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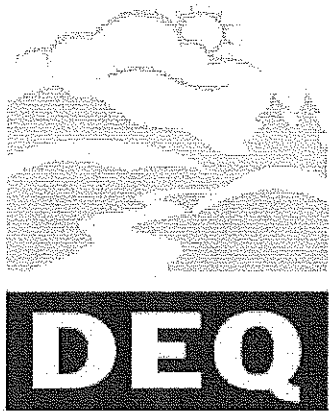
10/21/1977

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of Environmental Quality

Environmental Quality Commission Meeting
October 21, 1977
Coos Bay City Library Auditorium
525 Anderson Street
Coos Bay, Oregon

9:00 a.m. A. Minutes of September 23, 1977 EQC Meeting

B. Monthly Activity Report for September 1977

C. Tax Credit Applications

PUBLIC FORUM - Opportunity for any citizen to give a brief oral or written presentation on any environmental topic of concern. If appropriate the Department will respond to issues in writing or at a subsequent meeting. The Commission reserves the right to discontinue this forum after a reasonable time if an unduly large number of speakers wish to appear.

D. Southwest Region - Report of Region Manager on significant on-going activities in the Southwest Region (Reiter)

E. Coos County Solid Waste - Review of Coos County Solid Waste Program (Reiter)

F. Coos Bay Log Handling - Status report on log handling in Coos Bay area (Barbara Burton)

G. Clatsop Plains Sewage Disposal - Consideration of amendments to moratorium on construction of new subsurface sewage disposal systems in Clatsop Plains area, OAR 340-71-020(7) (Tilson)

H. Dexter Sewage Disposal, Lane County - Consideration of adoption of moratorium on construction of new subsurface sewage disposal systems in Dexter area, Lane County, OAR 340-71-020(8) (Osborne)

I. NPDES July 1, 1977 Compliance Date - Request for approval of Stipulated Consent Orders for NPDES permittees not meeting July 1, 1977 compliance date (Bolton)

J. Sulfur Content of Fuels Policy - Consideration of adoption of proposed policy on use of low sulfur fuels in Portland metropolitan area, OAR 340-22-010 (Greene)

K. Subsurface Rules - Request for authorization to hold public hearing on proposed amendments to subsurface sewage disposal rules (Osborne)

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Because of the uncertain time spans involved, the Commission reserves the right to deal with any item at any time in the meeting. Anyone wishing to be heard on an agenda item that doesn't have a designated time on the agenda should be at the meeting when it commences to be certain they don't miss the agenda item.

The Commission will breakfast (7:30 a.m.) at the Pony Village (Club Room), North Bend. Lunch will be at the Thunderbird (Klamath Room) 1313 N. Bayshore Drive, Coos Bay.

MINUTES OF THE NINETIETH MEETING
OF THE
OREGON ENVIRONMENTAL QUALITY COMMISSION

October 21, 1977

On Friday, October 21, 1977, the ninetieth meeting of the Oregon Environmental Quality Commission convened in the Coos Bay City Library Auditorium, 525 Anderson Street, Coos Bay, Oregon.

Present were all Commission members: Mr. Joe B. Richards, Chairman; Dr. Grace S. Phinney, Vice-Chairman; Mrs. Jacklyn Hallock; Mr. Ronald Somers; and Mr. Albert Densmore. Present on behalf of the Department were its Director and several members of the Department staff.

Staff reports presented at this meeting, which contain the Director's recommendations mentioned in these minutes, are on file in the Director's Office of the Department of Environmental Quality, 1234 S. W. Morrison Street, Portland, Oregon.

AGENDA ITEM A - MINUTES OF THE SEPTEMBER 23, 1977 EQC MEETING

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock, and carried unanimously that the minutes of the September 23, 1977 EQC meeting be approved as presented.

AGENDA ITEM B - MONTHLY ACTIVITY REPORT FOR SEPTEMBER 1977

Commissioner Hallock asked what an experimental processing facility was in connection to the solid waste plan actions completed for Angus MacPhee. Mr. Ernest Schmidt, Administrator of the Department's Solid Waste Division, replied that Mr. MacPhee is a landfill operator in Washington County who is experimenting with composting sewage sludge and pulp clarifier sludge from Publishers Paper at Newberg and the Solid Waste Division issued him a short-term permit for this experimental process. Commissioner Somers asked what Mr. MacPhee was going to do with it. Mr. Schmidt said Mr. MacPhee hoped to show that this was a satisfactory procedure to make these products usable as a soil conditioner.

Commissioner Densmore asked some questions on the significant activities report. In response to Commissioner Densmore, Mr. Harold Patterson of the Department's Air Quality Division said that the agreements mentioned in the significant activities report referred to procedural agreements between the Department and EPA regarding the Prevention of Significant Deterioration (PSD). Commissioner Densmore said he would like to see a sample of this type of procedural agreement.

Commissioner Densmore then asked what the sampler deficiencies were that caused the spring 1977 samples in the Portland Data Base to be discarded. Mr. Patterson replied that it was the inability of the sampler to separate particle size as it was supposed to.

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney, and carried unanimously that the Monthly Activity Report for September 1977 be approved as presented.

AGENDA ITEM C - TAX CREDIT APPLICATIONS

Commissioner Somers asked why it took two years from approval of the Weyerhaeuser facility (T-923) for them to apply for tax credit. Mr. Harold Sawyer of the Department's Water Quality Division replied that it frequently takes a year or two on large projects before all the accounting is completed on costs of the facility.

Commissioner Densmore asked if the Department had had other applications like T-913 for Tallman Orchards for an orchard fan. Mr. Harold Patterson of the Air Quality Division replied that the Department had issued several tax credits for orchard fans and the first of them were from the Medford area.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock, and carried unanimously that tax credit applications T-605R, T-702R, T-703R, T-706R, T-913, T-916, T-918, T-921 and T-923 be approved and that Pollution Control Facility Certificate No. 612, issued to Tax Credit Application T-684 be revoked as the facility had changed ownership.

PUBLIC FORUM

Mr. Bob Bowen appeared regarding the appeal process for septic tank approvals. He said he bought a piece of land on the basis of receiving a valid septic tank permit. Mr. Bowen said that now the permit had been amended so that he could no longer build a three-bedroom house; he could only build a two-bedroom house and he could not put the house where he was told he should put it to begin with. Mr. Bowen said that when he asked the Department what the appeal procedure was he was told there wasn't one; therefore, he expressed the need for such an appeal procedure.

Mr. Raymond Underwood of the Department of Justice said that unless it was a commercial development it did not qualify for a contested case hearing and must take recourse with the courts.

Chairman Richards and Commissioner Hallock asked for a staff report at the next meeting regarding the appeal process on septic tank approvals. The Commission also suggested that Mr. Bowen contact Mr. Richard Reiter of the Department's Southwest Region Office regarding his particular problem.

Commissioner Somers asked why the Commission was not informed of the Department's pending move. Director Young said that it was not the Department's intent to exclude the Commission from information of this kind. Chairman Richards requested that a section be added to the activity report on pending administrative decisions of this type.

No one else wished to speak on any subject.

AGENDA ITEM D - REPORT OF SOUTHWEST REGION MANAGER ON SIGNIFICANT ONGOING ACTIVITIES IN THE SOUTHWEST REGION (COOS-CURRY-DOUGLAS COUNTIES)

Mr. Richard Reiter, Regional Manager for the Department's Southwest Region office, presented the staff report on this matter. Mr. Reiter explained that this report was originally prepared for the August EQC meeting which was not held. He said that since the time when the report was made, negotiations had been completed with Georgia-Pacific and Roseburg Lumber to develop compliance schedules on their veneer dryer emission control program. He said that they tried to stick to completion dates of January 1979; however, some of them were made for May of 1979. Chairman Richards asked why they were being allowed this length of time to comply. Mr. Reiter said that this was because of timing to complete everything to come into compliance.

In response to Chairman Richards, Mr. Reiter said that most of the approximately 27 veneer dryers in this area were out of compliance without controls. However, he said, they have negotiated compliance schedules for these facilities and it means adding controls as opposed to process changes to have the facilities come into compliance.

Mr. Reiter said that the portion of the report on subsurface and alternative sewage disposal systems did not include Jackson and Josephine counties because the Commission would be in that area later in the year. He said they wanted to make the Commission aware that Curry and Douglas counties were contract counties and Coos County was a direct service county.

Mr. Reiter said that Douglas County had shown some interest in a solid waste resource recovery program along with Coos County.

Mr. Reiter continued with highlighting portions of the written staff report on new industry and seafood processing.

AGENDA ITEM E - COOS COUNTY SOLID WASTE - REVIEW OF COOS COUNTY SOLID WASTE PROGRAM

Mr. Richard Reiter of the Department's Southwest Region Office presented the staff report on this matter. Mr. Reiter said that DEQ had been working with the Coos-Curry Solid Waste Planning Council since 1973 to improve the solid waste management program in those counties. He said that in 1975 the EQC approved open burning variances for four disposal sites on the basis that an improved solid waste disposal program would be forthcoming.

Mr. Reiter said that Phase I of a resource recovery study was completed in April 1976, sponsored by the Department and the Port of Umpqua. He further said that the result of this Phase I study was that a resource recovery program, if implemented, should be built in the North Bend area. However, Mr. Reiter said that Phase II of the project has been

sponsorless until just recently when renewed interest by industry had caused the Coos-Curry-Douglas-Economic Improvement Association to reactivate the energy recovery program for the South Coast. In the meantime, Mr. Reiter said, the variances granted Myrtle Point and Powers are due to expire in October 1977.

Mr. Reiter listed several ways of dealing with the expiring variances, since neither the Myrtle Point, nor Powers sites were capable of being converted to a modified landfill due to steep topography, soils, high rainfall or availability of sufficient land. These several alternatives are detailed in the staff report.

Mr. Reiter listed the following Director's recommendations:

1. Grant a two-year variance to the cities of Myrtle Point and Powers, during which time they are to develop the necessary program to participate in a regional landfill program and/or energy recovery program. The existing open burning disposal sites shall be phased out as soon as possible within that two-year period. If practicable an interim source separation program of saleable materials shall be established. Six-month progress reports shall be provided to the Commission.

2. The Department should express interest in, and if possible financially support a study to identify the financial and institutional requirements of developing an energy recovery program for the South Coast.

3. The EQC finds that the variance requests meet the intent of ORS 459.225(3)(c) in that strict compliance would result in closing of the disposal sites and no alternative facility or alternative method of solid waste management is available.

In response to Commissioner Densmore, Mr. Reiter said that except for the Bandon area, where the current landfill is located, it doesn't appear that an available site can be located in Coos County.

Chairman Richards said he could support the recommendation, but he was not happy with six-month progress reports. Mr. Reiter said it might be possible to identify specific milestones. Chairman Richards asked, if once a variance is granted could conditions be added to it. Mr. Raymond Underwood, Department of Justice, said that once the variance was granted it could not be changed without the variance holder being entitled to a right of appeal.

Commissioner Somers asked if it was correct that some $130,000 had already been spent in planning. Mr. Reiter replied that $47,000 was received by the Coos-Curry Council for their planning efforts, and the Port of Umpqua received $75,000 for the first study and $51,000 for the follow-up study. In response to Commissioner Somers, Mr. Reiter said that an ongoing recovery plan was not in existence. He also said that currently most of the solid waste in the area was headed toward Bandon.

Mr. Roger Emmons, Oregon Sanitary Services Institute, testified that they were generally very supportive of the staff recommendations. He said that the Shinglehouse Slough site could not operate and meet all the state and federal pollution requirements, and they proposed that its use be limited. Mr. Emmons said that they wanted Commission assurance that they could use the Joe Ney Disposal Site near Charleston as an alternate if the Shinglehouse site were in limited operation, rather than having to drive to Bandon. Mr. Emmons also proposed that a feasibility study on resource recovery be made. He said that if, as a result of such a study, resource recovery proved to be economically and technically feasible, they would give it full support.

Chairman Richards asked how Mr. Emmons would change the Director's recommendation. Mr. Emmons asked that the plan for regional disposal include his collectors going into the Joe Ney site. He said that they are also discussing with the county the possibility of leasing the site and operating it for the county. Mr. Emmons said that they would also like to add "technical" to the financial and institutional studies identified in Director's Recommendation number 2.

Commissioner Somers asked why private industry didn't take over the problem. Mr. Emmons said that due to the fact that pollution control bonds were available only to governments, they did not have an adequate method of financing.

Commissioner Ed Walrup, Coos County Commission member, said that Coos County was pleased that the Commission came to Coos Bay for their meeting. Mr. Walrup requested that the Commission grant the variances for the cities of Myrtle Point and Powers. He said that the county had purchased a garbage incinerator at the Bandon site as Phase I of their program, and that they planned to sell the resulting power. Mr. Walrup said they wanted to assure the Commission that they were doing something about the solid waste problem in the area. He also said that the county had offered to let the Oregon Sanitary Services Institute take over the Joe Ney site and run it at no cost.

Chairman Richards asked if Mr. Reiter was recommending any change in the Director's recommendation. Mr. Reiter replied that he would not add anything pertaining to guaranteeing the collectors access to the Joe Ney site. He said that that site was not a long-term landfill and at the present rate of filling had only about three more years to operate.

Commissioner Densmore said that he saw the Commission as having three alternatives. He said the first would be to adopt the recommendation as is at this meeting; second to delay action for one month until such time the staff would have an opportunity to meet with interested parties to devise a timetable; and third to grant the variance at this meeting conditioned upon the preparation and acceptance of a plan within a specified number of days.

Mr. Reiter said he would be comfortable with an initial date of deciding which direction to take on resource recovery, but beyond that he would have trouble identifying realistic milestones.

Commissioner Somers asked Mr. Emmons, if the Joe Ney site was offered to them, why they were asking the Commission to condition the variance to allow them access to it. Mr. Emmons said they were considering that with the County Commission, but they wanted to make sure their customers were not going to have to bear the charges of equipment changes necessary to take the solid waste to Bandon.

Commissioner Somers asked if there would be a problem with a four-month variance to see if within that time they could determine if there would be a resource recovery program. Mr. Reiter said that they had proposed six-month progress reports, and if the Commission were to grant six-month variances the only difference would be that a formal hearing would be held every six months instead of just the presentation of status reports.

Commissioner Densmore MOVED that this matter be held in abeyance for a period of four months and to extend the temporary variances for Myrtle Point and Powers until the February EQC meeting. The motion was seconded by Commissioner Hallock and carried unanimously.

Chairman Richards restated his understanding that the temporary variances for Myrtle Point and Powers would be extended until the February EQC meeting and that the matter of granting a final variance would be postponed until that time with the understanding that a plan for whether or not to go into resource recovery would be forthcoming.

AGENDA ITEM G - CLATSOP PLAINS SEWAGE DISPOSAL--CONSIDERATION OF AMENDMENTS TO MORATORIUM ON CONSTRUCTION OF NEW SUBSURFACE SEWAGE DISPOSAL SYSTEMS IN CLATSOP PLAINS AREA, OAR 340-71-020(7)

Mr. Murray M. Tilson of the Department's Salem-North Coast Region, Tillamook Branck Office, presented the staff report on this matter. Mr. Tilson outlined some of the background on the moratorium and the recommendations of Mr. H. Randy Sweet (a consulting geologist/hydrogeologist hired from funds available from the DEQ-Clatsop County Loan Agreement) for responses to questions outlined in the Intergovernmental Directive adopted by the Commission on April 1, 1977.

Commissioner Phinney said that the only monitoring she saw proposed was in Mr. Sweet's report and apparently that is what the Department was planning on going ahead with.

Commissioner Phinney asked if it was Department policy to allow septic tanks on lots less than an acre. Mr. Tilson replied that if lots under the size of one acre meet the criteria in the subsurface rules for septic tanks they are allowed.

Mr. Don Corkill, Clatsop County Commissioner, said that they have attempted to comply with all the Commission's requests and said that he had staff available to answer any questions the Commission might have. Chairman Richards said that he believed the DEQ staff and the Commission had tried to comply with their part of the bargain also, and that the Commission was quite uncomfortable with imposing the moratorium and they felt that a lot of the decisions were really local government land planning decisions.

Mr. Corkill said that water quality monitoring had begun and would continue, and if any degradation was happening they would declare a moratorium on building sites themselves.

Commissioner Densmore said he had received correspondence from a Mrs. Steele and asked if the problem she alluded to would have to be solved in the future. Mr. Lou Larsen of the Clatsop County Council said that Mrs. Steele was one of the property owners in Camp Rilea. He said that Camp Rilea had a land exchange with the county and acquired lots to exhanges with these property owners to get them out of Camp Rilea.

It was MOVED by Commissioner Hallock, seconded by Commissioner Phinney, and carried unanimously that the Director's recommendation, as follows, be approved.

DIRECTOR'S RECOMMENDATION

The Director recommends that the Commission take the following actions:

1. Enter findings that

    a. The protection of the groundwater in the moratorium area requires continuation of the existing moratorium in the five unincorporated areas outlined in the county's letter of August 31, 1977. (Attachment E of the original Agenda Item G for October 21, 1977.)

    b. The preservation of water supplies for the future makes advisable the continuation of the moratorium in the two parcels of county-owned land and in Camp Rilea. This land was designated for future reserves in the county's August 31 letter.

    c. There is no petition to modify the moratorium within the incorporated areas of Gearhart, Hammond or Warrenton before the Commission and the moratorium should remain undisturbed until such time as the cities themselves or some other person petitions for modification and gives sufficient reason.

d. The seventy-five lots of record which are less than one acre in size, but are not in the above-mentioned subareas of the moratorium do not threaten the fourteen square mile aquifer study area with unacceptable groundwater degradation. While preferential, windfall benefits would accrue to allow systems on lots recorded after the April 1, 1977 moratorium date, the county's request to allow one single family system on such of these lots as were of record on April 1, 1977 and as otherwise qualify should be granted.

e. In the moratorium areas not mentioned above, septic tank/drainfield development not to exceed one single family flow equivalent per acre can take place without contributing unacceptable levels of nitrates of nitrogen to the groundwater beneath.

f. The attached proposed rule amendment will continue to prevent unacceptable degradation of groundwater while allowing such development as, at present, appears to be compatible with preserving the quality of the groundwater.

g. The proposal, based upon conservative information, is subject to further review and does not prejudice future proposals which may be based on new information.

h. At the time a comprehensive plan and appropriate zoning are accomplished it is expected further review will be appropriate.

2. Adopt the attached proposed amendment to OAR 340-71-020(7) as a permanent rule to take effect immediately upon its filing with the Secretary of State.

Chairman Richards said it was the Commission's intent in adopting this recommendation to include the latest revision of OAR 340-71-020(7)(b)(E).

AGENDA ITEM F - COOS BAY LOG HANDLING--STATUS REPORT ON LOG HANDLING IN COOS BAY AREA

Ms. Barbara Burton of the Department's Southwest Region staff presented the staff report on this matter. Ms. Burton said that it had been determined several years ago that severe water quality problems exist around some log handling operations.

She said that the chief problem appeared to be lack of oxygen, and in the Coos Bay area in particular there is a period of two to three months every year where there is a severe oxygen problem. Ms. Burton said that this had the effect of driving out fish and other aquatic life, if not actually killing them.

Ms. Burton said that hearings were held to determine what could be done about this and other problems. She said that it was brought out in the hearings that the cure for these problems might cause other problems which were worse than those which already existed. She said that the results might be that many mills might have to shut down because they could not operate with a land-based system. She also said that noise and dust problems from increased truck traffic might be worse than the present water quality problem.

Ms. Burton said that the log handling policy adopted October 24, 1975, set a five-year time span in which the Department was to work with industry to try to reduce the water quality problems. She said that there were eight companies involved in the Coos Bay-Reedsport area. Agreement had been reached with four of the companies, she said, and permits have been issued to them. Ms. Burton said that they thought they had agreement that the Department could require permits; however, one company apparently did not believe that and enforcement action was underway with that company to obtain an application so that it may be permitted. She said that the negotiating process was still going on with the three remaining companies.

Ms. Burton said that a biological study of the tidelands had begun to see what type of impact log storage had on tidelands.

Ms. Burton said, that barring any unforeseen circumstances, that the policy deadline of 1980 would be met. She said that the only exception would be one company that they are still negotiating with is facing some major expenses in the installation of two easy letdown devices.

Commissioner Phinney asked if the Corps of Engineers was moving toward removing pilings in the abandoned dumps. Ms. Burton said that the problems involved in the removal of pilings are that it is very expensive and good records are not available on who owns them. She said that the current policy is that when new pilings are installed they have to go through the Corps for permission and the Corps stipulates that all old pilings in the area must be removed before new pilings are installed.

In response to Commissioner Densmore, Ms. Burton said that agreement had been reached with Weyerhaeuser and Georgia-Pacific in Coos Bay and International Paper in Reedsport and permit conditions were still being negotiated with Coos Head Timber and Al Peirce Lumber. She said an impasse had been reached with Knutson Towboat Company on whether they were going to submit an application or not and civil penalty proceedings had been started on them. She also said there was one more company in the Reedsport area that had not turned in an application, but no real problem was anticipated with them.

No action by the Commission was necessary on this item.

AGENDA ITEM H - DEXTER SEWAGE DISPOSAL, LANE COUNTY--CONSIDERATION OF ADOPTION OF MORATORIUM ON CONSTRUCTION OF NEW SUBSURFACE SEWAGE DISPOSAL SYSTEMS IN DEXTER AREA, LANE COUNTY, OAR 340-71-020(8)

Mr. T. Jack Osborne of the Department's Subsurface Sewage Disposal Section staff presented the Director's recommendation on this item.

It was MOVED by Commissioner Hallock, seconded by Commissioner Somers, and carried unanimously that the Director's recommendation as follows be adopted:

It is the Director's recommendation that:

The Commission issue an order prohibiting construction of new subsurface sewage disposal system construction permits and the issuance of favorable reports of evaluation of site suitability within the Dexter area of Lane County, by adopting the proposed amendment to OAR Chapter 340, Section 71-020.

AGENDA ITEM I - NPDES JULY 1, 1977 COMPLIANCE DATE--REQUEST FOR APPROVAL OF STIPULATED CONSENT ORDERS FOR PERMITTEES NOT MEETING JULY 1, 1977 COMPLIANCE DEADLINE

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock, and carried unanimously that the following Director's recommendation be approved:

I recommend that the Commission approve the following Consent Orders:

1. Department of Environmental Quality v. South Suburban Sanitary District, Stipulation and Final Order, No. WQ-CR-77-163.

2. Department of Environmental Quality v. City of Cannon Beach, Stipulation and Final Order, No. WQ-SNCR-77-212.

3. Department of Environmental Quality v. City of Rockaway, Stipulation and Final Order, No. WQ-SNCR-77-160.

AGENDA ITEM J - SULFUR CONTENT OF FUELS--ADOPTION OF POLICY

Commissioner Somers read to the Commission a letter addressed to him from Mr. Tom Donaca of Associated Oregon Industries, in which Mr. Donaca expressed his concern that the proposed policy on the sulfur content of fuels may become a "self-fulfilling prophesy." In his letter, Mr. Donaca said that this rule was primarily designed to solve SO_2 problems relating to sulfur content of fuels and it seemed that the Department was impressing on the rule problems broader than covered by the existing regulation on the sulfur content of fuels. Mr. Donaca also outlined several other concerns in regard to specific parts of the proposed policy.

Chairman Richards asked if the staff had had a chance to review Mr. Donaca's letter. Mr. Young replied that they had not seen the letter.

Commissioner Phinney said it seemed to her that Mr. Donaca thought that the Commission was putting the blame for the sulfur content in the air on these fuels, and that that was not what the proposed policy was doing.

Commissioner Phinney continued to say that she thought that Mr. Donaca was mistaken in his interpretation of this policy. Commissioner Hallock said that she agreed with Commissioner Phinney and asked if the staff would like time to look at Mr. Donaca's letter and comment.

Chairman Richards said that although he did not like Mr. Donaca's last-minute appeal, he would like to know if Mr. Donaca had anything of value to add or not.

Mr. Harold Patterson of the Department's Air Quality Division said he did not feel any harm would be done by postponing action on this policy until the next meeting.

Commissioner Phinney said she did not see the necessity in postponing action because Mr. Donaca had known about this matter for some time and because she felt he was misinterpreting the intent of the policy.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock, and carried with Commissioner Phinney desenting, that the matter be deferred until the next meeting.

AGENDA ITEM K - AUTHORIZATION TO CONDUCT A PUBLIC HEARING ON THE QUESTION OF AMENDING THE ADMINISTRATIVE RULES GOVERNING SUBSURFACE AND ALTERNATIVE SEWAGE DISPOSAL

Commissioner Somers MOVED that the Director's recommendation to authorize a public hearing to take testimony on the question of amending the administrative rules governing subsurface and alternative sewage disposal be approved, and that the staff be directed to consider a proposed rule for appeals to the Commission on individual subsurface permits and on alternative systems.

Chairman Richards suggested that they request a staff analysis of the present policy.

Commissioner Somers then amended his motion to say that the staff be directed to analyze an appeals method and that it need not necessarily be a part of the public hearing process.

The motion was seconded by Commissioner Hallock and carried unanimously.

Commissioner Somers MOVED that the next four EQC meetings be held in Portland. The motion died for lack of a second. Commissioner Somers asked if there was an Executive Department recommendation that the Commission move around the state to hold their meetings. Mr. Young said he knew of no such order. Commissioner Hallock asked if it would be possible to hold a meeting in the Valley between those meetings scheduled for Bend, Medford and Hermiston. Chairman Richards said that this could be discussed at the next meeting to be held in Bend.

There being no further business, the meeting was adjourned.

Respectfully submitted,

Carol A. Splettstaszer
Recording Secretary

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item B, October 21, 1977, EQC Meeting

September Program Activity Report

Discussion

Attached is the September Program Activity Report.

ORS 468.325 provides for approval or disapproval of Air Quality plans and specifications by the Environmental Quality Commission. Water and Solid Waste facility plans and specifications approvals or disapprovals and issuance, denials, modifications and revocations of permits are prescribed by statutes to be functions of the Department, subject to appeal to the Commission.

The purposes of this report are to provide information to the Commission regarding status of the reported program activities, to provide a historical record of project plan and permit actions, and to obtain the confirming approval of the Commission of actions taken by the Department relative to air quality plans and specifications.

Recommendation

It is the Director's recommendation that the Commission take notice of the reported program activities and give confirming approval to the Department's actions relative to air quality project plans and specifications as described on pages 7 & 8 of the report.

Michael Downs
for
WILLIAM H. YOUNG

M. Downs:mjb
229-6485
10-11-77

Department of Environmental Quality
Technical Programs

Permit and Plan Actions

September 1977

DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL PROGRAMS

MONTHLY ACTIVITY REPORT

Air, Water & Solid Waste Divisions (Reporting Unit) — September 1977 (Month and Year)

SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans
	Month	Fis.Yr.	Month	Fis.Yr.	Month	Fis.Yr.	Pending
Air 1/							
Direct Sources	14	38	10	33			28
Total	14	38	10	33			28
Water							
Municipal	123	456	126	529			49
Industrial	9	32	12	31			8
Total	132	488	138	560			57
Solid Waste							
General Refuse	4	9	3	5			10
Demolition		1		1			1
Industrial	2	8	2	6			6
Sludge							
Total	6	18	5	12			17
Hazardous Wastes							
GRAND TOTAL	152	544	153	605			102

1/ Tax credit only actions not included in summary.

DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL PROGRAMS

MONTHLY ACTIVITY REPORT

Water Quality Division — September 1977

PLAN ACTIONS COMPLETED - 138

Co	Name of Source/Project/Site and Type of Same		Date Rec'd	Date of Action		Time to Complete Action
	Municipal Sources - 126					
24	KEIZER SD	PAYNTER ESTATES SUBD	J082277	083177	PROV APP	09
24	KEIZER SD	MEADOWBROOK SUBD PH I JO 516	J082277	083177	PROV APP	09
24	SALEM	CINNAMON HILLS NO 2	J082577	083177	PROV APP	06
34	HILLSBORO	MEADOWS TOWNHOUSE ESTATES	J081977	090177	PROV APP	13
34	HILLSBORO	GOLDEN ACRES #4	J082277	090177	PROV APP	10
34	HILLSBORO	HAVENWOOD	J082277	090177	PROV APP	10
20	EUGENE	FOXWOOD	K082277	090177	PROV APP	12
21	GLENEDEN SD	LAT 5.4A GLENEDEN SD EXT	J082277	090177	PROV APP	10
06	NORTH BEND	CEDAR STREET	J082977	090677	PROV APP	08
26	GRESHAM	GLOCCA MORRA	J082577	090677	PROV APP	15
24	SALEM	SIXACRES SUBD	J082477	090677	PROV APP	13
24	SALEM	MYTEE-VIEW SUBD	J082477	090677	PROV APP	13
24	SALEM	CANDLEWOOD ESTATES	J082577	090677	PROV APP	11
34	USA	SOUTHWOOD PARK INTERCEPTOR	J082277	090677	PROV APP	15
26	PORTLAND	ZION TOWN IMPS	J082377	090777	PROV APP	15
34	USA ALOHA	BLUEBIRD NO 2	J082277	090777	PROV APP	16
08	BROOKINGS	ROSS BUSINESS CENTER	J082977	090777	PROV APP	09
34	USA SOMERSET	NEAKAHNIE VILLAGE 620	K082977	090777	PROV APP	09
34	USA DURHAM	SARA KNOLL SUBD	K082477	090777	PROV APP	14
34	USA DURHAM	PEPPER TREE 618	K082577	090777	PROV APP	13
34	USA CEDAR HLS	WESTMINSTER SUBD 621	K082977	090777	PROV APP	09
34	USA DURHAM	HOLLY HARTWICK BEAVERTON	K082977	090777	PROV APP	09
34	USA ALOHA	COLTON MEADOWS 623	K082977	090777	PROV APP	09
26	TROUTDALE	TETON RIDGE	J083177	090877	PROV APP	08
26	TROUTDALE	DORA ST EXT	J082977	090877	PROV APP	10
26	GRESHAM	ALDERWOOD EST	J082977	090877	PROV APP	10
24	SALEM WILLOW	GILBERT ST S	J090677	090877	PROV APP	02
24	SALEM	STARKEY ADD	J090677	090877	PROV APP	02
03	WILSONVILLE	CHARBONNEAU M NEIGHBORHOOD	J083177	090977	PROV APP	09
24	SALEM-WILLOW	SERRA TERRA NO 2 - PHASE 2	J082977	091277	PROV APP	14
26	TROUTDALE	ALPHA CENTAURI	K090177	091277	PROV APP	11
24	SALEM	ANDRESEN WAY	J090677	091277	PROV APP	06
08	BROOKINGS	SEAVIEW HTS NO 2	J082977	091377	PROV APP	15
34	USA ALOHA	MEREWOOD 624	J083177	091377	PROV APP	13
34	USA ALOHA	KINNAMAN ESTATES	J082977	091377	PROV APP	14
34	USA CORNELIUS	ALPINE LOOD	J082977	091377	PROV APP	15
30	HERMISTON	NW 7TH STREET	K082977	091377	PROV APP	15
30	HERMISTON	W STANDARD AVE	K082977	091377	PROV APP	15
34	USA DURHAM	WILDERNESS SUBD	J090177	091377	PROV APP	12
20	EUGENE	BRAEMORE SUBD	K083177	091477	PROV APP	14
06	NORTH BEND	SHORB ADDITION	K090177	091477	PROV APP	13
30	STANFIELD	HIGHWAY 395 CROSSING	K090677	091477	PROV APP	08
03	CANBY	TOWNSHIP ROAD	K090677	091477	PROV APP	08
03	CCSD #1	RIDGEGATE 111	K090677	091477	PROV APP	08
20	EUGENE	SOUZA PARK 3RD ADD	K090777	091477	PROV APP	07
20	EUGENE	CONCORD 1ST ADD	K090777	091477	PROV APP	07
03	CCSD #1	EMMERT PARKWAY ESTATES	K090877	091477	PROV APP	06
27	MONMOUTH	KILLEN ADD	K090877	091577	PROV APP	07
20	SPRINGFIELD	7TH & "J" ST	K090977	091577	PROV APP	06
18	KLAMATH FALLS	ROOSEVELT STREET EXTENSION	K091277	091577	PROV APP	03
34	OAK LODGE SD	HEAVENLY HOMES EXTENSION	K091277	091577	PROV APP	03
20	SPRINGFIELD	COLT PARK 1ST ADD	K091477	091577	PROV APP	01
15	BCVSA	ALBION LN COLUMBUS AVE	J082977	091677	PROV APP	18
34	TUALATIN	AUTUMNWOODS	K082977	091677	PROV APP	18
20	EUGENE	COLINA VISTA EST 1ST ADD	K082977	091677	PROV APP	18
09	BEND	MEADOWVIEW EST 5TH ADD.	K083177	091677	PROV APP	16
22	ALBANY	EAST CENTRAL SSS SS-77-25,3	K083177	091677	PROV APP	16
34	USA	MILLER LAT	K090177	091677	PROV APP	15
20	SPRINGFIELD	54TH & E STREET	K090177	091677	PROV APP	15
15	MEDFORD	CASTLE RIDGE SUBD	K090277	091677	PROV APP	14
34	USA DURHAM	HOMEGROWN PROPERTIES	K090277	091677	PROV APP	14
34	TUALATIN	PREMIER INDUSTRIAL PARK	J090277	091677	PROV APP	14
14	PARKDALE SD	LATERAL B-2A	J090677	091677	PROV APP	10

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MONTHLY ACTIVITY REPORT

Water Quality Division — September 1977

PLAN ACTIONS COMPLETED (138 cont.)

