of the transmission line from the Siletz. We should be able to determine the options available for moving more water to the plant soon. Once that information is available, I will be meeting with the Seal Rock District to try to get a better idea of the expected demand there.

The problem is further complicated by the tenuous water right held by the District at the Siletz intake. The water right may be interrupted by the state at periods of low flow in the river. This occurs, naturally, at periods of high demand.

Seal Rock is investigating the feasibility of additional storage. The long term answer seems to be a large impoundment, possibly on a tributary to the Siletz.

In any event, we are aware of the problem and are working to find solutions. We may know more in a month or so once our report is complete.

Sincerely,

David R. Palmer
City Manager

DRP/pl

cc: Heinz Neuman
Seal Rock Water Line

1(B) (Exhibit B)

September 11, 1979

I. SEAL ROCK WATER DISTRICT PURCHASES FROM TOLEDO UNDER JOINT AGREEMENT APPROVED BY GOVERNING BODIES IN 1976

	1977	(a.d.g.)	1978	(a.d.g.)	1979	(a.d.g.)
Jan.	-----	------	3,320,000	107,097	5,874,000	189,484
Feb.	3,336,000	119,143	3,821,000	136,464	5,249,000	187,464
March	2,186,000	90,839	3,026,000	97,613	4,624,000	149,161
April	2,763,000	92,100	4,383,000	146,100	6,187,000	206,233
May	3,243,000	104,613	4,013,000	129,452	4,459,000	143,839
June	4,800,000	160,000	5,529,000	184,300	7,470,000	249,000
July	5,956,000	192,129	5,884,000	189,806	6,588,000	212,516
Aug.	6,465,000	208,548	6,942,000	223,935	7,722,000	249,097
Sept.	5,458,000	181,933	5,872,000	195,733		
Oct.	3,781,000	121,968	4,847,000	156,355		
Nov.	3,639,000	121,300	5,057,000	168,567		
Dec.	4,261,000	137,452	4,114,000	132,710		

Note: "Peak Daily Use" for the last three years has occured on either July 4 or Labor Day and has not exceeded 327,000 gallons.

II. DISTRICT SIZE
A. 14 sq. mi.

III. DISTRICT INCORPORATION YEAR
A. 1959, under ORS 264.

IV. DISTRICT 1979 ASSESSED VALUATION
A. $65,713,000.00.
1. Statutory Bonding Capacity = 10% of assessed valuation.
2. Bonded Indebtness 9/11/79 = 1.6% of assessed valuation.

V. DISTRICT USERS
A. 1184 metered service connections as of 9/11/79.
1. Domestic users (single family-single home) = 95%.
2. Commercial users (small business) = 5%.
3. Av. occupancy rate per metered user (est) = 2.4 persons
4. Water reservoir capacity = 1,225,000 gals.
5. Daily per capita water use average = 100 gals.

VI. DISTRICT WATER RIGHTS/PERMITS
A. Total of rights and permits, currently available for use or development as needed, is 13 cfs (8,424,000 gals. per day).

VII. DISTRICT INTERIM AND LONG RANGE PLANNING
A. An engineering survey/study is now in progress to cover district's interim requirements through 1986.
B. The district is a participant of the Central Lincoln County Water Resources Committee for long range planning that will implement provisions of the existing Lincoln County Comprehensive Water Development Plan applicable to the central area of the county. At the present time the Bureau of Reclamation is conducting a feasibility study for the construction of a dam at the Big Rock Creek Site to meet the central county needs for multi purpose uses.

Miller - Motion to table Lost Creek #3 hearing until after Seal Rock Water District has presented its information to Planning Commission.

Gnos - Seconded Motion. Motion carried unanimously.

MOTION TO TABLE LOST CREEK #3
#154-79

Heinz Neuman, Executive Secretary of Seal Rock Water District. Introduced Proponent Exhibit #1, statement from Water District dated September 17, 1979, by this reference made a part hereof.

Jeff Gonor, Chairman of Board, Seal Rock Water District. Have prepared statement of facts concerning Water District. Statements have appeared in newspaper and radio and from Planning staff that Board is concerned about. Confidence of people in District have been seriously eroded by statements which are being made, which District cannot substantiate. There have been indications that City of Toledo might not be able to fulfill water supply contract between Toledo and Water District due to lack of capacity of its own system. Water District has participated in comprehensive planning county-wide for last 10 years. District has other resources; have existing water rights on proven and non-proven other water sources within the boundaries of District.

Granger - District has competent engineer; City has engineer and is now in the process of assessing capabilities of City to provide water according to the contract, which I understand, is a non-interruptable contract for up to one million gallons per day. We have been made aware of some potential problems. City of Toledo has informed staff they are providing right now just about all the water they could provide given the existing treating capacity and pumping capacity. Staff concerns arise out of study that was adopted in 1974; study done by engineering consulting firm. Water District cannot come up to recommendations that were made in Plan for storage; fire-flow capacity would have to be measured by rural fire protection district. Don't know what plans are of District to comply with Plan in 1980. Staff desires to cooperate with District in developing plan that is acceptable with City of Toledo and County. Westek Engineering doing study for City of Toledo, which information is not yet available. Have letter from City Manager, Toledo, which speaks to problems. Keep in mind number of platted lots in Seal Rock; each lot has right to hook up to water so long as water is available. Approximately one-third of platted lots have been developed. Approximately 3,600 lots have right to water; water also to be used for fire protection. Capacity of system right now doesn't meet the fire-flow recommendations that were made for 1975 or 1980 in the Plan. County has responsibility to not encumber more water than is available. Original information from City concerning peak daily use has proven to be inaccurate. Peak consumption is about 327,000 gallons.

Neuman - In last two years the increase in service connections has averaged about 15%. Prior years 1960 thru about two years ago, was around 8-10% annual growth. About 150-175 hookups for past two years, which have been booming years. Bayshore has 1,040 lots; 237 improved lots. Discussed long range planning of District.

Gonor - Most critical problem at moment is size of line between pumping station and water plant in Toledo.

LOST CREEK #3

Phone 336-2247
P.O. Box 220
Toledo, Oregon 97391

November 19, 1979

Oscar Granger
Lincoln County Planning Director
Lincoln County Courthouse
Newport, Oregon 97365

Dear Oscar:

Attached is the brief water report prepared by Westech Engineering for the City of Toledo, and a description of the water system by City Planner Garrett Smith. Because there is no way to confirm the accuracy of the water plant records, we have been reluctant to distribute it. We have installed a flow meter on the Mill Creek line, and plan to do the same on the Siletz line. This will allow us to double check the plant readings.

Because so much emphasis is being placed on Toledo's ability to provide water to Seal Rock Water District, I think it important to present this to you today, before the public hearing tonight.

There are several significant findings in the report. However, there is no direct statement to the point of Toledo's ability or inability to provide one million gallons per day to Seal Rock. The report indicates:

1. Georgia Pacific uses 50% of Toledo's treated water.

2. Seal Rock uses 15% to 19% of Toledo's treated water.

3. At peak periods, maximum day demand on the system exceeds present capacity of the 2.16 million gallons per day.

4. Seal Rock Water District maximum day demand is 744,000 gallons per day.

There are several factors relevant to the above statements:

1. Georgia Pacific is building a water filtration plant. Upon completion in July 1979, the water demand from Georgia Pacific should drop from 400 gallons per minute to 100 gallons per minute.

2. The city is developing a water plan. Improvements to the raw water intake system are aniticpated to increase water production.

Water provided to Seal Rock is taken from the Siletz River. Seal Rock has a water right to 1.6 million gallons per day from the river. Toledo pumps and treats that water through the Toledo water system. Although adequate to meet current demands, the Seal Rock water right and 2.6 million gallons per day of Toledo's 3.6 million gallons per day water rights may be cut off in the event of low water in the Siletz River. Low water (below 100 cfs) occurs in August and September with a frequency of about three years out of every five years.

The City of Toledo has a contract to provide up to one million gallons per day to Seal Rock Water District. With phased development and coordinated improvement schedules, I expect the Toledo water system to grow in conjunction with demand. However, the Seal Rock Water District now has a peak demand in excess of .7 million gallons per day. While the average demand is less, the peak is approaching the 1.0 million gallons per day limit. It should also be noted that water is provided to the Seal Rock Water District on a "surplus water" basis. The contract provides for procedures in the event "surplus water" is not available -- primarily a joint meeting between Seal Rock and Toledo.

There are several variables affecting the Toledo/Seal Rock water situation. These variables make it difficult to make a firm yes or no answer to the question of providing a continuous supply of one million gallons per day to Seal Rock. They include:

1. Changes in demand by Georgia Pacific.

2. Rapidity of development in Seal Rock Water District.

3. Availability of funds to make improvements of the raw water system.

We are continuously working to keep the system up with the demand. I expect the city to be able to provide 1.0 million gallons per day to Seal Rock, but that is dependent on factors mentioned above.

Sincerely,

David R. Palmer
City Manager

DRP/gh
cc: Heinz Neuman
Don Knapp

SEAL ROCK WATER DISTRICT
P. O. Box ~~XX~~ 198
SEAL ROCK, OREGON 97376

Novemb

David R. Palmer
Toledo City Manager
P. O. Box 220
Toledo, OR 97391

RE: WESTECH Engineering Report.

Dear Dave;

While there seems to be some minor discrepancy on figures listed on Table #1 of the referenced report on "daily average" figures of the district's monthly water use, as compared to our actual recorded payments for listed periods, there is a significant error, in my opinion, of what was listed under "maximum daily demand" in the same Table #1!

Under the present design operations we are incapable of exceeding a 450 g.p.m. rate of pumping water from Toledo without blowing controller fuses or having heater devises activated for pump shut down! In short, we can't understand how any "maximum day flow demand" for the district can be arrived at that would exceed 648,000 g.p.d. for a 24 hour period! Additionally such demand has only occurred during the few periods when the district had shut off pumps during periods requested by Toledo during repair operations when the normal pumping operations of 10 to 12 hours might have required a 20 to 24 hour cycle to refill district's present 1.225 mg reservoir capacity.

In terms of actual "peak daily demand" through period tabulated by WESTECH, district's requirements never exceeded .3 mg over the high use days of July 4, 1979 or Labor Day 1979 as checked for these days.

The district can adjust pumping times/cycles to flatten out apparent "peak day demands". I would be happy to meet with you and the WESTECH Engineer representative to discuss this subject at any convenient time.

Sincerely,

Heinz Neuman

Heinz Neuman, Executive Secretary

CC: Oscar Granger, Lincoln County Planner

LOST CREEK #3

October, 1979

WATER SYSTEM SUPPLY ANALYSIS

1. Water Metering

At the plant: The total raw water flow into the plant and the raw flow from Mill Creek are measured and totalized. Annubar equipment utilizing the pitometer principal provide the flow measurement. There is apparently no convenient way to determine whether the measurements provided are accurate or not. The water plant operator believes that the flow measurements recorded are not completely accurate.

There needs to be a way to calibrate or check the flow measuring equipment. The plant operator has equipment which can and should be used to check the flow from the Siletz pump station. Some appurtenances at the pump station need to be installed first. Apparently there is an old meter which was removed from the Mill Creek pump station, was repaired, and needs to be reinstalled. This could be used to check the equipment measuring Mill Creek raw water flows.

Seal Rock: Annubar equipment also measures flows to Seal Rock, but a second meter also measures flows. The two measurements are checked against each other periodically to assure accuracy.

Georgia Pacific: Georgia Pacific is a large water user and draws water through seven meters. The meters are read monthly.

Summary: The overall measurement and recording of water system demands is somewhat less than complete since the new water treatment plant was put in operation. There is one eight month period during 1978-79 when plant flows are not available due to meter failure. The accuracy of the raw water flow measurements is questionable, but they are probably within 20 percent of being correct.

The measurement of flows to the two largest water users, Seal Rock Water District and Georgia Pacific, are considered quite accurate. Because the Georgia Pacific meters are read just monthly, there is no good information available about what their maximum daily use is. This information would be useful but not essential.

2. Recorded Water Demands

Table 1 shows system water demands since mid-1977. Average flows for each month are of interest because they should show the general trends of water use. Although the accuracy of the water supply information is uncertain, the trend of total water supply during the critical months of July and August appears to be relatively static during the last three years. This is apparently because all the water that can be pumped to the plant is used on at least a few days each year.

TABLE 1
TOLEDO WATER DEMANDS

Month	Average Daily Flow During Month, MGD	Average Daily Flows During Month For			Maximum Daily Flows During Month, MGD	
		Georgia Pacific	Seal Rock	Remaining Water Users	Total System	Seal Rock
7/77	1.578				2.171	
8	1.531		0.190		1.915	
9	1.129		0.141		1.338	
10	1.096		0.023		1.495	
11	1.032		0.128		1.454	
12	1.057		0.122		1.688	0.414
1/78	1.044	0.564	0.108	0.372	1.492	0.417
2	1.151	0.514			1.515	
3	1.167	0.493			1.391	
4	1.107	0.594	0.145	0.368	1.330	
5	1.145	0.521	0.127	0.497	1.354	0.409
6	1.468	0.596	0.178	0.694	2.152	0.669
7	1.584	0.589	0.194	0.801	2.188	0.390
8	1.426	0.575	0.199	0.652	2.118	0.322
9	1.349	0.567	0.190	0.592	1.793	0.685
10	1.322	0.683	0.168	0.471	1.602	0.437
11		0.502	0.131			0.245
12		0.610	0.139			0.442
1/79		0.659	0.195			
2		0.723	0.159			
3		0.570	0.183			0.335
4		0.701	0.201			0.744
5		0.755	0.193			0.629
6		0.734	0.239			0.445
7	1.511	0.764	0.229	0.518	1.848	0.527
8	1.521	0.741	0.295	0.485	2.097	0.624

	Total System Water Supply-- Average for Month, MGD		Total System Water Supply-- Maximum Day of the Month, MGD	
	July	August	July	August
1977	1.578	1.531	2.171	1.915
1978	1.584	1.426	2.188	2.118
1979	1.511	1.521	1.848	2.097

There does seem to be a trend developing in water use by Seal Rock and Georgia Pacific:

	Average Flow for Month To				Maximum Day of the Month	
	Seal Rock		Georgia Pacific		Seal Rock	
	July	Aug.	July	Aug.	July	August
1977	0.190	0.141				
1978	0.194	0.199	0.589	0.575	0.390	0.322
1979	0.229	0.295	0.764	0.741	0.527	0.624

Seal Rock seems to be becoming ever more dependent on the use of water from Toledo. In 1977, July and August demands averaged 0.167 MGD versus 0.262 MGD in 1979. Peak daily flows in 1979 reached 0.624 MGD, still significantly below the 1.0 MGD maximum commitment.

The water used by Georgia Pacific is even more significant. During the first six months in 1978, their water use averaged 0.547 MGD as compared to 0.690 MGD for the first half of 1979. This is an increase of about 140,000 gallons per day or 26 percent over 1978 use. Georgia Pacific presently uses about 50 percent of the city's water. Seal Rock is using about 15 to 19 percent during July and August.

3. Future Water Demands

The future water demands for Seal Rock and Georgia Pacific may be difficult to predict. Seal Rock can legally ask for up to 1.0 MGD from Toledo. Thus their maximum day demand is limited to 1.0 MGD. During the critical months of July and August, probably their average water demands will increase more or less in proportion to the number of services on their system. Recently there has been considerable development activity within the Seal Rock District.

Georgia Pacific water use in the future needs to be projected by the company. Continued growth of water use at present rates (26 percent per year) will seriously affect water system planning.

Water use by the rest of the city users can be projected as being proportional to future populations. The population projections for Toledo were recently given us by the city planning staff.

Figure 1 reflects projected average water demands during July and August. The following numbers were used:

Projected Average Water Demands during July and August

Year	1979	1980	1985	1990	1995	2000
Population	3450	3500	4631	5591	6551	7510
City water use	0.502	0.77	1.01	1.23	1.44	1.65
Georgia Pacific	0.753	0.79	1.01	1.28	1.64	2.09
Seal Rock	0.262	0.31	0.67	1.00	1.00	1.00
Total	1.517	1.87	2.69	3.51	4.08	4.74

The average demands during July and August relate to total water supplies required during critical periods. Perhaps even more important to Toledo is maximum daily demand for water. The raw water supply capabilities, i.e., water intakes, transmission lines, and treatment facilities, will need to meet the maximum daily demands.

Unfortunately, we don't know what the Georgia Pacific maximum daily demands are because they aren't measured. On the other hand, with proper regulation, the peak water uses by Georgia Pacific may be more easily controlled than peak water use by the general public.

Based on recorded information, maximum day water demands are projected as follows:

Projected Maximum Day Water Demands

Year	1979	1980	1985	1990	1995	2000
City water use	1.20	1.22	1.62	1.96	2.29	2.63
Georgia Pacific	0.95*	0.99*	1.26*	1.54*	1.80*	2.06*
Seal Rock	0.74	0.87	1.00	1.00	1.00	1.00
Total	2.1†	3.08	3.88	4.50	5.09	5.69

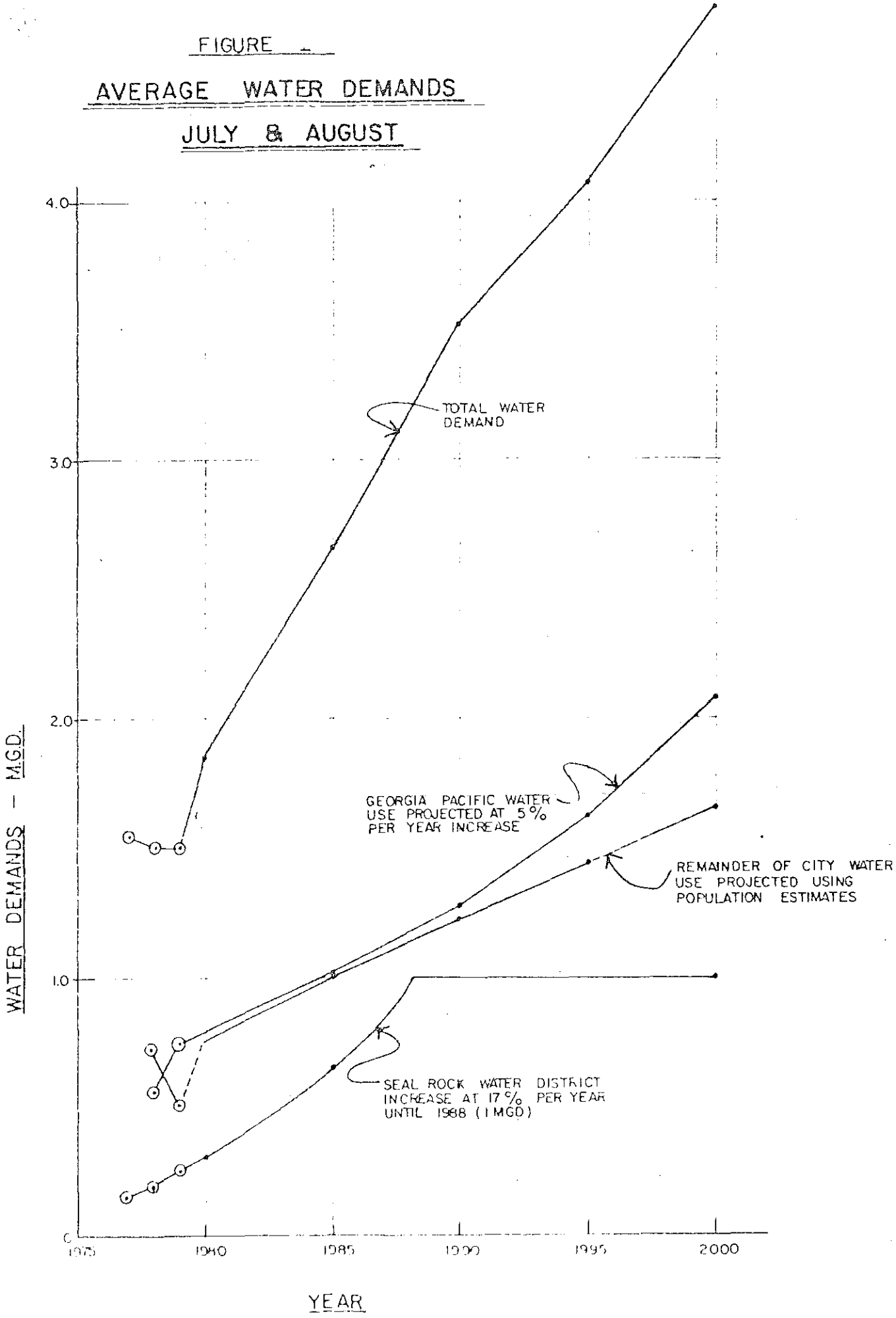
*Estimated at 2% over average for month.