&	Name of Source/Project/Site and Type of Same		Date Rec'd	Date of Action	Action	Time to Complete Action
20	SPRINGFIELD	SANDALWOOD	K090677	091677	PROV APP	10
08	BROOKINGS	LEE ENGLISH SUBD	K090677	091677	PROV APP	10
21	YACHATS	YACHATS EXTENSION	J090777	091677	PROV APP	10
03	CCSD #1	OAK KNOLL SUBD	J090777	091677	PROV APP	09
20	SPRINGFIELD	BLUE-ELLE PARK	K090877	091677	PROV APP	08
20	SPRINGFIELD	42ND & MAIN ST	K090877	091677	PROV APP	08
20	SPRINGFIELD	Q ST FROM 7TH TO 9TH	K090877	091677	PROV APP	08
26	PORTLAND	SW 47TH & PP S OF SW VERMONT	K090977	091677	PROV APP	07
02	CORVALLIS	TIMBERHILL SE 2ND ADDITION	K091277	091677	PROV APP	04
26	PORTLAND	SW 68TH AVE & BEAV HILLS HWY	K091377	091677	PROV APP	03
10	N ROSEBURG SD	WAREWOOD MT SUBD	K082477	091977	PROV APP	26
15	MEDFORD	E RIVERSIDE N BARNETT	J090177	091977	PROV APP	18
24	KEIZER SD	JUNIPER SUBD NO 2	J090277	091977	PROV APP	17
20	EUGENE	FOXWOOD REV.	K090777	091977	PROV APP	12
03	WEST LINN	ROSEMARIE PARK	J090877	091977	PROV APP	11
34	USA DURHAM	METZGER ACRE TRACTS BLOCK 17	J090877	091977	PROV APP	11
34	USA DURHAM	BEAVER CREEK VILLAGE	J091477	091977	PROV APP	05
02	CORVALLIS	MIDDLEBORO	K091677	091977	PROV APP	03
05	VERNONIA	LOGGER ESTATES	J082277	092077	PROV APP	29
14	HOOD RIVER	GLENN MEADOW ADD	J090877	092077	PROV APP	12
26	TROUTDALE	FLEUR DE LIS	J090877	092077	PROV APP	12
24	SALEM	BATTLECREEK ESTATES NO 4	J091277	092077	PROV APP	08
15	BCVSA	ORR DRIVE EXTENSION NO. 1	J091277	092077	PROV APP	08
24	SALEM	WOODSIDE SUBD	J091277	092077	PROV APP	08
17	HRBK FRUIT SD	LATERAL K 18 EXTENSION	J091277	092077	PROV APP	08
24	SALEM	SUNTREE	J091377	092077	PROV APP	07
34	USA ALOHA	IVY GLEN NO 3	J091377	092077	PROV APP	07
02	CORVALLIS	THE CANNERY	K091577	092077	PROV APP	05
34	USA ALOHA	FALLATIN PHASE 111	J091577	092077	PROV APP	05
06	BANDON	COAST GUARD HILL	K091677	092077	PROV APP	04
04	ASTORIA	PRAIRIE MARKET SEWER	K081577	092177	PROV APP	32
05	SCAPPOOSE	GREEN MEADOWS	J091477	092177	PROV APP	07
24	SALEM	JOHNISEE ESTATES EAST	J091677	092177	PROV APP	05
03	WEST LINN	NOVA WEST	J091977	092277	PROV APP	03
26	GRESHAM	SE VISTA AVE	J092277	092277	PROV APP	00
24	SALEM	SKYLINE VILLAGE PHASE 2	J091277	092377	PROV APP	11
17	HARB-FRUIT SD	LATERAL D-16 EXT MEADOW GLEN	J091977	092377	PROV APP	04
10	ROSEBURG	SUNRISE VALLEY SUBD	J091977	092377	PROV APP	04
17	HARB-FRUIT SD	TWISTED PINE	J091977	092377	PROV APP	04
20	EUGENE	CALVIN ST PAVING	K090177	092677	PROV APP	25
20	EUGENE	WILLOW TREE PLAT	K090177	092677	PROV APP	25
34	TUALATIN	COLUMBIA SUBD	J092277	092677	PROV APP	04
20	EUGENE	SHILOH STREET	K090177	092677	PROV APP	25
20	EUGENE	PANORAMA VIEW 3RD ADD	K090177	092677	PROV APP	25
20	EUGENE	IRONWOOD STREET	K090177	092677	PROV APP	25
20	EUGENE	CANDLELIGHT PK 3RD ADD	K090177	092677	PROV APP	25
33	MAUPIN	MAUPIN STP REVISIONS	V092277	092777	VERBAL CMTS	05
10	N ROSEBURG SD	NEWTON CREEK TERRACE SUBD	J092377	092777	PROV APP	04
15	CENTRAL POINT	SAMS VALLEY ELEM SCH ADD	V092077	092977	PROV APP	09
02	CORVALLIS	CORVALLIS CH NOS 67 & 71	V092277	092977	APPROVED	07
20	SPRINGFIELD	67TH & SOUTH A	K091977	093077	PROV APP	11
16	CULVER	CULVER EXTENSION	K091977	093077	PROV APP	11
20	SPRINGFIELD	SEVILLE	K092077	093077	PROV APP	10
21	SILETZ	TARA 1ST ADDITION	K092077	093077	PROV APP	10
34	USA ROCK CR	ROCK CR CONTR 52 ADD NO 1	V092777	093077	APPROVED	03
31	UNION	UNION CHANGE 7 AND 8	V092777	093077	APPROVED	03
30	ECHO	WORK ORDER NO 1	V092977	093077	APPROVED	01
15	BUTTE FALLS	CHANGE ORDER NO 9	V090277	093077	APPROVED	28
21	DEPOE BAY S.D.	CHANGE ORDER NO 5	V092977	093077	APPROVED	01
30	UKIAH	CHANGE NO 1	V091577	093077	APPROVED	15
10	RIDDLE	CHANGES NO 9,10 & 11	V092077	093077	APPROVED	10
26	PORT PORTLAND	CHANGE NO 2	V092077	093077	APPROVED	10

DEPARTMENT OF ENVIRONMENTAL QUALITY
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MONTHLY ACTIVITY REPORT

Water Quality (Reporting Unit) — September 1977 (Month and Year)

PLAN ACTIONS COMPLETED (138)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
INDUSTRIAL WASTE SOURCES (12)			
Douglas	Champion Building Prod. Webco, Log Pond Overflow Structure	9-1-77	Approved
Polk	Norman Weinsz Slaughter Monmouth, Slaughter House Waste Disposal	9-1-77	Approved
Douglas	International Paper - Gardiner Log Conditioner Recycle	9-1-77	Approved
Douglas	United Parcel Service Roseburg, Oil/Water Separator	9-8-77	Approved
Washington	Tektronix, Inc. - Beaverton Two ISCO Samplers	9-14-77	Approved
Washington	Tektronix, Inc. - Beaverton Relocation of Fab/Lab.	9-14-77	Approved
Washington	Tektronix, Inc. - Beaverton ETCH Circuit, Automated Plating System	9-19-77	Approved
Marion	Oregon State Penitentiary Salem, Animal Waste Collections & Separator	9-23-77	Approved
Clatsop	Jo-Ray's Arabians - Astoria Animal Waste Disposal	9-28-77	Approved
Linn	Teledyne Wah Chang - Albany SiHi Vacuum Pumps	9-30-77	Removed From Review
Curry	Champion Building Procucts Gold Beach, Glue Waste Recycle Modification.	9-30-77	Approved
Tillamook	Tillamook County Creamery Tillamook, Secondary Digester	9-23-77	Approved

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Water Quality (Reporting Unit) — September 1977 (Month and Year)

SUMMARY OF WATER PERMIT ACTIONS

	Permit Actions Received				Permit Actions Completed				Permit Actions Pending		Sources Under Permits		Sources Reqr'g Permits	
	Month		Fis.Yr.		Month		Fis.Yr.							
	*	**	*	**	*	**	*	**	*	**	*	**	*	**
Municipal														
New	0	1	0	1	0	0	0	2	3	2				
Existing	0	0	0	2	0	0	0	3	0	2				
Renewals	3	0	3	0	1/ 4	0	13	3	74	2				
Modifications	2	0	7	0	0	0	2	0	11	0				
Total	5	1	10	3	4	0	15	8	88	6	299	72	302	76
Industrial														
New	0	1	3	4	1	0	3	5	3	4				
Existing	0	0	0	2	0	4	0	4	1	1				
Renewals	5	1	10	4	1	1	18	4	46	5				
Modifications	6	1	7	1	0	1	5	1	14	0				
Total	11	3	20	1	2	6	26	14	64	10	434	97	433	102
Agricultural (Hatcheries, Dairies, etc.)														
New	0	1	0	1	0	0	1	0	0	1				
Existing	0	0	0	0	0	0	0	0	0	0				
Renewals	0	0	0	0	0	0	0	0	0	0				
Modifications	0	0	0	0	0	0	0	0	0	0				
Total	0	1	0	1	0	0	1	0	0	1	66	9	66	10
GRAND TOTALS	16	5	30	15	6	6	42	22	152	17	799	178	806	188

* NPDES Permits
** State Permits
1/ Includes one denial

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Water Quality (Reporting Unit) — September 1977 (Month and Year)

PERMIT ACTIONS COMPLETED - 12

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Jackson	City of Medford Sewage Disposal	9-14-77	NPDES Permit Renewed
Clackamas	Sunset Bay State Park Sewage Disposal	9-14-77	NPDES Permit Renewed
Clackamas	Government Camp Sanitary Dist. Sewage Disposal	9-14-77	NPDES Permit Renewed
Lincoln	New England Fish Co. Newport Plant	9-14-77	NPDES Permit Renewed
Clatsop	Pacific Fabricators Oil Platforms	9-14-77	NPDES Permit Issued
Umatilla	Boise Cascade Corp. (A.E. Staley Mfg. -Stanfield)	9-22-77	State Permit Transferred
Douglas	Reedsport Mill Co., Inc. Log Handling	9-27-77	State Permit Issued
Douglas	International Paper Log Handling	9-27-77	State Permit Issued
Coos	Georgia Pacific Log Handling	9-27-77	State Permit Issued
Coos	Weyerhauser N. Bend, Log Handling	9-27-77	State Permit Issued
Clackamas	Barton Sand & Gravel Grovel Operation	9-29-77	State Permit Renewed
Tillamook	City of Wheeler Sewage Disposal	9-30-77	Permit Renewal Denied

DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL PROGRAMS

MONTHLY ACTIVITY REPORT

Air Quality (Reporting Unit) — September 1977 (Month and Year)

PLAN ACTIONS COMPLETED

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Direct Stationary Sources (15)			
Lane (NC870)	Willamette Industries. Duct veneer dryer to boiler.	9/21/77	Approved.
Multnomah (NC906)	Premium Kiln Specialties, Inc. Hog fuel stoker.	9/23/77	Project temporarily canceled.
Washington (NC941)	Forest Fiber Products. Replacement trimmer and sander.	8/30/77	Approved.
Linn (NC944)	Willamette Industries. New veneer dryer.	8/22/77	Approved.
Clackamas (NC950)	Publishers Paper - Oregon City. Chip bin cyclone.	9/19/77	Approved.
Douglas (NC963)	Empire Pacific Industries, Inc. New door mfg. plant.	8/30/77	Approved.
Klamath (NC967)	Modoc Lumber Company. Adding 2.5 MW generator on existing boiler.	9/10/77	Approved.
Marion (NC971)	Willamette Door and Manufacturing. Expand mfg. facility.	9/12/77	Approved.
Multnomah (NC972)	Shell Oil Co. Floating internal cover on existing storage tanks.	9/19/77	Approved.
Jackson (NC975)	Down River Forest Products. Baghouse on cyclone #13.	9/7/77	Approved.
Lane (NC980)	Trus Joist Corporation. New micro-laminating plant.	9/15/77	Approved (tax credit only).
Lane (NC981)	Weyerhaeuser Company. Pallman lines' cyclone control.	9/19/77	Approved (tax credit only).
Lane (NC982)	Weyerhaeuser Company. PB-1 cyclone control.	9/19/77	Approved (tax credit only).

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Air Quality (Reporting Unit) — September 1977 (Month and Year)

PLAN ACTIONS COMPLETED

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Direct Stationary Sources (continued)			
Lane (NC983)	Weyerhaeuser Company. Screw conveyor.	9/19/77	Approved (tax credit only).
Clatsop (NC988)	Crown Zellerbach Company. Noncondensable gas incinerator change.	9/1/77	Approved.

DEPARTMENT OF ENVIRONMENTAL QUALITY
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MONTHLY ACTIVITY REPORT

Air Quality (Reporting Unit) — September 1977 (Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources under Permits	Sources Reqr'g Permits
	Month	Fis.Yr.	Month	Fis.Yr.			
Direct Sources							
New	1	18	8	11	7		
Existing	12	49	10	15	34		
Renewals	4	41	7	16	25		
Modifications	201*	277*	207*	265*	12		
Total	218	385	232	307	78	1,739	1,780
Indirect Sources							
New	2	8	3	6	15		
Existing							
Renewals							
Modifications	0	1	0	1	0		
Total	2	9	3	7	15	59	
GRAND TOTALS	220	394	235	314	93		

*Includes 197 permits converted to Minimal Source Permits.

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MONTHLY ACTIVITY REPORT

Air Quality (Reporting Unit) — September 1977 (Month and Year)

PERMIT ACTIONS COMPLETED (235)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Direct Stationary Sources (232)			
	197 permits converted to Minimal Source Permits		Permits Issued
Benton	Mid-Willamette Lumber 02-7080, Renewal	8/25/77	Permit Issued
Benton	Paul Earber Hardwoods 02-7085, Renewal	8/25/77	Permit Issued
Benton	A & M Hardwoods 02-7090, Existing	8/25/77	Permit Issued
Clackamas	Joe Bernert Towing 03-2657, Modification	8/30/77	Permit Issued
Clatsop	Warrerton Lumber Company 04-0041, Modification	9/13/77	Permit Issued
Clatsop	White Cap Concrete 04-0051, Existing	8/30/77	Permit Issued
Clatsop	Pacific Fabricators 04-0052, New	9/13/77	Permit Issued
Deschutes	Brooks Scanlon, Inc. 09-0001, Renewal	9/13/77	Permit Issued
Douglas	Tri-City Ready Mix 10-0117, Modification	8/30/77	Permit Issued
Josephine	Morris Lumber Products 17-0010, Modification	9/13/77	Permit Issued
Josephine	Gilbert Rock and Redimix 17-0057, New	9/13/77	Permit Issued
Lake	C. S. Andrus 19-0017, Existing	8/30/77	Permit Issued
Lake	American Fossil Company 19-0018, Existing	8/25/77	Permit Issued

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MONTHLY ACTIVITY REPORT

Air Quality (Reporting Unit) — September 1977 (Month and Year)

PERMIT ACTIONS COMPLETED (235 - cont.)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Direct Stationary Sources (continued)			
Linn	Lemons Millwork 22-0257, Renewal	8/30/77	Permit Issued
Linn	Willamette Industries 22-1025, Existing	8/25/77	Permit Issued
Linn	Cedar Lumber Company 22-2523, Renewal	8/22/77	Permit Issued
Linn	C & C Cedar Products 22-5192, Renewal	8/30/77	Permit Issued
Marion	T. A. Lively 24-0724, Renewal	8/30/77	Permit Issued
Multnomah	R.N.B. Associates 26-1090, Modification	9/13/77	Permit Issued
Multnomah	John Klondilis 26-1747, Modification	9/13/77	Permit Issued
Multnomah	Willamette-Western Corporation 26-1895, Modification	8/25/77	Permit Issued
Multnomah	Willamette-Western Corporation 26-2965, Modification	8/25/77	Permit Issued
Umatilla	Eastern Oregon Hospital and Training Center 30-0060, New	8/25/77	Permit Issued
Umatilla	J. R. Simplot 30-0078, New	9/19/77	Permit Issued
Washington	Coast Vending Machine Company 34-2645, New	8/30/77	Permit Issued
Portable	Custom Rock and Paving 37-0012, Modification	9/13/77	Permit Issued
Portable	Oceanlake Sand and Gravel 37-0155, Existing	8/25/77	Permit Issued

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Air Quality (Reporting Unit) — September 1977 (Month and Year)

PERMIT ACTIONS COMPLETED

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Direct Stationary Sources (continued)			
Portable	C. H. Stinson 37-0166, New	9/13/77	Permit Issued
Portable	R. J. Taggart Construction 37-0167, Existing	8/30/77	Permit Issued
Portable	Babler Brothers 37-0168, Modification	9/13/77	Permit Issued
Portable	Stadeli Pump and Construction 37-0169, Existing	8/25/77	Permit Issued
Portable	Stadeli Pump and Construction 37-0170, Existing	8/25/77	Permit Issued
Portable	Mid-Oregon Crushing 37-0174, New	9/13/77	Permit Issued
Portable	L. W. Vail 37-0175, Existing	8/25/77	Permit Issued
Portable	Q-Bit Rock Crushing 37-0177, New	8/25/77	Permit Issued
Indirect Sources (3)			
Marion	State Motor Pool and Park and Ride Lot, 455 space Motor Pool, 375 space Park and Ride Lot. File No. 24-7013	9/30/77	Final permit issued.
Multnomah	Grand Avenue Street widening. File No. 26-7014	9/30/77	Final permit issued.
Washington	Hillsboro Payless Shopping Center, 874 spaces in reciprocal easement agreement. File No. 34-7016	9/30/77	Final permit issued.

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MONTHLY ACTIVITY REPORT

Solid Waste Division (Reporting Unit) — September 1977 (Month and Year)

PLAN ACTIONS COMPLETED (8)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Coos	Joe Ney Sanitary Landfill Existing site Operational plan	6/7/77*	Conditional approval
Linn	Roche Road New site Operational plan	6/15/77*	Conditional approval
Yamhill	Willamina Lumber Existing site Operational plan	8/25/77*	Conditional approval
Union	Union County Solid Waste Processing Site New site Partial Construction plans	9/9/77	Conditional approval
Sherman	Sherman County Landfill New site Operational plan amendment	9/12/77	Plan amended
Washington	Augus G. MacPhee Experimental Processing Facility Operational plan	9/12/77	Conditional approval
Yamhill	Publishers Paper - Newberg Existing Experimental Processing Facility Operational plan amendment	9/20/77	Plan amended
Columbia	Longview Fiber Company New site Operational plan	9/21/77	Conditional approval

* Not previously reported.

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MONTHLY ACTIVITY REPORT

Solid Waste Division (Reporting Unit) — September 1977 (Month and Year)

SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending		Sites Under Permits	Sites Reqr'g Permits
	Month	Fis.Yr.	Month	Fis.Yr.				
General Refuse								
New	2	4	1	3	4			
Existing	2	3	5	5	19	(*)		
Renewals	1	1	1	3	1			
Modifications	13	15	2	5	13			
Total	18	23	9	16	37		187	191
Demolition								
New					1	(*)		
Existing				1				
Renewals					1			
Modifications								
Total	0	0	0	1	2		19	19
Industrial								
New		2		4				
Existing				2	5	(*3)		
Renewals	2	3		3	5			
Modifications			1	1				
Total	2	5	1	10	10		93	95
Sludge Disposal								
New								
Existing								
Renewals		1	1	1	2			
Modifications								
Total	0	1	1	1	2		5	5
Hazardous Waste								
New								
Authorizations	19	39	14	59	4			
Renewals								
Modifications								
Total	19	39	14	59	4		1	1
GRAND TOTALS	39	68	25	87	55		305	311

*Sites operating under temporary permits until regular permits are issued - total 23.

DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL PROGRAMS

MONTHLY ACTIVITY REPORT

Solid Waste Division (Reporting Unit) — September 1977 (Month and Year)

PERMIT ACTIONS COMPLETED (25)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
General Refuse (Garbage) Facilities (9)			
Umatilla	Hermiston Landfill Existing facility	9/6/77	Permit issued.
Washington	Angus MacPhee New facility	9/12/77	Letter Authorization issued.
Harney	Crane Disposal Site Existing facility	9/13/77	Permit Issued.
Harney	Lawen Disposal Site Existing facility	9/13/77	Permit issued.
Hood River	Hood River Landfill Existing facility	9/14/77	Permit issued (renewal).
Crook	Prineville Reservoir Resort Existing facility	9/26/77	Permit amended.
Wallowa	Troy Disposal Site Existing facility	9/26/77	Permit issued.
Wallowa	Imnaha Disposal Site Existing facility	9/26/77	Permit issued.
Lane	Cottage Grove Existing facility	9/27/77	Permit amended.
Demolition Waste Facilities - None			
Sludge Disposal Facilities (1)			
Klamath	Six Bit Prairie Existing facility	9/29/77	Permit issued (renewal).

DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL PROGRAMS

MONTHLY ACTIVITY REPORT

Solid Waste Division (Reporting Unit) — September 1977 (Month and Year)

PERMIT ACTIONS COMPLETED (continued)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Industrial Waste Facilities (1)			
Yamhill	Publishers Paper, Newberg Existing facility	9/20/77	Letter Authorization amended.
Hazardous Waste Facilities (14)			
Gilliam	Chem-Nuclear Systems Existing facility	9/1/77	Eight (8) verbal disposal authorizations confirmed in writing. (small quantities of chromic acid and pesticides).
"	" "	9/6/77	Disposal authorization approved. (PCB capacitors).
"	" "	9/8/77	Disposal authorization approved (phenolics).
"	" "	9/19/77	Disposal authorization denied (DDT).
"	" "	9/21/77	Two (2) disposal authorizations approved. (Paint Waste, PCB contaminated soil).
"	" "	9/26/77	Two (2) disposal authorizations approved. (Solvent and monoethanolamine).

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. C, October 21, 1977, EQC Meeting

Tax Credit Applications

Attached are review reports on 10 requests for tax credit action. These reports and the recommendations of the Director are summarized on the attached table.

Director's Recommendation

It is recommended that the Commission act on the tax credit requests as follows:

1. Issue Pollution Control Facility Certificates for 9 applications: T-605R, T-702R, T-703R, T-706R, T-913, T-916, T-918, T-921, and T-923.

2. Revoke Pollution Control Facility Certificate No. 612, issued to Tax Credit Application T-684, as the facility has changed ownership (see review report and letter from company, attached).

Michael Downs
for
WILLIAM H. YOUNG

M.J.Downs:cs
229-6485
10/12/77
Attachments
1. Tax Credit Summary
2. Tax Credit Application Table
3. 10 Review Reports

Attachment 1

TAX CREDIT SUMMARY

Proposed September 1977 Totals:

Air Quality	$ 150,203.00
Water Quality	2,591,922.73
Solid Waste	-0-
	$2,742,136.73

Calendar Year Totals to Date:
(Excluding October 1977 Totals)

Air Quality	$5,995,833.16
Water Quality	1,389,737.02
Solid Waste	446,661.00
	$7,832,231.18

Total Certificates Awarded (Monetary Values) Since Beginning of Program (Excluding October 1977 Totals)

Air Quality	$103,694,691.95
Water Quality	72,987,092.07
Solid Waste	13,609,675.18
	$190,291,459.20

TAX CREDIT APPLICATIONS SUMMARY

Applicant/ Plant Location	Appl. No.	Facility	Claimed Cost	% Allocable to Pollution Control	Director's Recommendation
Glacier Sand & Gravel Scappoose	T-684 (WQ)	Gravel washing system	$298,942.00	[illegible]	Revoke Cert. No. 612; change in ownership
Champion Bldg. Prod. Roseburg	T-605R (AQ)	Modifications to existing wigwam waste burner	18,271.00	80% or more	Issue Certificate
Tektronix, Inc. Beaverton	T-702R (AQ)	Eight dust collectors	66,628.00	80% or more	Issue Certificate
Tektronix, Inc. Beaverton	T-703R (WQ)	Caustic waste disposal system	19,687.00	80% or more	Issue Certificate
Tektronix, Inc. Beaverton	T-706R (WQ)	Chromic waste disposal system	9,116.00	80% or more	Issue Certificate
Tallman Orchards, Inc. Hood River	T-913 (AQ)	Orchard Fans	15,890.00	80% or more	Issue Certificate
Champion Bldg. Prod. Lebanon	T-916 (AQ)	Baghouse control system	49,414.00	80% or more	Issue Certificate
Willamette Industries, Inc. Millersburg	T-918 (WQ)	2 Additional 50 Hp aerators	26,527.08	80% or more	Issue Certificate
Tektronix, Inc. Beaverton	T-921 (WQ)	Electron capture device	2,705.66	80% or more	Issue Certificate
Weyerhaeuser Co. Springfield	T-923 (WQ)	Primary wastewater system improvements	2,533,898.00	80% or more	Issue Certificate

Attachment 2

Appl T-684

Cert 612

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

REVOCATION OF POLLUTION CONTROL FACILITY CERTIFICATE

---

1. Certificate Issued to:

Glacier Sand and Gravel
Santosh Plant
300 Lakeside Drive
Oakland, California 94604

The Pollution Control Facility Certificate was issued for a water pollution control facility.

2. Discussion

On September 26, 1975, the Environmental Quality Commission issued Pollution Control Facility Certificate No. 612 to Glacier Sand and Gravel for their Santosh Plant in Scappoose, Oregon. The Certificate was in the amount of $298,942, and was issued for a gravel washing system.

On September 7, 1977, the Company notified the Department that the facilities certified in Pollution Control Facility Certificate No. 612 had been sold to Cascade Aggregates, Inc. (see authorizing letter, attached).

3. Summation

Pursuant to ORS 307.420(4), certificate no. 612 should be revoked because of change of ownership of the certified pollution control facilities.

4. Director's Recommendation

Revoke Certificate No. 612 issued to Glacier Sand and Gravel in the amount of $298,942.

Attachments (2)

CASplettstaszer
229-6484
10/12/77

RJN

GLACIER SAND & GRAVEL COMPANY

300 LAKESIDE DRIVE • OAKLAND, CALIFORNIA 94604

September 7, 1977

RECEIVED
SEP 9 1977
Water Quality Division
Dept. of Environmental Quality

State of Oregon
Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

Re: Certificate #612
Issued 9/26/75
Santosh Plant, Scappoose, Oregon
Columbia County

Gentlemen:

As prescribed by law we are advising the recent sale of our Santosh plant and equipment, including the gravel washing system covered by Pollution Control Facility Certificate #612, to:

Cascade Aggregates, Inc.
c/o Conway Investment Corporation
Foot of S. W. Abernathy Street
Portland, Oregon 97201

We understand you will revoke certificate #612 and that Cascade Aggregates may apply for a new certificate for the remaining term of the property tax exemption available.

Yours very truly,

GLACIER SAND & GRAVEL COMPANY

A. E. Steffe
Director, Corporate Taxes

DDE/jd

cc: Cascade Aggregates, Inc.
Santosh TF (2)

Certificate No. 612

Date of Issue 09-26-75

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Application No. T-684

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: As: Lessee	Location of Pollution Control Facility:
Glacier Sand & Gravel Company Pacific Building Materials Santosh Plant - Dike Road 3510 S. W. Bond Avenue Portland, Oregon 97201	US Route 30 and Scappoose Bay Scappoose, Oregon Columbia County

Description of Pollution Control Facility:

Steel sump pump; Denver pump with rubber discharge hose; liquid cyclone separators; booster pump; dewatering screw; conveyor and conveyor structure; turbine pump; relocation of Denver pump;and ancillary piping, pipe fittings & valves for collection and recycling for reuse of all waste water (gravel washings).

Date Pollution Control Facility was completed and placed in operation: 04-10-73; 04-10-73

Actual Cost of Pollution Control Facility: $ 298,942.00

Percent of actual cost properly allocable to pollution control:

Eighty percent (80%) or more

In accordance with the provisions of ORS 449.605 et seq., it is hereby certified that the facility described herein and in the application referenced above is a "pollution control facility" within the definition of ORS 449.605 and that the facility was erected, constructed, or installed on or after January 1, 1967, and on or before December 31, 1978, and is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air or water pollution, and that the facility is necessary to satisfy the intents and purposes of ORS Chapter 449 and regulations thereunder.

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

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing water pollution.

2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.

3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

Signed _____

Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission

on the 26th day of September 1975.

4. Summation

A. Facility was constructed after receiving approval to construct issued pursuant to ORS 468.175.

B. Facility was constructed on or after January 1, 1967 as required by ORS 468.165 (1) (a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing water pollution.

D. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that Chapter.

E. 80% or more of the facility cost allocable to pollution control is considered appropriate because it operates at a net loss despite the value of recovered fiber. Other less expensive alternatives were tried, but were unsuccessful.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-923, such certificate to bear the actual cost of $2,533,898.00, with 80% or more of the cost allocable to pollution control.

Kent Ashbaker:elh
229-5325
10-12-77

Appl. No. T923

Date 9-23-77

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Weyerhaeuser Company
Willamette Region - Paperboard Manufacturing
Tacoma, WA. 98401

The applicant owns and operates a large wood products complex in Springfield, Oregon, in Lane County.

The application was received September 7, 1977.

The application is made for Tax Credit for a waste water treatment facility which resolves an air pollution problem.

2. Description of Claimed Facility

The facility described in this application consists of the following major components:

1. Papermill waste water pump station
2. Pulp mill waste water pump station and spill pond
3. A flotator system for removing and recycling fiber in paper mill effluent
4. A 130 foot diameter clarifier for settling pulp mill effluent
5. A filter building containing sludge pumps and 8X10 ft. belt filter
6. A 1975 Ford L-900 sludge truck
7. An outfall metering station building containing effluent monitoring and sampling equipment

Notice of Intent to Construct was approved 4-16-74. Preliminary Certification for Tax Credit was not required.

Construction was initiated on the Claimed Facility August, 1974. The facility was completed and placed into operation July/August, 1975.

Facility cost: $2,533,898.00 (Accountant's certification was provided.)

3. Evaluation of Application

Prior to construction and operation of the claimed facility, pulp and paper mill wastes were settled in two settling ponds. Anaerobic digestion of the solids in the settling ponds on occasion created odors. The ponds also caused local fog problems. With the claimed facility, the ponds and these associated problems have been eliminated. Elimination of the settling ponds was required by the Department through air permit #20-8850 issued August 6, 1973.

D. The facility was substantially required by the Department and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.

E. The application claims the equipment is used 100% for pollution control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of $2,705.66 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-921.

William D. Lesher:em
(503) 229-5318
September 27, 1977

Appl T-921

Date September 27, 1977

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Tektronix, Inc.
P. O. Box 500
Beaverton, OR 97005

The applicant owns and operates an industrial complex, manufacturing electronic equipment, oscilloscopes, information display and television products. The complex is located in the Beaverton area.

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

2. Description of Claimed Facility

The claimed facility is a Hewlett Packard, Model No. 188033, Serial C0570, Electron Capture Device, placed on an existing gas chromatograph which is used to monitor treated waste water discharge.