†Measured maximum day total flow appears to be limited by raw water supply capacity. Apparently maximum day water demands exceed present supply capacity.

FIGURE –

AVERAGE WATER DEMANDS

JULY & AUGUST



The water demand projections on the preceding page are much greater than previous projections made for the city. The difference between these projections and earlier projections arise from:

a. Somewhat higher population projections for Toledo.

b. Water use projections are made for Georgia Pacific. Apparently their water use was not considered separately in the past.

c. Water use in Seal Rock is projected to increase at 17 percent annually, reaching the 1.0 MGD limit sooner than previous estimates indicated.

4. Existing Supply Capacity

Based on the somewhat questionable flow measurements recorded at the water treatment plant, the city's raw water supply capacity is as follows:

a. Mill Creek dam, transmission line, and pump station: 1.1 MGD or 763 gpm.

b. Siletz intake and transmission line:

Two pumps on:	0.756 MGD or 525 gpm
Three pumps on:	1.060 MGD or 736 gpm

c. Maximum raw water flow: 2.16 MGD.

The hydraulics of the Siletz transmission line was investigated. Briefly, the findings were as follows:

a. The old 10" steel piping between the pump station and surge tank exhibited very poor flow characteristics, much worse than we would have suspected.

b. The remainder of the transmission line exhibited reasonably good flow characteristics.

c. Our analysis would be much more conclusive if we could get higher flows through the pipeline (we had anticipated flows over 1000 gpm), and if we could confirm the measured flow rates.

d. The 10" steel pipe must be replaced before much additional supply capacity in the Siletz transmission line can be generated. There will also need to be some modifications made to the surge tank.

5. Future Supply Capacity

If we assume that Mill Creek will continue to supply just 1.1 MGD maximum, then the Siletz system must supply the following flows to meet projected maximum day demands:

1980	1985	1990	1995	2000
1.98 MGD	2.78 MGD	3.40 MGD	3.99 MGD	4.59 MGD

These are much higher flows than previously anticipated. We calculate that:

a. 1980 flows can be met by modifying the Siletz pumps, replacing the 10" steel pipe, and modifying the surge tank.

b. 1985 flows can be met by further pump modifications, and replacing all the 12" transmission line (about 9800 feet) with 18" pipe.

c. With the entire pipeline built of fairly new 18", 16", and 14" pipe, flows above those projected for 1985 can probably best be generated by adding a booster pump station on the Siletz line near where it crosses the Highway 20 bypass.

All of the above discussion about the Siletz water source neglects the fact that the city only has good early water rights to a flow of 1.75 cfs (1.13 MGD) at the existing intake. While the city holds other later rights allowing use of more Siletz River water, they probably cannot be fulfilled during a dry year.

There appears to be some potential for increasing the supply capacity from Mill Creek. As the maximum day demands normally occur during relatively short hot spells, periods when there are many tourists, etc., it may make more sense to meet maximum day flows from the Mill Creek dam where about 82 million gallons is stored. For instance, if we could pump 3 MGD from the Siletz River, then a 2 MGD flow from Mill Creek would about meet maximum day demands projected for 1995. An extensive hydraulic analysis of the Mill Creek system was beyond the scope of this short report, but there does appear to be potential for increasing Mill Creek supply flows to around 2 MGD without extensive work.

6. Conclusions

a. The city water supply capacity is limited to about 2.16 MGD presently.

b. The actual maximum day demands probably presently slightly exceed supply capacity.

c. About 50 percent of all the water supplied is used by Georgia Pacific. Their water usage has increased 26 percent in the last year.

d. About 15 to 19 percent of all the water is used by Seal Rock Water District. Their use of water from Toledo is increasing rapidly.

e. The metering equipment at the water treatment plant may be accurate, but it is difficult to check or calibrate and so the plant flow measurements are viewed with some skepticism.

f. Based on the water use trends of Seal Rock, Georgia Pacific, and the remaining users, it appears that water demands are presently higher than previously recognized, and that meeting future water demands needs to be viewed with real concern.

g. Measured hydraulic conditions in the Siletz River transmission line indicate that portions of that line are in much worse condition than we suspected. The flows through it cannot be readily increased much without replacing all of the old 10" steel pipe.

7. Recommendations

a. Step 1: Make independent measurements of Siletz transmission line and Mill Creek transmission flows. This should either confirm or perhaps cause some modification to the raw water supply data.

b. Step 2: Hold discussions with Georgia Pacific mamagement to discuss water supply with them. Subjects to be covered include:

1) The status of the city water supply situation.

2) Recent water use by Georgia Pacific.

3) Can water use by Georgia Pacific be reduced by better conservation, control of waste, etc.?

4) What will the future Georgia Pacific water needs be?

5) With Georgia Pacific using half the city water, are there common facilities that might be utilized to meet the overall water needs? For instance, could the city pump peak water demands from Olalla Reservoir or utilize some of the Georgia Pacific water rights for water from the Siletz?

c. If after steps 1 and 2 the water supply situation still appears critical, a more in-depth analysis of water needs and supply is warranted. Possible long-range solutions include:

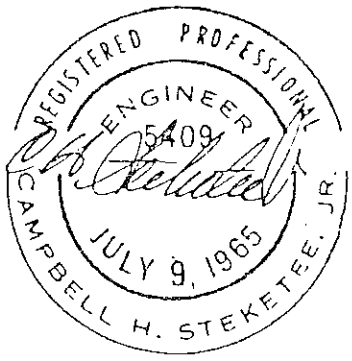
1) Increasing Mill Creek storage and/or supply capacity.

2) Obtaining old water rights to Siletz River water.

3) Storing water in the Siletz drainage basin, perhaps at Valsetz Lake, for summer release and flow augmentation.

4) Joint use of Georgia Pacific reservoir or intake or transmission line.

WESTECH ENGINEERING, INC.



1 CST CREEK #3

CITY OF TOLEDO

Municipal Water Delivery and Supply

An engineering report on "Water Supply and Treatment Facilities for the City of Toledo, Oregon" was prepared in March of 1973 by Barrett & Associates of Portland, Oregon. Much of the data and analysis of that report is still valid. The population projections are not.

Toledo obtains its water from two sources. Mill Creek lies to the South and East of the City. There is an impoundment on the creek which stores 82 million gallons. At periods of lowest flow, the creek itself can provide approximately one million gallons a day, though one consultant indicates that in years of severe drought flows may be reduced considerably below that level. Since transmission from the Mill Creek impoundment to the treatment plant in the City is designed for approximately 600 to 650 gallons per minute (no more than 1 millions gallons a day) water stored in the impoundment reservoir is seldom available as a back-up supply. During periods of heaviest demand and lowest stream flows, the level does drop below the spillway, but much of the stored water cannot be used at this critical period.

The Siletz River is the second source of water for the city. Water is pumped under pressure for a short distance, then flows by gravity to the treatment plant within the city for distribution to the three municipal reservoirs. The transmission lines between the Siletz River and the City were installed in the 1930's, originally, and are generally in marginal repair. Some sections are of wood and will require replacement soon. One section of the line runs under the Georgia Pacific reservoir, making the detection and repair of breaks difficult, if not impossible. This section of pipe is relatively new. The City has a contract with Westech Engineering, Inc., for improvement of the Siletz transmission line and pumping capability. Since 1973 population figures and projections were used to establish the timetable for the phased replacement of the line, and since these figures now appear to be very much too low, that timetable will need to be revised.

Water rights on the Siletz are complex. The City has one right for 1.1 millions gallons per day which is always available. The right was granted prior to legislation which allows water users to be cut off when river flows drop below a certain level. Toledo is not subject to these provisions on the 1.1 mgd source.

A second water right, 14 miles upstream from the present intake on the Siletz has never been exercised. The City has just obtained a new water right at the point of the present intake for 4.0 c.f.s. or 2.6 mgd. Neither right would be available during periods of low summer flow when minimum river flow standards were being maintained by cutting off users with rights post-dating the referred to legislation.

The Seal Rock Water District also has water rights on the Siletz subject to termination during periods of low flow. These are for 1.6 mgd. Seal Rock W.D. has a legal right to purchase up to one mgd from Toledo. It is expected that the district will require that much water from Toledo in the near future.

If improvements to the transmission line from the Mill Creek impoundment are not made, and if the height of the dam is not increased, we may consider that Toledo and Seal Rock have the following supplies:

Mill Creek	1 mgd
Siletz (not subject to cut-off)	1.1 mgd
Siletz (Toledo right, possible cut-off for low flow)	2.6 mgd
Siletz (Seal Rock, possible cut off)	1.6 mgd

Westech (using the low population projections of Barrett & Assoc. made in 1973) has submitted a plan for the pumping and transmission of 2.6 mgd from the Siletz by the year 2000.

The current and best available population projections for the City of Toledo indicate that population in 1985 may be as high as 4631 people. In the year 2000 as high as 7510. Using the Barrett & Associates calculation that in the year 2000 the Maximum Daily Demand per person will be 625 gallons, simple arithmetic indicates that the demand that may need to be filled from Mill Creek and the Siletz in the year 1985 is: 3.9 mgd

2000 is: 5.7 mgd

If we use average rather than peak demand figures, we would use (for Toledo) 235 gpcd in 1985 and 250 gpcd in the year 2000. In Seal Rock we use 100 gpcd in accord with Barrett & Associate figures.

1985 is: 2.0 mgd

2000 is: 2.9 mgd

In both cases we assume Seal Rock will be purchasing 1 mgd by 1985.

It is argued that it is prudent to plan for maximum population figures expected. It is also prudent to consider peak rather than average demand since the City of Toledo does not have the storage capacity for treated water to carry more than a day or two at a time.

The highest demand for water is invariably during the summer when the periods of low flow on the Siletz will occur.

VICTOR ATIYEH
GOVERNOR

Department of Land Conservation and Development

1175 COURT STREET N.E., SALEM, OREGON 97310 PHONE (503) 378-4926

May 8, 1981

Linda Zucker
Department of Environmental Quality
P.O. Box 1760
Portland, OR 97207

Dear Ms. Zucker:

We understand that the Department of Environmental Quality (DEQ) is considering a proposed rule that will allow continued development over the Alsea Dunal Aquifer on the assumption that the groundwater aquifer is too degraded to be developed as a domestic water supply source. As part of the proposed rule (340-71-400(3)), a land use consistency statement prepared for the Environmental Quality Commission (EQC) states, "This proposal appears to be consistent with Goal Number 6 (Air, Water and Land Resources Quality), and Goal Number 11 (Public Facilities and Services), but may not be consistent with some beneficial uses relating to groundwater protection under Goal Number 5." The uncertainty in that determination combined with Robert Gilbert's May 6, 1981 specific request for DLCD comments prompted us to submit the following comments to help clarify how Goals 5 and 6 relate to the proposed action.

The LCDC adopted OAR 660-16-000 at the May 1 Commission meeting. This temporary rule clarifies some differences and uncertainty on the use of Goal 5 in land use decisions. The enclosed copy includes a chart outlining the new procedures for applying Goal 5 to land use decisions..

Based on the information we have available, it appears the aquifer appropriately falls into Category 1C. Category 1A is reserved for those situations where the site is so minor or the resource so degraded that Goal 5 does not apply. According to information supplied to us by DEQ, the Alsea Aquifer is significant and capable of restoration and therefore warrants Goal 5 consideration. Category 1B is reserved for cases where there is inadequate information to determine the location, quantity and quality of the resource. It's our understanding that data are available to document the aquifer's discharge and direction. Therefore, Category 1C, identifying conflicting uses based on available information on the location, quality and quantity of the resource, should be followed. Continued residential development on the aquifer could be a conflicting use unless standards are developed that ensure a degree of resource protection.

EQC's responsibility, then, is to resolve conflicts and determine the economic, social, environmental and energy consequences of allowing continued development with its associated impacts over the aquifer. As noted on the chart, EQC can either preserve the Alsea Aquifer (Category 3A), allow continued residential use of the aquifer as a conflicting use (Category 3B), or allow but specifically limit the conflicting use so as to prevent continued groundwater degradation (Category 3C). This would be accomplished by allowing continued residential development only if standards are met that would ensure a desired degree of resource protection.

With regard to findings for Goal 6, the order does not adequately document consistency with the Goal. The Order stops short of saying how, "standards for construction, installation and periodic inspection of on-site sewage disposal systems on lands overlaying the Alsea Dunal Aquifer" meet the goal of maintaining and improving the quality of the water resource. Continued development affecting the aquifer must not: (1) exceed the carrying capacity of the aquifer considering long range needs; (2) degrade groundwater quality; or (3) threaten its availability.

I trust this will help DEQ and the EQC in their consideration of allowing continued development on the Alsea Aquifer. The Department would be glad to help mediate any conflicts brought to your attention by local, state or federal authorities as requested in the order.

Sincerely,

Richard L. Mathews
Program Division Manager

RLM:JM:cp
5379A

cc: Robert Gilbert, DEQ
Bob Jackman, DEQ
Maggie Conley, DEQ
Bob Cortright, Newport Field Office
Lincoln County Board of Commissioners
City of Waldport

BEFORE THE
LAND CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF OREGON

IN THE MATTER OF STATEWIDE PLANNING GOAL 5	)	TEMPORARY RULE OAR 660-16-000

(1) Inventory Goal 5 Resources

The inventory process for Statewide Planning Goal 5 begins with the collection of available data from as many sources as possible including experts in the field, local citizens and landowners. The local government then analyzes and refines the data and determines whether there is sufficient information on the location, quality and quantity of each resource site to properly complete the Goal 5 process. This analysis also includes whether a particular natural area is "ecologically and scientifically significant", or an open space area is "needed", or a scenic area is "outstanding", as outlined in the Goal. Based on the evidence and local government's analysis of those data, the local government then determines which resource sites are of significance and includes those sites on the final plan inventory.

A "valid" inventory of a Goal 5 resource under OAR-660-16-000 (1C) must include a determination of the location, quality, and quantity of each of the resource sites. Some Goal 5 resources (e.g., natural areas, historic sites, mineral and aggregate sites, scenic waterways) are more site-specific than others (e.g., groundwater, energy sources). For site-specific resources, determination of location must include a description or map of the boundaries of the resource site and of the

impact area to be affected, if different. For non-site-specific resources, determination must be as specific as possible.

The determination of quality requires some consideration of the resource site's relative value, as compared to other examples of the same resource in at least the jurisdiction itself. A determination of quantity requires consideration of the relative abundance of the resource (of any given quality). The level of detail that is provided will depend on how much information is available or "obtainable."

The inventory completed at the local level, including options OAR-660-16-000 (1A), (1B) and (1C), below, will be adequate for Goal compliance unless it can be shown to be based on inaccurate data, or does not adequately address location, quality or quantity. The issue of adequacy may be raised by the Department or objectors, but final determination is made by the Commission.

Based on data collected, analyzed and refined by the local government, as outlined above, a jurisdiction has three basic options:

(1A) Do Not Include on Inventory

Based on information that is available on location, quality and quantity, the local government might determine that a particular resource site is not important enough to warrant inclusion on the plan inventory, or is not required to be included in the inventory based on the specific Goal standards. No further action need be taken with regard to these sites. The local government is not required to justify in its comprehensive plan a decision not to include a particular site in the plan inventory unless challenged by the Department, objectors or the

Commission based upon contradictory information.

(1B) Delay Goal 5 Process

When some information is available, indicating the possible existence of a resource site, but that information is not adequate to identify with particularity the location, quality and quantity of the resource site, the local government should only include the site on the comprehensive plan inventory as a special category. The local government must express its intent relative to the resource site through a plan policy to address that resource site and proceed through the Goal 5 process in the future. The plan should include a time-frame for this review. Special implementing measures are not appropriate or required for Goal 5 compliance purposes until adequate information is available to enable further review and adoption of such measures. The statement in the plan commits the local government to address the resource site through the Goal 5 process in the post-acknowledgment period. Such future actions could require a plan amendment.

(1C) Include on Plan Inventory

When information is available on location, quality and quantity, and the local government has determined a site to be significant or important as a result of the data collection and analysis process, the local government must include the site on its plan inventory and indicate the location, quality and quantity of the resource site (see above). Items included on this inventory must proceed through the remainder of the Goal 5 process.

//

(2) Identify Conflicting Uses

It is the responsibility of local government to identify conflicts with inventoried Goal 5 resource sites. This is done primarily by examining the uses allowed in broad zoning districts established by the jurisdiction (e.g., forest and agricultural zones). A conflicting use is one which, if allowed, could negatively impact a Goal 5 resource site. Where conflicting uses have been identified, Goal 5 resource sites may impact those uses. These impacts must be considered in analyzing the economic, social, environmental and energy (ESEE) consequences.