Request for Preliminary Certification for Tax Credit was made May 11, 1977 and approved May 18, 1977. The claimed facility was installed August 11, 1977, and placed into operation August 11, 1977.

Facility Cost: $2,705.66 (Invoice for the equipment was provided).

3. Evaluation of the Application

The applicant states that, in order to obtain the accuracy required by the Department, this additional equipment must be used. Limit for chlorinated hydrocarbons is 0.02 mg/l. Present equipment would get results only down to 1.0 mg/l.

The electron capture device will increase the sensitivity one thousand times improving repeatability of results and the ability to monitor in the required range.

4. Summation

A. Facility was installed after receiving approval and preliminary certification issued pursuant to ORS 468.175.

B. Facility was constructed after January 1, 1967 as required by ORS 468.165(1)(a).

C. Equipment is designated for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing water pollution.

D. The facility was required by the Department and is necessary to satisfy the intents and purposes of ORS Chapter 468, and the rules adopted under that chapter.

E. No economic return is derived from investment in the facility.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of $26,527.08 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-918.

William D. Lesher:em
(503)229-5318
September 27, 1977

Appl T-918

Date September 27, 1977

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Willamette Industries, Inc.
Western Kraft Paper Group
Albany Mill Division
3800 First National Bank Tower
Portland, OR 97201

The applicant owns and operates a pulp and paper mill that manufactures liner board, bag paper and corrugating medium, near Millersburg in Linn County.

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

2. Description of Claimed Facility

The facility claimed in the application consists of the installation of two additional 50 HP aerators - Aqua Jet, Model 3905011, in the aeration basin, including electrical works.

Request for Preliminary Certification for Tax Credit was made November 30, 1976 and approved December 3, 1976.

Construction was initiated on the claimed facility February 16, 1977, completed and placed into operation on April 18, 1977.

Facility Cost: $26,527.08 (Accountant's Certification was provided).

3. Evaluation of The Application

There were eleven aerators installed prior to the two claimed. The two additional reduce the BOD discharge to a level that is required by the NPDES Permit 1943-J for the mill. The aerators are 90% efficient in BOD removal. Each 50 HP unit removes approximately 1500 pounds BOD per day.

4. Summation

A. The claimed facility was constructed after receiving approval to construct and preliminary certification issued pursuant to ORS 468.175.

B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165 (1)(a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing water pollution.

E. There is little, if any, economic return on this baghouse. Therefore, 100% of the cost of the system is allocable to air pollution control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of $49,414 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-916.

F. A. Skirvin:sw
(503) 229-6414
9-20-77

Appl T-916

Date 9-20-77

State of Oregon
Department of Environmental Quality

Tax Relief Application Review Report

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1. Applicant

Champion International Corporation
Champion Building Products Division
P. O. Box 10228
Eugene, Oregon 97401

The applicant owns and operates a hardboard plant at Lebanon, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a baghouse control system for Cyclones 14, 15, 16 and 21, located on the hardboard plant.

Notice of Intent to Construct and Preliminary Certification for Tax Credit not required.

Construction was initiated on the claimed facility on December 1, 1971, completed on August 1, 1972, and the facility was placed into operation on August 1, 1972.

Facility Cost: $49,414 (Accountant's Certification was provided).

3. Evaluation of Application

The applicant has installed a Carter Day baghouse (Model 144 RJ-96) to control the emissions from Cyclones 14, 15, 16 and 21. These cyclones are material transfer cyclones on the hardboard plant. This system is the best type of control system for the type of sawdust handled by these cyclones. These cyclones and the baghouse comply with all Department regulations.

4. Summation

A. Facility was not required to have prior approval to construct or preliminary certification.

B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing air pollution.

D. The facility was required by the Mid-Willamette Valley Air Pollution Authority and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.

B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing air pollution.

D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.

E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fans, depreciation over ten years and no salvage value plus the average interest at 9% on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of $15,890 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-913.

H. M. Patterson:sw
(503) 229-5364
9-15-77

Appl T-913

Date 9-15-77

State of Oregon
Department of Environmental Quality

Tax Relief Application Review Report

1. Applicant

Tallman Orchards, Inc.
3322 Thomsen Road
Hood River, Oregon 97031

The applicant owns and operates a fruit orchard at Hood River, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is two orchard fans to control frost damage to fruit trees. The facility cost consists of:

Two Tropic Breeze wind machines Model GP-300-86HP, Part Nos. 17019 and 17020	$15,890

Request for Preliminary Certification for Tax Credit was made December 21, 1976, and approved December 22, 1976.

Construction was initiated on the claimed facility January 17, 1977, completed February 24, 1977, and the facility was placed into operation February 24, 1977.

Facility Cost: $15,890. (Accountant's certification was provided.)

3. Evaluation of Application

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters can cause a significant smoke and soot air pollution problem in the City of Hood River. The orchard farmers desire a secure, long range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance caused by the use of heaters. An orchard fan, which serves ten acres, reduces the number of heaters required for frost protection from 340 heaters to 100 perimeter heaters, a 70% reduction. The significant function of the fan is to provide a reduction in the use of heaters, which reduces emissions to the atmosphere.

An orchard fan blows warmer air from above an inversion level down into the trees. They have proven effective for frost control in the Pine Grove area of Hood River where frost control is needed on an average of thirty hours per year.

4. Summation

A. Facility was constructed after receiving approval to construct and preliminary certification issued pursuant to ORS 468.175.

E. Applicant claims 80% or more of facility costs are allocable to pollution control and that there is no return on investment, increased production, improved product quality, fuel savings or byproduct resulting from the installation of this facility.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T706, such certificate to bear the actual cost of $9,116. with 80% or more of the cost applicable to Pollution Constrol.

William D. Lesher:eh
(503) 229-5318
October 10, 1977

Appl. No. T706R

Date 10-10-77

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Tektronix, Inc.
P. O. Box 500
Beaverton, OR. 97077

The applicant owns and operates an industrial complex, manufacturing electronic equipment, oscilloscopes, information display and television products in the Beaverton area.

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

2. Description of Claimed Facility

The claimed facility is a chromic waste disposal system consisting of a Wiel pump for transfer of chromic waste from building 16 Etch Line Facility through a piping network to waste treatment plant for reduction, precipitation and removal from waste water.

Notice of Intent to Construct and Preliminary Certification for Tax Credit was not required.

Construction was initiated on the claimed facility in August, 1973, completed in May, 1974, and placed into operation in May, 1974.

Facility Cost $9,116. (Accountant's certification was provided.)

3. Evaluation of Application

Removal of chromic wastes is necessary to protect biological systems in sewage treatment plants and natural waters. Although the claimed facility is part of the treatment process, it is important to collect these wastes for treatment.

Staff verified that claimed facilities were operating as designed.

4. Summation

A. Facility was not required to have prior approval to construct or preliminary certification.

B. Facility was constructed on or after January 1, 1967, as required by ORS Chapter 468.165 (1) (a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing water pollution.

D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T703, such certificate to bear the actual cost of $19,687. with 80% or more of the cost applicable to Pollution Control.

William D. Lesher:elh
(503) 229-5318
October 10, 1977

Appl. No. T703R

Date 10-10-77

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Tektronix, Inc.
P. O. Box 500
Beaverton, OR. 97077

The applicant owns and operates an industrial complex, manufacturing electronic equipment, oscilloscopes, information display and television products, in the Beaverton area.

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

2. Description of Claimed Facility

The claimed facility (caustic waste disposal system) consists of 500 feet of pipe, a Peerless pump (type O), and a 5000 gallon holding tank at the treatment plant. Caustic waste is generated at the Etch Line, Building 16.

Notice of Intent to Construct and Preliminary Certification for Tax Credit was not required.

Construction was initiated on the claimed facility in August, 1973, completed in May, 1974, and placed into operation in May, 1974.

Facility Cost $19,687. (Accountant's certification was provided.)

3. Evaluation

Prior to installation of the claimed facility, caustic waste was disposed of with the chromic acid wastes, with no control on final pH of discharge. It is now used to neutralize other wastes as well as being disposed of. The facility promotes control of the treatment process. There are no benefits from the claimed facility other than pollution control. Staff has verified that facility is operating as designed.

4. Summation

A. Facility was not required to have prior approval to construct or preliminary certification.

B. Facility was constructed on or after January 1, 1967, as required by ORS Chapter 468.165 (1) (a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing water pollution.

D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adoped under that chapter.

E. Applicant claims 80% or more of facility costs are allocable to pollution control and that there is no return on investment, increased production, improved product quality, fuel savings or byproduct resulting from the installation of this facility.

The material collected by the system is not reused. Therefore, it is concluded that the facility was installed solely for air pollution control.

4. Summation

A. Facility was not required to have prior approval to construct or preliminary certification.

B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing air pollution.

D. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.

E. The Department of Environmental Quality has concluded that 100% of the cost of this facility is allocable to air pollution control since the facility was installed solely for air pollution control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of $66,638.00 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-702.

F. A. Skirvin:sw
(503) 229-6414
October 5, 1977

Appl T-702R

Date 10-5-77

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Tektronix, Inc.
P. O. Box 500
Beaverton, Oregon 97077

The applicant owns and operates a precision scientific electronic measuring equipment manufacturing facility at Beaverton, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a system of eight dust collectors installed to collect dust from the Building No. 16 grinding room. The following are the American Air Filter model numbers and individual serial numbers and the itemized cost of the system:

	Model No. or Item	Serial No.	Cost
a.	16 B3-13K	A730079	$ 4,542
b.	17 B3-13K	A730080	4,542
c.	19 D12	D730481	3,031
d.	20 D16	D730482	3,031
e.	22 D14	D702289	4,395
f.	23 B3-13K	A740018	4,368
g.	29 D20	D740028	4,641
h.	30 B3-13K	A740010	4,541
i.	8 Motors		2,158
j.	Instrumentation		237
k.	Miscellaneous Materials		438
l.	Duct Work		3,380
m.	Installation		27,334

Notice of Intent to Construct and Preliminary Certification for Tax Credit not required.

Construction was initiated on the claimed facility in August 1973, completed in August 1974, and the facility was placed into operation in September 1974.

Facility Cost: $66,638.00 (Accountant's Certification was provided).

3. Evaluation of Application

The claimed facility has been inspected by the Department and is operating satisfactorily.

D. The facility was required by the Department and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.

E. The entire cost of the added items is allocable to pollution control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of $18,271 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-605R.

F. A. Skirvin:sw
(503) 229-6414
September 15, 1977

Appl T-605R

Date 9-15-77

State of Oregon
Department of Environmental Quality

Tax Relief Application Review Report

1. Applicant

Champion International Corporation
P. O. Box 10228
Eugene, Oregon 97401

The applicant owns and operates a veneer manufacturing plant in Roseburg; Oregon.

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

2. Description of Claimed Facility

The facility described in this application is an existing wigwam burner to which has been added auxiliary burners, dampers and combustion air controls.

Notice of Intent to Construct and Preliminary Certification for Tax Credit are not required.

Construction was initiated on the claimed facility in January 1971, completed February 1971, and the facility was placed in operation in March 1971.

Facility Cost: $18,271 (Accountant's Certification was submitted).

3. Evaluation of Application

Department regulations required that all wigwam waste burners be modified to improve combustion and reduce emissions. The applicant has installed auxiliary gas burners, temperature controlled damper, and controlled overfire and underfire air systems.

These modifications enable this burner to comply with all applicable Department regulations.

4. Summation

A. Facility was not required to have prior approval to construct or preliminary certification.

B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing air pollution.

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission

FROM: Richard Reiter, Southwest Region

SUBJECT: Agenda Item No. D, October 21, 1977, EQC Meeting

Report of Southwest Region Manager on Significant On-going Activities in the Southwest Region (Coos-Curry-Douglas)

Veneer Dryer Emission Control Program

With the exception of two companies (Georgia-Pacific, Coquille and Roseburg Lumber, Coquille) we've been able to complete negotiations on installation of veneer dryer emission control systems for those plants located in Coos-Curry and Douglas counties. Negotiations are on-going with Georgia-Pacific and Roseburg Lumber to develop compliance schedule completion dates as close to January 1979 as is possible. The possibility of these two firms applying for a variance has entered the negotiation discussions. For the most part, those schedules approved to date contemplate installation of some form of wet scrubber to bring their dryers into compliance.

Subsurface and Alternative Sewage Disposal System Program

Curry and Douglas counties are contract counties. Our primary involvement is conducting site re-evaluations upon request, evaluating alternative sewage disposal system applications, conducting variance hearings, evaluating experimental facility applications and following up on enforcement actions. Except for holding tanks for small businesses, alternative sewage disposal systems are not being utilized in Curry or Douglas County. Except for Douglas County, little attention is being given to experimental facilities program. In Douglas County, however, we have authorized several mounds, several recirculating sand filters, several trench sand filters in fractured bedrock and one non-overflow domestic stabilization pond.

Coos County is a direct service county. We currently have two Senior Sanitarian positions to implement the program. October 1, 1977 we will be adding a Sanitarian position to the Coos Bay Branch Office. Adding a

Sanitarian position will accomplish two things: 1) it will allow the two Senior Sanitarians to devote additional time to the Air, Water and Solid Waste programs where our coverage is currently inadequate; and 2) as personnel changes occur it provides some degree of stability to the Coos Bay Office by having a trained replacement available for the Subsurface program.

During 1976, 222 new construction permits were issued, 171 repair, alteration or extension permit applications were processed (170 issued) and 302 site evaluation applications were processed (284 sites approved for subsurface systems).

Fees in the amount of $33,150 were received toward support of the Subsurface and Alternative Sewage Disposal Systems program.

On August 30 and 31, 1977 a subsurface workshop is being sponsored by Coos Bay Branch Office for Coos County Real Estate Agents, developers and installers. It is intended that discussions will center on the current rules, soils, water table conditions and tentatively include a field trip to examine several test pits to demonstrate how we examine them for their soil and water table characteristics.

Solid Waste Program

Over the past two years substantial planning effort has gone into studying the feasibility of resource recovery on the South Coast (Coos-Curry Solid Waste Planning Council Study and Port of Umpqua Study). Although both studies identified that it was feasible to construct a resource recovery facility (energy recovery) in the Coos Bay area, no local sponsor has been identified to date. Lacking a local sponsor for a resource recovery program, the current effort in Coos and Curry counties is toward upgrading their landfill program. There are still four open burning dumps on the South Coast and some limited extension of their open burning variance may be requested to allow them time to implement a landfill alternative.

Douglas County is currently implementing its rural transfer program with transfer stations complete at Glendale, Myrtle Creek, Camas Valley, Glide and Canyonville. Transfer stations for Lookingglass, Yoncalla and Elkton are in various phases of design or construction. Upgraded landfills are operating at Roseburg and Reedsport. With the completion of the rural transfer station program, increased interest in a resource recovery program for the Roseburg area may occur.

There is also an active effort underway by the Douglas County Parks Department to create an artificial tire reef off the mouth of the Umpqua River. On a much smaller scale, the Fish and Wildlife Department is using old tires to enhance the warm water fish habitat in Cooper Creek Reservoir near Sutherlin. Both projects have been concurred with by the Department.

Seafood Processing Industry

As a result of Public Law 92-500, much effort has been committed toward the installation of fine screens to treat wastewater from the seafood processing industry. Installation of fine screens on the South Coast has been completed and compliance demonstration is being verified.

Although the installation of fine screens solves a presumed water quality problem by removing the majority of organic solids previously discharged, it has also tended to shift the environmental burden toward the air and land resources. In Coos Bay we are currently having to deal with odor nuisance complaints at some of the plant sites due to the temporary storage and handling of the solids prior to disposal and also odor nuisance complaints associated with the disposal of solids on agricultural lands. While the problems are probably controllable through better management practices, it can be time consuming responding to new complaints. Several of the plants have not been able to locate agricultural outlets and are hauling their screen solids to our already marginal landfills.

New Industry

With recent legislation providing for the construction of private salmon hatcheries, two firms are planning such hatcheries in the Coos Bay area. Anadromous, Inc. released their first fingerlings last summer and eventually hope to release 5,000,000 Coho salmon fingerlings a year. Weyerhaeuser Company has also announced plans for a private salmon hatchery in the Coos Bay area; however, no firm construction program has been started.

The Port of Coos Bay has an advisory group working on a feasibility study related to the establishment of a hake fishery, including processing facility in the Coos Bay area.

North Bend Airport Expansion

The Division of State Lands recently approved a fill permit allowing for a runway extension at the North Bend Airport. Although 32 acres of submerged tidelands will be filled, one of the conditions of approval was the returning to marshland a 48-acre pasture in the Joe Ney Creek area by the removal of a dike. Although approved by DSL, the airport project is still awaiting approval from the Corps of Engineers.

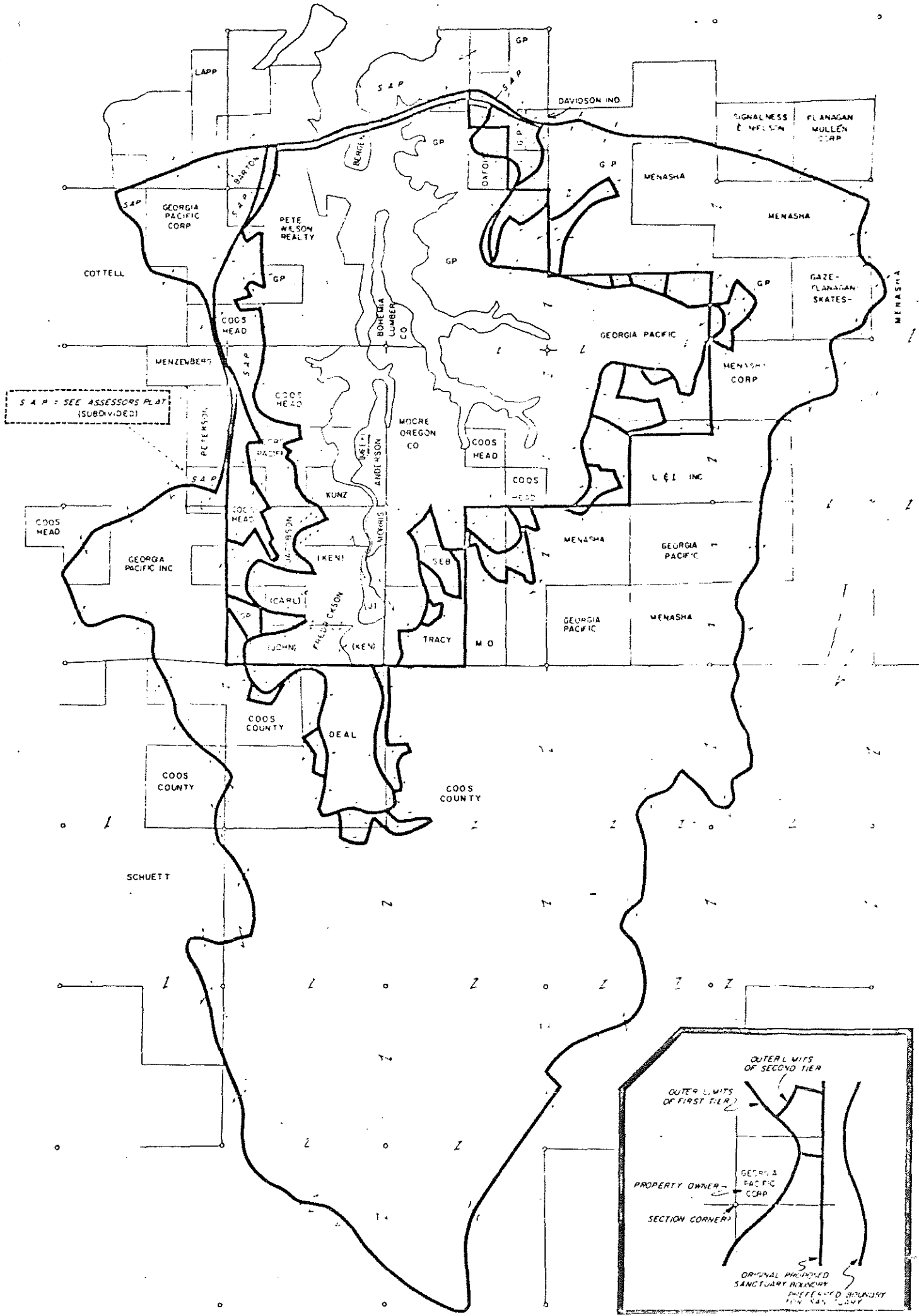
South Slough Sanctuary

The State of Oregon was the first state to submit an application under the Coastal Zone Management Act (P.L. 92-583) to create an estuarine sanctuary now known as the South Slough Sanctuary (see attached map).

The primary purpose of creating the South Slough Sanctuary was to ensure the permanent protection of a representative undisturbed estuarine area for use as a natural field laboratory for the long-term study of natural and human processes in estuarine ecosystems.

Administered by the Oregon State Land Board, approximately 4,200 acres are included in the sanctuary of which 500 acres were state-owned submerged lands or tideland. The State Land Board is guided by a Technical Management Task Force consisting of representatives from the Fish and Wildlife Department, Natural Areas Committee, Division of State Lands, Department of Forestry, University of Oregon Institute of Marine Biology, Coos County Commission and the Department of Environmental Quality. The Department's representative is Tim Davison of the Coos Bay Branch Office.

RPR:eve
Attachment
8/15/77


LAPP
S A P
GP
DAVIDSON IND.
SIGNALNESS
FLANAGAN MULLEN CORP
MENASHA
GEORGIA PACIFIC CORP
PETE WILSON REALTY
BARTON
BERGE
DAFOE
COTTELL
COOS HEAD
BOHEMIA LUMBER CO
GAZE-FLANAGAN-SKATES-
GEORGIA PACIFIC
MENZENBERG
S A P : SEE ASSESSORS PLAT (SUBDIVIDED)
PETERSON
MOORE OREGON CO
KUNZ
ANDERSON
L & I INC
GEORGIA PACIFIC INC
JACOBSON
MEYERS
(KEN)
SEB
(CARL)
FREDRICKSON
(JOHN)
TRACY
M O
COOS COUNTY
DEAL
SCHUETT
OUTER LIMITS OF SECOND TIER
OUTER LIMITS OF FIRST TIER
PROPERTY OWNER
SECTION CORNER
ORIGINAL PROPOSED SANCTUARY BOUNDARY
PREFERRED BOUNDARY

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. E, October 21, 1977, EQC Meeting

Coos County Solid Waste - Review of Coos County Solid Waste Program

Background

Attachment 1 to this report is a chronological history of events which have influenced the solid waste program in Coos and Curry Counties. A review of those events is useful in understanding the current solid waste program in Coos County.

Sanitary landfilling on the south coast, as in most of Western Oregon, is a marginal activity. High rainfall, steep topography, proximity to perennial or intermittent streams, soils commonly high in clay and silt, preclude the development of year-around sanitary landfills (i.e., daily compaction and cover) most places. With the exception of the existing Bandon and Port Orford disposal sites, no other existing or available good sanitary landfill sites have been identified in the last four years.

Recognizing the need for an improved solid waste management program, Coos and Curry Counties, by resolution, formed the Coos-Curry Solid Waste Planning Council. Utilizing planning grant funds received from the DEQ, the Council embarked upon a consultant planning study the spring of 1973. That effort culminated in a report adopted by the Planning Council in December of 1975 that identified a resource recovery program in the North Bend area as the least costly alternative and a regional landfill at Bandon as the second alternate.

Almost concurrently with the Coos-Curry Planning Council's efforts, the Port of Umpqua was able to obtain DEQ funds in September 1973 to undertake a consultant study to evaluate the potential for an energy recovery program for solid wastes from the south coast. The emphasis in this report was on the potential for energy and available markets as contrasted to the Planning Council's study whose primary emphasis was on solid waste disposal. This effort was completed in December 1974 and concluded that "Disposal of the Region's solid waste in an energy recovery plant in the Coos Bay-North Bend area producing either processed fuel or steam for sale is technically and economically feasible."

In October 1975 the EQC approved open burning variances for four disposal sites on the south coast largely on the basis that the potential of an improved solid waste disposal program would be forthcoming by melding the result of the Planning Council's report and the Port of Umpqua Report.

In January 1975 the Department was authorized to grant an additional $135,600 to the Port of Umpqua for a two-part study. Phase I was completed at an approximate cost of $51,000. Two potential locations for an energy recovery program were to be evaluated in detail; Coos Bay-North Bend and Reedsport. That report was received in April 1976 and the conclusion remained the same; an energy recovery program, if implemented, should be built in the North Bend area. At that point in time the Department terminated its contract with the Port of Umpqua and sought a sponsor in the Coos Bay area. Until very recently, no appropriate sponsor was identified in Coos County. Apparent lack of a sponsor stemmed from considerable concern on Coos County's part that the financial and institutional analysis in Phase I left unclear long-term obligations that might be assumed if Phase II and Phase III proceeded.

With the energy recovery program sponsorless, Coos County turned its attention to the disposal sites it was responsible for and tried to the best of its ability to upgrade its landfilling efforts at Joe Ney and Bandon. In addition since July 1977 they have proceeded to purchase an air curtain device to improve the open burning of bulky, combustible materials and have proceeded to purchase a "Consumat" incinerator for volume reduction at the Bandon Disposal site. The county also indicated to Myrtle Point, Powers, and Coquille that they could use the Bandon disposal site as a regional landfill if they could work out the transportation problems. They are currently in the process of adopting a franchising ordinance which may provide sufficient assurance to certain collectors to allow equipment purchase necessary to make the direct long haul to Bandon.

In late summer 1976, the private operators at the Shinglehouse Slough materially improved the operation of their modified landfill. However, compliance with permit conditions has been extremely expensive and leachate is still escaping to state waters. Complete closure or at least reduced operation appears imminent.

More recently Curry County has decided to proceed on its own to upgrade its solid waste disposal program. With the possible exception of Port Orford, all previous reports showed transfer to a resource recovery facility uneconomical because of distance.

Within the last month, renewed interest by industry has caused the Coos-Curry-Douglas-Economic Improvement Association (EIA) to reactivate the energy recovery program for the south coast. The Department has indicated an interest in receiving a detailed proposal for utilizing some of the remaining Phase II money ($84,600) from the Port of Umpqua study to answer some of the financial and institutional questions not answered by Phase I of the study.

In the mentime, the variances granted Myrtle Point and Powers were due to expire in October 1977. Neither site is capable of being converted to any semblance of a modified landfill due to steep topography, soils, high rainfall or availability of sufficient land.

Evaluation

Several alternatives appear possible at this time.

1. Deny extended variances to Myrtle Point and Powers at this time. In the short-run the Myrtle Point commercial hauler could make the long haul to Bandon. However, his equipment was purchased based on the existence of the Myrtle Point site, not a 70 mile round trip to Bandon. Substantial upgrading of equipment would be needed with commensurate increase in customer rates. Those persons not currently using commercial haulers would also be faced with a 70 mile round trip. Reason says not too many people will actually make such a trip, rather, one could expect substantial increase in promiscuous dumping or backyard accumulations.

   While Myrtle Point's situation is bleak, Power's situation is impossible. Faced with a 110 mile round trip, their hauler would simply cease doing business. It is our understanding from discussions with the City that their current hauler is an older gentleman with antiquated collection equipment neither of which would be capable of making the long haul for any reasonable period of time.

   Neither city is in a financial position at this time to provide the collection service currently provided by the private haulers.

2. Extend the variances for a sufficient length of time (i.e., two years) to allow conversion to a regional landfill program at Bandon. Instruct the staff to provide technical assistance to Myrtle Point, Powers, and Coos County to attain said regional landfill program in a timely manner but no later than two years. Require submission of semi-annual reports identifying progress being made.

   Emphasize that variances could be terminated within the two-year period upon showing of insufficient progress. Phase out Myrtle Point and Powers landfills at end of two years. In the interim, work with Myrtle Point and Powers to institute a source separation program to recover readily available and saleable source separated materials (i.e., newsprint, kraft paper, aluminum).

3. Extend the variances for a sufficient length of time (i.e., two years) to allow for conversion to an energy recovery program such as might come out of proposed CCD-EIA study being developed. Concurrent with the analysis of the energy recovery program identify the technical, financial and institutional arrangements necessary to transfer the wastes from Myrtle Point and Powers to a resource recovery facility. Phase out Myrtle Point and Powers disposal sites concurrent with the startup operation of a resource recovery program. In the interim work with Myrtle Point and Powers to institute a source separation program to recover readily available and saleable source separated materials (i.e., newsprint, kraft paper, aluminum).

4. Extend the variances for a sufficient length of time (i.e., two years) to allow Myrtle Point and Powers to convert to individual landfills that could meet the proposed federal standards for sanitary landfills. Instruct the staff to provide technical assistance to Myrtle Point and Powers to attain said individual landfill program in a timely manner but no later than two years. Require submission of semi-annual reports identifying progress being made. Emphasize that variances could be terminated within a two-year period upon showing of insufficient progress. Phase out existing Myrtle Point and Powers landfills at or before end of two-year period.

Summation

1. The Cities of Myrtle Point and Powers currently operate open burning disposal sites under variance from the EQC. The existing sites are not capable of being upgraded to sanitary landfill status.

2. Coos County operates a modified landfill at Bandon that is capable of being upgraded to a sanitary landfill. Coos County is prepared to allow Myrtle Point and Powers to use the Bandon disposal site for their solid wastes.

3. Two recent planning studies funded by the DEQ have concluded that energy recovery from solid wastes for the south coast is technically and financially feasible. Wastes from Reedsport on the north to Port Orford on the south could economically be transported to a site in the North Bend area.

4. Pending an identified direction for the solid waste disposal program in Coos County, the Cities of Myrtle Point and Powers were limited in their ability to make progress. The volume of solid waste from said cities will not materially affect either a regional landfill program or an energy recovery program.

5. No immediate alternative is reasonably available to Myrtle Point and Powers to replace their current open burning disposal practices.

6. Renewed interest through the Coos-Curry-Douglas Economic Improvement Association is being shown for an energy recovery program on the south coast. Depending on the scope of work identified the Department should financially support (using existing uncommitted funds) identifying the financial and institutional arrangements necessary for a feasible energy recovery program.

Director's Recommendation

1. Grant a two-year variance to the Cities of Myrtle Point and Powers, during which time they are to develop the necessary program to participate in a regional landfill program and/or energy recovery program. The existing open burning disposal sites shall be phased out as soon as

possible within that two-year period. If practicable an interim source separation program of saleable materials shall be established. Six-month progress reports shall be provided to the Commission.

2. The Department should express interest in, and if possible financially support, a study to identify the financial and institutional requirements of developing an energy recovery program for the south coast.

3. The EQC find that the variance requests meet the intent of ORS 459.225(3)(c) in that strict compliance would result in closing of the disposal sites and no alternative facility or alternative method of solid waste management is available.

Bill

WILLIAM H. YOUNG

RPReiter/kz
229-5913
10/12/77
Attachment (1)

Chronological History of
Solid Waste Efforts in Coos County

January 1973

A Coos-Curry Solid Waste Planning Council formed to plan for an improved solid waste management program to serve Coos and Curry Counties.

Spring 1973

DEQ allocated $47,000 from the Pollution Control Bond Fund to the Coos-Curry Solid Waste Planning Council to develop a South Coast Solid Waste Management Plan. Ed Riley was hired as consultant.

September 1973

DEQ allocated $100,000 from the Pollution Control Bond Fund to the Port of Umpqua (Reedsport) to do a study on Energy Recovery from solid waste for the south coast. CH2M/Hill was hired as consultant.

December 1974

Port of Umpqua received report which concluded that "Disposal of the Region's solid waste in an energy recovery plant in the Coos Bay-North Bend area producing either processed fuel or steam for sale is technically and economically feasible." $75,000 of the original $100,000 was actually expended.

Spring 1975

Coos-Curry Solid Waste Planning Council's contract with Ed Riley was terminated with Department concurrence and remaining funds ($16,000) were utilized to hire a staff person to complete required planning tasks. Larry Trumbull was hired as staff.

September 1975

Lonnie Van Elsberg and Mickey Moffitt were defeated as Coos County Commissioners in a special recall election held September 15, 1975. Shortly thereafter, Irene Johnson and Claude E. (Eddie) Waldrop were appointed to fill the unexpired terms.

October 1975

EQC grants a two-year variance to the Nesika Beach, Brookings, Myrtle Point and Powers disposal site subject to the development and implementation of an improved solid waste management program in Coos and Curry Counties.

December 1975

Coos-Curry Solid Waste Planning Council adopts the Solid Waste Managmeent Plan: 1975-1995, prepared by Larry Trumbull. Plan concluded that resource recovery in the North Bend area was the least costly future system for solid waste disposal in the south coast. First alternative to resource recovery was a regional landfill at Bandon with transfer from outlying sites. Coos and Curry Counties, as individual counties, have not formally adopted this plan at this time.

February 1976

DEQ allocated $51,000 from the Pollution Control Bond Fund to the Port of Umpqua to proceed with a Phase I study of an energy recovery system for the south coast. CH2M/Hill was hired as consultant. An additional $84,600 was earmarked for a Phase II (preliminary engineering) study if the Phase I study verified financial feasibility and markets.

April 1976

Port of Umpqua received Phase I report. The main conclusions reached were that an energy recovery system was feasible in the North Bend area and that a regional energy recovery plant was the most cost-effective solution to the south coast region's solid waste disposal probelm. Project terminated at this point by DEQ because Port of Umpqua was not in a position to be implementing agency.

August 1976

Improvements to Coos County's Joe Ney disposal site near Charleston were proposed to and approved by the DEQ. Improvements were implemented.

August 1976

Improvements to the privately owned Shinglehouse Slough disposal site were proposed to and approved by the DEQ. Those improvements were implemented.

October 1976

Fairview disposal site near Coquille was closed by Coos County. Commercially collected and other wastes are being hauled to the county's landfill at Bandon (approximately 50 miles round trip).

November 1976

Irene Johnson and Claude E. Waldrop were re-elected as commissioners in Coos County.

May 1977

Curry County formally withdrew from Coos-Curry Planning Council. Coos County does not take any action relative to the Curry County resolution.

June 1977

Further improvements to Coos County's Joe Ney disposal site were proposed to and approved by the DEQ. Improvements were implemented.

August 1977

Coos County proposes to purchase and utilize a portable air curtain device at the Joe Ney and Bandon disposal sites to improve open burning of bulky, combustible wastes. Coos County also proposes to install a "Consumat" incinerator at the Bandon disposal site for volume reduction purposes and to evaluate the energy recovery application of a "Consumat" incinerator. Lastly, Coos County makes known that Myrtle Point and Powers can use the Bandon disposal site as a long-term disposal site for their needs (approximately 70 miles round trip from Myrtle Point; approximately 110 miles round trip from Powers).

September 1977

DEQ allocated $4,000 from the Pollution Control Bond Funds to Curry County to develop an implementation program for upgrading Curry County's solid waste management program. Angus MacPhee was hired as the consultant.

September 1977

EQC extends the open burning variances for Nesika Beach and Brooking's disposal sites in Curry County until October 1978; the Myrtle Point and Power's disposal sites to December 1977, pending a more detailed staff report.

September 1977

Coos-Curry-Douglas Economic Improvement Association (CCD-EIA) proposes to update the financial feasibility of an energy recovery program at North Bend utilizing a portion of the uncommitted $84,000 left over from Phase II of the CH2M/Hill Port of Umpqua Study. Renewed interest has been expressed by industry in the North Bend area, particularly from the standpoint of the potential energy benefit as contrasted to the potential solid waste disposal benefits.

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F, October 21, 1977, EQC Meeting

Coos Bay Log Handling - Status Report on Log Handling in Coos Bay Area

Background

The use of public waters for log transport, storage, and handling had been a practice of long standing in Oregon. In some locations, severe water quality problems have been associated with log handling operations. After several public meetings and extensive industry testimony, the Environmental Quality Commission adopted, in October 1975, a policy for log handling practices in public waters (see Attachment 1).

In brief, this document stated that log handling is a legitimate use of public waters that may, in some cases, conflict with other beneficial uses of the waterways. Improvements in log handling practices were specified, mostly aimed at minimizing water storage where possible and minimizing the amount of bark allowed to escape into public waters. The Department was directed to implement the policy goals by developing and issuing state water quality permits for each log handling operation. This status report is presented to the Commission to inform you of the progress being made in the Coos Bay and Reedsport areas in working towards the policy goals.

Evaluation

Actions taken by the Department:

1. All log storage and log dump areas in the Coos Bay area were mapped.

2. All areas of log storage, log dumps, and mill sites have been inspected at least once.

3. A public meeting for all interested persons was held in Coos Bay in the Fall of 1976 to discuss the specific requirements and a tentative time schedule for the permits to be issued.

4. Several meetings were held with the Division of State Lands, the Department of Fish and Wildlife, and the U.S. Army Corps of Engineers to prevent potential conflicts and to gather information on these agencies' specific goals relative to log handling in public waters.

5. State permit applications were sent to each company involved in log handling.

6. A permit format was developed (see Attachment 2) and all permits were drafted.

7. Because of the controversial nature of this policy, the Department decided to add an extra step in the permit issuing process. Pencil drafts of the permits were sent, and meetings were held with each company to discuss the drafts.

8. Based on these meetings, each permit was reviewed and redrafted at least once. Most of the changes made were to clarify wording or to remove conditions that were clearly unreasonable.

9. Permits for Weyerhaeuser, Georgia-Pacific, Reedsport Mill and International Paper were issued September 27, 1977. The others will be discussed below.

10. A biological survey was started in November 1976 to determine what, if any, effects there are on biota living below rafts that go aground during tide changes. This study is expected to continue at least until the end of 1977. Initial indications are that log storage has a severe impact on the mud dwelling biota, with up to 95% fewer organisms living in areas where logs go aground. These mud dwelling organisms are major food sources for fish living in the estuary for all or part of their life cycles, which in turn are a major resource for the commercial and recreational fishing industry in the area.

Content of Proposed Permits

A sample permit is attached for your review. Included in each permit are:

1. Requirements for easy let-down devices, including compliance schedules where necessary;

2. Floating debris containment and removal around each log dump and mill intake;

3. Requirements for moving logs stored on dry land back five feet from waters' edge.

4. Monitoring requirements, including regular surveying for boundaries where encroachment is a problem;

5. Special feasibility studies for those companies where it appears they have alternatives to tideland storage; and

6. General conditions.

Problems Encountered

The implementation of the log handling policy has met some resistance from all of the companies involved, and much opposition from some of the companies. The outstanding reason, of course, is the cost. According to industry spokesmen, easy let-down devices start at $75,000 and go up to $300,000 each. Several of the companies facing the largest expenditures are relatively small. The other requirements, excluding the issue of tideland storage, should not be major items in terms of expense.

Al Peirce Lumber Company, Coos Head Timber Company, and Knutson Towboat Company initially contended that DEQ had no legal authority to issue state water quality permits for log handling activities. At one point, the Port of Coos Bay attempted to get a legal opinion from the Attorney General. To our knowledge, this effort has been dropped. Al Peirce Lumber Company and Coos Head Timber Company have retained a lawyer and have written the Department with specific legal questions. These were answered by the staff with the response reviewed by Mr. Ray Underwood, Legal Counsel.

In subsequent meetings with all three companies, it appears that they now accept that a permit can be required for their log handling operations. There is agreement that applications will be submitted, although they had not been received as of October 10, 1977. Agreement on the specific permit conditions has not been reached although discussions are continuing.

Another problem that has been difficult to resolve has been the illegal filling of wood wastes and encroachment into public waters, particularly in Isthmus Slough. A large amount of wood waste (mostly bark) is used to keep the yard from sinking and reverting back to marshland. It also appears that some of the wood wastes are ending up in the Slough. The monitoring requirement for periodic surveying placed in several of the proposed permits should prevent future encroachments, and the Department is working with the Division of State Lands to correct some of the most recent unauthorized fill violations.

The placing of wood waste dredging spoils on the edge of public waters is also a concern, both for aesthetic reasons and as a potential water pollution problem. The Department is again working with the Division of State Lands to determine which, if any, of these spoils piles are in violation of DSL Fill-Removal Permits.

Removal of abandoned pilings and log dumps was included in the log handling policy. This was not included in the log handling permits, because the Corps of Engineers has authority and a permit program over both placing and removing structures in the Coos Bay area waterways.

Summation

1. The Southwest Region is actively pursuing the implementation of the log handling policy for Coos Bay and the Umpqua River.

2. Some legal questions on the EQC policy have informally been made and apparently resolved.

3. The five-year limit on the goals set in this policy are expected to be met in Coos Bay and the Umpqua River.

4. Continued work with other regulatory agencies is necessary to fully implement the EQC log handling policy.

Director's Recommendation

No action is necessary at this time.

Michael Downs
for
WILLIAM H. YOUNG

Barbara A. Burton:cs
672-8204
Attachments (2)
1. October 24, 1975 EQC Log Handling Policy
2. Sample Log Handling Permit

LOG HANDLING IN OREGON'S PUBLIC WATERS

An Implementation Program & Policy

Adopted by

THE OREGON ENVIRONMENTAL QUALITY COMMISSION

October 24, 1975

GENERAL SUMMARY OF PROBLEMS

Based on the Department's field evaluations, experience and review of pertinent literature, the following general conclusions about the effects of logs in public waters are drawn:

1. There is ample and conclusive evidence that the bark, debris and leachate releases resulting from dumping, storage and millside handling of logs in public waters can have an adverse effect on water quality. The magnitude of the effect varies with the size and characteristic of the waterway and the nature and magnitude of the log handling operation.

2. Free fall log dumping causes the major release of bark and other log debris.

3. Bark and log debris are the major waste products resulting from logs in water. These materials range in size from microscopic particles to whole logs. Some float but most will sink in a short time. Numerous particles may travel submerged a considerable distance before dropping to the bottom. Bottom deposits of these substances may blanket the benthic aquatic life and fish spawning areas. During submerged decomposition stages the wood products rob overlying waters of dissolved oxygen and often give off toxic decay products.

4. Leachates from logs in water can be a significant source of biochemical oxygen demand and dark color. These generally have minimal impact in larger flowing streams but their effect may be compounded in quiet waters.

5. Where logs go aground during tidal changes or flow fluctu-

ations, they can be a detriment to bottom dwelling aquatic life and can be the cause of increased turbidity.

6. Even though significant improvements have been made at certain log handling areas, further improvements are needed and can be accomplished on a short-term basis by improved log dumping, handling and storage practices at operations that still adversely impact aquatic life and water quality.

7. Because alternatives to the storage and handling of logs in public waters can result in undesirable as well as desirable environmental trade-offs, it is imperative that each operation be carefully evaluated on its own merits.

IMPLEMENTATION PROGRAM

Based on the statement of general policy which follows and case by case water quality assessments, a proposed state permit will be developed for each log handling operation in public waters where problems exist or are likely to occur that will:

1. State specific objectives designed to bring that operation into acceptable compliance with water quality standards.

2. Require the permittee to evaluate alternatives and submit a program and time schedule for meeting specific objectives.

3. Require implementation of a control program as approved by the Department, giving consideration to the impact of alternative methods on the environment.

In accordance with existing permit issuance regulations, each proposed permit would then be subject to review and comment by both the permittee and the public prior to issuance.

STATEMENT OF GENERAL POLICY

The following statement of general policy is set forth to guide both the staff of the DEQ and timber industry representatives in matters pertaining to log handling in public waters:

1. The Environmental Quality Commission and the Department of Environmental Quality acknowledge that transportation and

storage of logs is one of the appropriate uses of public waters of the state so long as such operations are controlled to adequately protect environmental quality, natural resources, public health and safety and the economy of the state.

2. The construction of new wood processing plants which must receive logs directly from public waters will not be approved by the Department without specific authorization of the Environmental Quality Commission. In general, new operations will not be permitted where water quality standards or other beneficial uses would be jeopardized.

3. Existing log dumping, storage and handling shall be adequately controlled, or if necessary phased out, to insure that violations of water quality standards are not caused by such activities. Any control program requiring more than five years to implement shall be subject to approval by the Environmental Quality Commission.

4. Establishment of new log storage areas where logs go aground on tidal changes or low flow cycles will not be approved by the Department without specific authorization of the Environmental Quality Commission. Where there is evidence that such areas result in more than nominal damages to aquatic life and/or water quality, the existing log storage areas where logs go aground shall be phased out in accordance with an approved schedule unless specific authorization for continuance is granted by the Commission in consideration of environmental trade-offs. Any phase-out program taking more than five years shall be subject to approval by the EQC.

5. New free-fall log dumps shall not be permitted. Existing free-fall dumps shall either be phased out as soon as practicable by the installation of DEQ approved easy-let-down devices or controlled in a manner equivalent to the installation of easy-let-down facilities. Any requests for special consideration shall be subject to approval by the EQC.

6. Best practicable bark and wood debris controls, collection and disposal methods, as approved by the Department, shall

be employed at all log dumps, raft building areas and millside handling sites in accordance with specifically approved programs.

7. The inventory of logs in public waters for any purpose shall be kept to the lowest practicable number for the shortest practicable time considering market conditions and the quality of the water at the storage site.

8. Upon specific request, the industry shall provide information to the Department relative to log volumes and usage site locations in public waters.

9. All dry land log storage, wood chip, and hog fuel handling and storage facilities located adjacent to waterways shall be designed, constructed and operated to control leachates and prevent the loss of bark, chips, sawdust and other wood debris into the public waters. Plans and specifications must be approved by the Department prior to construction of new or modified facilities. (Additional approvals may be required relative to air quality and noise impacts).

10. Subsequent to adoption of this policy each industry shall be responsible for cleanup and removal of sunken logs, piling, docks, floats and other structures from its log dumping, handling, and storage sites in public waters when use thereof is to be permanently terminated. Discontinuance for a period of five years is prima facie evidence of the permanence of the termination.

DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S. W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696

Permit Number:
Expiration Date: 8/31/82
File Number: 42188

LOG HANDLING FACILITIES PERMIT

Issued pursuant to ORS 468.740

ISSUED TO:

International Paper Company
220 East 42nd Street
New York, New York 10017

LOG DUMP LOCATIONS:

Name	Waterway	River Mile
	Umpqua River	

LOG STORAGE AREAS:

Name	Waterway	River Mile
	Umpqua River	6.0 - 13.0
	Smith River	0.0 - 5.0

PLANT SITE:

Name	Waterway	River Mile
	Umpqua River	8.0

Issued in response to Application Number 2168 received 5/10/77.

WILLIAM H. YOUNG
Director

Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate log handling and storage facilities in public waters in conformance with requirements, limitations and conditions set forth in attached schedules as follows:

This permit does not relieve the permittee from responsibility for compliance with other applicable Federal, state or local laws, rules or standards.

SKETCH, MAP OR DESCRIPTION OF AREAS

State of Oregon
Department of Environmental Quality
P E R M I T C O N D I T I O N S

Permit Number: _____
Expiration Date: _____
Page _____ of _____

SCHEDULE A

Special Operating Requirements

1. After November 1, 1978 all logs placed in public waters shall be by means of Department approved easy letdown devices.

SCHEDULE B

Compliance Conditions and Schedules

1. Prior to November 1, 1978, the premittee shall install a Department approved easy letdowr device in accordance with the following schedule:

   a. Submit plans and specifications by December 1, 1977.

   b. Submit construction plans and time schedule by March 1, 1978.

   C. Complete construction by November 1, 1978.

2. Prior to May 1, 1978, the permittee shall initiate a program of positive debris control around each log dump and mill site. Included will be a means for detaining and removing floating debris daily. The following schedule is to be followed:

   a. Submit plans and specifications by August 1, 1977.

   b. Issue purchase orders by October 1, 1977.

   c. Complete installation by May 1, 1978.

SCHEDULE C

Minimum Monitoring and Reporting Requirements

1. The permittee shall report to the Department of Environmental Quality by January 31 of each year this permit is in effect, the following information for the preceding calendar year:

   a. Amount and location of board feet stored in public waters as of January 1, April 1, July 1 and October 1. Maps will be provided for International Paper's use for showing the locations of storage areas.

State of Oregon
Department of Environmental Quality
PERMIT CONDITIONS

Permit Number: _____
Expiration Date: _____
Page _____ of _____

GENERAL CONDITIONS

G1. Whenever an expansion of log handling facilities in or adjacent to public waters beyond those locations designated in this permit is anticipated, a new application must be submitted to the Department. No change shall be made until a new permit or permit modification has been issued.

G2. The permittee shall maintain as low an inventory of logs in public waters as is practical.

G3. No new areas where grounding due to tide changes occurs shall be used for log storage without written approval from the Department.

G4. All log handling activities in or adjacent to Oregon public waters shall be conducted in a manner consistent with the following:

a. All log letdown and debris control devices shall be maintained in good working order and operated so that a minimum of wood debris enters public waters.

b. All dredging spoils and other wood wastes shall be disposed of such that they will not reach any public waters or create nuisance conditions.

G5. No petroleum-base products or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the State.

G6. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where log handling activities in or adjacent to State waters are occurring.

b. To sample any discharge of pollutants.

G7. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall notify the Department of Environmental Quality within one hour. Compliance with this requirement does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

G8. This permit is subject to revocation for cause as provided by law.

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F, October 21, 1977, EQC Meeting

Coos Bay Log Handling - Status Report on Log Handling in Coos Bay Area

Background

The use of public waters for log transport, storage, and handling had been a practice of long standing in Oregon. In some locations, severe water quality problems have been associated with log handling operations. After several public meetings and extensive industry testimony, the Environmental Quality Commission adopted, in October 1975, a policy for log handling practices in public waters (see Attachment 1).

In brief, this document stated that log handling is a legitimate use of public waters that may, in some cases, conflict with other beneficial uses of the waterways. Improvements in log handling practices were specified, mostly aimed at minimizing water storage where possible and minimizing the amount of bark allowed to escape into public waters. The Department was directed to implement the policy goals by developing and issuing state water quality permits for each log handling operation. This status report is presented to the Commission to inform you of the progress being made in the Coos Bay and Reedsport areas in working towards the policy goals.

Evaluation

Actions taken by the Department:

1. All log storage and log dump areas in the Coos Bay area were mapped.

2. All areas of log storage, log dumps, and mill sites have been inspected at least once.

3. A public meeting for all interested persons was held in Coos Bay in the Fall of 1976 to discuss the specific requirements and a tentative time schedule for the permits to be issued.

4. Several meetings were held with the Division of State Lands, the Department of Fish and Wildlife, and the U.S. Army Corps of Engineers to prevent potential conflicts and to gather information on these agencies' specific goals relative to log handling in public waters.

5. State permit applications were sent to each company involved in log handling.

6. A permit format was developed (see Attachment 2) and all permits were drafted.

7. Because of the controversial nature of this policy, the Department decided to add an extra step in the permit issuing process. Pencil drafts of the permits were sent, and meetings were held with each company to discuss the drafts.

8. Based on these meetings, each permit was reviewed and redrafted at least once. Most of the changes made were to clarify wording or to remove conditions that were clearly unreasonable.

9. Permits for Weyerhaeuser, Georgia-Pacific, Reedsport Mill and International Paper were issued September 27, 1977. The others will be discussed below.

10. A biological survey was started in November 1976 to determine what, if any, effects there are on biota living below rafts that go aground during tide changes. This study is expected to continue at least until the end of 197[illegible]. Initial indications are that log storage has a severe impact on the mud dwelling biota, with up to 95% fewer organisms living in areas where logs go aground. These mud dwelling organisms are major food sources for fish living in the estuary for all or part of their life cycles, which in turn are a major resource for the commercial and recreational fishing industry in the area.

Content of Proposed Permits

A sample permit is attached for your review. Included in each permit are:

1. Requirements for easy let-down devices, including compliance schedules where necessary;

2. Floating debris containment and removal around each log dump and mill intake;

3. Requirements for moving logs stored on dry land back five feet from waters' edge.

4. Monitoring requirements, including regular surveying for boundaries where encroachment is a problem;

5. Special feasibility studies for those companies where it appears they have alternatives to tideland storage; and

6. General conditions.

Problems Encountered

The implementation of the log handling policy has met some resistance from all of the companies involved, and much opposition from some of the companies. The outstanding reason, of course, is the cost. According to industry spokesmen, easy let-down devices start at $75,000 and go up to $300,000 each. Several of the companies facing the largest expenditures are relatively small. The other requirements, excluding the issue of tideland storage, should not be major items in terms of expense.

sundial

Al Peirce Lumber Company, Coos Head Timber Company, and Knutson Towboat Company initially contended that DEQ had no legal authority to issue state water quality permits for log handling activities. At one point, the Port of Coos Bay attempted to get a legal opinion from the Attorney General. To our knowledge, this effort has been dropped. Al Peirce Lumber Company and Coos Head Timber Company have retained a lawyer and have written the Department with specific legal questions. These were answered by the staff with the response reviewed by Mr. Ray Underwood, Legal Counsel.

In subsequent meetings with all three companies, it appears that they now accept that a permit can be required for their log handling operations. There is agreement that applications will be submitted, although they had not been received as of October 10, 1977. Agreement on the specific permit conditions has not been reached although discussions are continuing.

Another problem that has been difficult to resolve has been the illegal filling of wood wastes and encroachment into public waters, particularly in Isthmus Slough. A large amount of wood waste (mostly bark) is used to keep the yard from sinking and reverting back to marshland. It also appears that some of the wood wastes are ending up in the Slough. The monitoring requirement for periodic surveying placed in several of the proposed permits should prevent future encroachments, and the Department is working with the Division of State Lands to correct some of the most recent unauthorized fill violations.

The placing of wood waste dredging spoils on the edge of public waters is also a concern, both for aesthetic reasons and as a potential water pollution problem. The Department is again working with the Division of State Lands to determine which, if any, of these spoils piles are in violation of DSL Fill-Removal Permits.

Removal of abandoned pilings and log dumps was included in the log handling policy. This was not included in the log handling permits, because the Corps of Engineers has authority and a permit program over both placing and removing structures in the Coos Bay area waterways.

Summation

1. The Southwest Region is actively pursuing the implementation of the log handling policy for Coos Bay and the Umpqua River.

2. Some legal questions on the EQC policy have informally been made and apparently resolved.

3. The five-year limit on the goals set in this policy are expected to be met in Coos Bay and the Umpqua River.

4. Continued work with other regulatory agencies is necessary to fully implement the EQC log handling policy.

Director's Recommendation

No action is necessary at this time.

Michael Downs
for
WILLIAM H. YOUNG

Barbara A. Burton:cs
672-8204
Attachments (2)
1. October 24, 1975 EQC Log Handling Policy
2. Sample Log Handling Permit

LOG HANDLING IN OREGON'S PUBLIC WATERS

An Implementation Program & Policy

Adopted by

THE OREGON ENVIRONMENTAL QUALITY COMMISSION

October 24, 1975

GENERAL SUMMARY OF PROBLEMS

Based on the Department's field evaluations, experience and review of pertinent literature, the following general conclusions about the effects of logs in public waters are drawn:

1. There is ample and conclusive evidence that the bark, debris and leachate releases resulting from dumping, storage and millside handling of logs in public waters can have an adverse effect on water quality. The magnitude of the effect varies with the size and characteristic of the waterway and the nature and magnitude of the log handling operation.

2. Free fall log dumping causes the major release of bark and other log debris.

3. Bark and log debris are the major waste products resulting from logs in water. These materials range in size from microscopic particles to whole logs. Some float but most will sink in a short time. Numerous particles may travel submerged a considerable distance before dropping to the bottom. Bottom deposits of these substances may blanket the benthic aquatic life and fish spawning areas. During submerged decomposition stages the wood products rob overlying waters of dissolved oxygen and often give off toxic decay products.

4. Leachates from logs in water can be a significant source of biochemical oxygen demand and dark color. These generally have minimal impact in larger flowing streams but their effect may be compounded in quiet waters.

5. Where logs go aground during tidal changes or flow fluctu-

storage of logs is one of the appropriate uses of public waters of the state so long as such operations are controlled to adequately protect environmental quality, natural resources, public health and safety and the economy of the state.

2. The construction of new wood processing plants which must receive logs directly from public waters will not be approved by the Department without specific authorization of the Environmental Quality Commission. In general, new operations will not be permitted where water quality standards or other beneficial uses would be jeopardized.

3. Existing log dumping, storage and handling shall be adequately controlled, or if necessary phased out, to insure that violations of water quality standards are not caused by such activities. Any control program requiring more than five years to implement shall be subject to approval by the Environmental Quality Commission.

4. Establishment of new log storage areas where logs go aground on tidal changes or low flow cycles will not be approved by the Department without specific authorization of the Environmental Quality Commission. Where there is evidence that such areas result in more than nominal damages to aquatic life and/or water quality, the existing log storage areas where logs go aground shall be phased out in accordance with an approved schedule unless specific authorization for continuance is granted by the Commission in consideration of environmental trade-offs. Any phase-out program taking more than five years shall be subject to approval by the EQC.

5. New free-fall log dumps shall not be permitted. Existing free-fall dumps shall either be phased out as soon as practicable by the installation of DEQ approved easy-let-down devices or controlled in a manner equivalent to the installation of easy-let-down facilities. Any requests for special consideration shall be subject to approval by the EQC.

6. Best practicable bark and wood debris controls, collection and disposal methods, as approved by the Department, shall

ations, they can be a detriment to bottom dwelling aquatic life and can be the cause of increased turbidity.

6. Even though significant improvements have been made at certain log handling areas, further improvements are needed and can be accomplished on a short-term basis by improved log dumping, handling and storage practices at operations that still adversely impact aquatic life and water quality.

7. Because alternatives to the storage and handling of logs in public waters can result in undesirable as well as desirable environmental trade-offs, it is imperative that each operation be carefully evaluated on its own merits.

IMPLEMENTATION PROGRAM

Based on the statement of general policy which follows and case by case water quality assessments, a proposed state permit will be developed for each log handling operation in public waters where problems exist or are likely to occur that will:

1. State specific objectives designed to bring that operation into acceptable compliance with water quality standards.

2. Require the permittee to evaluate alternatives and submit a program and time schedule for meeting specific objectives.

3. Require implementation of a control program as approved by the Department, giving consideration to the impact of alternative methods on the environment.

In accordance with existing permit issuance regulations, each proposed permit would then be subject to review and comment by both the permittee and the public prior to issuance.

STATEMENT OF GENERAL POLICY

The following statement of general policy is set forth to guide both the staff of the DEQ and timber industry representatives in matters pertaining to log handling in public waters:

1. The Environmental Quality Commission and the Department of Environmental Quality acknowledge that transportation and

be employed at all log dumps, raft building areas and millside handling sites in accordance with specifically approved programs.

7. The inventory of logs in public waters for any purpose shall be kept to the lowest practicable number for the shortest practicable time considering market conditions and the quality of the water at the storage site.

8. Upon specific request, the industry shall provide information to the Department relative to log volumes and usage site locations in public waters.

9. All dry land log storage, wood chip, and hog fuel handling and storage facilities located adjacent to waterways shall be designed, constructed and operated to control leachates and prevent the loss of bark, chips, sawdust and other wood debris into the public waters. Plans and specifications must be approved by the Department prior to construction of new or modified facilities. (Additional approvals may be required relative to air quality and noise impacts).

10. Subsequent to adoption of this policy each industry shall be responsible for cleanup and removal of sunken logs, piling, docks, floats and other structures from its log dumping, handling, and storage sites in public waters when use thereof is to be permanently terminated. Discontinuance for a period of five years is prima facie evidence of the permanence of the termination.

DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S. W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696

Permit Number:
Expiration Date: 8/31/82
File Number: 42188

LOG HANDLING FACILITIES PERMIT

Issued pursuant to ORS 468.740

ISSUED TO:

International Paper Company
220 East 42nd Street
New York, New York 10017

LOG DUMP LOCATIONS:

Name	Waterway	River Mile
	Umpqua River	

LOG STORAGE AREAS:

Name	Waterway	River Mile
	Umpqua River	6.0 - 13.0
	Smith River	0.0 - 5.0

PLANT SITE:

Name	Waterway	River Mile
	Umpqua River	8.0

Issued in response to Application Number 2168 received 5/10/77.

WILLIAM H. YOUNG
Director

Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate log handling and storage facilities in public waters in conformance with requirements, limitations and conditions set forth in attached schedules as follows:

This permit does not relieve the permittee from responsibility for compliance with other applicable Federal, state or local laws, rules or standards.

SKETCH, MAP OR DESCRIPTION OF AREAS

State of Oregon
Department of Environmental Quality
PERMIT CONDITIONS

Permit Number: _____
Expiration Date: _____
Page _____ of _____

SCHEDULE A

Special Operating Requirements

1. After November 1, 1978 all logs placed in public waters shall be by means of Department approved easy letdown devices.

SCHEDULE B

Compliance Conditions and Schedules

1. Prior to November 1, 1978, the premittee shall install a Department approved easy letdowr device in accordance with the following schedule:

   a. Submit plans and specifications by December 1, 1977.

   b. Submit construction plans and time schedule by March 1, 1978.

   C. Complete construction by November 1, 1978.

2. Prior to May 1, 1978, the permittee shall initiate a program of positive debris control around each log dump and mill site. Included will be a means for detaining and removing floating debris daily. The following schedule is to be followed:

   a. Submit plans and specifications by August 1, 1977.

   b. Issue purchase orders by October 1, 1977.

   c. Complete installation by May 1, 1978.

SCHEDULE C

Minimum Monitoring and Reporting Requirements

1. The permittee shall report to the Department of Environmental Quality by January 31 of each year this permit is in effect, the following information for the preceding calendar year:

   a. Amount and location of board feet stored in public waters as of January 1, April 1, July 1 and October 1. Maps will be provided for International Paper's use for showing the locations of storage areas.

State of Oregon
Department of Environmental Quality
PERMIT CONDITIONS

Permit Number: _____
Expiration Date: _____
Page _____ of _____

GENERAL CONDITIONS

G1. Whenever an expansion of log handling facilities in or adjacent to public waters beyond those locations designated in this permit is anticipated, a new application must be submitted to the Department. No change shall be made until a new permit or permit modification has been issued.

G2. The permittee shall maintain as low an inventory of logs in public waters as is practical.

G3. No new areas where grounding due to tide changes occurs shall be used for log storage without written approval from the Department.

G4. All log handling activities in or adjacent to Oregon public waters shall be conducted in a manner consistent with the following:

a. All log letdown and debris control devices shall be maintained in good working order and operated so that a minimum of wood debris enters public waters.

b. All dredging spoils and other wood wastes shall be disposed of such that they will not reach any public waters or create nuisance conditions.

G5. No petroleum-base products or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the State.

G6. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where log handling activities in or adjacent to State waters are occurring.

b. To sample any discharge of pollutants.

G7. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall notify the Department of Environmental Quality within one hour. Compliance with this requirement does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

G8. This permit is subject to revocation for cause as provided by law.

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. G, October 21, 1977, EQC Meeting

Clatsop Plains Subsurface Sewage Installation (Unicorporated Areas).

Background

On April 1, 1977, the Environmental Quality Commission adopted Oregon Administrative Rule (OAR) 340-71-020(7), which prohibits issuance of construction permits for new subsurface sewage disposal systems for favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of Clatsop County where there are unconsolidated sands or unconsolidated loamy sands (see attachment A).

1. All areas located south of the Columbia River, west of the Skipanon River (or Skipanon Waterway), and north of the southernmost part of Cullaby Lake.

2. All areas within the Shoreline Estates Sanitary District, and

3. All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one half mile due east of U. S. Highway 101.

In adopting a moratorium, the Environmental Quality Commission attached the following Intergovernmental Directive:

"Should a local unit of government desire to petition to modify or repeal the moratorium for any particular area, the following information would have to be developed by the local unit of government and be submitted to the Department and Commission prior to modification or repeal by the Commission:

A. An identification of the areas that should be protected for present and future development of domestic water supplies;

B. An identification of areas outside of these areas of domestic water supplies, where density indicated by single family unit equivalency will not degrade the groundwater;

C. An identification of those areas presently developed or proposed to be developed to high densities and a description of a program that will prevent further groundwater degradation and eliminate existing groundwater contamination.

It is also recommended that:

Assistance be provided by DEQ staff and State Water Resources staff to local agencies to help implement the above studies.

In addition, the remaining money available from the DEQ-Clatsop County Loan Agreement can be made available to hire a groundwater expert to prepare necessary technical information to be an aid to both the Department and local agencies."