(2A) Preserve the Resource Site

If there are no conflicting uses for an identified resource site, the jurisdiction must adopt policies and ordinance provisions, as appropriate, which insure preservation of the resource site.

(2B) Determine the Economic, Social, Environmental, and Energy Consequences

If conflicting uses are identified, the economic, social, environmental and energy consequences of the conflicting uses must be determined. Both the impacts on the resource site and on the conflicting use must be considered in analyzing the ESEE consequences. The applicability and requirements of other Statewide Planning Goals must also be considered, where appropriate, at this stage of the process. A determination of the ESEE consequences of identified conflicting uses is adequate if it enables a jurisdiction to provide reasons to explain why decisions are made for specific sites.

//

(3) Develop Program to Achieve the Goal

Based on the determination of the economic, social, environmental and energy consequences, a jurisdiction must "develop a program to achieve the Goal." Assuming there is adequate information on the location, quality, and quantity of the resource site as well as on the nature of the conflicting use and ESEE consequences, a jurisdiction is expected to "resolve" conflicts with specific sites in any of the following three ways listed below. Compliance with Goal 5 shall also be based on the plan's overall ability to protect and conserve each Goal 5 resource. The issue of adequacy of the overall program adopted or of decisions made under (3A), (3B) and (3C) below may be raised by the Department or objectors, but final determination is made by the Commission, pursuant to usual procedures.

(3A) Protect the Resource Site

Based on the analysis of the ESEE consequences, a jurisdiction may determine that the resource site is of such importance, relative to the conflicting uses, and the ESEE consequences of allowing conflicting uses are so great that the resource site should be protected and all conflicting uses prohibited on the site and possibly within the impact area identified in OAR 660-16-000 (1C). Reasons which support this decision must be presented in the comprehensive plan, and plan and zone designations must be consistent with this decision.

(3B) Allow Conflicting Uses Fully

Based on the analysis of ESEE consequences and other Statewide Goals, a jurisdiction may determine that the conflicting use should be allowed

fully, not withstanding the possible impacts on the resource site. This approach may be used when the conflicting use for a particular site is of sufficient importance, relative to the resource site. Reasons which support this decision must be presented in the comprehensive plan, and plan and zone designations must be consistent with this decision.

(3C) Limit Conflicting Uses

Based on the analysis of ESEE consequences, a jurisdiction may determine that both the resource site and the conflicting use are important relative to each other, and that the ESEE consequences should be balanced so as to allow the conflicting use but in a limited way so as to protect the resource site to some desired extent. To implement this decision, the jurisdiction must designate with certainty what uses and activities are allowed fully, what uses and activities are not allowed at all and which uses are allowed conditionally, and what specific standards or limitations are placed on the permitted and conditional uses and activities for each resource site. Whatever mechanisms are used, they must be specific enough so that affected property owners are able to determine what uses and activities are allowed, not allowed, or allowed conditionally and under what clear and objective conditions or standards. Reasons which support this decision must be presented in the comprehensive plan, and plan and zone designations must be consistent with this decision.

(4) Post-Acknowledgment Period

All data, findings, and decisions made by a local government prior to acknowledgment may be reviewed by that local government in its periodic

update process. This includes decisions made as a result of OAR 660-16-000 (1A), (2A), and (3). Any changes, additions, or deletions would be made as a plan amendment, again following all Goal 5 steps.

If the local government has included in its plan items under OAR 660-16-000 (1B), the local government has committed itself to take certain actions within a certain time frame in the post-acknowledgment period. Within those stated time frames, the local government must address the issue as stated in its plan, and treat the action as a plan amendment.

(5) Landowner Involvement

The development of inventory data, identification of conflicting uses and adoption of implementing measures must, under Statewide Planning Goals 1 and 2, provide opportunities for citizen involvement and agency coordination. In addition, the adoption of regulations or plan provisions carries with it basic legal notice requirements. (County or city legal counsel can advise the planning department and governing body of these requirements.) Depending upon the type of action involved, the form and method of landowner notification will vary. State statutes and local charter provisions contain basic notice requirements. Because of the nature of the Goal 5 process as outlined in this paper it is important to provide for notification and involvement of landowners, including public agencies, at the earliest possible opportunity. This will likely avoid problems or disagreements later in the process and improve the local decision-making process in the development of the plan and implementing measures.

As the Goal 5 process progresses and more specificity about the nature of resources, identified conflicting uses, ESEE consequences and implementing measures is known, notice and involvement of affected parties will become more meaningful. Such notice and landowner involvement, although not identified as a Goal 5 requirement is in the opinion of the Commission, imperative.

(6) Policy Application

OAR 660-16-000 is applicable to jurisdictions as specified below:

Category 1

Compliance with OAR 660-16-000 is required prior to granting acknowledgment of compliance under ORS 197.251 and OAR 660-03-000 through OAR 660-03-040 for those jurisdictions which:

a. have not submitted their comprehensive plan for acknowledgment as of the date of adoption of this rule.

b. are under denial orders as of the date of adoption of this rule.

c. are not scheduled for review prior to or at the June 1981 Commission meeting.

Category 2

Compliance with OAR 660-16-000 is required as outlined below for those jurisdictions which:

a. are under continuance orders adopted pursuant to OAR 660-03-040.

b. are scheduled for review at the April 30/May 1, May 29 or June 1981 Commission meetings.

For these jurisdictions a notice will be given to all parties on the original notice list providing a 45-day period to object to the plan

based on OAR 660-16-000.

OAR 660-16-000 will be applied based on objections alleging violations of specific provisions of the rule on specific resource sites. Objections must be filed following requirements outlined in OAR 660-03-000 through OAR 660-03-040 (Acknowledgment of Compliance Rule). Where no objections are filed or objections are not specific as to which elements of OAR 660-16-000 have been violated, and on what resource sites, the plan will be reviewed against Goal 5 standards as they existed prior to adoption of OAR 660-16-000.

Jurisdictions which receive acknowledgment of compliance (as outlined in ORS 197.251) at the April 30/May 1, 1981 Commission meeting will not be subject to review procedures outlined above, but will be treated as other previously acknowledged jurisdictions.

TEMPORARY RULE FINDING

The failure of the Commission to act promptly will result in serious prejudice to the public interest in that there is a need to clearly set forth the Commission's interpretation of Statewide Planning Goal 5 and the requirements for application of that interpretation, and a need to inform local units of government involved in the land use planning process as soon as possible of the Commission's interpretation of Goal 5.

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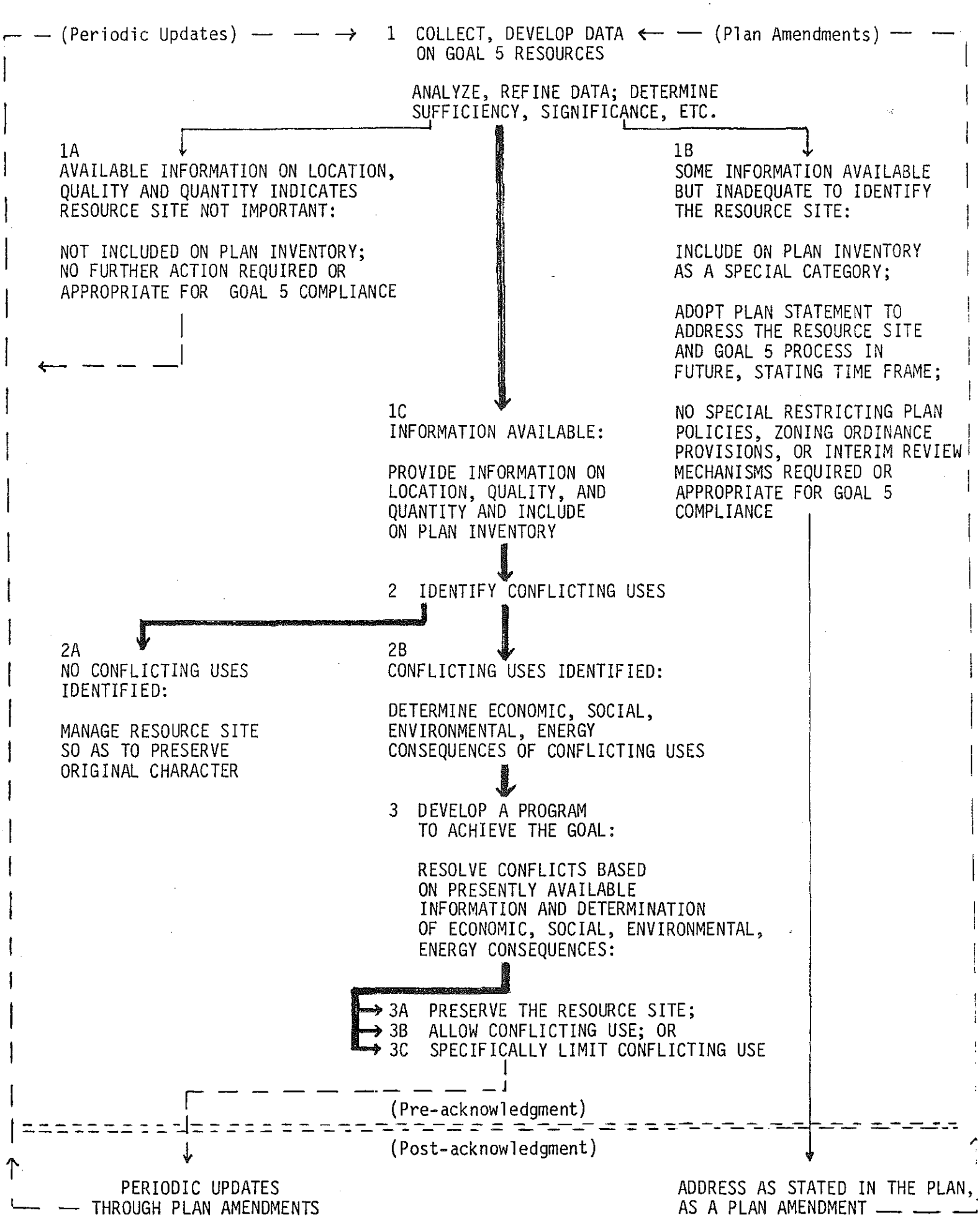
5117A


(Periodic Updates)
1 COLLECT, DEVELOP DATA ON GOAL 5 RESOURCES
(Plan Amendments)
ANALYZE, REFINE DATA; DETERMINE SUFFICIENCY, SIGNIFICANCE, ETC.
1A
AVAILABLE INFORMATION ON LOCATION, QUALITY AND QUANTITY INDICATES RESOURCE SITE NOT IMPORTANT:
NOT INCLUDED ON PLAN INVENTORY; NO FURTHER ACTION REQUIRED OR APPROPRIATE FOR GOAL 5 COMPLIANCE
1B
SOME INFORMATION AVAILABLE BUT INADEQUATE TO IDENTIFY THE RESOURCE SITE:
INCLUDE ON PLAN INVENTORY AS A SPECIAL CATEGORY;
ADOPT PLAN STATEMENT TO ADDRESS THE RESOURCE SITE AND GOAL 5 PROCESS IN FUTURE, STATING TIME FRAME;
NO SPECIAL RESTRICTING PLAN POLICIES, ZONING ORDINANCE PROVISIONS, OR INTERIM REVIEW MECHANISMS REQUIRED OR APPROPRIATE FOR GOAL 5 COMPLIANCE
1C
INFORMATION AVAILABLE:
PROVIDE INFORMATION ON LOCATION, QUALITY, AND QUANTITY AND INCLUDE ON PLAN INVENTORY
2 IDENTIFY CONFLICTING USES
2A
NO CONFLICTING USES IDENTIFIED:
MANAGE RESOURCE SITE SO AS TO PRESERVE ORIGINAL CHARACTER
2B
CONFLICTING USES IDENTIFIED:
DETERMINE ECONOMIC, SOCIAL, ENVIRONMENTAL, ENERGY CONSEQUENCES OF CONFLICTING USES
3 DEVELOP A PROGRAM TO ACHIEVE THE GOAL:
RESOLVE CONFLICTS BASED ON PRESENTLY AVAILABLE INFORMATION AND DETERMINATION OF ECONOMIC, SOCIAL, ENVIRONMENTAL, ENERGY CONSEQUENCES:
3A PRESERVE THE RESOURCE SITE;
3B ALLOW CONFLICTING USE; OR
3C SPECIFICALLY LIMIT CONFLICTING USE
(Pre-acknowledgment)
(Post-acknowledgment)
PERIODIC UPDATES THROUGH PLAN AMENDMENTS
ADDRESS AS STATED IN THE PLAN, AS A PLAN AMENDMENT

SEAL ROCK WATER DISTRICT
P. O. Box 83 198
SEAL ROCK, OREGON 97376

April 29, 1981

Department of Environmental Quality
522 S.W. 5th Ave. - P. O. Box 1760
Portland, OR 97207

Attn: Robert E. Gilbert, Regional Manager, Northwest Region

Re: Your letter of April 24, 1981, Lincoln County Alsea Dunal Aquifer Geographic Rule/w enclosures.

Dear Mr. Gilbert:

The Rohleder Association, Inc., Engineering Geology Report of 8/14/80, on referenced aquifer, fairly summarizes the extent of previous investigations under "Previous Work". In short, previous information on this source was so scant that it was not even considered worth noting in the Lincoln County Water Development Plans of 1965 and 1973 as a possible source for domestic water!

The Rohleder report does present some information based on results obtained from 6 shallow wells dug in the Bayshore/Sandpiper areas, however, the report acknowledges that data was merely a "reconniassance study" and that an accurate analysis of quanity and quality of water would require additional engineering, monitoring and lab work.

The district's own engineering studies and evaluation of water sources within it's 14 square mile area led to the conclusion that the development of marginal water sources, as related to cost/benefit ratios, would be economically unsound where a yield of at least a 1 million gallon per day output could not be realized. Based on this realistic planning concept, the district relinquished rights and permits on:

1. Henderson Creek
2. Elkhorn Creek
3. Collins Creek
4. Grant Creek
5. Moore Creek

all in the same marginal yield category purported to be availble from subject aquifer.

While the district has no objections against DEQ financing further engineering work or investigatings on an aquifer that might possibly provide a maximum yield of .3 MGPD, no district funds have been budgeted or plan to be budgeted for engineering or development of this marginal source which might be subject to salt water intrusion!

This letter is submitted in reply to comments requested from Don Gilbert, Water Superintendent, Seal Rock Water District.

Sincerely,

Heinz Neuman, Executive Secretary, Seal Rock Water District

cc: Clare Edmiston, Executive Secretary-Treasurer
Bayshore Beach Club, Inc.
Lincoln County Board of Commissioners
James E. Sexson, Director, Water Resources Department

STATE OF OREGON

INTEROFFICE MEMO

North Coast Branch (DEPT.) 842-6637 (TELEPHONE)

TO: Robert E. Gilbert, NWR

DATE: May 11, 1981

FROM: John L. Smits, NCB

SUBJECT: SS-Alsea Dune Aquifer
Sandpiper Number 3 Subdivision
Lincoln County
North Coast Branch Office

Dept. of Environmental Quality
RECEIVED
MAY 13 1981
NORTHWEST REGION

This 47 lot subdivision was granted subsurface approval by Lincoln County and the Department in June 1979. A limited number of lots have been developed to date, although many have been sold. The following facts must be considered:

1. The subdivision has been approved for 450 gallons per day systems.

2. Gravity flow systems were approved sized at 50 lineal feet per 150 gallons daily sewage flow.

3. The lots are developed on the highest, oldest stabilized dunes overlying the Alsea Dunal Aquifer.

4. The soil is rapidly drained sand. The ground water aquifer is likely present at depths as far as 75 to 100 feet below the ground surface.

5. The lot sizes range from 9,500 to 11,000 plus square feet.

6. Current rules require the use of low pressure distribution systems. Even though the permanent water table is at great depths, not over 450 gallons of effluent may be discharged per 1/2 acre.

7. The smallest lot that could be developed and meet current rules on the loading limit is 14,520 square feet or .33 acres. This would be an application rate of 300 gallons per day (a 2 bedroom dwelling) per .33 acres. None of the lots are this large. Therefore no lots could be developed and meet current rules.

8. If geographic region rule 340-71-400 (3) is adopted, the lots must meet current rules or the proposed rules on pressurized seepage beds or bottomless sand filters.

This would also appear to impose a discharge limit of not more than 300 gallons of effluent per lot, when the lots are smaller than 1/2 acre, because all lots within the area will be affected by the proposed rule.

9. Technical rule changes are not suppose to invalidate previous site approvals. The 450 gallons per day per 1/2 acre discharge limit is a technical rule change.

I suggest that until such time as the proposed rule OAR 340-71-400 (3) is adopted, the Department take the following position:

1. Pressurized disposal trenches or pressurized seepage beds are required.

2. Development be limited to 3 bedroom homes having not more than a 375 gallons per day sewage flow.

3. In areas where steep topography necessitates the use of pressurized disposal trenches, they shall be sized at 75 lineal feet per 150 gallons per day where ever possible. In no case shall pressurized disposal trenches sized at less than 50 lineal feet per 150 gallons per day be used.

4. Where pressurized seepage beds can be constructed they shall be sized at 200 square feet per 150 gallons per day. A 375 gallons per day flow would require installation of a 500 square feet seepage bed (20 feet x 25 feet or 10 feet x 50 feet).

It appears that the proposed rule must be modified to deal with lots that have received approval for 450 gallons per day systems. Either lots created after March 1, 1978 are addressed separately allowing a 375 gallons per day discharge rate or all lots platted before January 1, 1981 should be allowed this discharge limit.

It also becomes apparent that a number of platted lots in the Alsea Dunal Aquifer area like Sandpiper Number 3 are too steep to construct a pressurized seepage bed in accordance with current standards. The more steeply sloping lots are affected. Seepage beds are to be constructed not deeper than 36 inches into the natural ground surface. On a 30% slope, in order to construct a bed it would be necessary to cut 5 to 6 feet or more on the upslope portion. This would not meet rules.

Therefore, OAR 340-71-400 (3) (a) (B) should be modified to include the use of pressurized disposal trenches sized at 75 lineal feet per 150 gallons daily sewage flow. Due to the lot sizes the rule should also allow disposal trenches 5 feet apart on centers.

I need to know if you agree with the policy for Sandpiper Number 3 which we would apply at least until the proposed rule is adopted. The developer wants to know our position and how the proposed rule will affect the subdivision.