In order to prepare a response to the questions outlined in the Intergovernmental Directive, Clatsop County hired H. Randy Sweet, a consulting geologist/hydrogeologist, with the remaining funds available from the DEQ-Clatsop County Loan Agreement. The scope of work (Professional Service Agreement) was executed on May 19, 1977, and signed by Clatsop County, Mr. Sweet, and the Department of Environmental Quality (see attachment B). On August 20, 1977, the final report entitled "Clatsop Plains Sand-Dune Aquifer Carrying Capacity" was published (see attachment C).

The report recommendations are as follows:

"1. Limit sub-basin septic tank-drainfield densities initially to not more than one per 1.2 acres if the Department of Environmental Quality limit of 5 mg/l NO_3-N is to be met.

2. Reduce densities of drainfields in critical flow paths and other areas where the existing NO_3-N input exceeds levels which would result in more than 5 mg/l.

3. Reserve 1.6 $mi.^2$ of "prime aquifer" for long-term groundwater supply development, preferably in three or more separate areas in order to avoid excessive drawdown through well interference.

4. Monitor groundwater quantity and quality to develop necessary data for the refinement of the calculated aquifer carrying capacity."

NOTES:

1. Regarding 5 mg/l NO_3-N concentration, see H. L. Sawyer's letter dated August 4, 1977 (see attachment D).

2. The report only covered the unincorporated land under Clatsop County jurisdiction and not the areas within incorporated city limits (i.e., Gearhart, Hammond, Warrenton).

Based on Mr. Sweet's recommendations, Clatsop County submitted the following response to the Intergovernmental Directive and requested modification of the present subsurface moratorium rule (see attachment E).

A. Intergovernmental Directive A:

Three prime aquifer areas be reserved for the long-term groundwater supply development. They are Camp Rilea plus county-owned land adjacent to and due north of Camp Rilea; and county-owned land at the west end of the Del Ray Beach Road (parcels 1 and 2 on attachment E). Approximately 2500 acres is contained with these properties and the moratorium would remain in effect.

B. Intergovernmental Directive C:

Five areas (parcels 3 through 7 on attachment E) are areas of "high" density which would continue under the moratorium until such time as the county develops a program to handle the septic tank wastes.

C. Intergovernmental Directive B:

Based upon the 5 mg/l NO_3-N limit approved by the Water Quality Division of DEQ as the maximum allowed level within the dune's aquifer, the county requested that the moratorium be modified to allow a subsurface sewage disposal system for a single family dwelling unit to be installed on parcels with an area of one acre.

Evaluation

Clatsop County's proposed modification to the moratorium rule in the unincorporated areas of Clatsop Plains meets the conditions of the EQC's Intergovernmental Directive. The high density areas have been defined by the County. However, the program for proper handling and management of these areas has not been developed by the County. The County is evaluating their options with the affected public now and will be working closely with DEQ staff to an agreed upon program as quickly as possible.

Clatsop County has also set aside three parcels of land (Camp Rilea and two parcels of county-owned land) of "prime aquifer" for long-term groundwater supply development. Approximately 2500 acres or 3.9 square miles are included within the three parcels, which is greater than the 1.6 square miles recommended by Mr. Sweet's study. It should be noted that not all of the 1800 acres within Camp Rilea's property will be usable due to activities they are committed to and existing development. A sewerage system is now in preliminary design (money already appropriated) with an anticipated construction completion date of the summer of 1978 for the Camp's facilities.

H. R. Sweet's report on the carrying capacity of dune aquifer was a joint effort by Clatsop County, their consultant, and DEQ. Problems surfacing during the development of the recommendation were resolved at that time. Based upon this effort and the allowable 5 mg/l NO_3-N in the groundwater (natural plus man-induced), it was determined that a single family equivalent subsurface sewage disposal system be placed on 52,272 square feet (1.2 acres) of unconsolidated sands or unconsolidated loamy sands.

The 1.2 acre calculation was reviewed and all parties agreed that, from an administrative viewpoint, 1.0 acre was more reasonable. In reviewing the technical aspects of the required land, it should be noted that all assumptions were conservative in nature; average population density was rounded from 2.68 to 3.0 persons; all summer residents were calculated as full time; and road rights-of-way allowed additional lands open adjacent to the lots, so that the 1.0 acre (43,560 sq. ft.) request was considered reasonable.

On October 4, 1977, Clatsop County met with our Director and staff to discuss the draft report (see Agenda, attachment F.). Their concerns were as follows:

1. The density criteria developed in Mr. Sweet's Report is based on considering the entire Clatsop Plains area; however, the criteria used will be applied on consideration of each individual sub-basin. They would like to see more flexibility at the sub-basin level, but still maintain the overall Clatsop Plains basin density of one (1) dwelling unit per acre.

2. They did agree with the size limitation change from 1.2 to 1.0 acre per single family dwelling unit.

3. Clatsop County would like the 1.0 acre figure to be considered as the gross figure, which in some cases could include ownership of property to the centerline of public and county roads. They also want consideration to be given to defining one (1) acre as 40,000 sq. ft. (or 0.92 acres) due to the convenient development of one (1) acre lots from multiples of commonly sold lot sizes of 100' x 100', 100' x 200', etc. They felt this approach is justified when reviewing the conservative approach and safety factors used to develop the one (1) acre density criteria.

4. The County would like consideration given to development of the 192 pre-existing lots of less than one (1) acre in the proposed areas to be removed from the moratorium. The size breakdown was given as follows:

Size (acre)	Number of lots
3/4 - 1	10
1/2 - 3/4	28
1/4 - 1/2	42
less than 1/4	112
Total	192

We told the County to identify the location of these lots and present their concerns at the Public Hearing.

5. The County wanted an interpretation of Subsection (b)(C) of the proposed Amendment to OAR 340-71-020 (7). We interpreted this section to allow for the construction of a planned unit development (PUD), assuming that a single family dwelling unit per acre density was maintained within the proposed development.

The report, as previously indicated, does not address the land within incorporated city limits. Due to its jurisdiction responsibility, Clatsop County could only review those areas under their control. In addition, there are approximately 200 lots (from computer printout) presently existing in that area where the moratorium is proposed to be modified which do not have 1 acre to install a subsurface sewage disposal system.

Fort Stevens State Park, located in the northwest corner of Clatsop Plains, recently notified the Department that they will request legislative funds in 1979-81 fiscal period to construct the internal sewer system for the Park facilities and connect to the Hammond-Warrenton sewerage facilities. This time frame is necessary since the trunk line from Hammond will not be completed until the summer of 1979.

Summation:

1. Until a program is developed in accordance with the April 1 EQC Intergovernmental Directive, the subsurface sewage moratorium should not be altered or released on the following:

   a. City of Gearhart.

   b. City of Hammond (under Consent Order).

   c. City of Warrenton.

   d. Fort Stevens State Park. (Sewers to be installed - legislative approval needed).

   e. Five noted high density parcels (Smith Lake, Glenwood Mobile Home Park, Sunset Beach Area, Hwy 101 North and adjacent to Gearhart, condominium area northwest and adjacent to Gearhart, and the county land between Seaside and Gearhart (see attachment E for description).

2. The subsurface sewage moratorium needs to be continued on the three "prime aquifer" areas described by the County to be reserved for long-term groundwater supply development (Camp Rilea, county land adjacent to and north of Camp Rilea, county land at west end of Del Ray Beach Road (see attachment).

3. The 1.0 acre (43,560 sq. ft.) parcel size to handle the subsurface sewage from a single family unit equivalent density will not cause degradation of groundwater or surface water quality in accordance with the 5 mg/l NO_3-N condition set forth in the Department's letter of August 4, 1977.

4. The comprehensive plan needs to recognize the existence of parcels of land which do not meet the 1.0 acre size to handle a subsurface sewage disposal system. By using the data provided in Mr. Sweet's report, the County should be able to develop land use schemes which will allow these people a chance in the future to use a subsurface sewage disposal system.

Director's Recommendation:

1. Subsurface sewage moratorium should not be altered or lifted at this time on:

   a. City of Gearhart.

   b. City of Hammond.

   c. City of Warrenton.

   d. Fort Stevens State Park.

   e. Five existing high density areas outlined in the County's letter dated August 31, 1977 (see attachment E).

   f. Three "prime aquifer" areas outlined in the County's letter dated August 31, 1977 (see attachment E).

2. The subsurface sewage moratorium in the remaining areas should be modified to allow a single family unit equivalent density subsurface sewage disposal system for 43,560 sq. ft. (1 acre) (see attached proposed rule OAR 340-71-020(7).

3. The parcels of land within the area proposed for the moratorium modification (see 2 above) which do not have 43,560 sq. ft. to accommodate a subsurface sewage disposal system will have to be considered in the Clatsop County Comprehensive Land Use Plan as they relate to adjacent lands and sub-basin developed by Mr. Sweet. Once adopted and the County gives assurance to the Department that the 5 mg/l NO_3-N will not be exceeded, the moratorium should then be reevaluated.

Bill

WILLIAM H. YOUNG

Murray Tilson:bw
229-5372
October 11, 1977

Attachments:

A. OAR 340-71-020(7) (Proposed).
B. Professional Service Agreement.
C. Clatsop Plains Sand-Dune Aquifer Carrying Capacity, by H. R. Sweet.
D. H. L. Sawyer's letter dated August 4, 1977.
E. Clatsop County's letter and map dated August 31, 1977
F. Clatsop County Memo to Director, dated October 4, 1977.

Attachment A

9/__/77

PROPOSED AMENDMENT TO OAR 340-71-020(7)

(a) Pursuant to ORS 454.685, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of Clatsop County [~~where there are unconsolidated sands or unconsolidated loamy sands~~]:

(A) [~~All areas located south of the Columbia River, west of the Skipanon River (or Skipanon Waterway), and north of the southernmost part of Cullaby Lake,~~] That area bounded on the South by the North line at that certain right-of-way reserved by Frank L. Hurlburt, et al, in a deed to Charles V. Brown as recorded in Book 65, Page 527, Clatsop County Record of Deeds; Bounded on the West by the high tide line of the Pacific Ocean; Bounded on the North and East by a line extending from the Pacific Ocean Easterly to the Southwest corner of that certain tract conveyed to the State of Oregon as recorded in Book 230, Page 485, Clatsop County Record of Deeds;
thence Easterly and Southerly along the South line of said tract to the Southeast corner thereof;
thence running Easterly to the Westerly right-of-way line of the Fort Stevens - Camp Clatsop Highway, commonly referred to as "Ridge Road," said point being the Easterly terminus of the North boundary of tract herein described;
thence Southerly along the Westerly right-of-way line of said Ridge Road to its intersection with the South line of the Hobson D.L.C.;

thence West along the South line of said Hobson D.L.C. to the Northwest corner of that certain tract conveyed to Stanley I. and Elvira M. Guild as recorded in Book 260, Page 161, Clatsop County Record of Deeds;

thence Southerly along the West boundary line of the said Guild tract and the extension thereof to the South right-of-way line of County Road #34, commonly known as DeLaura Beach Road;

thence East along the Southerly right-of-way line of said County Road a distance of 2275' more or less to the Easterly right-of-way line of Clark Boulevard as platted in DeLaura Subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian;

thence Southeasterly along the Easterly right-of-way line of said Clark Boulevard to its intersection with the East bank of the West branch of Neacoxie Creek;

thence Southerly along the East bank of the said West branch of Neacoxie Creek to an intersection with the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian;

thence East along the South line of said Neacoxie Subdivision to the Westerly right-of-way line of aforesaid Ridge Road;

thence South and East along the Westerly right-of-way line of said Ridge Road to its intersection with the West bank of the East branch of Neacoxie Creek;

thence Southerly along the West bank of the East branch of said Neacoxie Creek to the Northeast corner of that certain tract conveyed to Ben D. and Muriel Hayes by deed recorded in Book 213, Page 446, Clatsop County Record of Deeds;

thence West along the North line of said Hayes property to the Northwest corner thereof;

thence Southeasterly along the Westerly line of the said Hayes property to the Southwest corner thereof, said point being the Northwest corner of property conveyed to Donald R. and Heler A. Falleur by deed recorded in Book 364, Page 282-83, Clatsop County Record of Deeds;

thence continuing Southeasterly along the Westerly line of said Falluer property to the North Boundary line of the Platted Ivyloo Subdivision in Section 9, Township 7 North, Range 10 West, Willamette Meridian;

thence West along the North line of said Ivyloo Subdivision to the Northwest corner thereof;

thence South 13° 32' East along the Westerly line of said Ivyloo Subdivision and the extension thereof to the North line of that certain right-of-way reserved by Frank L. Hurlburt as aforesaid.

(B) ~~[All areas within the Shoreline Estates Sanitary District]~~; and

The Del Rey Beach Subdivision located in Section 33, Township 7 North, Range 10 West, Willamette Meridian, as shown on Plate 7-10-33A, Clatsop County, Oregon.

(C) ~~[All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one half mile due east of U. S. Highway 101.]~~

That area beginning at the intersection of Clark Boulevard with County Road #34 in DeLaura Beach Subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian, Clatosp County, State of Oregon;

thence Southerly along the center line of Clark Boulevard to the South right-of-way line of College Avenue;

thence West along the South right-of-way line of said College Avenue to the East bank of the West branch of Neacoxie Creek;

thence Southerly along the East bank of said creek to the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian;

thence East along the South line of said Neacoxie Subdivision and the extension thereof to the West line of Ridge Road;

thence Southerly along the West line of said Ridge Road and East along the Southerly right-of-way line of Columbia Beach Road to its intersection with the East right-of-way line of Oregon Coast Highway 101;

thence South along the East right-of-way line of said Hwy 101 to its intersection with the North right-of-way line of Perkins Road;

thence East along the North right-of-way line of said Perkins Road to its intersection with the West right-of-way line of Rodney Acres Road;

thence Northerly along the West line of Rodney Acres Road to the center line of Skipanon Creek;

thence Northwesterly along the needle of Skipanon Creek to the South line of Warrenton City limits;

thence following the Warrenton City limits boundary in a Northwesterly direction to the point of beginning.

(D) That area beginning at a point where the North line of that certain tract conveyed to Michael Palmer by deed recorded in Book 400, Page 576-587, Clatsop County Record of Deeds, intersects the East right-of-way line of the Burlington Northern Railroad in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence East along the North line of the said Palmer tract to the Northeast corner thereof;

thence South along the East boundary of said tract to the Southeast corner thereof;

thence West along the South boundary of said tract to its intersection with the East line of the Burlington Northern Railroad right-of-way as aforesaid;

thence North along the East line of said right-of-way to the point of beginning.

Said parcel being located in Sections 9 and 10, Township 7 North, Range 10 West, Willamette Meridian.

(E) That area beginning at the Southwest corner of Ivyloo Acres Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence South 13° 32' East a distance of 370' more or less to the North line of that certain right-of-way reserved by Frank L. Hurlburt in his conveyance to Charles V. Brown as recorded in Book 65, Page 527, said point being the true point of beginning of parcel herein described;

thence continuing South 13° 32' East a distance of ' more or less to its intersection with the South line of the John Hobson D.L.C.;

thence West along the South line of said Hobson D.L.C. to the East bank of Neacoxie Creek;

thence Southerly along the East bank of said Neacoxie Creek to the South right-of-way line of Sunset Beach Road;

thence East along the Southerly right-of-way line of said Sunset Beach Road to the Northeast corner of Sunset Terrace Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian;

thence Southeasterly along the Easterly line of said Sunset Terrace and its extension thereof to the North line of Loch Haven Highlands Subdivision as platted in Section 16, Township 7 North, Range 10 West, Willamette Meridian;

thence East along the North line of said Loch Haven Highlands Subdivision to the Northeast corner thereof;

thence Southeasterly to the Southeast corner thereof;

thence following the Loch Haven Highlands Subdivision boundaries as platted Westerly, Southerly, Southwesterly, and Westerly to where the South line of Loch Haven Highlands Subdivision intersects the East bank of Neacoxie Lake;

thence Southerly along the East bank of said Neacoxie Lake to a point East of the Southeast corner of that certain tract conveyed to Anthony M. and Alberta M. Stramiello by deed recorded in Book 333, Page 523;

thence West to the Southeast corner of said Stramiello tract;

thence West along the South line of said tract and the extension thereof a distance of 718.8' to a point;

thence South 389.7' to a point;

thence West 400' to a point;

thence North 00° 02' West to the Northwest corner of D.L.C. #42, said point being in the South line of the Sunset Beach Subdivision, as platted in Section 9, Township 7 North,

thence West along the South line of said subdivision to the Westerly right-of-way line of Columbia Boulevard in said subdivision;

thence Northerly along the Westerly right-of-way line of said Columbia Boulevard to the North line of said Sunset Beach Subdivision;

thence West along the North line of said subdivision to the Pacific Ocean;

thence North along the Pacific Ocean to its intersection with the North line of that certain right-of-way reserved by Frank L. Hurlburt as aforesaid;

thence East along the North line of said right-of-way to the point of beginning.

Excepting therefrom, however, the following described parcel. Beginning at the Southwest corner of Ivyloo Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian; thence South 19° 32' East a distance of 375' more or less to the Northerly line of that certain 60'

strip reserved as a right-of-way by Frank L. Hurlburt in his conveyance to Charles V. Brown and recorded in Book 65, Page 527 Clatsop County Record of Deeds; said point being the true point of beginning of tract herein described; thence West along the North line of said right-of-way to the Pacific Ocean; thence Southerly along the high tide line of the Pacific Ocean to an intersection with the South boundary line of the John Hobson D.L.C. extended; thence East along the South boundary line of the said Hobson D.L.C. to a point 339.1' East of the East bank of Neacoxie Lake; thence North 19° 32' West a distance of 1290' more or less to the point of beginning.

(F) That area bounded on the North by the North line of the Gearhart Donation Land Claim; bounded on the East by Burlington Northern Railroad; bounded on the South by the North boundary of the Gearhart City Limits; bounded on the West by the Pacific Ocean.

Excepting therefrom, however, the following described parcel. Beginning at the intersection of the North line of the Gearhart City Limits with the Westerly right-of-way line of Marion Avenue; thence North and East along the said Westerly right-of-Way to its intersection with the East boundary of the platted Gearhart Green Subdivision; thence North along the East line of said subdivision and the extension thereof to the North boundary of the Gearhart Donation Land Claim; thence East along the North line of said Donation Land Claim to the center line of Neacoxie Creek; thence Southerly along the needle of said

creek to the North line of the Gearhart City Limits; thence West along the North line of said City Limits to the point of beginning. All above described property being in Sections 3 and 4, Township 6 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon.

(G) That area bounded on the West and North by the South boundary of the Gearhart City Limits; on the East by Burlington Northern Railroad and on the South by Seaside City Limits.

(H) The Cities of Gearhart, Hammond, and Warrenton.

(I) Fort Stevens State Park.

(b) Pursuant to ORS 454.685, within the areas set forth in subsection (c) below, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability, except to construct systems to be used under the following circumstances:

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

(B) The system is not to be installed within any of the areas subject to the prohibition set forth in subsection (a) above.

(C) The system is to be installed in an undivided parcel of one acre or more in size upon which the dwelling or building to be served is located and which is owned fully or fully subject to a contract of purchase by the same person or persons who own or are contract purchasers of the dwelling to be served by the system.

(D) The dwelling to be served is a single family dwelling, or a building whose required waste disposal capacity is not more than a single family dwelling.

(c) The minimum parcel size requirement of subsection (b) above shall apply to all of the following areas [which are not subject to the complete prohibition set forth in subsection (a) above] of Clatsop County where there are unconsolidated loamy sands:

(A) All areas located south of the Columbia River, west of the Skipanon River (or Skipanon Waterway), and north of the southernmost part of Cullaby Lake,

(B) All areas within the Shoreline Estates Sanitary District, and

(C) All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one-half mile due east of U. S. Highway 101.

[(b)](d) The restriction set forth in [subparagraph] subsection [(A)] (a) above is subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems in accordance with single family unit equivalent densities specified in the local land use plan for the area will not cause degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal.

[(c)] (e) The restrictions set forth in [subparagraph] subsections [(A)] (a), (b) and (c) above shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Director or his authorized representative pursuant to ORS 454.755 (1)(b) where such report was issued prior to the effective date of this subsection (7).

PROFESSIONAL SERVICE AGREEMENT

THIS AGREEMENT made and entered into this 19th day of May, 1977 by and between Clatsop County acting herein by and through its Chairman Albert W. Palmer who is duly authorized to act in behalf of the Board of County Commissioners of Clatsop County, Oregon hereinafter called "County", and Mr. H. Randy Sweet Consulting Geologist/Hydrogeologist of 601 Royal Street, Kelso, Washington 98626, hereinafter called "Consultant". This Agreement is approved by the Oregon Department of Environmental Quality, acting through its duly qualified representative, for the purpose of providing "reasonable evidence" as contemplated in Rule OAR 340-71-020(7), attached hereto as Exhibit "A" and by this reference incorporated herein, and adopted by the Environmental Quality Commission of the State of Oregon on April 1, 1977. The purpose of said review by said Commission and the Department of Environmental Quality hereinafter referred to as "Agencies" is for their consideration of "modification or repeal on an area by area basis" of said Rule based upon the Consultant's report and interpretation and evaluation thereof by said Agencies.

W I T N E S S E T H :

RECITALS:

1. The unincorporated areas of Clatsop Plains, Clatsop County, Oregon as described in Exhibit "A" became subject to a moratorium pursuant to the terms of the Environmental Quality Commission Administrative Rule attached hereto as Exhibit "A".
2. Agencies provided as set forth in Exhibit "B" attached hereto, for the potential modification or repeal of said moratorium on an area by area basis after they have been provided with "reasonable evidence"

by County that substantiates that development using subsurface sewage disposal systems in accordance with single family unit equivalent density on specified minimum lot sizes will not cause unacceptable degradation of ground water quality or surface water quality, nor that unacceptable degradation of ground water or surface water quality will occur as a result of such modification or repeal.

3. Agencies shall provide specific water quality standards for evaluation of whether the development will provide unacceptable levels of degradation of ground water or surface water quality.
4. Consultant is qualified to provide the type of "acceptable evidence" upon which Agencies may make their evaluation to determine whether modification or repeal of said moratorium on an area by area basis will or will not result in a level of degradation of the ground water or surface water quality as specified in the standards of the Agency hereinabove referred to.
5. County desires to employ Consultant for consideration hereinafter set forth to furnish consulting services for County's purposes of compliance with Exhibit "B" to the extent of providing the "reasonable technical evidence" that is sufficient for Agencies to make their evaluation of whether to modify or repeal the moratorium on an area by area basis and Consultant is agreeable to provide such geological and hydrogeological consulting services to the County for use by Agencies as specified by said Exhibit "B".
6. Exhibit "B" designates County as responsible for providing such "reasonable technical evidence" to Agencies for the purposes of modification or repeal of the moratorium for the unincorporated areas of Clatsop County subject to the moratorium described in Exhibit "A".

NOW, THEREFORE, THE PREMISES BEING IN GENERAL AS STATED IN THE FOREGOING RECITALS, IT IS AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

THINGS TO BE DONE BY CONSULTANT:

7. Coordinate and organize the gathering of available base data, including, but not limited to existing geological data, hydrogeological data, hydrogeochemical data and other relevant data.
8. Analyze the data base and develop a flow system analysis, water balance and distribution of natural as well as induced nutrient sources (primarily nitrate-nitrogen).
9. Consult with Department of Environmental Quality for determination of acceptable degradation levels. After receiving said determination by DEQ, Consultant shall complete the rest of the study described below.
10. Develop loading rates for individual systems and other existing or potential nitrate sources in the study area. Such determination to be made in conjunction with the County, Agencies and the Water Resources Division of the State of Oregon.
11. Define a suitable area to be maintained for long term protection and potential development of ground water resources.
12. Determine acceptable carrying capacity of Clatsop Plains sand dune aquifer outside of the area to be protected, and determine acceptable loading by subsurface septic tank effluent, and distribute the acceptable loading density.
13. Provide a written report describing methodology and final analysis of the above information for presentation to the Agencies in a form and with content acceptable to the Department of Environmental Quality and the Environmental Quality Commission for the review contemplated in Exhibit "B".

14. All of the above is further and more particularly described in the detailed work plan attached hereto as Exhibit "C" which is by this reference incorporated herein.

THINGS TO BE DONE BY COUNTY:

15. County approves the recitals herein, things to be done by Consultant, things to be done by Agencies, the general provisions and agrees to provide cooperation and assistance in all matters.

16. County shall provide backup clerical, cartographic and planner assistance to Consultant to the extent such services are required and on a reasonable basis.

17. County will provide Consultant with any and all County resource data and update County information where necessary.

THINGS TO BE DONE BY AGENCIES:

18. Agencies approve the recitals herein, things to be done by Consultant, things to be done by County, the general provisions and agree to provide timely cooperation and assistance in all matters.

19. Agencies shall review the work of Consultant at each stage and inform County of its acceptability for purposes of Agencies' review contemplated in Exhibit "B".

20. Agencies shall make the Department of Environmental Quality staff members, and specifically Mr. Messer, Dr. Paeth and Water Resource Department personnel, available as required and on a reasonable basis.

21. Upon completion of Section I, Exhibit "C" by Consultant, Agencies shall review the information and indicate any further information necessary and after compliance therewith by Consultant, make a determination of an acceptable degradation level to be utilized by Consultant in completing his obligations as set forth herein.

22. Upon completion of Section II, Exhibit "C", the County and the Agencies will review Consultant's information and make any necessary revisions and Agencies' input, e.g. study area boundary and acceptable levels of degradation of water quality.

23. Agencies shall review the complete report of Consultant as outlined at Section III, Exhibit "C" and make a determination of whether to release certain specified unincorporated areas in accordance with paragraph (B) of Exhibit "A".

24. After receipt of final report by Consultant, Agencies will notify County of the acceptability of said report so that County may release the retained portion of the Consultant's fees.

GENERAL PROVISIONS:

25. Agencies shall release the balance of the retainage of the original $125,000 loan made to Clatsop County and the municipalities therein for purposes of the Clatsop Plains Sewer Study for the purpose of obtaining Consultant's services to provide an analysis of the effect of subsurface sewage disposal systems upon the ground water quality and surface water quality within the unincorporated areas of Clatsop County subject to the moratorium set forth in Exhibit "A".

26. County through use of funds described in paragraph 25 above shall compensate Consultant at the rate of $30 per hour plus cost for direct expenses including materials, travel at 15¢ per mile, room and board away from station, long distance phone, copying, direct costs incurred in preparation of the reports, and other related costs.

27. County shall pay Consultant on the basis of a monthly billing by Consultant. The billing shall be segregated between Consultant's fees at the rate of $30 per hour and the other related expenses. County shall retain 10% of the Consultant's fees and the other

expenses shall be paid on a 100% basis at the time of billing. The retainage shall be paid upon approval by DEQ as hereinabove specified upon acceptance of the final report of Consultant.

28. Cost of Consulting Services for initial study shall not exceed $10,000.

29. Consultant shall do a follow up analysis as outlined at Section IV of Exhibit "C" during October, 1977 to update said report by analyzing the new data after one tourist season. Such Consulting Services costs shall not exceed $2,000 and shall be paid on the same basis set forth hereinabove.

30. The acceptable loading levels which will release the moratorium described hereinabove must be determined and agreed to by County, DEQ, and Water Resources Division of the State of Oregon.

31. The areas to be subject to this Agreement includes the unincorporated areas of the County subject to the moratorium described in Exhibit "A".

IN WITNESS WHEREOF, the parties hereto have set their hands and affix their seals.

DATED this 18th day of May, 1977 at Astoria, Oregon.

BOARD OF COUNTY COMMISSIONERS
FOR CLATSOP COUNTY, OREGON

BY Albert W. Palmer
Albert W. Palmer, Chairman

APPROVED AS TO FORM:

BY Orvo A. Nikula
Orvo A. Nikula, Commissioner

W. Louis Larson
Clatsop County Counsel

BY Don O. Corkill
Don O. Corkill, Commissioner

DATED this 19th day of May, 1977 at Astoria, Oregon.

H. Randy Sweet

H. Randy Sweet
Consulting Geologist/Hydrogeologist

APPROVED this 25 day of May, 1977 at Portland, Oregon.

OREGON DEPARTMENT OF
ENVIRONMENTAL QUALITY

BY William H. Young
Director

EQC Rule OAR 340-71-020(7)

(A) Pursuant to ORS 454.685, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems for favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of Clatsop County where there are unconsolidated sands or unconsolidated loamy sands:

(1) All areas located south of the Columbia River, west of the Skipannon River (or Skipannon Waterway), and north of the southernmost part of Cullaby Lake,
(2) All areas within the Shoreline Estates Sanitary District, and
(3) All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one half mile due east of U. S. Highway 101.

(B) The restriction set forth in Subparagraph (A) above is subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems in accordance with single family unit equivalent densities specified in the local land use plan for the area will not cause degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal.

(C) The restriction set forth in Subparagraph (A) above shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Director or his authorized representative pursuant to ORS 454.755 (1)(b) where such report was issued prior to the effective date of this Subsection (7).

EXHIBIT "B"

Intergovernmental Directive

Should a local unit of government desire to petition to modify or repeal the moratorium for any particular area, the following information would have to be developed by the local unit of government and be submitted to the Department and Commission prior to modification or repeal by the Commission:

A. An identification of the areas that should be protected for present and future development of domestic water supplies;

B. An identification of areas outside of these areas of domestic water supplies, where density indicated by single family unit equivalancy will not degrade the groundwater;

C. An identification of those areas presently developed or proposed to be developed to high densities and a description of a program that will prevent further groundwater degradation and eliminate existing groundwater contamination;

It is also recommended that:

Assistance be provided by DEQ staff and State Water Resources staff to local agencies to help implement the above studies.

In addition, the remaining money available from the DEQ-Clatsop County loan agreement can be made available to hire a groundwater expert to prepare necessary technical information to be an aid to both the Department and local agencies.

EXHIBIT "C"

DETAILED WORK OUTLINE

CLATSOP PLAINS

I. Coordinate Data Gathering

A. Clatsop County

1. Historical, present and projected development and growth.
2. County Comprehensive Plan.
3. County Master Sewerage Plan.
4. Present and projected water supply.
5. Soils map.
6. Base map for investigation.

B. Hydrogeology

1. U.S.G.S. Water Supply Paper.
2. North Coast Basin Report (O.W.R.D.)
3. File information (O.W.R.D.)

C. Ground-water Quality

1. U.S.G.S. data.
2. O.W.R.D. files.
3. O.S.H.D. water supply files.
4. D.E.Q. monitoring.
5. Other.

D. Nutrient Sources (primarily nitrate-nitrogen)

1. Clatsop County vegetation map.
2. Development patterns (County Planning office)
3. Loading per unit area (with D.E.Q. & O.W.R.D.)

II. Quantify Parameters

A. Finalize Study Boundary

B. Perform Water Balance

1. Precipitation.
2. Infiltration.
3. Runoff.
4. Gound-water underflow.
5. Evapotranspiration.

C. Develop Ground-water Flow Net.

D. Outline Nutrient Source Areas

1. Natural and background.
2. Induced, e.g. fertilizer and septic disposal.
3. Distribute throughout area.

E. Determine Long-term Needs for Ground-water Supply

F. Determine acceptable Ground-water Nutrient Concentrations (D.E.Q.)

III. Make Specific Recommendations

A. Reserve Area for Ground-water Development

1. Well field size.
2. Well spacing.

B. Development Density

1. Residential density with onsite disposal.
2. Other disposal and nutrient sources.

IV Follow up

A. Review new data.

B. Make pertinent recommendations.

Attachment C

CARRYING CAPACITY OF THE CLATSOP PLAINS SAND-DUNE AQUIFER

A report to: CLATSOP COUNTY COMMISSION and

OREGON ENVIRONMENTAL QUALITY COMMISSION

August 20, 1977

by: H. Randy Sweet
Geologist/Hydrogeologist
in cooperation with
Clatsop County Department of Planning and Development
Oregon Department of Environmental Quality

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APPENDICES

SUMMARY

The Clatsop Plains are underlain by windblown sands with a high hydraulic conductivity. The relatively young dune-sand has a shallow soil profile and readily accepts and transmits infiltrating water.

Waste water, e.g. septic tank-drainfield effluent, is easily disposed of but is not adequately treated for all contaminants in this medium. Nitrate-Nitrogen (NO_3-N) is introduced into the dune sand by both natural, e.g. vegetative, and induced, e.g. drainfield effluent, sources. Nitrate-nitrogen (NO_3-N) is attenuated primarily through dilution in the sand-dune aquifer.

NO_3-N concentrations in drinking water in excess of 10 mg/l reportedly pose a threat to public health. High density residential development which is dependent upon septic tank-drainfield disposal systems will result in excessive NO_3-N concentrations.

Frank (1970) has demonstrated the potential for ground-water development in the Clatsop Plains. An aquifer reserve area of 1.6 mi.^{2} will provide over 4,000 acre-ft/yr or sufficient water to supply over 14,000 people, the maximum projected population of the area in the year 2000.

Direct measurement or monitoring of ground-water for quantity and quality is needed to refine existing data and theoretical extrapolations. This monitoring has begun and will be carried on for at least one year.

RECOMMENDATIONS

1. Limit sub-basin septic tank-drainfield densities initially to not more than one per 1.2 acres if the Department of Environmental Quality limit of 5 mg/l NO_3-N is to be met.

2. Reduce densities of drainfields in critical flow paths and other areas where the existing NO_3-N input exceeds levels which would result in more than 5 mg/l.

3. Reserve 1.6 mi.^{2} of "prime aquifer" for long-term ground-water supply development, preferably in three or more separate areas in order to avoid excessive drawdown through well interference.

4. Monitor ground-water quantity and quality to develop necessary data for the refinement of the calculated aquifer carrying capacity.

INTRODUCTION

Location

Clatsop Plains is located in Northwest Oregon in Western Clatsop County and is bounded by the Columbia River to the north, Pacific Ocean to the West, Neawanna Creek and Seaside to the south, Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, see Figure 1. The study area includes about 23 square miles and concentrates on the 14 square miles which are unincorporated.

Background

The U. S. Geological Survey Water Supply Paper 1899-A (1970) identified a large area with substantial amounts of developable ground water in the Clatsop Plains. Due in part to the findings of that study and the prospect of high density development utilizing septic tanks which would contaminate the ground water, a partial moratorium on the installation of septic tanks was placed on the Clatsop Plains in 1970 by the Oregon Environmental Quality Commission. The moratorium did allow some new housing on existing developed subdivisions and tax lots.

Between 1969 and 1976 the Oregon Department of Environmental Quality (DEQ) conducted water quality surveys of the ground water (wells) and selected surface water (lakes and streams) in the Clatsop Plains. The survey data showed few wells were in excess of the U. S. Public Health Service drinking water allowable maximum concentration of 10 mg/l nitrate-nitrogen (NO_3-N), but that there is a trend toward increased NO_3-N as housing densities, dependent upon septic tank-drainfield disposal systems, increased.

From this data DEQ concluded that the trend of ground-water degradation (and potential surface water effects) could only become more acute with increased and/or continued construction of new housing in subdivisions of urban densities with conventional on-site disposal systems. Therefore, on April 1, 1977, the Oregon Environmental Quality Commission passed a resolution which prohibited any development utilizing septic tanks in the Clatsop Plains area. (see Appendix A). An "Intergovernmental Directive" (Appendix B) was also issued which called for "Modification or repeal on an area by area basis" of OAR 340-71-020(7). This directive called for petition by the appropriate local agency or agencies with the support of reasonable evidence in order to repeal the moratorium for any particular areas. A DEQ letter (Appendix B) has set the "planning goal" for NO_3-N concentrations at 5 mg/l.

CLATSOP PLAINS LOCATION

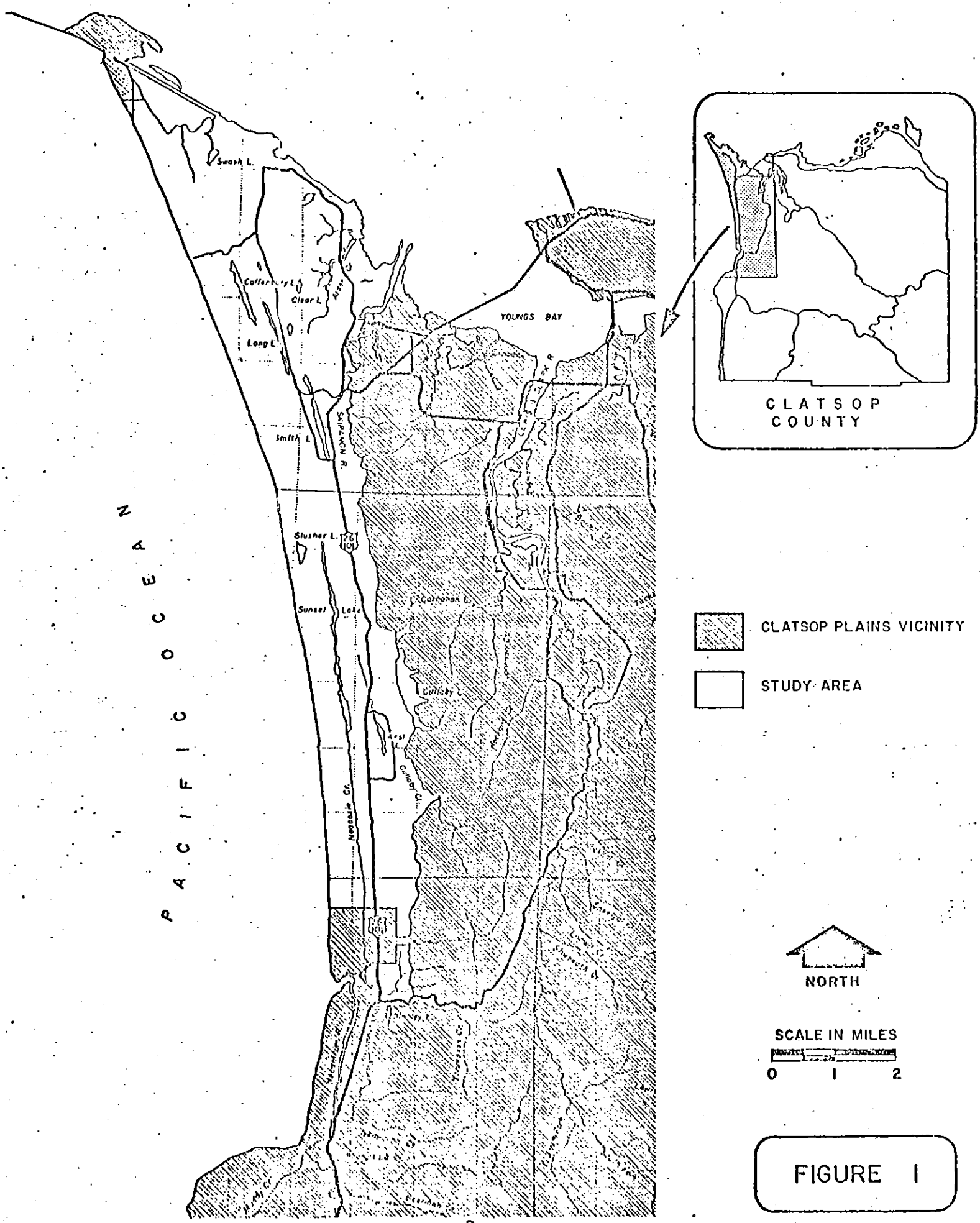


FIGURE 1

Purpose

The Environmental Quality Commission resolution was due in part to the potential degradation of ground and surface waters in the Clatsop Plains as high density development and attendant on-site waste disposal systems evolve. The primary purposes of this report are to delineate:

1) long-term ground-water supply reserve needs and area(s);

2) on-site disposal densities in specific areas which will not cause "unacceptable degradation" of ground and/or surface waters; and

3) outline the methodology and final analysis for presentation to the Environmental Quality Commission.

Other work will include assistance in the establishment of a ground-water quality monitoring program and follow-up interpretation of sampling data, as outlined in a contract between the consultant, Clatsop County and the Oregon Department of Environmental Quality, dated May 19, 1977.

Acknowledgements

This study was carried out under a contract between the Clatsop County Commission, Department of Environmental Quality and the principal author. The cooperation of Clatsop County and the Department of Environmental Quality staff were invaluable in its preparation. Special thanks are extended to Russ Fetrow of the Department of Environmental Quality, Salem Regional Office, for his cooperation; Bob Paeth, Soil Scientist of the Department of Environmental Quality, Portland Office, for his necessary assistance in the development of soils information as well as the vegetative dry matter data; Curt Schneider, Clatsop County Planning Director and his staff; and especially Walt Lindstrom, Cartographer, for data development and graphics production. J. Frank of the U. S. Geological Survey provided information, insight, and comments in the office and in the field on his Water-Supply Paper data for the area. Don Leach of the Soil Conservation Service at Astoria provided valuable information concerning drainage in the area as well as review and comment.

Walt Lindstrom, Cartographer, is again recognized for graphics production as is Carol Rutherford for the preparation of the manuscript.

HYDROGEOLOGY

Geology

The geology of the Clatsop Plains area has been described by many authors including Wells and Peck (1961), Warren et. al. (1945), Beaulieu (1971) and more recently Schlicker et. al. (1972). However, the most comprehensive description and primary source for this report is Frank's (1970) U. S. Geological Survey Water-Supply Paper 1899-A.

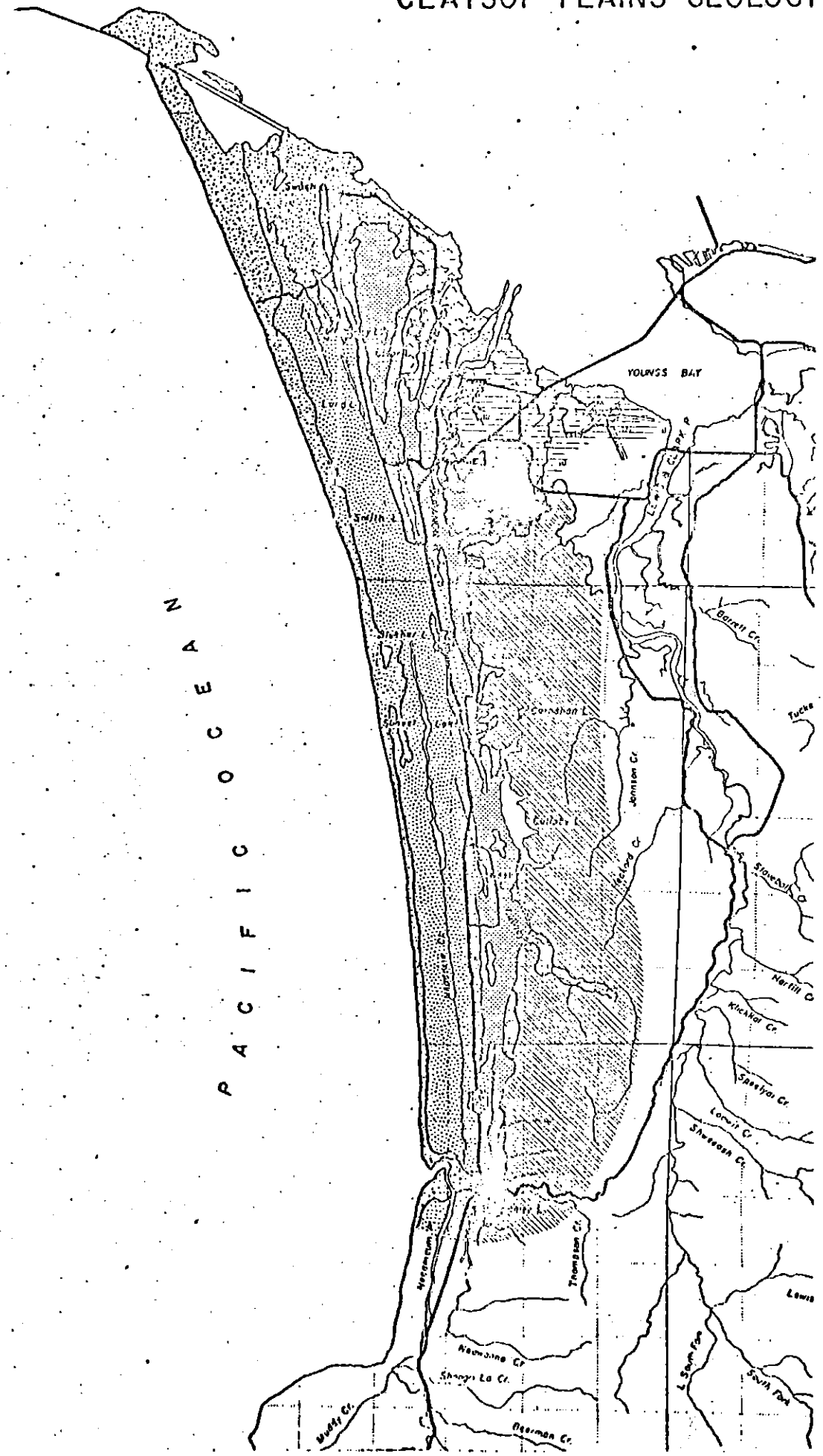
Bedrock in the Clatsop Plains area is the Astoria Formation. This unit is Oligocene to late Miocene in age and includes sandstone and silty shale, massive to cross-bedded, with general gentle westerly dips and extensive faulting, as well as local intrusions (Beaulieu, 1971). Frank (1970) states that the unit is "fine grained, tightly compacted, and relatively impermeable". It is the bedrock unit in the hills to the east of the Clatsop Plains and also underlies the sand-dune area at a depth of 125 to over 400 feet, see figures 2 and 3.

The area of primary interest in this report is immediately underlain by the sand-dunes and associated coastal wetland deposits which make up the Clatsop Plains. Cooper (1958) has described the evolution of the Clatsop dunes. Schlicker et. al. (1972) has summarized Cooper's work by stating that the dunes "basic pattern has been towards the development of a smooth arcuate coastline as the large quantities of sand (delivered by the Columbia River) are distributed in a balanced response to both north-flowing winter currents and the south-flowing summer currents. As sand (fine and medium grained quartz with lesser feldspar, magnetite, mica, and undetermined rock fragments) continues to be delivered to the area, the beach continues to grow seaward over the shallow shelf.

During pauses in progradation (seaward advance of the shoreline), submarine sand bars grow in size to emerge as new beach areas. Beach ridges are developed as sand is piled up immediately inland from the beach proper by storm waves and by entrapment of blown sand by dune grass. Formed in this way, the beach ridges are left behind as parallel rows of stabilized dunes as the beach migrates seaward. The persistence and lateral uniformity of the beach ridges are attributable to the smooth, arcuate shape of the parent sand bars and beach lines from which they are derived."

Wetlands, peat and organic soils, are located in some interdune and inland dune areas, e.g. near the foothill-dune contact. The peat and organic soils form where the water table is at or near the surface throughout most of the year. In some areas windblown and fluvial silts and sands cover the peat and/or organic soils. Evidence of these buried deposits has been logged in some drilled water wells (Frank, 1970). The elevation of the dunes and wetlands ranges from sea level to about 80 feet above sea level with thicknesses ranging up to more than 150 feet. Local relief in dune/interdune areas is as much as 60 feet.

CLATSOP PLAINS GEOLOGY



KEY

- PEAT
- SILTY CLAY
- BEACH SAND
- STABLE DUNES
- TERRACE SILTY CLAY
- TIDAL FLAT
- ASTORIA FORMATION

after Schlicker et. al., 1972

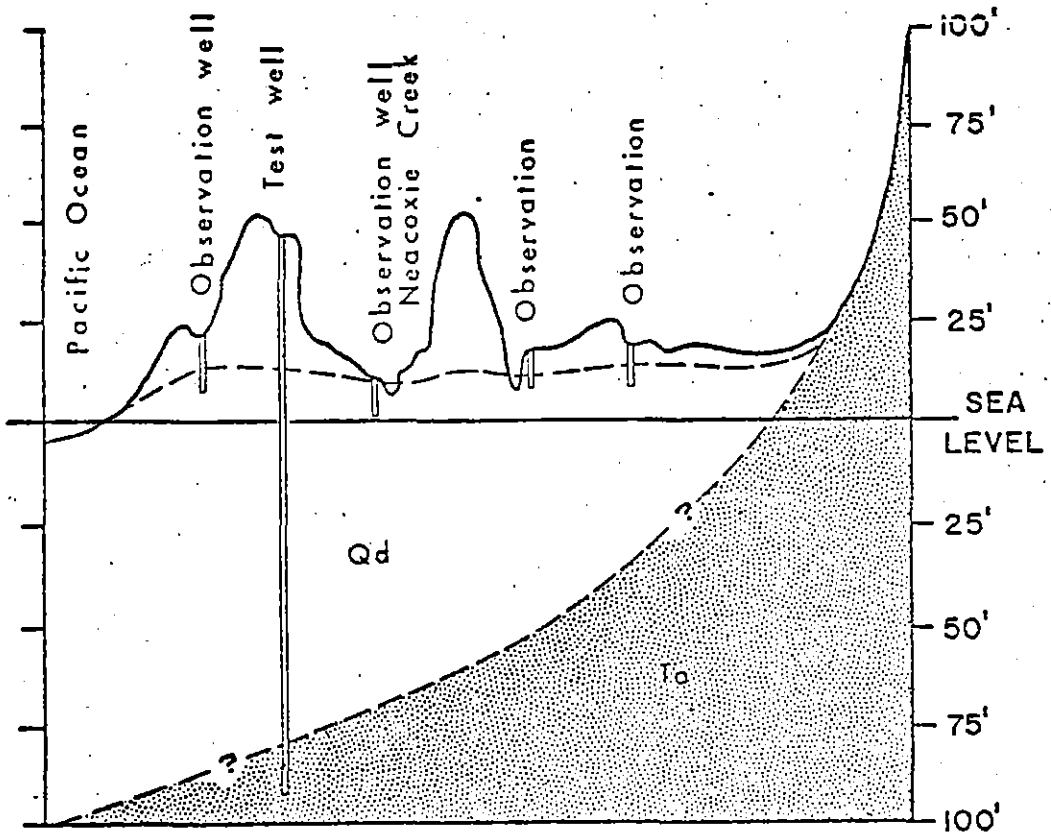
NORTH

SCALE IN MILES

0 1 2

FIGURE 2

CLATSOP PLAINS GEOLOGY CROSS SECTION



NOT TO SCALE

Qd DUNE SAND
Unconsolidated sand, wind-blown, particularly upper 40 feet of unit. Moderate hydraulic conductivity and the principal aquifer of the area.

Ta ASTORIA FORMATION
Shale and sandstone, low hydraulic conductivity. Will yield small quantities of water.

after Frank, 1970

FIGURE 3

Minor amounts of flood plain alluvium underlies the northern portion of the study area. The alluvium includes lenticular deposits of clay, silt and sand in the Columbia River Estuary with a thickness of up to 300 feet. This area is of minor importance to this report and is included here for completeness.

Soils

Soils of the Clatsop Plains include the previously mentioned peaty organic units in wetlands. Although little or no soil develops on the natural windblown sands, stabilization of the dunes by introducing planted beach grass, shore pine, scotch broom, etc., has resulted in the development of local shallow soil profiles. The plant succession resulting from the introduced species has contributed organic litter to the developing soils.

Soils in the Clatsop Plains were placed into general soil areas that show the main pattern of soils. Each kind of general soil area contains one or more major soils in a characteristic but not necessarily uniform pattern. General soil areas named in this report are Dune Lane soil area, Gearhart-Westport-Warrenton soil area, and Braillier Peat soil area.

The Dune Land soil area consists of nearly level to steep stabilized sand dunes and intervening nearly level wind formed valleys and swales parallel to the ocean. Relief ranges from low undulating hills that are 10 feet high to abrupt dunes and ridges that are as much as 50 feet above sea level. These areas have been stabilized by beach grass, shore pine, and scotch broom. Elevation ranges from sea level on the west to about 80 feet on the east. Dune Land soils consist of grayish brown, single grained, porous sand and fine sand. The surface may be slightly darkened in dunes that have been stabilized for the longest period of time. Wind erosion or soil blowing is a severe hazard in disturbed or unvegetated areas.

The Gearhart-Westport-Warrenton soil area consists of wind drifted sand in the form of stabilized dunes, ridges and hummocks parallel to the west. Ridges generally have 10 to 50 feet of relief with a maximum elevation of 80 feet. These areas have been stabilized for sufficient time to form soil profiles. Red alder, sitka spruce, western hemlock, western red cedar, shore pine, ocean spray, scotch broom, salmon berry, salal, huckleberry, thimble berry, and sword fern occur on ridges and red alder, salmon berry, willows, reeds, sedges, and Oregon crabapple occur in swales. Gearhart and Westport soils occur on ridges, and Warrenton soils occur in the long narrow interdunal swales and depressions.

Gearhart soils are excessively drained and very strongly acid. The surface layer is black fine sandy loam about 11 inches thick. The subsoil is dark yellowish brown sand about 6 inches thick over dark gray and gray sand many feet thick. Runoff is slow and permeability is very rapid. Slopes range up to about 20 percent. Again the hazard of wind erosion or soil blowing is severe in disturbed soils.

Westport soils are excessively drained and strongly acid. The surface layer of the mineral soil is very dark grayish brown fine sand to loamy fine sand 16 inches deep. The subsoil is brown to olive gray fine sand many feet thick. A mat of mosses, litter and roots occurs on top of the mineral soil. Runoff is slow and permeability is very rapid. Slopes range up to 45 percent. Soil blowing is a severe problem if vegetation is removed.

Warrenton soils are poorly drained and strongly acid. The surface is a layer of black muck about 3 inches thick. The mineral soil is black mottled, loamy sand about 11 inches thick. The subsoil is very dark grayish brown, mottled loamy sand 11 inches thick. Underlying material is very dark grayish brown and many feet thick. Runoff is slow to ponded and permeability is rapid. Slopes are less than 3 percent.

The Braillier Peat soil area consists of peaty areas in nearly level wet deflation plains and basins. Elevation is about 10 feet with a maximum relief of a few feet. Native vegetation is brush, willow, sitka spruce, red alder, sedges, reeds, and tussock grasses. Braillier soils are very poorly drained peaty soils formed mainly of slightly decomposed fibrous organic residues from water tolerant plants. Typically, the surface layer is dark brown extremely acid peat about 6 inches thick. The subsoil is dark grayish brown and grayish brown very strongly acid peat about 40 inches thick. Below this is a very dark grayish brown and gray, sand or slightly acid peat and muck. Runoff is very slow to ponded. Permeability is moderate. Areas of Warrenton sands may be intermingled or bordering the peats. Included in this general soil area in the northern part of the Clatsop Plains are areas of Clatsop silty clay loam and Coquille silty clay loam.

As pointed out above, nearly all of the soils in the developable areas within Clatsop Plains are well or excessively well drained. Although they provide for disposal of the liquid effluent, the shallow soil profiles and rapidly draining sandy substrata are not a good treatment medium for septic tank effluent. Walker et. al. (1973b) summarized that soil disposal of septic tank effluent in sands were found to add significant quantities of nitrate, formed by the nitrification of ammonia, the dominant nitrogen formed in the effluent, to underlying ground water. Sikora and Corey (1977) state that the effluent from septic tank systems located in sands will be undergoing predominately aerobic reactions with nitrate as the end product. Walker et. al. (1973a) has added that significant denitrification is not likely if seepage beds are built in deep sandy soils. This aspect of the problem will be addressed more fully under "Water Quality".

Hydrology

Surface water drainage in the Clatsop Plains is primarily dependent upon ground-water discharged to the surface water bodies and to a lesser extent upon precipitation runoff. Frank (1970) has pointed out that the lack of well defined tributaries to the major streams

is evidence that very little precipitation leaves the dune area by direct runoff. The water balance summary under the following "Ground Water" section will expand on this point. Tolle (1974) has emphasized Frank's point that "the exact relationship of the lake level to the water table is not fully understood" ...and "during the dry season the lakes may discharge water into the ground".

Leach (1977) has pointed out that much of the natural drainage pattern within the Clatsop Plains has been altered by the rapidly prograding, stabilized, dunes and the development of drainage ditches and canals by private land owners since the early 1900's. For example, Cullaby Lake once drained via a sinuous route to Sunset Lake and thence Neacoxie Creek. Development of the Skipanon Ditch in the early 1900's and later filling at the north end of Sunset Lake have altered this pattern. It should be noted that Cullaby Lake is the only major surface water impoundment in the study area which receives a significant amount of its recharge from surface water runoff on the bedrock hills to the east. Surface drainage in the foredune areas is toward the north, north of Slusher Lake, and toward the south and west, south of Slusher Lake. A number of ditches and canals have altered and improved drainage, including lowering the water table, in the wetter northern portion of the study area.

Surface drainage (as reported by Leach, 1977) has been used to augment ground-water and topographic data in the development of hydrologic basins and sub-basins within the Clatsop Plains, see Plate I and "Ground-Water" section. These sub-basins and their attendent ground water-surface water relationships are important in defining the direction and magnitude of ground-water movement as well as potential impacts of on-site waste disposal systems.

Ground Water

The Clatsop Plains sand-dune aquifer contains a complete local ground-water flow system as defined by Freeze (1972) and Freeze and Witherspoon (1966; 1967). This local flow system is superimposed upon a regional and intermediate ground-water flow system, see Figure 4. The larger regional and intermediate systems receive ground-water recharge in the Coast Range and its foothills to the east and transmit it through relatively deep flow to discharge areas immediately east; bedrock underlying the dunes; and west through submarine discharge. Dissolved solids in regional and intermediate systems are relatively high due to its deeper flow and increased residence time within the aquifer (Schwartz and Domenico, 1973). This is the case in this area. The amount of the regional and intermediate discharge and its affect on the sand-dunes aquifer is probably minimal, as its conduit (the Astoria Formation) has a low hydraulic conductivity and the sand-dunes aquifer system is quite thick, i.e. ranging up to 150 feet.

The sand-dune local ground-water flow system, within the study area, is almost entirely dependent upon infiltrating precipitation for recharge. A notable exception is imported water for domestic and irrigation uses. Ground-water movement within the local system is down-gradient or from recharge to discharge zones, see Figure 4. This down-gradient movement is dependent upon a difference in potential or potential gradient and vertical-horizontal hydraulic conductivity relationships. Flow is normal or at right angles to equi-potential surfaces. Frank (1970) has conservatively calculated the transmissivity of the sand-dune aquifer to be about 26,000 to 29,000 gal/day/ft; hydraulic conductivity to be about 1,700 to 1,900 gal/day/ft^2; estimated coefficient of storage of 0.10 to 0.30; and gradients up to about 0.007 ft/ft. These values result in a relatively rapid ground-water flow velocity of about 5 to 17 ft/day. A review of Frank's (1970) well information indicates that a vertical gradient exists within the sand-dune aquifer. It is on the order of 0.005 to 0.02 ft/ft, which is somewhat lower than the 0.12 ft/ft reported by Robison (1973) in the Coos Bay area. Some of the above figures are approximations and more detailed aquifer performance tests would be required to refine them.

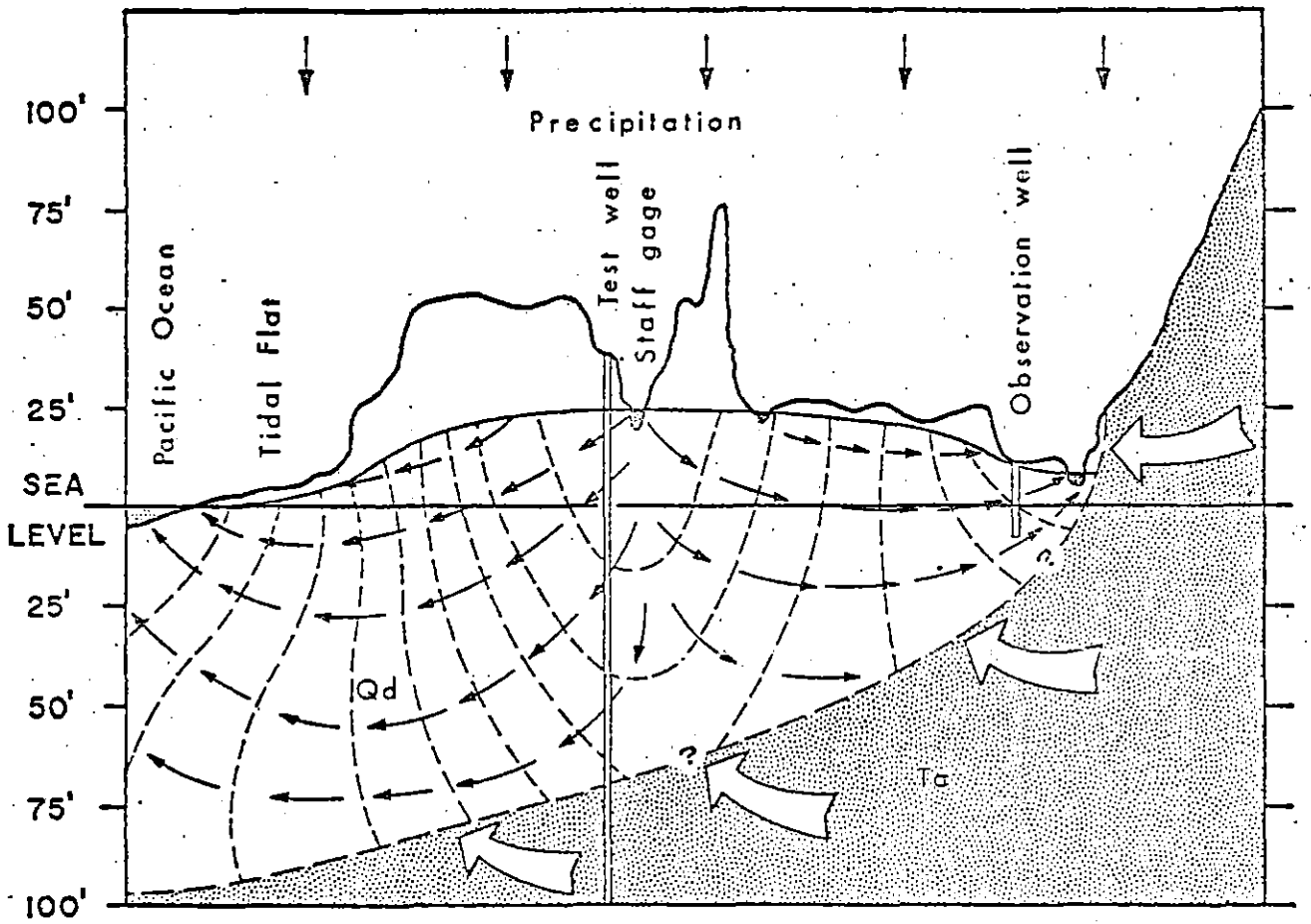
Equi-potential surfaces are defined in two dimensions by the water tables contours on Frank's (1970) water table maps. A third dimension is shown diagramatically on Figure 4. Robison (1973) conducted detailed analyses in the Coos Bay area dunes in order to construct an electric analog model of that similar sand-dune aquifer flow system. Figure 4 is similar to that developed by Robison in his report to the Coos Bay-North Bend Water Board. Equi-potential and flow lines are included in the diagramatic cross-section.

Keeping the potential surfaces and flow lines in mind, it is possible to outline discreet three dimensional flow channels through the dune-aquifer. Certain "critical flow channels" are included two dimensionally on Plate I and discussed below as well as under "Water Quality".

As previously mentioned, eight sub-basins have been outlined within the study area, see Plate I and Table 1. The primary basis for delineating the basins is Frank's (1970) October Water Table Map and in some cases his January Water Table Map. Hydrologic boundaries, ground-water divides, surface water drainage information (Leach, 1977), and topographic data were all used to develop Plate I. Some intra-basin divides are included on Plate I to more clearly depict ground-water movements in specific areas, primarily within sub-basins.

By considering major ground-water divides, intra-basin divides and other hydrologic boundaries discreet areas or basins can be considered for ground-water development and/or quality management. These same considerations are used to further breakdown or outline critical flow channels or common areas which are subject to influence by activities or potential activities which impact the ground-water within these channels, see Plates I, II, and III. It

CLATSOP PLAINS GROUND-WATER FLOW SYSTEM



NOT TO SCALE

REGIONAL AND INTERMEDIATE FLOW SYSTEMS

LOCAL FLOW SYSTEMS

Arrows show direction of ground-water movement.