Please consider the following situation that will arise if the rule is adopted:

Situation: The proposed geographic rule is adopted. The site must be evaluated to determine if it meets current standards. The lot is evaluated and the following is found:

1. A permanent water table is present, but meets the current depth requirements.

2. The lot is less than one-half (1/2) acre is size.

3. OAR 340-71-275 (3) requires that not more than 450 gallons per day be discharged per one-half (1/2) acre when permanent water is present. Exception (a) provides that this discharge limit can be exceeded if the lot was created before January 1, 1974 and a pressurzied gray water system is used.

4. OAR 340-71-220 (3) requires installation of 450 gallons per day systems on all lots with 2 exceptions.

5. The lot is approvable for a 450 gallons per day sewage flow by using a non-water carried plumbing unit and a pressurized gray water system sized at 2/3 x 450 or 300 gallons per day. The gray water could be disposed of in a 400 square feet seepage bed.

The approval or permit in this case would be issued in accordance with all current standards.

If in the previous situation a water table is found at a depth less than current standards, but not less than 4 feet from the ground surface, proposed 340-71-400 (3) (a) (B) is followed and a pressurized seepage bed could be approved. The system would be approved to dispose of both black and gray waste.

As you can see, the lot with the highest ground water conditions is treated more liberally than the one that meets the depth to ground water requirements. This is not right....."If only the water table was higher on our lot we wouldn't have to use this compost toilet!"

I'm probably thinking too much too late, but considering the Sandpiper Number 3 subdivision and the developers concerns has brought to light some difficulties with the proposed rule.

JLS:rae
cc: T. J. Osborne, Subsurface Section, DEQ
B. Zekan, Lincoln County Subsurface Section

VICTOR ATIYEH
GOVERNOR

Water Resources Department

MILL CREEK OFFICE PARK
555 13th STREET N.E., SALEM, OREGON 97310 PHONE 378-2982 or
1-800-452-7813

May 6, 1981

Robert E. Gilbert, Regional Manager
Department of Envioronmental Quality
522 SW 5th Street
PO Box 1760
Portland, OR 97207

Dear Mr. Gilbert:

REFERENCE: S.S. Lincoln County Alsea Dunal Aquifer Geographic Rule Change

My staff and I have strong reservations regarding the proposed rule change for the Alsea Dunal Aquifer. A detailed presentation of our concerns will be forwarded to you within a week. Thank you for the opportunity to comment on the proposed rule change.

Sincerely,

James E. Sexson

JAMES E. SEXSON
Director

JES:wpc
4953A

VICTOR ATIYEH
GOVERNOR

Water Resources Department

MILL CREEK OFFICE PARK
555 13th STREET N.E., SALEM, OREGON 97310 PHONE 378-2982 or
1-800-452-7813

May 15, 1981

Robert E. Gilbert, Regional Manager
Department of Enviornmental Quality
522 SW 5th Avenue
PO Box 1760
Portland, OR 97207

Dear Mr. Gilbert:

REFERENCE: SS Lincoln County Alsea Dunal Aquifer Geographic Rule

The Water Resources Department staff has completed a review of proposed geographic rule 340-71-400 (3) for lands overlaying the Alsea dunal aquifer. The proposed rule would permit continued development of the dunal area on the assumption that the aquifer has no value as a domestic water supply. The assumption is in error.

A review of the background memos, letters, and reports indicate that the sand dune aquifer is capable of providing a substantial daily yield of good quality water. Test wells constructed in May 1980 by the consultants, Rohleder and associates, Inc. show no detectable levels of fecal coliform bacteria in the ground water. Nitrate-nitrogen concentrations are below-the United States safe drinking water standards. The sand dunes form a valuable stored ground water resource for the north Waldport area that should be protected for future use.

Present day development represents 1/3 of the authorized number of lots on the dune area. Potential growth on the 800 remaining lots can seriously degrade the ground water quality. If sewer and treatment plant were employed, the aquifer could be restored within 5 to 8 years.

Therefore, the Water Resources Department strongly supports the adoption of alternative #1. Adopting this alternative will protect the future life of the dunal aquifer. Alternative #3, requiring sewers and a treatment plant by December 31, 1985, would delay clean-up of the aquifer and result in additional costs to land owners and developers, who would have to construct septic drain fields, abandon them, and connect to a new sewer system by the 1985 deadline.

Alterative #2 is expensive and permits further pollution of the aquifer. Alteratives 2 and 4 provide poor envioronmental quality protection.

Thank you for the opportunity to review and comment on the proposed geographic rule change.

Sincerely,

James E. Sexson

JAMES E. SEXSON
Director

JES:wpc
5085A

ATTACHMENT H

Nitrate - Nitrogen Loading Rate Calculations

Nitrate - Nitrogen Loading Rate Calculations

Sub-Basin (density) du/acre	NO_3-N Concentration (Pressure Systems) mg NO_3-N/l	Gravity Systems
Alsea Dunal Aquifer (2.75) su/acre	7.08	14.16
Buckley Creek		
- present (0.34)	0.78	1.56
- projected (1.2)	3.50	7.10
Hidden Lake		
- present (0.54)	1.70	3.40
- projected (1.2)	3.78	7.56
Bayshore		
- present (0.87)	2.65	5.29
- projected (3.33)	8.16	16.30
South Spit		
- present (0.8)	2.46	4.92
- projected (2.78)	7.08	14.16

Assumption:
- 375 gal/day/du

1) NO_3-N loading - Alsea Dunal Aquifer
Assume: 375 gal/day/unit
370 acres ÷ 1019 lots = 2.75 du/acre
375 gal/du/day x 2.75 du/acre = 1031.3 gal/acre/day
1031 gal/acre/day x 365 day/year = 0.376406 mg/acre/year

L = 0.38 x 30 x 8.34 = 95.1 lbs NO_3-N/acre/year

$$C = \frac{L}{8.34\ Q}$$

rech. from rainfall 1.23 mg/a/yr
+ rech. from effl. $\frac{0.38}{1.61}$ mg/a/yr

$$= \frac{95.1}{8.34 \times 1.61}$$

= 7.08 mg/l (pressurized systems)

x 2 = 14.16 mg/l (gravity systems)

2) NO_3-N loading - sub-basins

a. Buckley Creek

present density 0.34 du/a

375 x 0.34 = 127.5 gal/acre/day

x 365 = .047 mg/acre/year

L = 0.047 x 30 x 8.34 = 11.8 lbs NO_3-N/a/y

$$C = \frac{11.8}{8.34 \times 1.28} = 0.78 \text{ mg/l (pressure systems)}$$

1.56 mg/l (gravity systems)

projected density 1.2 du/a

375 x 1.2 = 450

x 365 = 0.164 mg/a/y

L = 0.164 x 30 x 8.34 = 41.0 lbs

$$C = \frac{41.0}{8.34 \times 1.39} = 3.5 \text{ mg/l (pressure)}$$

7.1 mg/l (gravity)

b. Hidden Lake

present - 0.54

375 x 0.54 = 202.5 x 365 = 0.074

L = 18.5

C = 1.7 (pressure) 3.4 (gravity)

projected - 1.2

375 x 1.2 = 450 x 365 = 0.164 mg

L = 41

C = 3.78 (pressure) 7.56 (gravity)

c. Bayshore

present density 0.87

375 x 0.87 = 326.3 x 365 = 0.119 mg

L = 29.8

C = 2.65 (pressure) 5.29 (gravity)

projected density 3.33

375 x 3.33 = 1248.75 x 365 = 0.46 mg

L = 115

C = 8.16 (pressure) 16.3 (gravity)

d. South Spit

present 0.8

375 x 0.8 = 300 x 365 = 0.11 mg

L = 27.5

C = 2.46 (pressure) 4.92 (gravity)

projected 2.78

375 x 2.78 = 1042.5 x 365 = 0.38 mg

L = 95.1

C = 7.08 (pressure) 14.16 (gravity)

ATTACHMENT I

Statement of Need for Rule

ATTACHMENT I

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of The Adoption	)	Statutory Authority,
of Rule 340-71-400(3), Lands	)	Statement of Need,
Overlaying the Alsea Dunal	)	Principal Documents Relied Upon,
Aquifer	)	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: This Rule allows continued development of subdivided lands overlaying the Alsea Dunal Aquifer, most of which does not meet current rules for on-site sewage disposal. The lands subject to this Rule are those in the Bayshore and Sandpiper Subdivisions.

3. Documents relied upon in proposal of the rule:

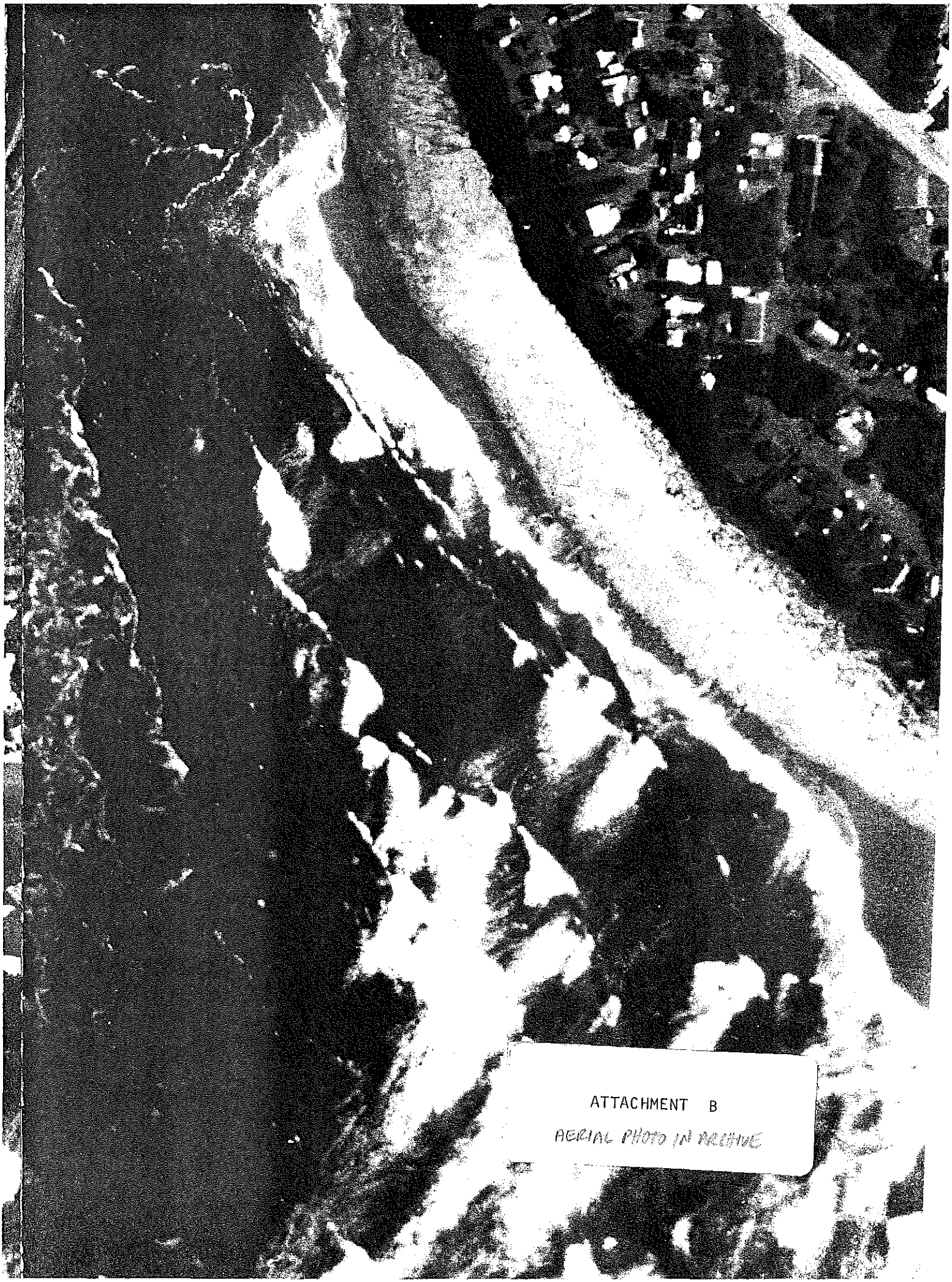
   Alsea Dunal Aquifer - A report prepared by the Department's staff. This document is available from the Department of Environmental Quality, P.O. Box 1760, Portland, OR 97207, or by calling 229-5209.

4. Fiscal and Economic Impacts: Fiscal and economic impact will affect most dramatically those property owners with undeveloped lots in the two subdivisions. They will be able to develop their lot/lots or they may not be able to develop them dependent on the adoption of this Rule. In addition, the area will be affected either positively or negatively by whether these lots are available for housing construction.

Dated: June 5, 1981

William H. Young, Director
Department of Environmental Quality

TJO:l
XL278 (1)



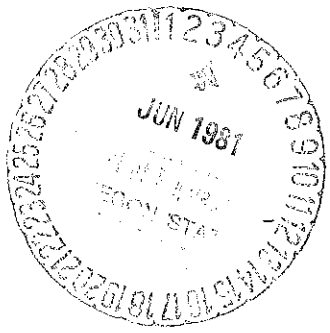
ATTACHMENT B

AERIAL PHOTO IN ARCHIVE

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207



June 1, 1981

NOTICE FOR ISSUANCE OF AIR CONTAMINANT DISCHARGE PERMIT

The persons described below have applied to the Department of Environmental Quality for Air Contaminant Discharge Permits in accordance with Oregon Revised Statutes, Chapter 468.310, and 468.320 and Oregon Administrative Rules, Chapter 340, Sections 20-033.02 through 20-033.20.

The Department has completed the preparation of Air Contaminant Discharge Permits for these sources and is providing this notice in order to encourage anyone desiring to submit information concerning the applicants or the proposed permits which might aid or assist the Department in making an adequate review. Written comments must be submitted prior to June 15, 1981.

The permit program is not a permissive activity, but rather requires an applicant to file an application to allow operation under specified conditions and rules. Any permit proposed or issued contains restrictive emission limits, compliance schedules as applicable, and specific conditions relative to operation.

The purpose of the program is to draw all these requirements together and issue one permit which allows the state to conduct a more rigorous air quality control program than might be practicable otherwise. After the above date, the Department will issue the proposed permits.

Comments submitted at this time relative to the attached applications should be addressed to:

Department of Environmental Quality
Air Contaminant Discharge Permit Program
P. O. Box 1760
Portland, Oregon 97207

The full context of the applications which may include maps, plans, other voluminous printed material not readily duplicable, and a copy of the proposed permits, are available for public inspection at the main office of the Department, P. O. Box 1760, Portland, 229-5696, or from the appropriate regional office (listed on back). Please write or phone the main office of the Department, (Attention: Mr. F. A. Skirvin, P. O. Box 1760, Portland, 229-6414), if additional information is wanted.

DEPARTMENT OF ENVIRONMENTAL QUALITY

REGIONAL OFFICES

Eastern Regional Office

Steve Gardels
700 S. E. Emigrant
Pendleton, OR 97801
276-4065

Baker County
Gilliam County
Grant County
Malheur County
Morrow County
Umatilla County
Union County
Wallowa County
Wheeler County

Willamette Valley Regional Office

John Borden
1095 25th, S.E.
Salem, OR 97310
378-8240

Benton County
Lane County
Linn County
Marion County
Polk County
Yamhill County

Central Regional Office

Richard Nichols
2150 NE Studio Road
Bend, OR 97701
382-6446

Crook County
Deschutes County
Harney County
Hood River County
Jefferson County
Sherman County
Wasco County

Southwest Regional Office

Gary Grimes
201 W Main, Suite 2D
Medford, OR 97501
776-6010

Jackson County
Josephine County

Roseburg Branch Office

Ron Baker
1937 W Harvard Street
Roseburg, OR 97470
440-3338

Douglas County

Coos Bay Branch Office

Ruben Kretzschmar
490 N Second
Coos Bay, OR 97420
269-2721

Coos County
Curry County

Northwest Regional Office

Bob Gilbert
Box 1760
Portland, OR 97207
229-5263

Clackamas County
Columbia County
Multnomah County
Washington County

Tillamook Branch Office

Jim Close
3600 E. Third
Tillamook, OR 97141
842-6637

Clatsop County
Lincoln County
Tillamook County

Klamath Falls Branch Office

Gilbert E. Hargreaves
Box L
Klamath Falls, OR 97601
884-2747

Klamath County
Lake County

NOTICE FOR ISSUANCE OF AIR CONTAMINANT DISCHARGE PERMIT

June 1, 1981

SYNOPSIS

The Department of Environmental Quality intends to issue Air Contaminant Discharge Permits to the following sources:

Oregon Portland Cement Co.
Durkee, Oregon
Shale & Limestone Crushing
Permit Renewal
01-0015

Foster Cedar, Inc.
Vernonia, Oregon
Shake & Shingle Mill
New Permit for Existing Source
05-2578

Wickiup Mfg.
Bend, Oregon
Millwork
New Permit for Existing Source
09-0066

Ralph N. Hakanson
Oakland, Oregon
Rock Crusher
Permit Renewal
10-0113

Blue Mt. Forest Products, Inc.
Long Creek, Oregon
Sawmill & Planing Mill
Permit Renewal
12-0022

Litwiller Funeral Home
Ashland, Oregon
Incinerator
New Permit
15-0163

Willamette Industries, Inc.
Griggs, Oregon
Plywood Mfg.
Permit Renewal
22-5194

Hills Quarry
Salem, Oregon
Rock Crusher
Permit Renewal
24-2553

Mobil Oil Corp.
Portland, Oregon
Bulk Gasoline Terminal
Permit Renewal
26-2029

Harris Pine Mills
Pendleton, Oregon
Sawmill & Planing Mill
Permit Renewal
30-0005

Eucon Corp. of Idaho
Hermiston, Oregon
Asphaltic Concrete Paving Plant
Permit Modification
30-0066

Newberg River Rock Products
Newberg, Oregon
Redi-mix Concrete Plant
New Permit
36-6048

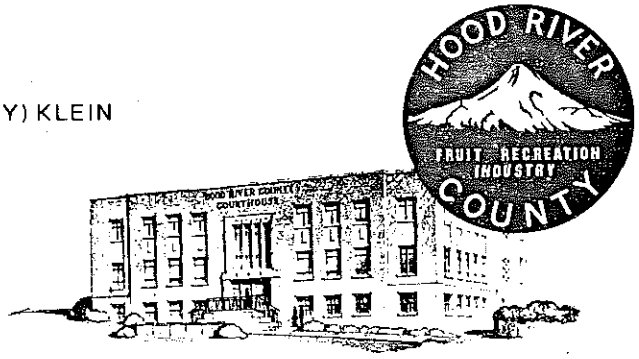
Deschutes Ready Mix Sand & Gravel Co.
Portable Plant
Asphaltic Concrete Paving Plant
Permit Renewal
37-0207

Karban Rock, Inc.
Portable Plant
Rock Crusher
New Permit
37-0272

Valley Brass & Aluminum
Salem, Oregon
Brass & Aluminum Foundry
Permit Renewal
24-0725

Any comments or information required may be submitted to the Department of Environmental Quality or appropriate regional office. It is intended that these permits be issued after July 15, 1981.

ANTHONY C. (TONY) KLEIN
DIRECTOR



DEPARTMENT OF PUBLIC WORKS
918 18TH STREET
HOOD RIVER, OREGON 97031

PHONE: 386-2616

June 3, 1981

Hood River County
Sanitary Landfill

Proposed Landfill Closure Plan (June Edition)

In order to expedite the closure of the existing landfill, while at the same time prepare adequately for future disposal, and limit unauthorized roadside dumping Hood River County proposes the following actions:

1. Surface water cutoff ditches will be cleaned, extended and maintained to limit infiltration and subsequent drainage to the catchment basins caused by rain falling directly on the fill itself. If erosion of the ditches occurs the ditches will be armored with rock or other suitable material.

2. Additional labor has been hired to allow more thorough compaction of solid waste and control of debris. Daily and final cover will be accomplished with on site and improted material. On site material is culbertson loam and bald copply loam. Imported material will be wyeast silty loam. All these materials are classified ML in the Unified Soil Classification series.

3. The attached plans indicate proposed final grades for the landfill after final cover. All final grades will be in excess of 2 percent. With these grades it is estimated that an additional 40,000 cubic yards of solid waste can be accommodated. At the present rate of disposal this should be sufficient to allow an additional 600+ days of disposal at the existing landfill. This will require about 7100 cubic yards of daily cover material and 19300 cubic yards of final cover material.

4. Funds are being budgeted to purchase the imported cover material together with a portable debris screen to reduce litter and sufficient personnel to operate a sanitary landfill.

5. Funds are also being budgeted to upgrade and maintain the leachate collection and disposal system. The primary causes of the occasional loss of leachate downstream are lack of maintenance to the system and overloading the pumping capacity because of surface runoff. The pumps can remove up to 200 gallons per minute when the system is maintained because of the present lack of surface water diversion up to 1200 gallons per minute are drained into the catchment basins. With the cutoff ditches as proposed a maximum of 260 gallons per minute are expected during the average storm. The peak runoff will also be

lowered due to temporary storage in the fill itself. With the storage available in the catchment basins the pumps can keep up with the anticipated runoff of the proposed diversions.

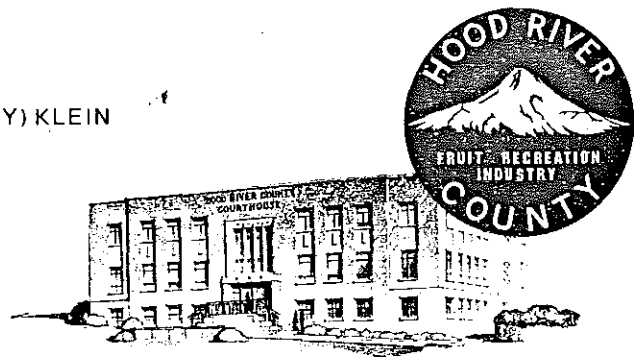
6. Upon completion of the fill the site will be fertilized and soil amendments added in accordance with the County Extension Agent's recommendations. Seeding with a perennial wheat grass, clover mixture would be accomplished during the spring or fall.

7. Annually, near the end of the rainy season the site will be inspected and any settlements which cause ponding will be filled and reseeded.

8. Areas which exhibit reasonable stability will be planted by the County Forester with seedling conifers at the rate of about 500 trees per acre. This will continue until the entire site has been returned to forest use.

9. The leachate collection system will be maintained until it is determined that the leachate no longer contains objectionable substances in obnoxious quantities.

ANTHONY C. (TONY) KLEIN
DIRECTOR



DEPARTMENT OF PUBLIC WORKS
918 18TH STREET
HOOD RIVER, OREGON 97031

PHONE: 386-2616

June 4, 1981

Summary of Progress
for
SOLID WASTE DISPOSAL
HOOD RIVER COUNTY

May 1978
Letter from D.E.Q. requiring closure of landfill

Summer 1978
Search for possible alternatives and request for assistance from D.E.Q. staff

Sept 1978
Volume study with cooperation of D.E.Q. of existing landfill

Oct 1978
Trip to Bandon, Ore to investigate modular incineration

Nov 1978
Cost study by staff of 4 alternatives

Dec 1978
Correspondence with Systech Corporation on modular incineration

Jan 1979
Proposal from Systech Corporation for study of alternatives

April 1979
Contract with Systech Corporation for study of alternatives

Summer 1979
Study in progress

Aug 1979
Study complete and recommendation to transfer made by Systech Corporation

Fall 1979
Negotiation and selection of landfill outside county

Dec 1979
Letter from Wasco County Court allowing Hood River County use of the landfill near The Dalles

Jan 1980
Snow emergency

Feb 1980
Request by Commission for staff to review cost of alternatives because of

significant rise in fuel cost

March 1980
Review of cost complete. Request for proposal, preliminary design and siting study.

April 1980
Proposal received & reviewed

May 1980
Contract with Systech on preliminary design & siting study

Summer 1980
Study in progress

Sept 1980
County Commission request appraisals of sites

Oct 1980
Appraisals complete and new cost estimates made

Nov 1980
Site selected and option acquired on parcel. Preliminary design and soil foundation begins.

Jan 1981
Systech completes preliminary design and siting study

Feb 1981
Submitted to City of Hood River Planning Commission for site plan review. Condemnation proceedings began.

March 1981
City completes review and rejects plan

April 1981
Alternate site review and submitted

May 1981
County Commission request additional information and cost study on alternatives because of public comment and possible new information on economics. Cost study completed and presented.

June 1981
?

Winter 1980-1981
Note; Hood River County requested D.E.Q. to site a transfer station by their authority as outlined in the O.R.S.'s that allow D.E.Q. to site landfills. It was determined by D.E.Q. staff that they did not have the authority to site transfer stations.

CITY OF
PORTLAND, OREGON
BUREAU OF PLANNING

Mildred A. Schwab, Commissioner
Terry D. Sandblast, Acting Director
621 S.W. Alder
Portland, Oregon 97205
(503) 248-4253

2 June 1981

Commissioner Joe Richards
Box 10747
Eugene, OR 97401

Dear Commissioner Richards:

The Environmental Quality Commission will be tackling the question of New Source Review Rules at your June 5 meeting. The City of Portland feels that this regulation is extremely important and has already committed a great deal of time and resources to working out a system based on local economic and environmental objectives.

Based on these findings, we presented comments on these rules at the last Commission meeting. When the staff response to those comments was released last week, we did not feel that our major concerns had, in fact, been addressed and in one case felt that the departments proposed changes exacerbated the problem rather than relieved it. Questions as complicated as the New Source Review Rule are difficult to reach agreement on through written responses. I believe that the Commissioner's decision to have a workshop to continue discussion at the June 5 meeting is an excellent idea, but I ask that you consider opening that workshop up for public involvement as well. In particular, we are still concerned about the three points outlined on the attached page. Staff representing the City of Portland will be available at your meeting to clarify these points and respond to any questions.

Our technical analysis has been used as a format for other cities and regulatory agencies facing these same questions. We hope that our work will not be overlooked by Oregon.

Sincerely,

Mildred Schwab
Commissioner of Public Affairs

MS:CK:db

cc: Environmental Quality Commission
Bill Young, Director

Attachment

City of Portland

1. The banking requirements still appear to be set up to discourage banking. The City opposed the banking discount provision (340-20-265) because of the uncertainty it created for anyone trying to use the banking system. We do not believe that anyone will create a banked credit without some guarantee that those credits will be available when a firm is ready to use them. A moratorium with no extension in lifetime is probably even more of a disincentive than the previous discounting provision. If a moratorium is declared and not lifted prior to the end of a credit's 10 year lifetime, the entire credit is lost. Thus, the change has not addressed the issue at all and may, in fact, have made it worse.

2. The City has a basic difficulty with the philosophy that DEQ is using in the case of using emission reductions created by plant shutdowns and curtailments. The objective of the banking and offset programs, as they were first conceived, was to provide a system that would allow continued growth, job creation and support of a strong local economy without causing airshed degradation. This rule goes much beyond this idea and actually sets DEQ in the position of making decisions on what types of emission reductions can be used to allow growth.

   A firm that is having economic problems and needs to curtail production in order to survive is definitely making an emission reduction (adding less pollution into the airshed). Yet DEQ has decided that this emission reduction cannot be transferred to another facility that is not having economic problems and is in the position of being able to use that reduction to create new jobs. The department has recommended instead that only firms that can reduce emissions through innovative technology should be allowed to provide emission reductions for growth. While the objective of supporting technological development is certainly one that we can all agree to, we feel that the department should not be setting our economic policy. The DEQ rules should address the technical implications (permanency and enforcability) of the emission reductions while leaving local governments the choice of the development allowed in its place.

3. Finally, the City believes that having a 25 ton cut-off for particulate sources and a 40 ton cut-off for volatile organic compound sources versus our 50 ton recommendation for each places an unfair disadvantage on smaller firms. Although the department did discuss this in the staff report, they did not mention the growth for smaller firms that is already built into the emission inventory or the cost of offsets for smaller firms. By DEQ's own estimation, the reduction from our recommended 50 ton cut-off and the department's 25 and 40 ton cut-offs will only affect 2 more sources per year. Given our present ozone status, the most likely scenario is that these sources will be searching for particulate offsets. That means that there will be an additional 50 tons of particulate offset under the DEQ proposed rules versus the Growth Management recommendations. The estimated average cost to those two firms will be $10,000 per ton or an additional $500,000, making this one of the least cost effective measures available to the Commission.

DAVE FROHNMAYER
ATTORNEY GENERAL

DEPARTMENT OF JUSTICE
PORTLAND DIVISION
500 Pacific Building
520 S.W. Yamhill
Portland, Oregon 97204
Telephone: (503) 229-5725

May 22, 1981

William H. Young, Director
Department of Environmental Quality
522 S.W. Fifth Avenue
Portland, Oregon 97204

Re: First Union Management, Inc., dba Mall 205--Failing Sewage Main

Dear Bill:

This letter outlines a recently discovered, potentially very serious, pollution source and the steps which have been taken to correct it.

On May 5, 1981, Chris Reive of your staff informed me of a very dangerous situation which had developed regarding the sewer main which Mall 205 shopping center then used to transport its sewage from its development approximately 15 blocks to the City of Portland sewer. Chris told me that in 1970 the Mall 205 developers had connected their sewer pipes to an abandoned water main without ever having obtained the required plan approval from the EQC or DEQ. He informed me that after some suspiciously foul smelling water had been noticed surfacing on S.E. Stark Street east of 97th Avenue during the fall and spring of 1980-81, on March 24, 1981, a Multnomah County maintenance crew dug up the spot where the liquid was surfacing. They discovered that the source of the water was a leak in the sewer pipe that served Mall 205. In fact, the pipe that was being used as a pressure sewer main actually was an abandoned water main. About 30 inches directly below the Mall 205 sewage main they found the Hazelwood Water District pressure water main. The District serves approximately 20,000 people in the area. The District's system is inter-connected and the water passing through that point could reach all its service areas.

The best that we could establish from sketchy records was that the pipe that Mall 205 was using as a pressure sewer main was abandoned as a water main approximately 20 years ago, presumably because of its poor quality. When it originally was constructed is problematic. It is clear that no one on behalf of Mall 205 has ever submitted plans for approval of that system. Furthermore, had they sub-

mitted plans they would not have been approved because past and present criteria and rules require a separation of ten horizontal feet between sewer lines and lower water lines.

Mall 205 repaired the leak upon request.

Although the identified leak was repaired, the integrity of the entire approximately 15 blocks of pipe between the Mall 205 shopping center and the Portland city sewer was highly questionable. Because it failed there, it is highly probable that it has failed and would fail at other points along the line. In fact, George Phoenix, Manager of the District, indicated on May 13 that they also have identified other points of failure on the Mall 205 sewer. The close proximity of the water line to the sewer line constitutes a serious threat to the health of approximately 20,000 citizens. That area of the water main is known to experience low pressure. If a leak in the water main should occur in an area where the sewer line were failing and should the water main experience negative pressure at the point, for example, because of a substantial water withdrawal in another part of the system such as to fight a fire, then sewage could be drawn into the water system and could be distributed to a substantial number of people, threatening to cause death and sickness from water borne diseases.

On April 15, 1981, Stephen Carter, regional engineer with your Northwest Region, sent a letter to Mall 205 to the attention of their local manager. In that letter Steve outlined the facts characterizing them as constituting a "great threat to public health," cited violations and provided copies of our rules and statutes. Additionally, he requested to receive a response by no later than April 24 outlining what they planned to do to remedy the situation and threatened enforcement action in their failure to act promptly. No written response was received by April 24, and therefore Steve prepared an enforcement referral. On April 24 Steve did receive a telephone call from Don Zak, Assistant Vice President--Maintenance and Construction for First Union Management, Inc. of Cleveland, Ohio, the company that manages Mall 205. Mr. Zak indicated that he did not understand the nature of the violations and requested a letter detailing the specifics. He indicated that he had just received Steve's letter on April 20th and had not had time to prepare a response. Mr. Zak stated that they were not prepared to accept responsibility at that time because they did not understand the problem.

On May 1 Steve received a letter dated April 28, 1981 from Debbie L. Moss, Assistant Counsel for First Union Real Estate Investment, Cleveland, Ohio, basically repeating Mr. Zak's message.

As I indicated above, on May 5 the above information was related to me over the telephone. I was greatly concerned that there was a grave public health hazard and that the company which was clearly required to take prompt action to remedy it had not accepted responsibility and appeared to be attempting to buy time by establishing a pen-pal relationship. Therefore, I arranged a meeting on May 6th between Chris and Van Kollias of your investigation compliance section and Steve to discuss the matter. We concluded that immediate remedial action by First Union was necessary. Therefore Van planned to serve a civil penalty five day notice. We also decided to hold meetings with all the interested governmental units and First Union as soon as possible. We picked May 13.

Steve gave me copies of the file which I reviewed. I unsuccessfully attempted to contact Ms. Moss in Cleveland. The next morning, May 7th, I reached her and told her in no uncertain terms that we had a serious health hazard and invited First Union to send a representative to our May 13 meeting in our conference room. In essence I told her that we had no intention of being involved in a time consuming letter exchange campaign and demanded that the problem be resolved immediately.

On May 7th, the investigation and compliance section served a civil penalty five day notice upon First Union's local corporate registered agent. On Friday, May 8th, I received a telephone call from Greg Mowe, an attorney with the Stoel, Rives, Boley, Fraser and Wyse law firm in Portland. Mr. Mowe indicated that he had just been contacted by First Union regarding the five day notice. I invited Mr. Mowe to my office and fully explained the situation. I invited him to attend our meeting on May 13th. I informed him that our demands were that the sewer pipes be relocated according to DEQ approved plans and specifications and that in the interim we would probably require that the existing sewer main be abandoned and that the sewage be pumped to a holding tank and hauled to a sewage treatment plant instead. I told him that the purpose of the May 13th meeting was to allow them to outline how and when they proposed to correct the problem.

On Wednesday, May 13, at 1:30 p.m. a meeting was held in our conference room. At that meeting were representatives of the Oregon State Health Division, the DEQ, Multnomah

did not send a representative. At this preliminary meeting, we reached a consensus that we should demand that the sewer pipe be relocated and that in the interim the sewer pipe should be abandoned and the sewage be pumped and hauled to a sewage treatment plant. At 2:00 p.m. Gail Achterman, an attorney with the Stoel, Rives firm representing First Union, and Charles Foster, an engineer with the consulting firm of Landeco, Inc. of Tucson, Arizona, which is First Union's consultant, appeared at the meeting as invited. I outlined our demands and invited them to outline their schedule for resolving the problem. Ms. Achterman stated that they would relocate the sewage line as soon as possible but that abandoning the sewage line during construction and pumping and hauling to a sewage treatment plant was out of the question because it would be financially prohibitive. After I again outlined the grave health hazard, George Birnie, attorney for the Hazelwood Water District, stated that because of the duty that the District owes its customers, the requirement that First Union immediately abandon the existing sewer line was not negotiable. He indicated that he would have to recommend to the Board of Directors of the Water District that they file a law suit to require use of a holding tank and hauling to a sewage treatment plant. I stated that my recommendation to you would be the same. The meeting broke up.

The next morning Mr. Mowe telephoned me. He indicated that First Union was lining up local contractors to do the relocation job immediately. They were doing the pricing work and would get started as soon as possible. He stated that in order to expedite the job they were not bidding it out as they usually would. Mr. Mowe stated that it would cost $20,000 to $30,000 a week to pump to a holding tank and haul to a sewage treatment plant and that they did not want to do that. I repeated that the health issue was not bargainable. I stated that I was of the opinion that at that point they were making satisfactory progress but that I wanted a commitment that day regarding the hauling. That afternoon Mr. Mowe called me to inform me that First Union was trying to get the tanker that they used on a previous occasion when the sewer pipe was plugged. First Union had not yet contacted him to confirm that those arrangements had been made. Mr. Mowe promised to call me the next morning with a confirmation, or the reasons why he had not obtained it.

On the morning of Friday, May 15th, Mr. Mowe telephoned me. He informed me that First Union had contacted their previous contractor which will haul the sewage. He stated that First Union will also retain a local sanitary engineer to consider alternatives to hauling and pumping for proposal to us if feasible. I told Mr. Mowe that we wanted the hauling commenced immediately but that his client would have to contact Bob Gilbert of the Northwest Region for an approval.

I informed him to do that that day so that the hauling could be commenced that day or the next (Saturday, May 16th) at the latest. I further informed Mr. Mowe that the existing sewer pipes will have to be cleaned out and sealed as soon as possible and that they would have to provide adequate assurances that the pipe would not be used again. Finally, I requested him to send me a letter confirming what they have agreed to do and providing me with reasonable schedules for completing the work. Enclosed is a copy of that letter to me dated May 15, 1981.

Later that morning Mr. Birnie, the Water District's attorney, telephoned me to inform me that the Board had met the previous night and authorized a law suit against First Union. I told him what had happened. We both agreed that neither of us should sue unless and until First Union fails to meet its commitment.

On May 18, 1981 First Union disconnected the sewer and began pumping and hauling its sewage.