Dashed lines connect points of equal potentiometric head. Head decreases in direction of flow.

FIGURE 4

should be noted that flow channels begin at divides and discharge to surface drainage systems including lakes, streams and the Pacific Ocean to the west. A brief summary of the relevant activities within the critical flow channels shown on Plates I, II and III, is included in Tables 2 and 11 under "Water Quality".

Water Balance

A water balance is essentially an accounting procedure which totals the various inputs and outputs of water within a given area. For the sake of simplicity, basins or areas with distinct hydrologic boundaries are best considered for a balance. Input in the Clatsop Plains includes incident precipitation and imported water. Output includes evaporation, transpiration by plants, direct runoff, ground-water discharge to lakes and streams with attendant runoff, underflow and discharge to the foredune, and submarine seeps to the west of the Plans.

Again Frank's (1970) work on the Clatsop Plains is the principal source of water balance information. Oregon State University's Extension Service Report (Tolle, 1974) and Schlicker et. al. (1972) review and comment on Frank's report, but add little new information. A summary of Frank's water balance includes:

TABLE 3

WATER BALANCE DATA

Input	in./yr.	acre-ft./yr./mi.^{2}
Precipitation	78.5-80.0	4190-4270
Imported Water	neglible	--
Output		
Evaporation	20-21	1070-1120
Evapotranspiration	15	800
Runoff	neglible	--
Balance	43.0-45.0	2300-2400

Frank (1970) states "that 60 inches of water, or nearly 80 percent of the average annual precipitation, infiltrates into the dune sand. About one-fourth of this amount is required to meet evapotranspiration losses, and the remainder (about 45 in.) is discharged ...mostly by seeps and underflow".

Tolle (1974) questions Frank's recharge figure stating that: 1) areas of relatively high and low aquifer recharge exist, 2) evidence of conditions favorable to surface runoff exist, and 3) potential (emphasis added) evapotranspiration figures calculated for each of four stations near the Plains do not agree with the U.S.G.S. figures. However, he concedes that "the ground-water

recharge amount is probably close to being correct because it contained measured information". Therefore, Frank's estimate of "as much as 2,500 acre-ft. per square mile per year or an average of 2 mgd per sq. mi. (million gallons per day per square mile) may be available for withdrawal" by water wells. This 45 in. or 2,500 acre-ft. figure stated by Frank is used in the remainder of this report.

Table 4 includes a basin by basin and areawide breakdown of available ground water. This data is based on the basin size and the above areal recharge figures.

TABLE 4

CLATSOP PLAINS BASIN AND SUB-BASINS GROUND-WATER RECHARGE

Sub-Basin	Area ($mi.^2$)	Recharge (mil. gal/yr)
1. N. Foredune	4.12	9.20
2. S. Foredune	1.72	3.84
3. Coffenbury Lake	3.40	7.59
4. Smith Lake	2.72	6.07
5. Cullaby Lake	7.27	16.23
6. Sunset Lake	0.96	2.14
7. Neacoxie Creek	0.88	1.96
8. Southeast Plains	2.02	4.51
TOTAL	23.09	51.54

WATER QUALITY

Surface Water

The relationship between surface and ground water has been pointed out. Ground water is the major recharge source for streams and lakes in the study area. Lakes and surface drainage ways act as the main drain for ground water within the dune area while seepage to the fore-dune and submarine seeps probably account for large volumes. As mentioned earlier, flow is from ground-water divides to drains. Also, the position of the divides moves as the water table rises and falls and therefore an "average" position was used in delineating some ground-water basins and intra-basin divides, see Plate I. During periods with an extremely low water table, e.g. late summer and fall, the ground-water divides may coincide with the axes of certain lakes and the lakes may in fact be a recharge source for the ground water, discharging water to the ground.

McHugh (1972) has reported on Coffenbury, Cullaby, Sunset and Smith Lakes. In all cases, he pointed out the effect of bog and swamp drainage, i.e. leaching out of nutrients and their discharge to the lakes as well as humic materials leaching from the peaty lake bottoms. McHugh further reports that the lakes are generally beta-mesosaprobic or moderately enriched and that Coffenbury, Sunset, and Smith are probably receipients of septic-tank drain-field discharges. Since the lakes are generally moderately enriched, they should be considered sensitive to added nutrient input. Tolle (1974) summarizes McHugh's (1972) data as well as Sanderson et. al. (1973) with regard to 17 other lakes in the area. Most of these lakes are probably also at least moderately enriched.

Ground Water

The quality of ground water is primarily a product of the flow system, local, intermediate, and/or regional recharge-discharge areas; residence time in the aquifer; mineralogy of the aquifer; and the relationship of aquifer mineralogy to the chemistry of the recharge water. For example, local ground-water flow in the Clatsop Plains generally travels through a shorter flow path, has less residence time and is much lower in dissolved solids content than the regional and intermediate systems which pass through more of the Astoria Formation and have a much longer residence time within the aquifer. Common T.D.S. (total dissolved solids) concentrations range from 100-200 mg/l in Oregon's local systems to much higher values in regional systems (Illian, 1973). This compares with 60-212 mg/l in the dune-aquifer and Frank's (1970) "water (of) ... poor chemical quality" in the Astoria Formation.

The effect of the chemistry of the recharge water is demonstrated in the relatively higher chloride concentrations in wells nearest to the ocean. Wind blown aerosols, sea spray, provides chloride salts to the dune areas where it is leached to the ground water by

infiltrating precipitation. This has not been a problem in the area as none of the samples tested in the dune-aquifer have approached the U. S. Public Health Service drinking water standard of 250 mg/l, see Appendix C, Water Quality Data.

Iron concentrations also demonstrate the effect of recharge water chemistry within the dune-aquifer. Excessive organics in bogs and marshes as well as the previously described buried inter-dune areas (Geology Section) provide weak organic acids and the reducing conditions necessary for the soluble transport of ferrous iron. All reported wells east of Highway 101 have higher concentrations of iron than those in the center of the dune-aquifer. As expected, these wells also have lower pH or acidic waters. A notable exception of this is well 7N/10W-33H1 which Frank (1970) pointed out to be completed in a perched zone, presumably above a less permeable buried organic inter-dune deposit. Frank's (1970) data also shows that the deeper test wells had higher pH (more basic) and lower iron concentrations. Although many samples exceed the U. S. Public Health Service recommended standard (0.3 mg/l) for iron, it should be pointed out that iron is a nuisance constituent easily removed by aeration and not a health hazard.

Hardness is not a problem in the wells sampled. Frank (1970) points out that hardness ranged from 11 to 92 mg/l in his samples, i.e. soft to slightly hard water.

Nutrients

Common nutrients include phosphate (PO_4), sulfate (SO_4), and nitrogen (N) generally in the form of nitrate (NO_3) in ground water. Phosphate concentrations are generally low in the ground water of Clatsop Plains, see Appendix C. This is to be expected given the abundance of iron. Much of the phosphorus in soils is bound to ferric iron. As previously mentioned, under reducing conditions the iron is converted to the soluble ferrous state. The phosphorus is then released to the soil solution to establish a new equilibrium with aluminum and/or calcium-bound phosphates. Sikora and Corey (1977) have shown that problems with phosphorus contamination of ground water would be expected primarily with very "clean" sandy soils, soils with high water tables ... and even in most of these soils the contamination would probably not become apparent until the soil absorption field had been in operation for a number of years". Phosphorus has been shown to be a "limiting" nutrient in the growth and production of algae in lakes (Sawyer, 1952). With the ground-surface water relationships previously described, especially in the lakes, the potential impact of phosphate contributions to the accelerated eutrophication of the lakes should be considered. On the other hand, phosphates do not constitute a significant threat to domestic use of the ground water.

Sulfate is a very soluble constituent in septic tank effluent. Again, the minimum concentration required to support algae growth in lakes is low. Beauchamp (1953) has reported a lower limit of 0.5 mg/l. On the other hand, the U. S. Public Health Service

recommended maximum concentration for drinking water is 250 mg/l, far above any measured levels in the Clatsop Plains, see Appendix C.

Nitrates are also a very mobile constituent in ground water. Nitrates are the end product of aerobic stabilization of organic nigrogen (McKee and Wolf, 1963; Hem, 1959). Nitrification of ammonia (NH_4) to nitrite (NO_2) and thence to nitrate (NO_3) takes place relatively rapidly under oxidizing conditions. The concentration is generally reported as nitrogen (N), e.g. NO_3-N. These conditions are common to the unsaturated zone between the land surface and the water table. Denitrification or a reduction in nitrogen concentration can take place through the volitilization of ammonia and its loss to the atmosphere. Some denitrification may also take place under very special circumstances within the soil (Lance, 1972). Sikora and Keeney (1975) have pointed out that the aerobic or oxidizing condition must precede an anaerobic or reducing condition for this subsurface denitrification or reduction of nitrate to take place. It is generally considered insignificant or minimal in septic tank drainfield systems. Ammonia volatilization, nitrate adsorption and chemodenitrification are likewise considered to have a minimal effect on nitrate concentrations below drainfields (Sikora and Corey, 1977). Nitrates constitute another nutrient to be considered in the evaluation of lake water quality with a minimum concentration of 0.3 mg/l required for algae growth (Sawyer, 1952; Muller, 1953).

Winton et. al. (1971) have reported that excessive nitrate ingestion in infants may result in methemoglobinemia, i.e. blue babies. Other recent studies have questioned this relationship (Shearer, et. al. 1972; Shural, et. al, 1972). However, the fact remains that the U. S. Public Health Service Drinking Water Standards prohibit the use of water for drinking purposes when the nitrate-nitrogen (NO_3-N) concentration is in excess of 10 mg/l. The sources of NO_3-N in the Clatsop Plains include natural (e.g. precipitation and vegetation) as well as induced (e.g. fertilizers and waste water disposal). A discussion of the sources and their impact on ground-water quality follows.

Natural Nitrogen Sources

As described under HYDROGEOLOGY, precipitation is essentially the only source of ground-water recharge in the Clatsop Plains. Reported concentrations of NO_3-N in the rainwater range from Riffenburg's (1925) 0.2 mg/l which he attributed to the lightning induced combination of atmospheric nitrogen to nitric oxides which dissolve in rainwater to a low of 0.05 mg/l reported by Tarrant et. al. (1968) in Oregon. Many authors have discounted lightning as a significant source of NO_3-N and instead indicate a correlation between soil alkalinity and NO_3-N in rainfall (Junge, 1958; Feth, 1966). In their detailed study in Oregon, Tarrant, et. al. (1968) stated that the average concentration of total N was 0.05 mg/l in gross rainfall ... no measurable NO_2 or NH_4 (were found). Most of the N brought down in precipitation

collected in the open was in the organic form and was attributed to locally generated airborne organic debris, including pollen". The 0.05 mg/l concentration value for NO_3-N for rainfall is used in this report.

Vegetation is the largest natural source of N to the soil and ground water, see Plate II. The dune areas of the Clatsop Plains have plant communities in all stages of succession from sand stilling beach grass to scotch broom and shore pine, to sitka spruce, which is the climax forest species for the area (Franklin and Dyrness, 1973; Wiedemann, 1966; Wiedemann et. al., 1969). Similar plant successions take place on the deflation plains from meadow, rush, and marsh communities toward a shrub and tree community (Stockham and Pease, 1974). Most of the nitrogen in the ecosystems is tied up in the organic form as plants and animals or their transitory decay products. Organic forms of nitrogen are oxidized to the nitrate form by natural biological processes. It is then recycled as it is used by plants and microorganisms. If the rate at which nitrates are utilized in the ecosystem is less than the nitrification rate, nitrates will accumulate in the soil and percolate downward into ground water.

Dry matter yields for the various plant communities and their sources appear in Table 5. The amount of nitrogen produced by each plant community was established by multiplying dry matter yield by a nitrogen content of 2.0 percent for legumes, 1.0 percent for pasture, and 0.5 percent for all other nonlegumenous plants, see Table 6. Losses of nitrogen from these sources to the ground water pool were estimated to be 40 percent annually, see Table 7. The estimated release of NO_3-N to the ground water is complicated by a number of factors. Natural seasonal peaks in the release of NO_3-N to the ground water such as late in the fall, winter and early spring are reported by Viets and Hageman (1971). Peat and muck act as a reservoir for the storage of NO_3-N. Organic soils also tie up NO_3-N and Leach (1977) has indicated this may be a major sink for the accumulation of NO_3-N in portions of the Clatsop Plains. Fredriksen et. al. (1975) have shown the effect of rapid vegetative succession on NO_3-N release rates in logged and burned forest areas. They report a short (3 to 4 year) lag in consumption of excess NO_3-N by emerging vegetation and establishment of a new balance. The rapid vegetative succession referred to above could be a major factor in slowing the release of NO_3-N to the ground water.

Induced Nitrogen Sources

Nitrous oxides from auto and industrial emissions are a source of induced N. Junge (1958) has indicated that they are probably not of great importance in less densely populated areas. On the other hand, fertilizer can be a major source of induced N. In the Clatsop Plains pastureland is fertilized at the rate of 100 pounds of nitrogen per acre per year, usually in the form of 16-20-0 (Leach, 1977; Jackson, 1977). Cranberries receive about 30 pounds of nitrogen annually per acre either as 16-20-0 or 11-48-0 (Leach, 1977).

TABLE 5

TOTAL DRY MATTER YIELD

LAND USE AND VEGETATION TYPE[1]	YIELD (tons/acre/year)[2]
S Sand	
SM Salt Marsh	1.00[3]
DG Dune Grass (80% grass, 20% beach pea)	2.50[4, 5]
SP Shore Pine	2.25[3]
RS Ridge and Swale	4.50[3]
M Meadow (80% grass, 20% legumes)	2.50[4, 5]
D Deciduous with Conifer	1.50[3]
C Conifer	1.25[3]
Cd Conifer with Deciduous	1.50[3]
X Recent Clearcut	1.50[3]
XO Old Clearcut	1.50[3]
A Agriculture	1.50[4]
Ap Pasture	4.50[4, 5, 6]

1/ Vegetation types from Stockham and Pease, 1974, see Plate II.
2/ Average yields from indicated sources.
3/ STALFELT'S Plant Ecology, Plants, The Soil and Man, 1972. Trans. by Dr. M. S. Jarvis and Dr. P. G. Jarvis, Halsted Press, John Wiley and Sons, New York.
4/ Don Leach, Soil Conservationist, Soil Conservation Service, Astoria, OR
5/ Bill Billings, Agronomist, Soil Conservation Service, Portland, OR
6/ Tom Jackson, Professor of Soil Science, Dept. of Soil Section, O.S.U., Corvallis, OR

TABLE 6

TOTAL NITROGEN PRODUCED ANNUALLY BY EACH VETETATION TYPE

LAND USE AND VEGETATION TYPE[1]		TOTAL NITROGEN (lbs/acre/year)
S	Sand	
SM	Salt Marsh	10
DG	Dune Grass (80% grass, 20% beach pea)	40
SP	Shore Pine	25
RS	Ridge and Swale	50[2]
M	Meadow (80% grass, 20% legumes)	25
D	Deciduous with Conifer	100[2]
C	Conifer	15
Cd	Conifer with Deciduous	30[2]
X	Recent Clearcut	15
XO	Old Clearcut	15
A	Agriculture	15
Ap	Pasture	90

1/ Vegetation types from Stockham and Pease, 1974, see Pate II.

2/ These values were adjusted upward to take into account fixation of nitrogen by red alder after Newton et. al. 1967.

TABLE 7

ESTIMATED ANNUAL N LOSS TO GROUND WATER FROM EACH VEGETATION TYPE

LAND USE AND VEGETATION TYPE[1]		TOTAL NITROGEN (lbs/acre/year)
S	Sand	
SM	Salt Marsh	4
DG	Dune Grass (80% grass, 20% beach pea)	16
SP	Shore Pine	10
RS	Ridge and Swale	20
M	Meadow	10
D	Deciduous with Conifer	40
C	Conifer	6
Cd	Conifer with Deciduous	12
X	Recent Clearcut	6
XO	Old Clearcut	6
A	Agriculture	6
Ap	Pasture	35[2]

1/ Vegetation types from Stockham and Pease, 1974, see Plate II.

2/ This value was derived by assuming all forage was consumed by livestock and that 73% of the total nitrogen in the forage was returned to the soil surface in the form of manure. Thirty percent of this nitrogen was lost to the atmosphere by volatilization and 55% of the total nitrogen in the manure was lost to ground water. Leach (1977) has expressed concern that this value (35 lbs/acre/yr) may be high, based on SCS data.

The Astoria Golf Club uses 160 pounds of nitrogen annually. The greens are fertilized monthly from March to September at the rate of 0.9 pounds of nitrogen per 1000 square feet. They are fertilized monthly from October to April at the rate of 0.5 pounds of nitrogen per 1000 square feet. The tees are fertilized on the same time schedule but at a rate 1/3 to 1/2 of what is applied to the greens. Tees and greens are clipped regularly and the clippings are scattered under trees and shrubs near by. Fairways are fertilized once a year at the rate of 0.75 pounds of nitrogen per 1000 square feet. Clippings are left on the fairways. A similar fertilizer program is carried on at the Gearhart Golf Course and the Seaside Golf Course, but fertilizer is not applied to fairways on a regular schedule. The Gearhart Golf Course uses 45 pounds of N annually and the Seaside Golf Course uses 33 pounds of N annually (Chapman, 1977).

Nitrogen losses by volatilization (gasification) were assumed to be 30 percent for animal manure and 5 percent for commercial fertilizer. Denitrification losses from commercial fertilizers were assumed to be 15 percent (Miller and Smith, 1976; Ayers and Branson, et. al. 1973). Theoretical annual losses of nitrogen to the ground-water pool from each vegetation type based on these assumptions, applied fertilizers, and dry matter yields appears in Table 7.

Table 8 sums up the estimated N production for dwelling units (du). Domestic use of fertilizer for lawn and gardens is a source of N. In calculating the N contribution by du an average annual fertilizer application of 5 lbs/du is used. Assuming a water use of 400 gal/day/du (including 300 gal. household and 100 gal/irrigation, etc.) with a background NO_3-N concentration .03-06 mg/l (Clatsop County Health Department, 1977) provides 0.04-0.07 lbs/du/yr of NO_3-N to the total. The most important induced source of N is wastewater. Siegrist et. al. (1976) reported on the work of several researchers who measured N contributions ranging from 0.016 to 0.037 lbs/day/capita while Siegrist et. al. reported 0.013 lbs/day/capita of N in the wastewater stream. Walker et. al. (1973b) evaluated the subsurface disposal of septic tank effluent in sands and reported that "the average N-input per person was 10 lbs/yr. Essentially complete nitrification in the soil results in addition of approximately 73 lbs. NO_3-N to the ground water per year for an average family of four", see Table 8 for population adjustment.

Seasonal population peaks and associated waste water discharges affect the rate of NO_3-N increases in the ground water. Perhaps the greatest weakness in this theoretical approach is the part-time residential nature of much of the area. However, assuming full-time residence in the developed areas is the most prudent approach for a "long-term evaluation".

TABLE 8

CLATSOP PLAINS ESTIMATED ANNUAL DWELLING UNIT N PRODUCTION

Water Supply background[1]

Warrenton $\simeq$ .03 mg/l NO_3-N or 0.04 lbs/du/yr
Surf Pines $\simeq$ .06 mg/l NO_3-N or 0.07 lbs/du/yr

Sanitary Wastes[2]

58.5 lbs/du/yr

Lawn and Garden

5 lbs/du/yr

TOTAL NO_3-N - 63.55 lbs/du/yr[3]

1/ (400 gal/day/du) (365 day/yr) (8.34) (C mg/l) $\simeq$ L lbs/yr/du

2/ Clatsop County census data shows 2.68 persons/du and (Walker et. al., 1973b) base their figure of 73 lbs/du/yr of 4 persons. Therefore, 75% of 73 lbs/du/yr or 58.5 lbs/du/yr is used herein for sanitary wastes.

3/ Changes in the number of persons/du will proportionally change the NO_3-N/du contribution. However, the 2.68 or 3 figure used herein is assumed to be a "statistically" valid figure.

Ground-Water Nitrate-Nitrogen Concentrations

By transferring the nutrient (NO_3-N) loading per unit area data presented above and in Table 8, to a breakdown of each vegetative type of land use within the various sub-basins, Table 9, the total theoretical N-input to each basin can be calculated, see Table 10. Table 10 provides a theoretical total NC_3-N per unit area per annum loading rate for each sub-basin.

Integration of the basin wide, unit area, and/or dwelling unit NO_3-N loading data with the water balance data included under "Ground-Water" makes the estimation of theoretical ground-water NO_3-N concentrations possible. The total NO_3-N in the ground water within a particular area will include that provided by precipitation or recharge, vegetation, fertilizers and dwelling units. As an example of the use of Figure 5 (page 27):

1) an area which is primarily covered by dune grass (see Table 7 and Figure 5) would have a NO_3-N concentration of ~1.5 mg/l in the effected ground water;

2) an area which is primarily covered by shore pine (see Table 7 and Figure 5) would have a NO_3-N concentration of less than 1 mg/l in the effected ground water;

3) an area which is urban (see Plate II) and has one du per 5 acres (see Table 8 and Figure 5) would have a NO_3-N concentration of about 1 mg/l in the affected ground water;

4) a N loading of about 54 lbs/acre/yr. would result in a NO_3-N concentration of about 5 mg/l in the effected ground water (see Figure 5); and

5) a N loading of about 250 lbs/acre/yr. would result in a NO_3-N concentration of over 23 mg/l in the effected ground water (see Figure 5).

As previously mentioned, the U. S. Public Health Service limit for NO_3-N in drinking water is 10 mg/l. This concentration would theoretically allow a N-loading equivalent of just under 2 du/acre, see Figure 5 and Table 8. However, due to the previously mentioned seasonal peaks in the leaching of NO_3-N; large amounts of NO_3-N in other organic soils; and the seasonal population fluctuations common to the area, the Department of Environmental Quality has determined that the initial maximum loading for planning purposes should not result in NO_3-N concentration in excess of 5 mg/l in the ground water, see Appendix B. This allows a development density of about 0.8 du/acre in those areas not restricted for other reasons, e.g. reserve water-supply, critical flow path, basin overloading near lakes, etc., see Table 11.

TABLE 9

CLATSOP PLAINS BASIN VEGETATIVE AND LAND USE DATA

	S[1,2]	SM	DG	SP	BS	M	D	C	CD	X	XO	A	Ad	U	D.DG	M.DG.D	M.D	SP.U	SP.M	D.C	Golf Course	Surface Water	Total Area
1. N. Foredune	99	75	262	554	3	130	373	54	--	--	--	--	--	34	964	38	--	--	--	--	--	4	2,639
2. S. Foredune	30	--	223	235	107	5	31	--	--	--	--	--	24	29	40	141	39	120	42	--	28	25	1,095
3. Coffenbury Lake	--	156	15	8	151	28	286	1012	--	48	--	--	--	224	--	--	--	--	--	--	--	153	2,177
4. Smith Lake	--	--	--	--	37	185	4	523	--	78	--	--	137	207	--	--	--	--	--	486	--	80	1,743
5. Cullaby Lake	--	--	--	44	67	173	543	1316	8	21	--	57	1090	666	--	--	--	--	--	251	72	323	4,651
6. Sunset Lake	25	--	--	7	108	--	56	--	--	--	--	--	173	86	--	45	--	4	--	--	22	103	614
7. Neacoxie Creek	9	--	--	19	--	39	30	71	--	--	--	--	264	6	--	--	97	--	--	--	43	--	563
8. Southeast Plains	--	8	--	--	--	135	36	374	144	23	4	--	289	137	--	--	--	--	--	154	--	14	1,293
TOTAL ACRES	171	239	500	867	395	695	1358	3350	152	170	4	57	1977	1389	1004	224	136	124	42	1016	164	701	14,775

1/ Area in acres calculated from Stockham and Pease, 1974

2/ see Tables 5-7 for vegetative groups

TABLE 10

CLATSOP PLAINS BASIN PRESENT THEORETICAL ANNUAL NITRATE-NITROGEN CONTRIBUTIONS TO GROUND WATER

Sub-Basin	Natural (lbs) Precipitation	Natural (lbs) Vegetation	Induced (lbs.) Fertilizer	Induced (lbs.) Dwelling Units[1]	Total (lbs)	Total/Unit Area (lbs./acre)
. N. Foredune	4	54,464	---	0	54,468	21
. S. Foredune	2	16,993	18	8,770	25,783	23
. Coffenbury Lake	3	24,884		7,817	35,704	16
. Smith Lake	3	22,324	---	13,155	35,482	20[2]
. Cullaby Lake	7	77,593	116	45,883[3]	123,599	27[4]
. Sunset Lake	1	11,525	44	8,452	20,022	33[5]
. Neacoxie Creek	1	13,871	27	890	14,789	26
. Southeast Plains	2	20,613	---	7,944	28,559	22
Total	23	242,267	205	92,911[1]	338,406	23

1/ Dwelling units based on county records from Assessor's data and apportioned to areas.
2/ Not including lake surface, 21 lbs/acre.
3/ Subtract sewered homes, e.g. Cullaby Lake System, and correct for large Urban (U) designation.
4/ Not including lake surface, 29 lbs/acre.
5/ Not including lake surface, 39 lbs/acre.

N LOADING PER UNIT AREA VS. GROUND-WATER NO_3-N CONCENTRATION

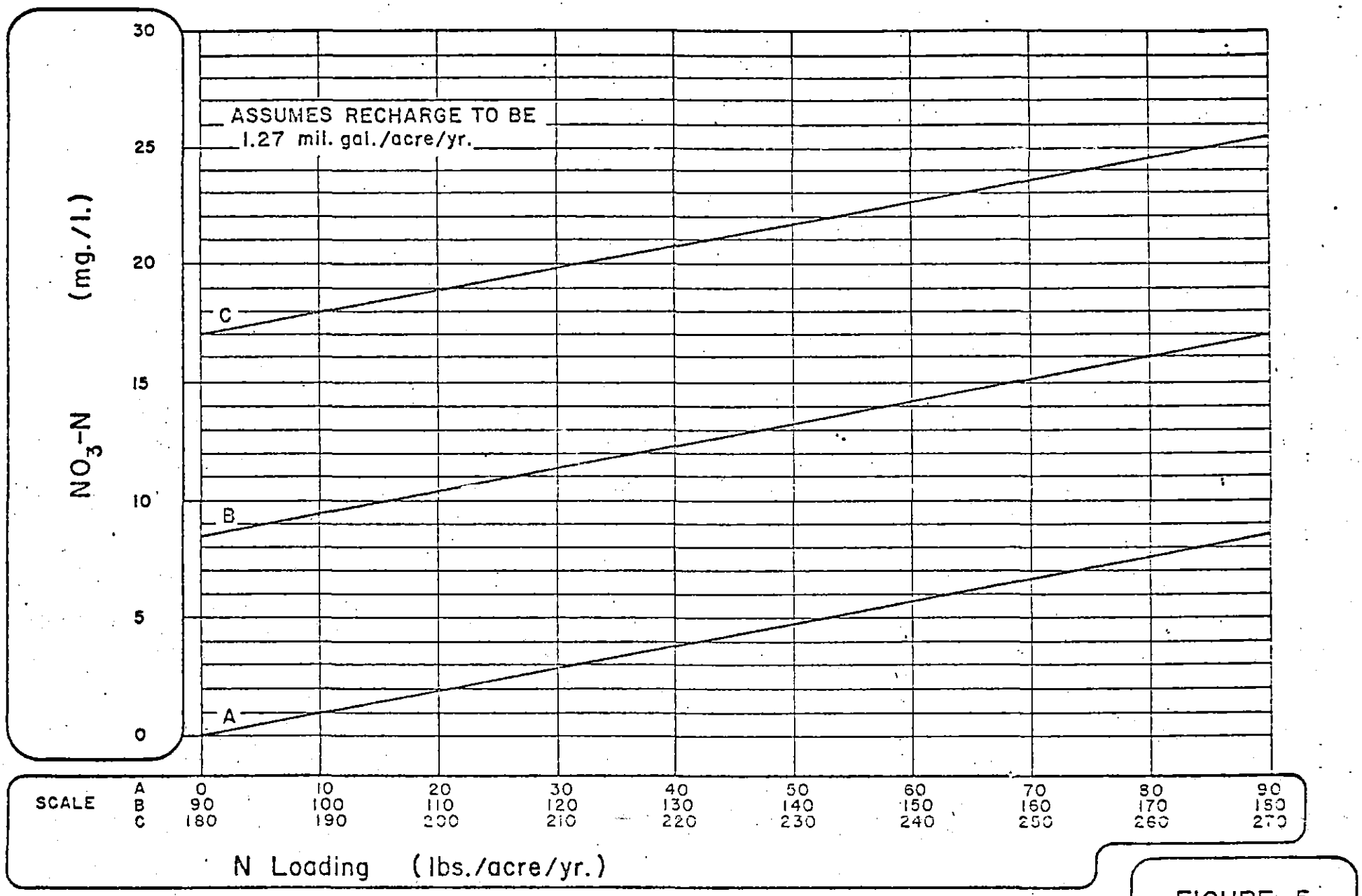


FIGURE 5

TABLE 11

CLATSOP PLAINS CRITICAL FLOW CHANNEL REMARKS

Sub-Basin Number	Area (acres)	N-Input Natural	N-Input Induced[10]	Total N/Unit Area (lbs/acre/yr.)
N. Foredune				
1a	36	432	1/	12 1/
S. Foredune			2/	
2a	43	489		11 5/
2b	15	225	191	27 6/
2c	32	258	448	22 5/
Coffenbury Lake				
3a	90	1108	3/	12 3/7
3b	5	98	3/	20 3/7
3c	2	33	3/	17 3/7
Smith Lake				
Cullaby Lake				
5a	127	690	572	10 5/
5b	32	772		24 8/9
5c	7	16	191 4/	30 4/5
5d	42	1144	1335 4/	59 4/5
5e	14	148	191	24 5/
5f	24	50	381	18 5/
Sunset Lake				
6a	11			8/
6b	21	730	3178	186 5/
6c	85	2030	446	29 5/
Neacoxie Creek				
7a	23	96	445	24 5/
Southeast Plains				
8a	97	1664	2860	47 5/
8b	269	2165	2161	16 5/

1/ Unknown input from Camp Rilea Dump.
2/ Possible seasonal reversal of 6b flow channel toward west.
3/ Input from large community drainfields to be added.
4/ To be checked for sewered areas.
5/ High density zoning.
6/ Existing well field.
7/ Large state park drainfield.
8/ Possible effluent irrigation site.
9/ Fuel storage site.
10/ Number of dwelling units from County Assessor's data, apportioned to estimate total in flow channel.

WATER SUPPLY

One of the primary goals of this study is to identify and set aside an area or areas within the Clatsop Plains dune aquifer to serve as a long-term reserve water supply for larger community systems. This area is to be protected against excessive induced contamination from waste disposal or other sources, e.g. petroleum spills. Plates I, II, and III, and Tables 10 and 11 outline some possible contaminant sources and the critical flow channels which they may affect.

Water in the Clatsop Plains study area is presently provided by the City of Warrenton, Surf Pines Development, Palisade Pipeline Company, and City of Seaside-Gearhart Community Water Systems. According to Myers et. al. (1973), these systems serve about 8,600 people. All of the systems except the Surf Pines Development are dependent upon surface water sources and have water rights totalling more than 35 cubic feet per second (c.f.s.). Some residences are also served by private individual wells where population densities will not support a public system and/or the individuals prefer not to hook up to the public systems.

Myers et. al. (1973) have pointed out that the long range potential for surface water development is difficult to assess due to incomplete, poor, sketchy and/or unavailable information regarding the sources, i.e. current flow, use, hazards, quality, future planned uses, etc. On the other hand, the potential for development of the dune aquifer has been documented for some time (Frank, 1970).