I think that we are well on our way to resolving what potentially could have been an environmental disaster. Once I got their attention, First Union has acted promptly. I am encouraged by their present cooperation. If they continue, we have every reason to believe that the problem will be finally remedied quickly and a catastrophic health hazard averted. Now that they have committed themselves to the $5,000.00 a day pumping and hauling expenses they will have a very great incentive to complete the project quickly. By the same token, we have committed the DEQ to expediting all necessary reviews. If, for any reason, First Union should falter, you should take prompt and immediate action. Until then, or the completion of the project, I recommend that you withhold further enforcement action. If the project is completed promptly without incident, I would recommend that you give serious consideration to closing the case.

Please call me if you have any questions.

Sincerely,

/s/ Robert L. Haskins

Robert L. Haskins
Assistant Attorney General

bc
enclosure
cc: EQC
Fred Bolton
Oregon State Health Division
George E. Birnie
Multnomah County Environmental Services--Permit Section
Harold Sawyer
Bob Gilbert

Port of Portland

Box 3529 Portland, Oregon 97208
503/231-5000
TWX: 910-464-6151

June 3, 1981

Mr. Joe B. Richards
Environmental Quality Commission
P.O. Box 1760
Portland, OR 97207

Dear Mr. Richards,

At the April 24, 1981 Environmental Quality Commission meeting commission members requested that a workshop be held with the Department of Environmental Quality staff to address questions raised at the meeting regarding DEQ's New Source Review Rule and Plant Site Emissions Limit Rule. These are scheduled for adoption at the June 5, 1981 EQC meeting.

DEQ has not held a workshop and has instead scheduled a workshop session to be held during the June 5 meeting. DEQ staff has not stated if public comment will be allowed at this meeting. Due to the length and complexity of the testimony presented at the April 24 hearing, we believe it is critical that the Commission allow public comments at the June 5 meeting.

Sincerely,

I. James Church
Deputy Executive Director

cc: Bill Young
Lloyd Kostow

EQC
Young
Underwood
Weatherbee

LANE REGIONAL
AIR POLLUTION AUTHORITY

(503) 686-7618
1244 Walnut Street, Eugene, Oregon 97403

Donald R. Arkell, Director

May 22, 1981

Joe Richards, Chairman
Environmental Quality
Commission
P.O. Box 1760
Portland, OR 97207

RE: Proposed Open Burning Rules

Dear Mr. Richards;

LRAPA appreciates the opportunity to review the draft revisions to the proposed Open Burning Rules prior to final action by the EQC. There are several provisions of the draft dated 05/05/81 which merit some additional comment.

1. The proposed definition of boundaries for restricted zones for construction, demolition, and domestic open burning are now proposed for Lane County, as suggested in LRAPA and Local Fire District testimony. That provision is still supported by the Authority.

2. The requirement to extinguish fires two hours before sunset is, in our view, unenforceable for domestic burning in rural areas. There is substantial incentive for individuals to do such burning during the late afternoons, after normal working hours, and we believe that resource constraints on fire districts in rural areas will cause this rule to have a generally low enforcement priority. LRAPA's recommendation is that the current dawn-to-dusk burning hours be retained.

3. The LRAPA Board proposed that a single, nine-month burning season be instituted for domestic open burning in place of the current two-season burning year. The reasons for this proposal were that:

   A. There is expressed desire from the rural areas of Lane County to provide additional time for disposal, by burning, of yard debris, because of limited opportunity to do so during the Spring and Fall burning seasons.

   B. Ambient concentrations of Particulate Matter from domestic open burning would not increase, as long as it is conducted only on days of good atmospheric ventilation.

C. That the cost of administering the domestic burning permit program by the Fire Districts would be cut substantially by reducing the number of permits necessary each year.

We reaffirm our position that a single season is easier to manage and, with vigorous enforcement, will not cause increases in Ambient Particulate concentrations.

In taking the above positions and in developing recommendations for the State Rules which apply to Lane County, it is recognized that restrictions on open burning are necessary in areas of the State where there is high population exposure potential or unacceptible air quality. We believe that the recommendations above are modest, and do not endanger that precept. They will, however, provide a measure of relief in those areas where alternative disposal is not reasonably available, and will provide sufficient flexibility within which the Authority and the local Fire Districts can administer effective open burning controls.

It is requested that you give serious consideration to LRAPA's comments and testimony, as well as that of the local Fire Districts in Lane County.

Sincerely,

Bill Hamel

Bill Hamel, Chairman
LRAPA Board of Directors

DRA/mjd

ATTACHMENT ITEM J

In the CIRCUIT Court of the State of Oregon

for the County of HOOD RIVER

GLENN ALBERT BLEVINS and ROSIE MAE BLEVINS, husband and wife,

Plaintiffs

vs.

HOOD RIVER COUNTY and STATE OF OREGON, THE DEPARTMENT OF ENVIRONMENTAL QUALITY,

Defendants

No. 8762

SUMMONS

To HOOD RIVER COUNTY and STATE OF OREGON, THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Defendants

You are hereby required to appear and defend the complaint filed against you in the above entitled action within thirty (30) days from the date of service of this summons upon you, and in case of your failure to do so, for want thereof, plaintiff(s) will apply to the court for the relief demanded in the complaint.

NOTICE TO THE DEFENDANT: READ THESE PAPERS CAREFULLY!

You must "appear" in this case or the other side will win automatically. To "appear" you must file with the court a legal paper called a "motion" or "answer." The "motion" or "answer" must be given to the court clerk or administrator within 30 days along with the required filing fee. It must be in proper form and have proof of service on the plaintiff's attorney or, if the plaintiff does not have an attorney, proof of service upon the plaintiff.

If you have any questions, you should see an attorney immediately.

/s/ Teunis Wyers
SIGNATURE OF OREGON RESIDENT ATTORNEY

TEUNIS WYERS
Attorney for Plaintiffs
P. O. Box 417
Hood River, Oregon 97031
(503) 386-2221

STATE OF OREGON;
County of Hood River } ss.

I, the undersigned attorney of record for the plaintiff, certify that the foregoing is an exact and complete copy of the original summons in the above entitled action.

Teunis Wyers
ATTORNEY OF RECORD FOR PLAINTIFF(S)

TO THE OFFICER OR OTHER PERSON SERVING THIS SUMMONS: You are hereby directed to serve a true copy of this summons, together with a true copy of the complaint mentioned therein, upon the individual(s) or other legal entity(ies) to whom or which this summons is directed, and to make your proof of service on the reverse hereof or upon a separate similar document which you shall attach hereto.

Post office address at which papers in the above entitled action may be served by mail.

Wm. H. Young, Director
THE STATE OF OREGON
THE DEPARTMENT OF ENVIRONMENTAL QUALITY
522 SW 5th
Portland, Oregon 97204

NAME POST OFFICE ADDRESS AND TELEPHONE NUMBER

/s/ Teunis Wyers
ATTORNEY(S) FOR PLAINTIFF(S)

served by mail.
Jan Shaw

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
MAY 27 1981
OFFICE OF THE DIRECTOR

FORM No. 190—CIRCUIT OR DISTRICT COURT SUMMONS
OE STEVENS NESS LAW PUB. CO., PORTLAND, ORE.

IN THE CIRCUIT COURT OF THE STATE OF OREGON

FOR THE COUNTY OF HOOD RIVER

FILED
HOOD RIVER COUNTY
MAY 18 4 54 PM '81
DEPARTMENT OF RECORDS AND ASSESSMENT
DEPUTY

GLENN ALBERT BLEVINS and ROSIE MAE BLEVINS, husband and wife,

Plaintiffs,

vs.

HOOD RIVER COUNTY and STATE OF OREGON, THE DEPARTMENT OF ENVIRONMENTAL QUALITY,

Defendants.

No. 8762

COMPLAINT

NUISANCE

For a First Cause of Action, plaintiffs allege:

I.

At all times material hereto, plaintiffs claim ownership of the real property described in Exhibit A, hereinafter referred to as "plaintiffs' property". Upon plaintiffs' property is situated plaintiffs' home, various outbuildings and a spring or springs used by plaintiffs as a source of drinking water and for other purposes.

II.

At all times material hereto, defendant HOOD RIVER COUNTY was a duly existing county formed under the laws of the State of Oregon. Defendant HOOD RIVER COUNTY owned adjacent real property to the South of plaintiffs' property, consisting of parcels lying in Section 10, Township 1 North, Range 10 East of the Willamette Meridian.

///

LAW OFFICES OF
TEUNIS WYERS
HOOD RIVER, OREGON 97031
PHONE 386-2221

III.

In or about February 1971, defendant HOOD RIVER COUNTY constructed and commenced the operation of an open garbage dump or sanitary landfill. Since that time defendant HOOD RIVER COUNTY has operated said dump, or caused it to be operated, on a continuous basis, and is doing so at the present time.

IV.

Said dump has running from it and onto plaintiffs' property, a certain effluent or leachate, which is offensive in smell and appearance and contains various substances of a toxic, rotten, filthy and foul nature. Defendant HOOD RIVER COUNTY has allowed this condition to exist since shortly after the opening of this dump, and has failed to take corrective measures to mitigate or eliminate damage caused thereby to the plaintiffs. This condition continues unchanged, is causing further damage on a daily basis, and is expected to continue indefinitely.

V.

The water and filth comprising this leachate has come upon plaintiffs' property in such quantities as to render portions thereof unfit for use, and also to contaminate plaintiffs' source of domestic and livestock water, and to create such a stink and smell as to deprive plaintiffs of the use of a portion of their property. Plaintiffs have in consequence thereof sustained damage in the amount hereafter alleged.

NEGLIGENCE

For a Second Cause of Action, Plaintiffs allege:

LAW OFFICES OF
TEUNIS WYERS
HOOD RIVER, OREGON 97031
PHONE 386-2221

VI.

Paragraphs I through III of the First Cause of Action are incorporated by reference.

VII.

At all times material hereto defendant THE DEPARTMENT OF ENVIRONMENTAL QUALITY was an existing administrative agency, duly formed under the laws of the State of Oregon, charged with monitoring compliance with and enforcement of regulations affecting solid waste disposal sites in the State of Oregon.

VIII.

Defendants were negligent in one or more of the following particulars, causing damage to the plaintiffs as hereinafter alleged:

A. In selecting a dump site with characterstics which does not protect contiguous land from leachate runoff;

B. In situating the sump on the site in such a manner that contiguous properties were not protected from leachate runoff;

C. In selecting a dump operational design which was inadequate in its failure to prevent a leachate problem;

D. In operating the dump in a manner which cause the emission of the leachate as alleged above;

E. In failing to detect the leachate problems early enough to take measures to correct the problem;

F. In failing to take measures to correct the leachate problem when placed on notice of its existence, or to take any measures to minimize its effect on plaintiffs.

LAW OFFICES OF
TEUNIS WYERS
HOOD RIVER, OREGON 97031
PHONE 386-2221

G. In failing to instruct dump operators properly regarding methods to prevent or minimize leachate problems and in failing to properly supervise dump operators who may not have employed those methods;

H. In failing to operate said dump in compliance within applicable clean water and solid waste regulations.

IX.

As a result of the negligence of the defendants, plaintiffs' property has become polluted and contaminated, and a portion thereof has been rendered unfit for use by plaintiffs.

X.

Since a short time after the opening of the dump, defendants knew or should have known that a nuisance would be created thereby and that the plaintiffs' property would be contaminated and polluted.

XI.

As a result of said contamination and pollution, plaintiffs have been damaged in an amount which is undetermined at the present time, but which does not exceed the fair market value of the plaintiffs' property, $110,000.00.

INVERSE CONDEMNATION

For a Third Cause of Action, plaintiffs allege:

XII.

Paragraphs I through IV of the First Cause of Action are incorporated by reference.

///

LAW OFFICES OF
TELNIS WYERS
HOOD RIVER, OREGON 97031
PHONE 386-2221

XIII.

The contamination and pollution suffered by plaintiffs as a result of the leachate from the aforementioned dump has restricted and interfered substantially and unreasonably with the common and necessary use and enjoyment of plaintiffs' property and has destroyed a portion thereof.

XIV.

As a result thereof the fair market value of plaintiffs' property has been substantially diminished in an as yet undetermined amount not exceeding $110,000.00.

XV.

Plaintiffs' property has thereby been taken for a public use without just compensation.

XVI.

It has been necessary for plaintiffs to retain the services of an attorney to assert their rights in this matter, and if successful, they are entitled to a reasonable attorney fee award under ORS 20.085.

WHEREFORE, plaintiffs pray:

A. For judgment against defendants for damages in an amount to be determined, not exceeding $110,000.00,

B. For an injunction against defendants requiring them to take what measures are necessary to abate the nuisance and prohibit further damage,

C. For judgment against defendants for their attorney's fees, costs and disbursements incurred herein, and

LAW OFFICES OF
TEUNIS WYERS
HOOD RIVER, OREGON 97031
PHONE 386-2221

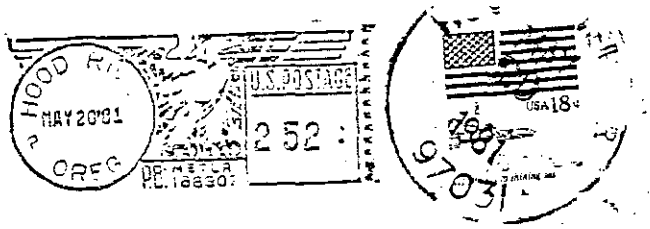
D. For such other relief as the Court may deem just.

/s/ Teunis Wyers
TEUNIS WYERS OSB #76387
Attorney for Plaintiffs

PLAINTIFFS' REAL PROPERTY

The Southeast quarter of Government Lot 12, and all of Government Lot 13, Section 3, Township 1 North, Range 10 East of the Willamette Meridian, in the County of Hood River and State of Oregon, EXCEPTING THEREFROM that portion conveyed to J. Arlie Bryant et ux., recorded June 23, 1977, as Recorder's Fee No. 771450, Film Records.

FFICES OF
WYERS
BOX 417
OREGON 97031



Box 1760

CERTIFIED MAIL RESTRICTED DELIVERY
RETURN RECEIPT REQUESTED

RESTRICTED DELIVERY

Mr. William H. Young, Director
State of Oregon
Dept. of Environmental Quality
522 SW 5th
Portland, Or. 97204

RETURN RECEIPT REQUESTED

Petitions Circulate

Solid Waste Site Study Ready

A final report on a transfer station design will go to the Hood River County Board of Commissioners meeting Thursday afternoon with a recommendation that it be accepted.

The report by System Technologies Corp. of Xenia, Ohio, (Systech) is titled as a "Transfer Station Siting and Preliminary Design Study," and is keyed to a site northwest of the intersection of Rand Road and Cascade in Hood River.

Public Works Director Tony Klein will review the study for the Board of Commissioners as he prepares to take it to the city of Hood River Planning Commission this month for a site plan review. He wants to make sure there is a mutal understanding on operating procedures before he goes before the planning commission with a list of commitments by the county.

It's likely the commission will hear more than just a report from Klein. Opponents of the siting have been circulating petitions seeking an alternative, and it's possible there will be a presentation at the report session, which was scheduled at 1:30 p.m. at the county courthouse.

The Systech report indicated that the total estimated capital cost for the project is $545,000. That includes land acquisition, site development and access roads, transfer building and recycling building, compaction equipment and rolling stock.

Annual operating costs were set at $207,000. That includes interest on loans, labor, maintenance and disposal costs, including transportation.

The report itself anticipates the complaints that have developed in fact.

"Any site that is selected for this use will probably be criticized by parties who consider themselves to be affected by the proposed facility," it notes. "One major contention will be that 'there is a better site within the county,' or that 'it is not a perfect site.' "

"It is readily apparent that this perfect site does not exist nor is it required. However, this definition does point out some of the factors that must be considered in any transfer station siting program."

The approach applied by the company took the "perfect site" characteristics into account as standards in an effort to come as close as possible to the criteria.

Most of the reports deals with history of the process, and summary of projected capital and operating costs. It also includes floor plan, building elevations

(Continued on Page 2)

Neighbors Voice Objections to Solid Waste Site

Soil testing at a proposed six-acre solid waste transfer station was ordered Monday, but not before the county commissioners had heard a flood of testimony from neighbors of the site objecting to the location selected, property northwest of the Cascade-Rand Road intersection.

But the County Board of Commissioners tabled a recommendation to start preparation of contract documents for the station, an indication that the location is not a certainty at least for the time being. The commission also approved a plan for contracting for disposal of solid waste, providing for transfer to a location outside Hood River County.

Commission Chairman Elmer Murray, addressing an audience of about 30 persons, asked for orderly testimony to be offered on the subject. At one point he hammered his gavel to quiet an exchange within the audience, causing one opponent to leave complaining that "I can't stand the smell already."

More than half a dozen persons spoke in opposition to the proposed waste transfer station after Director of Public Works Tony Klein reviewed proposed drawings of a building and site development.

First and most angered were Mr. and Mrs. Edmunt Ricchiuti, who own the property immediately to the west of the proposed six and a half acre site.

"I own the property to the west," said Ricchiuti. "How would you like to have that 15 feet from your kitchen window?" Ramona Ricchiuti continued by raising question about why that particular site had been chosen. "Of all sites, how did this get chosen?" she asked. Indicating she felt there were many locations far better suited, she asserted she is against it. "And there are seven people in my family here and they're all against it," she said. The Ricchiutis indicated they had moved here from California and purchased the property because of its beauty and location — a situation they feel would be damaged or ruined by presence of a transfer station on the adjacent property.

Longest comment came from another opponent, Archie Lester, who owns property both to the east of the proposed landfill location and to the west.

"I can't see a garbage dump being put in that place," he said. A former longtime city planning commissioner, Lester contended it had not been the planning commission intent to provide for such a facility at that location. He also raised other questions regarding whether the proposed building met height qualifications of the zone, and whether it violated a clause in the federal freeway regulations prohibiting dumps or disposal sites within view of a federally-funded freeway. The I-84 freeway skirts the north side of the property.

Lester also raised a question of possible increase in the rodent population. "That property sits right on a creek, a natural runway for rats," he said.

He offered other alternatives he had examined. "Why not the old Indian village?" he asked. He said the tract east of Hood River contains 20 acres of flat land, and he suggested it would support a landfill. He also suggested other possible sites on the old Columbia River Highway, and later amended the list to include the property of Ken Kirby, administrative assistant. "I think it is a great big error, an injustice to the people of Hood River," he said.

After a recess, Lester took the stand again saying he thought the Kirby property on Eastside Road "would be a wonderful place."

Adding testimony of the same nature was George Jacobson, who has a business on West Cascade. He described himself as a 50-year resident of Cascade who said he thought the plan for a transfer station was great — "But not there." He feels the future commercial development in Hood River lies in that direction, and the transfer station would be a detriment.

Most of those opponents gave odor, possible rodent increase, traffic increase, and the general idea of a transfer station for a neighbor in their testimony.

Lee Klingman, who is buying a restaurant near the transfer site, said he has plans to improve the property, but was concerned about the impact a transfer station would have. He asked about possible leakage, for one thing. In his restaurant business, he said a "dump" across the street could be harmful.

"I invested in this area because I thought it was beautiful. But why improve it if it is going to be across from a dump?" he asked.

Others adding to the commentary were Richard Marlow and Wayne Dodd. Marlow said he had lived two blocks from a transfer station. "That place stunk just from the trucks going in and out," he said.

Not all the comment was negative.

Don Durr, an owner of Hood River Garbage Service, felt the fears were overstated. He contended the location on a city sewer was necessary so attendants could hose the area down and keep it clean. He also downplayed the odor feared by neighbors.

He has followed the transfer station planning since it started more than two years, and noted those in the audience might not understand the extensive search process, and the extensive requirement placed by outside agencies such as the Department of Environmental Quality and Environmental Protection Agency.

Durr asserted that compacted garbage, transferred once or twice a day from a sealed compacting unit, would provide the city with a good clean facility. Using his own business as an example, he pointed to company property in a residential area of Hood River where trucks have been parked as much as five days without creating odor problems.

"As long as the garbage is moved, it's not going to stink," he claimed. Once the garbage is in the building, it will never see the light of day here."

The plans presented by Tony Klein included a recycling building and a large building with a slab and chute into a compacting unit on a lower level. He said material would be dumped either directly into the hopper, or on the floor, to be pushed into the bin by a loader. A compacting machine would pack it into a trailer, which would be sealed to the compactor. When full, the trailer would be hauled away, to be replaced by another.

During Durr's testimony the exchange arose which prompted the Ricchiutis to leave the room on Elmer Murray's call for order.

For the most part, though, the testimony was orderly and well-received.

Mrs. Ekker reminded that the location was the result of a two and a half year search, and noted such factors as city sewer access, location near the freeway, size and proper zoning all as considerations in the decision to option the land.

But she also made it clear that the choice of site was not yet written in stone. "If we find there are problems," she said, "we will have to make another determination." While the site has been optioned, soil and other tests and approval are needed. That's why the commission tabled the proposal to go ahead with construction plans at that site before soil tests were completed.

A final decision on whether to locate the transfer station on that site will probably have to be made within a month or two, as agreed in the option signed by the county and by property owner Herschel Johnson. The county paid $1,000 earnest money for the option to buy the site at $120,000.

Transfer Site Trip Slated

County commissioners and others interested in solid waste transfer stations will take a firsthand look at a plant in operation on Feb. 21.

The county will charter a bus on that date to travel to Tillamook County, which has established two waste transfer stations which handle volumes similar to one planned in Hood River.

Administrative assistant Ken Kirby was charged with responsibility for arranging the trip, which will be open not only to county and city officials, but also others from the general public who want to make the trip and make reservations with Kirby. "People have got to call in so we won't overload the bus," said the administrative assistant. He said those persons living closest to the proposed transfer station in Hood River will have priority.

The idea for the trip grew out of remarks by Commissioner Shirley Ekker at a special meeting called last week to hear a review of the proposal to build a solid waste transfer station in Hood River to replace the present county landfill.

The county has an option on a six-plus acre parcel at the northwest corner of Cascade Street and Rand Road in Hood River. Because of its location within city limits, the proposed transfer station has created controversy — much of it generated by neighbors of the selected site. The location is under option by the county, but has not yet been purchased.

The special meeting on Thursday was called to review a plan for the development drafted by Systech, an Ohio firm which deals with waste disposal. Tony Klein, director of public works for the county, wanted to go over the plans with the county prior to a site plan review before the Hood River City Planning Commission. The burden of proof lies with the county to prove that the planned use is compatible with the light industrial zoning that applies to the proposed site, he said.

The city has already indicated it will hold a public hearing on the transfer station proposal before either approving or disapproving the location. "Basically they'll be asking us how we're going to handle the operation," said Klein. "We have to make some commitments." He said such things as screening, operating days and hours, and provisions for access and drop boxes are all questions that have to be resolved.

Mike Nagler, county planner, said the hearing was being scheduled because the city "has some concerns," and "feels an obligation to the citizens" to present information so they will know what the plan involves.

Klein told the commission the plans call for a gate at Cascade Street which could be locked when the transfer station is closed. When the gate is open, he said, the station "would be supervised at all times when being used for disposal." Nagler told the commission the building would occupy only about one percent of the total site, and three or four percent would be developed.

After the review by Klein and Nagler, Commissioner Ekker reported that she had conferred

(Continued on Page 3)

Transfer Site:

Does It Fit in a City Light Industrial Zone?

Hood River City Planner Dan Meader reported Monday his findings indicate a county solid waste transfer station is an allowable use in a light industrial zone within the city. But the county officials had to wait until later to find out whether the City Planning Commission accepts his recommendation.

After a long hearing on the subject Monday, the commissioners decided they had received too much information to digest in a matter of minutes, so they adjourned their meeting until noon Wednesday.

Technically, the only question subject to Monday night's hearing was whether a transfer station is an allowable use in a light industrial zone. But the testimony was much broader than that, because it was opened to all testimony for and against the county's proposal to site a transfer station within the city of Hood River.

Even if the city commission accepts the transfer station as an allowable use, it still has site review jurisdiction, and the county would be required to comply with its conditions to develop its project.

The appearance of the controversial subject on the city planning agenda attracted a room full of interested persons. Several of them were there to let the commission know they oppose the project.

The county has an option on 6.5 acres lying northwest of the intersection of a Rand Road extension and Cascade Street. It plans to use a portion of the land for a 50 by 60-foot metal building to house a waste transfer station, with an attached 20 by 40-foot building for recycling. It would allow the county to close the present landfill on Middle Mountain, which is under a closure order from the Oregon Department of Environmental Quality. There was a sense of immediacy at the Monday meeting because the county's option on the land, owned by Herschel Johnson, expires on Feb. 26. But Administrative Assistant Ken Kirby was authorized to negotiate with the owner for an extension of the original option.

The urgency is accented by another reality. Public Works Director Tony Klein has said the county landfill is running out of room rapidly, and there has been a viable alternative developed other than the one on the drawing boards.

But a lot of Hood River people would like to see the county move its drawing boards outside the city of Hood River. One of the foremost of these is Archie Lester, who circulated a petition imploring the county commission to relocate the transfer station to another site. He reported Monday that he had handed in the petition carrying 632 signatures, and contended he could have found more signers if he had more help.

'It doesn't fit,' claim opponents, but planner disagrees

Lester, himself a former 15-year member of the city planning commission, said he feels that in no way does the proposed use qualify as light industry. He said light industry should apply to building, manufacturing or repairing products. "To me, garbage transfer in no way fits," he testified. Lester's extensive testimony included danger of flooding at the site, and the desire of residents not only in the city but also outside to see the transfer station moved elsewhere.

George Jacobson of 2060 Sherman St. also went on record against the site. He was a passenger on a bus tour of transfer stations on Saturday, and he felt they were undesirable. Of a facility outside Camas, Wash., he said "It is dirty and it stunk." He said a compactor observed outside Stevenson, Wash. was neat and not unsightly, but there was a "great amount of odor." Others speaking in opposition to the siting were Wayne Dodd, who felt it would be unbecoming to that area, where Lions Club members are planning to install a new welcome sign for Hood River, and both Jack and Elmer Owen, whose large new and used car center lies to the west of the proposed transfer site.

Pat Pattison, city planning commission member who presided at the meeting, opened the hearing to discussion of all sides of the issue to give all the group as broad a perspective as possible in making a decision. All of the commission members have visited other transfer stations to observe them in operation.

Opening the hearing on Monday, the commission heard Meader's staff report recommending a finding that the

(Continued on Page 2)

Condemnation Process Starts for Waste Station

A near-unanimous County Board of Commissioners pushed toward condemnation of a 6.5 acre solid waste transfer site at Rand Road and Cascade streets here Monday.

But the newest commission member, Glenn Palmer, still held out hope for another site he has favored all along — the city's waste water treatment plant at the Port of Hood River site. A reluctant county commission gave permission for Palmer to open discussion this week with the city. But most of the commission members are not enthusiastic about the sewer plant site. In fact, Commissioner Rodger Schock's motion to let Palmer broach the subject noted that possibility of following through was "remote."

So while the commission left the door open a crack for a second site, it moved ahead on another front by offering Herschell Johnson $103,000 for a 6.5 acre tract northwest of the Rand/Cascade intersection, a preliminary to condemnation.

The letter informing Mr. and Mrs. Johnson of the county's start toward exercising the right of eminent domain carried the $103,000 cash offer, which was an amount listed in an appraisal conducted by the county.

This action was triggered when an option held by the county to pay $120,000 for the site expired, and Johnson's renewal offer to the county wasn't acceptable. In that offer, he raised the asking price to $150,000, and also hiked the option fee.

While the first steps toward condemnation have been made, there's still an opportunity for the county and Johnson to negotiate a settlement before it goes to court, District Attorney Hugh Garrabrant told the commission.

The move toward condemnation came at the Monday meeting of the county commission, capping a series of special meetings called last week about the time the option signed with Johnson last November was expiring.

During one of those special meetings that Palmer — though he did not oppose the Rand/Cascade site, made his pitch for the sewage plant's unused land. He showed maps illustrating that the development ad planned for the Rand/Cascade site would fit on unused land at the waste water treatment plant. On that basis, he received permission to meet with the city on Tuesday to review his plan.

(After more than two years of study, the commission decided that solid waste transfer to a site in northern Wasco County was the best alternative to a present county landfill, which is under orders to close. That left the county with a need to locate the place where garbage would be collected.)

Palmer told the council in his brief presentation that Tony Klein, Hood River County Director of Public Works, had indicated that a second site should perhaps be considered. Palmer also added that when Systech, the company which reviewed a list of area sites as possibilities, was making its rounds in the valley, a careful study of the site near the sewer plant was not made.

Palmer's proposal was issued under the "remote possibility" that the county would seek a different site than the one being considered at the corner of Rand Road and Cascade Street.

Palmer noted that the size of the port lot would be adequate for the site transfer station, that it would be of less bother to residents, that the move would be to the city's benefit in that it could lease the land to the county, and that several fringe benefits would exist.

"There are many facets that need to be explored," Palmer told the council in the special meeting. "I would just like you to look at all of the assets."

Palmer admitted that there would "undoubtedly be potential for a traffic problem," but no other negative points were brought up by the commissioner.

It was his colleagues, Elmer Murray and Shirley Ekker of the county commission who gave the sewer plant site the bad marks.

"I have definite feelings against the port site," said Murray, who pointed out that the county had paid out in the neighborhood of $18,000 to have 16 area sites reviewed by Systech.

Murray and Ekker contended that the lot near the waste water plant, which the city presently owns, would not be "near enough space." Though a minimum amount of space required for the transfer station was not known, both Ekker and Murray figured that about three acres would be the least amount of land for the site. That figure was from a Systech recommendation.

According to City Administrator Bruce Erickson, the parcel on the port that Palmer was alluding to is only about one and half acres at the maximum.

In addition, Murray noted that a lease of the lot from the

(Continued on Page 2)

Discussion Held On Transfer Site

(Continued from Page 1)

city by the county would not be wise as he sees it. "I'm not in favor of a short lease arrangement," he said. "Ten years is just not enough." Murray pointed out that in 10 years the city may decide that it needs the space back and then the county would be out of a transfer site. For that purpose, Murray favored either a long-term lease or a purchase of the land, if either.

City officials were concerned that a lease to the county and the subsequent construction of a transfer station on the port would put an agreement which it holds with the port in jeopardy. According to the agreement, the city can build on no more than 60 percent of the 2.61 acres which it purchased. Already, the city has constructed on a good portion of the parcel. Anymore construction may well take the city past the 60 percent mark.

Erickson felt that the lot on the port was suspect in terms i size, as well. As he said, yo never know when expansion will be needed. "In short range, it wouldn't be that big of a problem. In long range, though, it could become quite a problem," he mentioned.

Mayor Chuck Beardsley was curious to know what Systech thought of the site, if it even looked at it. "Perhaps because of its size, they didn't bother to look at it," noted Ekker. Erickson added to that view, saying, "By standpoint of size alone, it wouldn't have been considered."

Beardsley boiled the problem down to a conflict between county commissioners. He said that until a minimum size for the site is determined, that problem can't be solved. Murray and Ekker were talking about three acres and Palmer was down to an acre and a half. Beardsley noted that the issue was a waste of time for him and his council if the commission needs a minimum of three acres.

It was decided by council members that a letter to the county asking about specific size requirements would be the next logical step to take. "If the site meets the commission's size needs, then we're willing to consider it," said Beardsley, speaking for the council. He added that he didn't want to tangle with the subject until that was determined.

The council, then, will send an inquiry letter to the county commission to get the commission's decision on the minimum size required for the waste transfer station. The council will also be asking whether the county commission is interested in leasing or buying the parcel, since there was a conflict between commissioners on that.

Meanwhile, the county will be proceeding with the condemnation of the lot on Cascade Street. Monday night, Klein met with the city planning commission to continue discussion on the possible waste transfer site on west Cascade.

At the time which the meeting opened, Klein noted that the county did not have the option on that land, but he was quite certain that that option would be there soon. The planners, however, were hesitant to move ahead on the topic until they knew it wouldn't be a total waste of time.

Klein mentioned that the conditions listed by the planners were important to the county in determining whether or not to begin eyeing other properties. As a result, the planning commission went ahead with an outline of its conditions that the county would have to meet.

After a brief discussion of an operational plan for the station which Klein presented to the commission Monday night, the planning commission proceeded to get into some conditions for the county to meet in order for it to gain the go-ahead from the planning commission on the waste transfer site.

The commission made a rough outline of conditions that it turned over to City Planner Dan Meader to polish up and put in written form by the noon meeting on March 12.

County eyes site for transfer station

By JEANIE SENIOR
Correspondent, The Oregonian

HOOD RIVER — The Hood River County Commission has agreed to seek a 180-day option to purchase six acres of land in the city of Hood River that is designated as the future site for the county's solid waste transfer station.

If the county fails to get the option, commissioners have instructed District Attorney Hugh Garrabrant to proceed with condemnation of the parcel.

The city planning commission meets this week for a site plan review on the transfer station. It ruled last week that the transfer station is an appropriate use in a light industrial zone.

Commissioners selected the Hood River sited transfer station, which will replace the county's landfill near Mount Hood, after two years of studying disposal methods and site alternatives.

However, Commissioner Glenn Palmer, a new member of the board who was not involved in the study, told the other commissioners again Thursday that he wants to see the transfer station located on a smaller parcel of city-owned land next to the Hood River sewage treatment plant.

Palmer said Hood River Mayor Chuck Beardsley told him the city would consider having the transfer station there.

He showed the commission a site plan of the treatment plant property, together with a plan of the proposed transfer station.

Commissioner Shirley Ekker said the idea of putting the transfer station there was dismissed during the study because there is inadequate land for expansion of the use. The treatment plant is located along the Columbia River.

Stressing that he considered it a "very remote possibility" that the county might want to use the city's land, Commissioner Rodger Schock moved that Palmer contact the mayor and City Council to see if they would consider the idea.

When Palmer said he would get in touch with Beardsley and ask him to set up an emergency council session, Schock said, "I don't see that urgency. That wasn't the tone of my motion. I want to reiterate that I consider it a very remote possibility."

Meanwhile, space at the county landfill is running out so rapidly that the county may have to find a temporary disposal alternative until the transfer station is completed. County Public Works Director Tony Klein said he expects the landfill will be full by late summer. DEQ has ordered the county to close the landfill because of leachate problems.

THE SUNDAY OREGONIAN, MARCH 1, 1981

City's denial blocks garbage plan

By JEANIE SENIOR
Correspondent, The Oregonian

HOOD RIVER — The effort to begin construction of a solid-waste transfer station for Hood River County struck an obstacle last week when site plan approval was denied by the city Planning Commission.

The county now has the options of appealing the decision to the City Council or submitting an amended site plan.

The county is proposing to locate the transfer station on a six-acre parcel on Cascade Avenue, near the west city limits of Hood River.

After an option on the land expired two weeks ago and the county could not reach agreement on its price with the property owner, county commissioners voted to begin condemnation proceedings on it.

The city Planning Commission's denial of the site plan listed nine findings of fact and included 14 other issue to be addressed if a revised site plan is submitted.

Problems with landscaping, storm drainage, traffic circulation, noise controls and development of the remainder of the property were cited in the denial.

The county selected the Cascade Avenue site after hiring an engineering consultant to study disposal methods and disposal sites in the county.

Hood River County's garbage currently is dumped in a sanitary landfill near the community of Mount Hood. But the landfill, which is less than 10 years old, is nearly full and has had severe leachate problems. The state Department of Environmental Quality has ordered the county to find another method of dealing with its solid waste.

Garbage from the transfer station would be trucked to a landfill in Wasco County.

Last week, commissioners toured two other possible transfer station sites. One piece of land, a 1⅓-acre parcel owned by the city of Hood River and located next to the city's sewage treatment plant, was not proposed in the engineering study.

However, County Commissioner Glen Palmer had promoted the site as being suitable for a transfer station.

The other site visited is the former location of the city-county garbage dump, on old Highway 30 about two miles east of Hood River. That parcel, also owned by the city, is currently used and considerably larger than the treatment plant property.

Following the field trip, Commissioners Shirley Ekker, Elmer Murray and Rodger Schock voted to cease contemplation of the treatment plant parcel, saying it is too small for its proposed use.

Murray, the commission chairman, said he was reluctant to spend county money on a piece of land that would be available only on a short-term lease.

However, the commission Tony Klein, the county public works director, to prepare a cost analysis of the old dump site, in case commissioners have to look to the property as an alternate place to put the transfer station.

THE SUNDAY OREGONIAN, MARCH 15, 1981

Deadline Imposed for Landfill Site

Oregon has placed a July 1 deadline for closing the Hood River County middle mountain landfill, but Public Works Director Tony Klein says it is "all but impossible" to meet that date, and another deadline set requiring a permanent facility to be in operation.

He said he'll draft a proposal for an appeal that would allow the county another year and a half of use at the landfill, and even then he's not sure a replacement facility can be in place by that time.

Adding to the landfill woes is a $110,000 lawsuit filed by Glenn and Rosie Blevins, who seek not only compensation for damage they say the leachate from the landfill has caused them, but also an injunction to abate the alleged nuisance.

Klein's plan for an extension at the landfill would call for bringing in more earth material for an added lift at the facility. He said the plan would also provide for improvements in the leachate trapping system.

While the Department of Environmental Quality (DEQ) was prodding the county to move, the deliberations were continuing to become more complicated. The county not only has failed so far to locate a transfer station site, it is now adding a new element to the formula. It is once again considering incineration, an alternative that was once dropped at the urging of the DEQ.

Klein said he received notice from William Young, director of the DEQ, updating the regulations concerning the Hood River landfill. He noted that a closure date had been set for July 1, and the deadline for having a permanent alternative on line would be June 1, 1982.

Even though the county has been working under closure deadlines over two years, a solution still remains to be found, and the landfill remains open. The county commission has decided to construct a transfer station where garbage would be collected. It will then be transported to a landfill in northern Wasco County, under the plan. But every effort to find a location for the transfer station has been frustrated so far, and the commission is still looking.

In addition, some members of the public, along with Commissioner Glenn Palmer, want to develop incineration as the solution to the county garbage problem.

Klein has recommended to the county staying with the transfer station plan, but locating it in an industrial area so that the incineration alternative could be developed at some later time. His recommendation reflects the urgency he feels in dealing with the waste disposal question. "We have no site yet," he said, and added that the county is even "shaky" now on settling on an alternative to the landfill.

"I would say now that it is almost impossible to get a permanent facility together by June 1 next year." But his duty will be to make every effort in that direction.

The pinch is complicated by the lawsuit, which could make an immediate change imperative if it is successful.

The Blevins filed suit in circuit court naming the county, state and DEQ as defendants. They own property in the area of the county sanitary landfill, and contend that leaching effluent from the sanitary landfill onto parts of their land has rendered it unfit for use, that it has contaminated domestic and livestock water, and "stinks so much" they can't use part of their land. The suit charges eight counts of negligence, asks a judgment of up to $110,000, and seeks an injunction to "abate the nuisance and prevent further damage."

The county commission held a special meeting on the garbage disposal issue on Thursday last week, received Klein's review on costs of an incineration operation, and heard testimony from the public on the proposals. After taking testimony, the commissioners decided to wait two weeks to make a decision in order to give them time to digest the material presented at the meeting.

STAFF REPORT

HOOD RIVER COUNTY

SOLID WASTE DISPOSAL ALTERNATIVES

ECONOMIC ANALYSIS

MAY 1981

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LIST OF SOURCES

Diamond Fruit

Jack Olson Operating Manager
Dave Rhodes Engineer
Rick Rickman Engineer

Pacific Power & Light

Roy Cederstam Manager
Kurt Ihde Senior Energy Consultant

Hood River Garbage, Inc.

John Rath Partner
Don Durr Partner

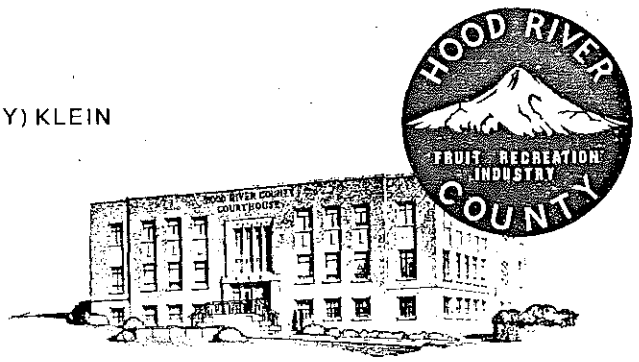
Consumat Systems, Inc.

Moose Zurline Bellingham, Wash

Misc.

Clem Pope
Pete Harris City Engineer

ANTHONY C. (TONY) KLEIN
DIRECTOR



DEPARTMENT OF PUBLIC WORKS
918 18TH STREET
HOOD RIVER, OREGON 97031

PHONE: 386-2616

TO: BOARD OF COMMISSIONERS

FROM: ANTHONY C. KLEIN, DIRECTOR OF PUBLIC WORKS

SUBJECT: STAFF REPORT - SOLID WASTE DISPOSAL ALTERNATIVES

DISCUSSION: As requested, Public Works has again reviewed the economic's of several alternatives for our solid waste disposal.

In order to evaluate the alternatives we have discussed the possibility of revenues from two sources; Diamond Fruit Co. and Pacific Power & Light. The staff of both of these organizations have been very helpful.

Also I would like to thank Mr. Pete Harris, City Engineer, John Rath & Don Durr of Hood River Garbage, and Mr. Clem Pope for assisting us in collecting information.

Enclosed is a list of persons we talked with.

The first step after collecting the additional information was to determine the type of operation of the alternatives, then the capital costs were estimated. Page 4

Second we then evaluated all operating costs and possible revenues. Page 5 This gave us the first year cost for all the alternatives.

The next step is to estimate the future cost. Inflation and the rising cost of energy are the factors that will govern the future cost. We can only suppose what the rate of increase will be for inflation and energy cost so it was determined that we look at several different variables to determine how sensitive the alternatives will be to changes. We selected one incinerator and one transfer alternative to estimate future cost. On pages 6 to 8 gives the summary of the variables and how they compare with present dollars.

Also we did a mileage estimate on several sites discussed. We used the 1980 census and divided the county into areas as done on the 1980 census. We assumed all garbage was collected and based the numbers of trips on the present operation of Hood River Garbage Service. Pages 9 to 11 shows the total number of miles driven per year for 5 sites.

We discussed with Pacific Power & Light the revenue from producing electric power. They are very interested in buying power but the price for kilowatt hour varys based on several options. See letter from Kurt Ihde Page 12.

We discussed with Diamond Fruit staff the possibility of furnishing steam for the cannery operation in Hood River. They are evaluating their needs and will have a report back to us shortly.

Based on all discussion and reevaluation I recommend that we continue to site a transfer station in an industrial area and design the facility for future conversion to an incinerator. This will allow the county the greatest flexability for any future problems or advantages.

Yours truly,

Anthony C. Klein,
Director of Public Works

ACK:bl

HOOD RIVER COUNTY SOLID WASTE OPTIONS

Capital Outlay

	Transfer				Incinerator Volume Reduction			
	Johnson	Odell	Neal Cr	Landfill	Johnson	Odell	Neal Cr	Landfill
Capital Costs								
Land	120000	80000			120000	80000		
R/W Acquisition			10000				10000	
Off-Site Impvts	6500	1000	70000		6500	1000	70000	
Utilities	20000	20000	55500	84000	20000	20000	55500	84000
Sitework	122600	96000	113300	104200	122600	96000	113300	104200
Pub Reqmts	17000				17000			
Structure	116100	116100	100000	100000	125000	125000	110000	110000
Subtotal	402200	313100	348800	288200	411100	322000	358800	295500
Equipment								
Basic Equip	25000	25000	25000	25000	751000	751000	751000	751000
Heat Recovery								
Elect Gen								
Loader	15000	15000	15000	15000	15000	15000	15000	15000
Tractor	56000	56000	56000	56000				
Trailers	48000	48000	48000	48000				
Subtotal	144000	144000	144000	144000	766000	766000	766000	766000
Total	546200	457100	492800	432200	1177100	1088000	1124800	1061500

HOOD RIVER COUNTY SOLID WASTE OPTIONS

Annual Costs

	Transfer					Incinerator Volume Reduction			
	Johnson	Odell	Neal Cr	Landfill		Johnson	Odell	Neal Cr	Landfill
Labor									
Supervisor					1	31100	31100	31100	31100
Operators 1½	35450	35450	35450	35450	4	98400	98400	98400	98400
Truck Dr 1	27500	27500	27500	27500	¼	6900	6900	6900	6900
Gen Maint									
Building	1200	1200	1000	1000		1300	1300	1100	1100
Equipment	1300	1300	1300	1300		37600	37600	37600	37600
Utilities									
Electricity	3000	1850	1500	1500		7000	4000	4000	4000
Aux Fuel						10600	10600	16700	16700
Other	1000	1200	800	800		1000	1200	800	800
Loader	5200	5200	5200	5200		5200	5200	5200	5200
Disposal									
Transport	38150	38750	39350	42700		5600	5800	6000	7100
Disposal	56420	56420	50700	50700		3000	3000	3000	3000
Site Amort.	53900	41900	46700	38600		55000	43100	48000	39600
Equipt Amort.	25490	25490	25490	25490	12%20	102550	102550	102550	102550
Subtotal	248610	236260	235990	230240		365250	350750	361350	354050
Income									
Net Total	248610	236260	235990	230240		365250	350750	361350	354050

Solid Waste Disposal

Summary of Economic Analyses

Transfer Site Odell Area versus
Incinerator Site Johnson Parcel

Basic Assumptions

1. Minimum attractive rate of return on investment = 12%
2. Capital Costs
   - Transfer Station $457,100.00 @ 12% = 61200/year
   - Incinerator w/ Steam Production $1,477,000.00 @ 12% = 197740/year
3. Operating Costs and Maintenance
   - Transfer Station $168870.00 per year
   - Incinerator w/ Steam Production $253,300.00 per year
4. With steam sell 27,750,000# steam/year

Possibilities:

1. Inflation rate increases at roughly the same rate for all costs and income.
   Steam could be sold at $4.00/1000#
   Equivalent Uniform Annual Costs
   - Transfer Station $230070.00
   - Incinerator $300040.00

2. Inflation rate increases at 12% for energy costs and income and 8% for all other costs.
   Steam could be sold at $4.00/1000# and increase 12%/year
   Equivalent Uniform Annual Costs
   - Transfer Station $249070.00
   - Incinerator 312710.00

3. Inflation rate increases at roughly the same rate for all costs and income.
   Steam could be sold at $6.00/1000#
   Equivalent Uniform Annual Costs
   - Transfer Station $230,070.00
   - Incinerator $284540.00

4. INFLATION RATE INCREASES AT 12% FOR ENERGY COSTS AND INCOME AND 8% FOR ALL OTHER COSTS.
STEAM COULD BE SOLD AT $6.00/1000# AND INCREASE 12%/YEAR

EQUIVALENT UNIFORM ANNUAL COSTS

TRANSFER STATION	$249070.00
INCINERATOR	$240010.00

IN OTHERWORDS FOR THE TOTAL COST OF THE INCINERATOR TO EQUAL THE TOTAL COST OF THE TRANSFER STATION THE SELLING PRICE OF STEAM MUST BE;

1. ALL COSTS, INCOME INFLATE AT SAME RATE
SELL STEAM FOR $7.95/1000# (MORE OR LESS)

2. ENERGY COSTS, INCOME INFLATE AT 12% ALL OTHER COSTS INFLATE AT 8%
SELL STEAM FOR $5.75/1000# (MORE OR LESS)

Solid Waste Disposal Alternative

Propose Transfer Station for first 5 years
Install Incinerator with Heat Recovery at end of 5 year period

Assumptions
Location - Johnson Site
Rate of Return - 12%
Sell steam at $4.00/1000# (27750000#/year)

Initial Costs
Site & Building 402200.00 20 year life
Transfer Equipment 144000.00 w/ 39300.00 salvage at 5 years

Annual Costs first 5 years $169220.00/year

Costs at year 5
Install Incinerators $1,051,000.00 w/ 75100.00 salvage at year 20

Annual Costs year 6 - year 20 $252900.00/year
Income, sale of steam 6-20 $111000.00/year

Present Worth 12%

Initial Investment	546200.00	Salvage Transfer	22300.00
O&M years 1-5	610040.00	salvage Incinerator	7790.00
Investment @ year 5	596340.00	steam Income	428900.00
O&M years 6-20	977210.00		458990.00 IN
	$2,729,790.00 OUT		

Net Present Worth $2,270,800.00

Equivalent Uniform Annual Cost $304010.00

ODELL — Estimate of Miles Driven per Year

Location	One Way Dist To Site	Trips Per Year	One Way Total Miles
City (12th & May)	8	804	6432
West City (Frankton)	8	222	1776
South City (Brookside)	6½	136	884
Westside (Country Club)	7	96	672
Oak Grove (Portland Dr.)	5½	640	3520
Eastside (Panorama Pt.)	6	181	1086
Pine Grove (Glass Dr.)	2½	209	522
Odell	½	352	176
West Odell (Lippman Rd)	2	135	270
Willow Flat	2½	405	1012.5
Dee	9	183	1647
Trout Ck	10½	183	1922
Parkdale	8½	465	3952.5
			23872 One Way
Trans Sta to Landfill			5333 Round Trip
			29205 Total

RAND ROAD

Location	One Way Dist To Site	Trips Per Year	One Way Total Miles
City (12th & May)	1½	804	1206
West City (Frankton)	1½	222	333
South City (Brookside)	2½	136	340
Westside (Country Club)	3½	96	336
Oak Grove (Portland Dr.)	6	640	3840
Eastside (Panorama Pt.)	3½	181	634
Pine Grove (Glass Dr.)	7	209	1463
Odell	9	352	3168
West Odell (Lippman Rd)	9½	135	1283
Willow Flat	10	405	4050
Dee	13½	183	2471
Trout Ck	15½	183	2836
Parkdale	16½	465	7672
			29632 One Way
Trans Sta to Landfill	2.7	404	2181.6 Round Trip
			31814 Total

CITY DUMP — Estimate of Miles Driven per Year

Location	One Way Dist to Site	Trips Per Year	One Way Total Miles	
City (12th & May)	2.75	804	2211	
West City (Frankton)	4	222	888	
South City (Brookside)	8	136	1088	
Westside (Country Club)	6	96	576	
Oak Grove (Portland Dr.)	7½	640	4800	
Eastside (Panorama Pt.)	1½	181	271.5	
Pine Grove (Glass Dr)	5	209	1045	
Odell	8	352	2816	
West Odell (Lippman Rd)	9	135	1215	
Willow Flat	9	405	3645	
Dee	15½	183	2836	
Trout Ck	18½	183	3385.5	
Parkdale	15.75	465	7323.75	
			32100.75	One Way
Trans Sta to Landfill	2	404	1616	Round Trip
			33716	Total

NEAL CREEK

Location	One Way Dist to Site	Trips Per Year	One Way Total Miles	
City (12th & May)	9	804	7236	
West City (Frankton)	9.5	222	2109	
South City (Brookside)	8	136	1088	
Westside (Country Club)	9	96	864	
Oak Grove (Portland Dr.)	7½	640	4800	
Eastside (Panorama Pt)	7	181	1267	
Pine Grove (Glass Dr.)	3	209	627	
Odell	3	352	1056	
West Odell (Lippman Rd)	4	135	540	
Willow Flat	4½	405	1822	
Dee	11½	183	2104	
Trout Ck	10½	183	1922	
Parkdale	10½	465	4882	
			30317	One Way
Trans Sta to Landfill	7.2	404	5818	Round Trip
			36135	Total

LANDFILL — Estimate of Miles Driven per Year

Location	One Way Dist to Site	Trips Per Year	One Way Total Miles	
City (12th & May)	12½	804	10050	
West City (Frankton)	11½	222	2553	
South City (Brookside)	11	136	1496	
Westside (Country Club)	11½	96	1104	
Oak Grove (Portland Dr.)	10	640	6400	
Eastside (Panorama Pt)	10½	181	1901	
Pine Grove (Glass Dr)	6½	209	1359	
Odell	5	352	1760	
West Odell (Lippman Rd)	6½	135	877	
Willow Flat	3	405	1215	
Dee	10½	183	1921	
Trout Ck	7	183	1281	
Parkdale	5½	465	2558	
			34475	One Way
Trans Sta to Landfill	11	404	8888	Round Trip
			43363	Total

PACIFIC POWER & LIGHT COMPANY

P. O. Box 300
Hood River, OR 97031
May 12, 1981

Jim Lyon
Dept. of Public Works
Hood River County Shop

Re: Garbage Incineration for Power Production

Dear Jim:

After meeting with you and Tony Klein last week, I have attempted to put together some of the information you requested. Most of the information you requested on the cost to connect to PP&L facilities is very site-specific, but I will try to give you some very general estimates.

Line Costs: It generally runs $600 to $700 per pole for three-phase line construction, however, underbuild on existing transmission line could run as little as $1.00 per foot. A pole will, in normal conditions, span 250-300 feet. It is present policy that the energy supplier may also pay an annual maintenance cost if additional line is constructed to serve only your facility. There may be additional expenses incurred by the acquisition of property for line right-of-way which could also increase your expense, depending on the site. The costs of transformers for a typical 480 volt to 12 kva site for 300 kva load, three-phase service would run in the neighborhood of $6,000.00, installed.

Switching Equipment: I am enclosing Schedule C to give you a list of the interconnection equipment required. This equipment varies depending on your generation facilities and would not necessarily be standard to any facility or site. Because of these variables in your equipment and how it is affected by where and to what facilities of PP&L's you connect to, the best advice I could give you would be to ask your potential equipment supplier for his estimate of cost for this type of interconnection needs on his equipment.

Concerning prices paid for your generation, I am enclosing some information on incremental energy prices (see Schedule A). This would relate to the minimum prices paid for customer-owned generation facilities for short-term agreements.

Prices over these amounts may increase based on term of contracts, reliability, time of delivery, cost of replacing the resource, avoided costs to PP&L and other factors which affect the value of electricity.

The contract will include an annual escalation of the basic value of kilowatt hours delivered. As you can see from the information supplied by our Contract Services Department, it is possible for prices to be as low as 12 mills, or 1.2 cents per kwh, or as high as 80 mills, or 8 cents per kwh (payable in 1986).

The actual value of your generation will have to be evaluated by our Contract Services Department. If you want more detailed information on pricing, I will have someone from that department contact you, or you can view the draft of a contract which I have in my office.

We will be able to give you a more detailed and accurate analysis of costs when a specific site has been selected.

Yours truly,

Kurt Ihde

Kurt Ihde
Senior Energy Consultant

KI:pk

Mrs. Richard Kuhn
2419 Hillcrest Road, Medford, Oregon 97501

6 May 1981

Environmental Quality Comm.
c/o Joe Richards, Chairman
Box 1760
Portland, Oregon 97207

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
MAY 11 1981
OFFICE OF THE DIRECTOR

Gentlemen:

Disbelief over your recent decision regarding the change in particulate rule from .35 to .40 and extension of the compliance date for Down River Timber products has prompted this letter –

As a private citizen & volunteer and member representing public on the Medford-Ashland Air Quality Advisory Comm. which functioned from 1970-1979 & which formulated the rule, I do not understand

Mrs. Richard Kuhn
2419 Hillcrest Road, Medford, Oregon 97501

the E.Q.C.'s determination — that of ignoring much testimony from a broad spectrum of Jackson Co. plus the unanimous recommendations from Jackson Co. Commissioners, Medford City Council + your own D.E.Q. staff.

As all of Jackson Co. had faith in you as you have always (usually) acted with responsibility you have shaken this faith and many people, Commissioners, council + public are enraged —

Please advise why so much overwhelming testimony against the change + extension were ignored by E.Q.C.

Patricia Kuhn

Mr. Richards - thank you for your supportive vote.