In order to estimate the long-range water needs of Clatsop Plains, the projected population of the service area is required. Clatsop Plains, Gearhart, Hammond, Seaside, and Warrenton census divisions now total 8,235 or about 28 percent of Clatsop County's 29,500 people (Center for Population Research and Census, C.P.R.C., 1976). A projection of the Center for Population Research's maximum population for Clatsop County to year 2000 with an equal percentage going to Clatsop Plains will result in a service area including 12,236 (C.P.R.C., 1976; Myers et. al., 1973). Liebert (1975) has stated that "because the area has living advantages and is near probable employment, it is assumed that the Clatsop Plains will reach 40 percent of total population in the year 2000 (14,400 persons)". These figures result in a probable residential population of 12,236 to 14,400 persons in the year 2000. Seasonal increases in population due to summer use of beach and recreational areas have been estimated at three times resident year round population in the south and two times resident year round population in the north of the study area or an average increase of two and one-half times (Liebert, 1975). These increases would result in a maximum service population of 30,590 to 36,100 persons in the year 2000.

In the Water Quality and Nutrient Sources Section of this report several figures and references were given for "normal" water usage. The Department of Environmental Quality standard of 75 gallons per day per capita was used to project induced nutrient contributions to the ground water. Liebert (1973) estimated water usage at 100 gallons per day per capita for sewerage design purposes. Although this figure is high, 100 gallons per day per capita, it is commonly

used to estimate home water needs and allows for some peaking. Given the range of population projections and a water use of 100 gallons per day per capita, the long range total requirement for the Clatsop Plains is from 3,660 to 4,030 acre/ft/yr, see Table 12.

Under "Hydrogeology" it has been shown that the available ground water for sustained annual use is about 2,500 acre-ft/yr/mi^2. This figure is based in part on the water balance work of Frank (1970) as well as Brown and Newcomb (1963) and Robison (1973). Integrating water supply needs into the annual available ground water from the water budget makes it possible to calculate the area of dune aquifer which should be set aside and protected for

TABLE 12

CLATSOP PLAINS LONG RANGE WATER SUPPLY

Year	Population[1]	Water Supply[2] (acre-ft/yr)	Aquifer Area[3] (mi^2)
1980	8,990	2,520	1.0
1990	10,211	2,860	1.1
2000	12,192 to 14,400	3,660 to 4,030	1.5 to 1.6

1/ 1980, 1990 and low value for 2000 based on C.P.R.C. (1976) data with 2000 high value from Liebert (1975).

2/ based on 2.5 peaking for summer season spread throughout year, see Liebert (1975).

3/ based on Frank (1970), Brown and Newcomb (1963) and previous water balance.

long range ground-water supply, see Table 12. It should be pointed out that this estimate allows for maximum projected population; year round loading of the population by beach and recreational users; as well as total dependence of the Clatsop Plains population on community water supply from the well field(s), and does not include the individual wells and other smaller well fields such as Surf Pines within the study area. As such, the area(s) set aside is perhaps double the area actually required and provides for a buffer between the field(s) and possible adjacent development.

Plate I outlines a general, large suggested area as well as a "most desirable" area which could be set aside for the long-term reserve. It is recommended that three or more smaller areas, e.g. one-half square mile each, be developed to avoid possible well interference and excessive drawdown at a single location.

MONITORING PROGRAM

Purpose

A ground-water monitoring program can be designed to directly measure the quantity and/or quality of subsurface water, see Sweet (1974). In the Clatsop Plains, several approaches are possible.

Tolle (1974) has questioned some of Frank's (1970) water balance data. The regular measurement of precipitation, surface runoff, as well as water table elevation changes and attendant changes in gradients and underflow would make the refinement of the water balance possible. However, the cost of such a detailed program may not be warranted, given the existing Frank (1970) report. Some wells in the area are presently measured regularly by the Oregon Water Resources Department and the U. S. Geological Survey. Periodic evaluation of the data collected in these programs may be adequate to discern any long-term decline in water levels.

As described under "Water Quality", integration of flow systems, water budget and nutrient source information makes possible the prediction of the theoretical ground-water concentration of NO_3-N. If this theoretical value is to be confirmed or if a re-evaluation and/or re-calibration of the quantity of NO_3-N leaching to the ground water is to be checked, a well developed, continuing, ground-water sampling, analysis, and interpretation program is needed.

Present Program

Establishment of a ground-water quality monitoring program to include the interpretation of the first two sampling runs is included in Phase II of this work. Twelve existing wells and four new wells are proposed for the program. Historic data for the wells is included in Appendix C and the well data and location forms are included in Appendix D.

Ten of the existing wells were sampled June 29, 1977, and will be re-sampled in September 1977, see Appendix C. Following the second sampling, to include two more existing as well as the four new wells, the data will be examined, interpreted, and relevant recommendations made to Clatsop County and Department of Environmental Quality. Clatsop County is presently pursuing a technical assistance grant through the Oregon Land Conservation and Development Commission to continue the monitoring program within the study area through at least one more water year.

Future Needs

Ground-water boundaries and/or divides do not necessarily follow political boundaries or geographical subdivisions. Therefore, the exclusion of incorporated areas from an "areawide water quality management program" is not entirely possible or desirable. Table 11 points out some of the problems in this study area. If a ground-water quality management program is to be employed in the Clatsop Plains, extension of the study area to hydrologic boundaries is necessary.

Continued monitoring of water levels and quality within the Clatsop Plains will make periodic checks on temporal changes and future projections of the quantity and quality of the ground water possible. If the management of the dune-aquifer is to be complete, continued sampling and periodic modification of the monitoring program are needed.

When the well field(s) are developed within the Clatsop Plains there will be drawdown of the water table by the pumping wells. The spatial arrangement, design and management of the well field will determine the amount of drawdown, see Frank (1970). In order to directly measure the effect of the pumping; to avoid the intrusion of salt water; and improve the management of the well field, monitoring wells should be included in the well field design.

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APPENDICES

A through D

Appendix A

Proposed Rule OAR 340-71-020(7)

(A) Pursuant to ORS 454.685, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems for favorable reports of evaluation of site suitability within the boundaries of the follcwing geographic areas of Clatsop County where there are unconsolidated sands or unconsolidated loamy sands:

(1) All areas located south of the Columbia River, west of the Skipannon River (or Skipannon Waterway), and north of the southernmost part of Cullaby Lake,

(2) All areas within the Shoreline Estates Sanitary District, and

(3) All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one-half mile due east of U. S. Highway 101.

(B) The restriction set forth in Subparagraph (A) above is subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems in accordance with single family unit equivalent densities specified in the local land use plan for the area will not cause degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal.

(C) The restriction set forth in Subparagraph (A) above shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Director or his authorized representative pursuant to ORS 454.755 (1)(b) where such report was issued prior to the effective date of this Subsection (7).

HLS/PMM:ak
March 21, 1977

APPENDIX B

Intergovernmental Directive

Should a local unit of government desire to petition to modify or repeal the moratorium for any particular area, the following information would have to be developed by the local unit of government and be submitted to the Department and Commission prior to modification or repeal by the Commission:

A. An identification of the areas that should be protected for present and future development of domestic water supplies;

B. An identification of areas outside of these areas of domestic water supplies, where density indicated by single family unit equivalancy will not degrade the groundwater;

C. An identification of those areas presently developed or proposed to be developed to high densities and a description of a program that will prevent further groundwater degradation and eliminate existing groundwater contamination;

It is also recommended that:

Assistance be provided by DEQ staff and State Water Resources staff to local agencies to help implement the above studies.

In addition, the remaining money available from the DEQ-Clatsop County loan agreement can be made available to hire a groundwater expert to prepare necessary technical information to be an aid to both the Department and local agencies.

ROBERT W. STRAUB
GOVERNOR

Department of Environmental Quality

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5324

August 4, 1977

Clatsop County Board of Commissioners
P. O. Box 179
Astoria, OR 97103

Gentlemen:

Re: Groundwater Management Study,
Clatsop Plains

We have reviewed the limited available information relative to acceptable nitrogen species levels in groundwater. The federal publication "Quality Criteria for Water, EPA-440/9-76-023" recommends 10 mg/l NO_3-N as an upper limit for domestic water supplies. This publication also states, "Waters with nitrite-nitrogen concentrations over 1 mg/l should not be used for infant feeding." (See attached copy.)

We do not believe it prudent to use the limits cited above for planning purposes since they contain no margin of safety in protecting public health.

For nitrate-nitrogen, we believe that 5 mg/l NO_3-N may be used as an upper limit for planning purposes providing that a reasonable factor of safety is included in the various assumptions made in the calculation process.

For nitrite-nitrogen, we believe a wider margin of safety is desirable. The upper limit for planning purposes should not exceed 0.2 mg/l NO_2-N, again providing that a reasonable factor of safety is included in the various assumptions made in the calculation process.

We are open to further discussion of this matter if you so desire.

Sincerely,

Harold L. Sawyer, Administrator
Water Quality Division

HLSielk
Enclosure

cc: Bob Paeth, Regional Operations Division - DEQ
\Russ Fotrow, Salem-North Coast Region Office - DEQ

COPY

APPENDIX C (also see Frank, 1970)

CLATSOP PLAINS AREA STUDY

WELL STUDY DATA

1969-1974

Well Name	Well No.	Sampling Date	Fe (mg/l	Color (Color Units)	Cl^- (mg/l)	*PO_4 (mg/l)	SO_4 (mg/l)	**NH_3-N (mg/l)	**NO_3-N (mg/l)	MPN TC/FC (Counts/ 100 ml)
South Gearhart (GONE)	1	6/3/69	0.08	5	27.2	0.01	21.9	0.18	<8.0	4.5/
		8/19/69	0.04	0	14.4	0.01	5.8	0.10	1.25	6 /
		10/07/69	0.40	-	19.7	0.01	----	0.05	0.07	6 /
		3/10/70	0.12	3	11.6	0.01	3.5	0.04	0.55	2.2/
		4/11/72	----	0	24.6	0.01	17.7	0.03	0.26	----
		8/08/72	0.15	5	44.2	<0.01	3.3	<0.01	0.42	----
North Gearhart (replaced by 6N/10W - 3 bbc	2	6/3/69	0.02	0	43.3	0.04	5.9	0.10	1.1	4.5/
Colony Surf 7N/10W - 33 ac	3A	6/3/69	0.02	1	23.2	0.12	5.2	0.06	0.05	4.5/
		8/19/69	0.09	0	20.2	0.13	5.1	0.17	0.08	4.5/
		10/07/69	0.05	-	35.4	0.11	----	0.04	0.05	4.5/
		3/10/70	0.03	1	28.8	0.11	4.4	0.03	0.07	2.2/
		4/11/72	----	0	48.5	0.09	4.1	0.09	<0.01	
Surf Pines 7N/10W - 28ab	4	6/3/69	0.02	0	37.9	0.07	5.9	0.06	0.04	4.5/
		8/19/69	0.11	0	34.6	0.15	5.9	0.03	0.26	4.5/
		10/07/69	0.05	-	59.8	0.12	----	0.06	0.17	4.5/
		11/12/74	----	<1	53.6	0.10	13.0	0.01	0.95	<4.5/<4.5
West Sunset 7N/10W - 9cd	5	6/3/69	0.32	5	38.4	0.13	8.4	0.08	0.02	4.5/
		8/19/69	0.20	2	37.9	0.06	6.8	0.04	0.05	4.5/
		10/07/69	0.15	-	22.4	0.09	----	0.10	0.05	4.5/
		3/10/70	1.00	15	12.4	0.21	6.6	0.09	0.10	2.2/
		8/08/72	0.38	5	26.0	0.14	1.1	0.03	0.07	<4.5/<4.5
		10/31/72	0.26	5	19.6	0.16	1.2	0.03	<0.01	<4.5/<4.5
		11/12/74	----	5	24.5	0.07	5.8	0.01	0.05	<4.5/<4.5

* Reported as Soluble Ortho Phosphate
** Reported as Nitrogen

CLATSOP PLAINS AREA STUDY

WELL STUDY DATA

1969-1974

Well Name	Well No.	Sampling Date	Fe (mg/l)	Color (Color Units)	Cl^- (mg/l)	*PO (mg/l)	SO_4 (mg/l)	**NH_3-N (mg/l)	**NO_3-N (mg/l)	MPN TC/FC (Counts/ 100 ml)
East Sunset	6	6/03/69	0.06	4	8.8	0.01	2.1	0.09	0.45	4.5/
7N/10W - 9dd		8/19/69	0.04	2	13.8	0.02	2.1	0.03	0.58	4.5/
		10/07/69	0.05	0	16.0	0.03	3.0	0.09	0.80	4.5/
		3/10/70	0.09	15	4.0	0.02	4.1	0.06	0.34	2.2/
		4/11/72	----	5	37.8	0.01	1.8	<0.01	0.22	----
		8/08/72	<0.03	5	24.2	0.01	2.0	<0.01	0.65	<4.5/<4.5
		11/12/74	----	<1	9.	0.03	1.4	0.34	0.26	<4.5/<4.5
Cullaby Lake	12	6/03/69	45	-	23.6	0.23	2.2	0.15	1.5	----
(GONE)		8/19/69	44	700	7.5	0.15	14.5	0.24	0.80	4.5/
		10/07/69	53	1200	35.8	0.17	38.5	0.38	0.77	4.5/
		3/10/70	32	600	22.0	0.22	11.5	1.7	2.2	2.2/
		4/11/72	----	500	2.8	0.18	<0.1	0.30	0.36	----
		8/08/72	49	1750	30.5	0.17	0.0	0.17	<0.01	<4.5/<4.5
		10/31/72	40	500	27.4	0.12	<0.1	0.24	0.22	4.5/
		11/12/74	----	800	26.5	0.34	48.6	0.80	1.75	<4.5/<4.5
Camp Rilea	10	6/03/69	0.28	5	21.6	0.10	4.1	0.04	0.04	23
8N/10W - 33cc		8/19/69	0.30	5	21.5	0.01	1.8	0.03	0.03	23
		3/10/70	0.84	10	21.6	0.01	1.8	0.14	0.11	4.5/

* Reported as Soluble Ortho Phosphate
** Reported as Nitrogen

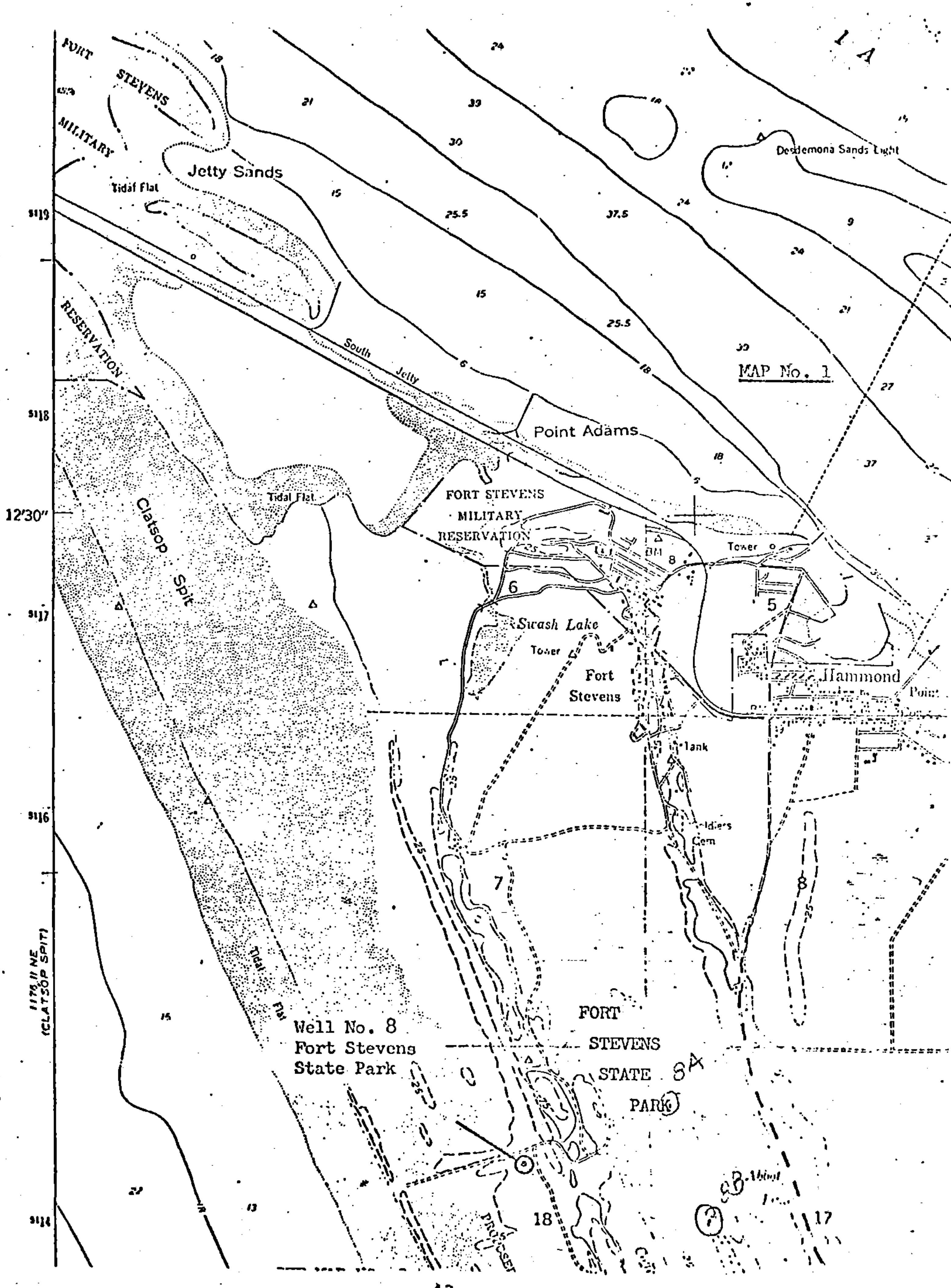
CLATSOP PLAINS AREA STUDY

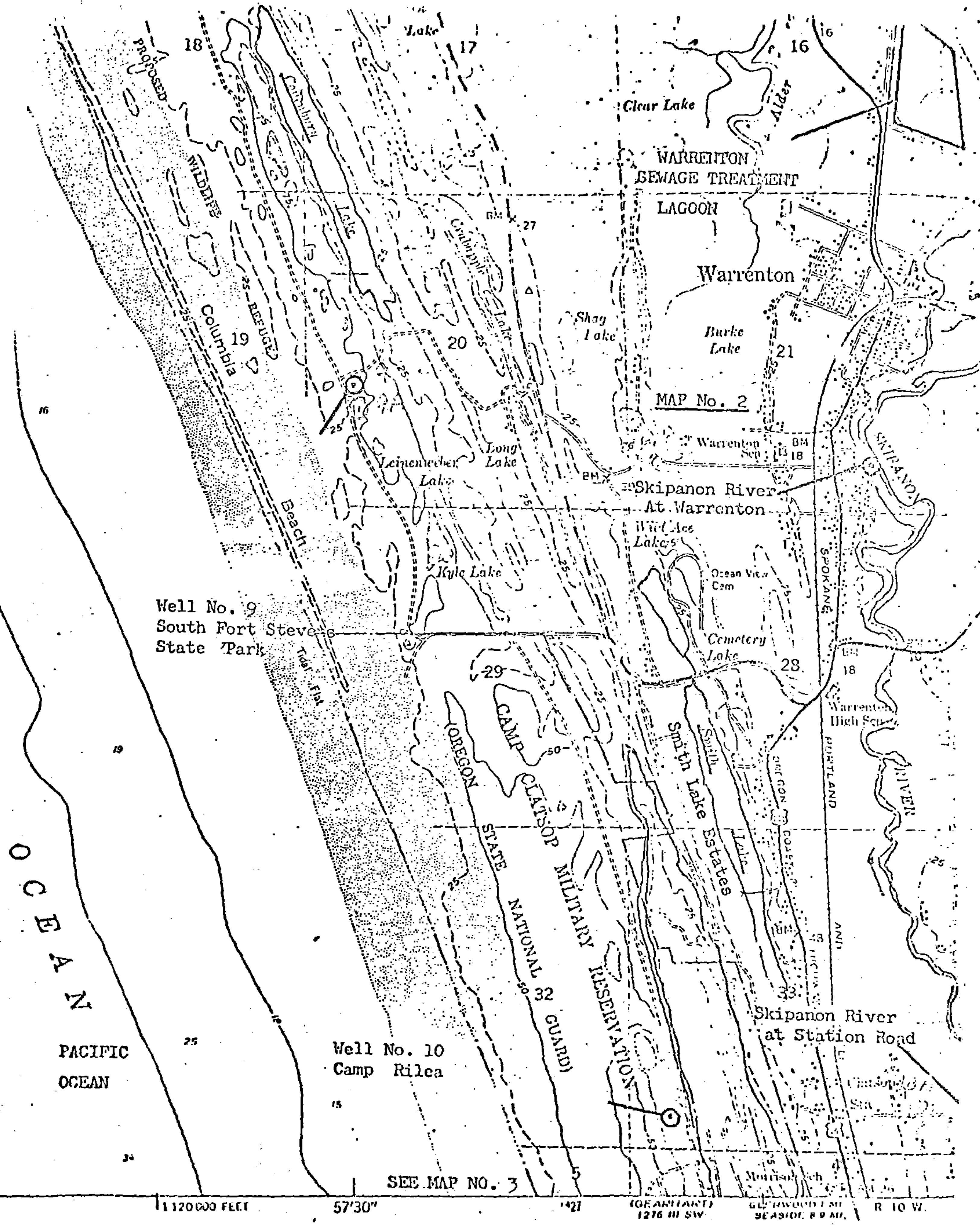
WELL STUDY DATA

1969-1974

Well Name	Well No.	Sampling Date	Fe (mg/l)	Color (Color Units)	Cl^- (mg/l)	*PO_4 (mg/l)	SO_4 (mg/l)	**NH_3-N (mg/l)	**NO_3-N (mg/l)	MPN TC/FC (Counts/ 100 ml)
South Ft. Stevens	9	6/03/69	0.63	4	38.9	0.03	1.1	0.12	0.05	4.5/
8N/10W - 20 cb		8/19/69	0.60	1	39.2	0.02	3.4	0.03	0.03	4.5/
		3/10/70	0.65	0	40.3	0.03	0.5	0.38	0.05	4.5/
Ft. Stevens	8	6/03/69	0.02	0	17.4	0.10	4.0	0.09	0.18	4.5/
Replaced by		8/19/69	0.04	0	25.5	0.08	4.1	0.05	0.71	4.5/
8N/10W - 18aca		10/07/69	0.08	3	39.0	0.13	5.1	0.10	0.96	4.5/
		3/10/70	0.08	0	36.5	0.09	4.2	0.02	0.74	2.2/
		4/11/72	----	0	36.4	0.08	3.5	0.27	3.2	----
		8/08/72	<0.03	2	23.7	0.07	3.0	<0.01	3.6	<4.5/<4.5
		10/31/72	<0.03	0	29.0	0.17	3.6	0.03	3.5	<4.5/<4.5

* Reported as Soluble Ortho Phosphate
** Reported as Nitrogen


FORT STEVENS MILITARY RESERVATION
Jetty Sands
Tidal Flat
Desdemona Sands Light
South Jetty
MAP No. 1
Point Adams
Tidal Flat
12'30"
Clatsop Spit
FORT STEVENS MILITARY RESERVATION
Tower
Swash Lake
Tower
Fort Stevens
Hammond
Tank
Soldiers Cem
Tidal Flat
Well No. 8
Fort Stevens
State Park
FORT STEVENS STATE PARK
(CLATSOP SPIT)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WARRENTON SEWAGE TREATMENT LAGOON
Warrenton
Clear Lake
Alder
Shag Lake
Burke Lake
Long Lake
Kyle Lake
Cemetery Lake
Skipanon River At Warrenton
Well No. 9
South Fort Steve
State Park
Columbia
Beach
Tidal Flat
PROPOSED
CAMP CLATSOP MILITARY RESERVATION
OREGON STATE NATIONAL GUARD
Smith Lake Estates
Warrenton High School
SPOKANE
PORTLAND
OREGON COAST
SKIPANON RIVER
Skipanon River
at Station Road
Well No. 10
Camp Rilca
PACIFIC OCEAN
OCEAN
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1 120 000 FEET
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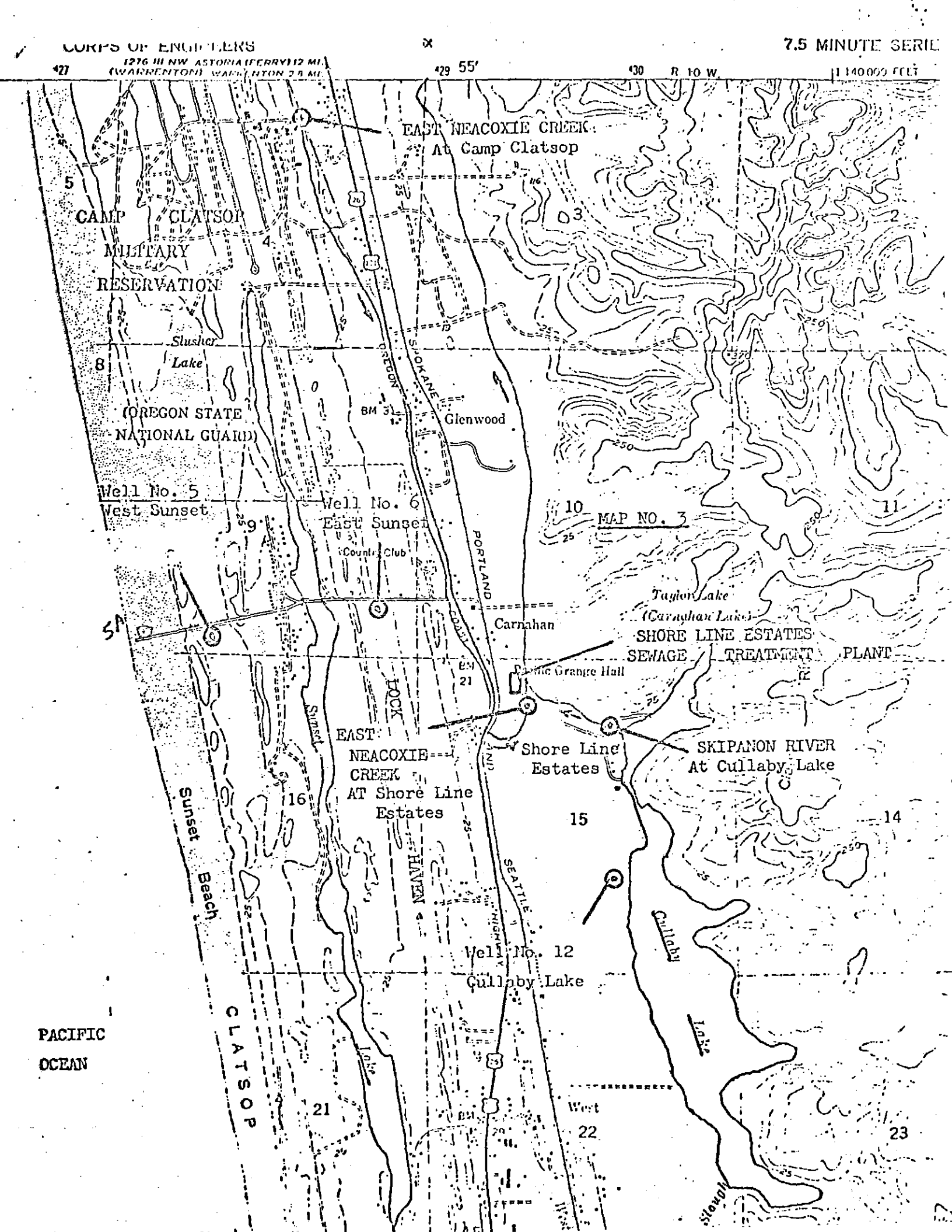
CORPS OF ENGINEERS
7.5 MINUTE SERIE
1276 III NW ASTORIA (FERRY) 12 MI.
(WARRENTON) WASHINGTON 2.8 MI.
427
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1:24000 FEET
EAST NEACOXIE CREEK
At Camp Clatsop
CAMP CLATSOP
MILITARY
RESERVATION
Slusher
Lake
(OREGON STATE
NATIONAL GUARD)
OREGON
SHOKANE
BM 31
Glenwood
Well No. 5
West Sunset
Well No. 6
East Sunset
Country Club
MAP NO. 3
PORTLAND
Taylor Lake
(Carnahan Lakes)
Carnahan
SHORE LINE ESTATES
SEWAGE TREATMENT PLANT
Pacific Grange Hall
LOCK
EAST
NEACOXIE
CREEK
AT Shore Line
Estates
Shore Line
Estates
SKIPANON RIVER
At Cullaby Lake
Sunset
Sunset Beach
HAVEN
SEATTLE
HIGHWAY
Well No. 12
Cullaby Lake
Cullaby
Lake
PACIFIC
OCEAN
CLATSOP
West
Slough

MAP NO.

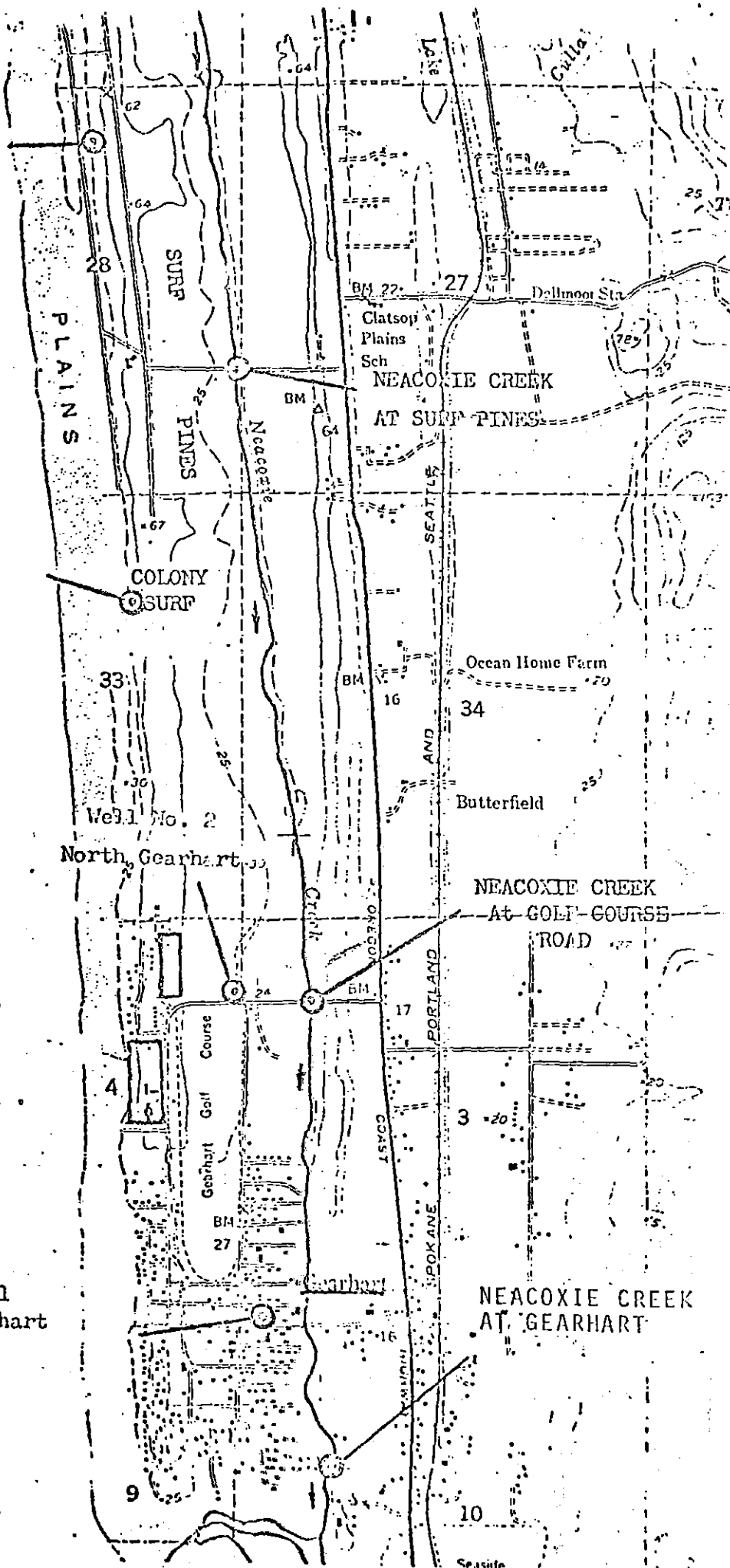
Well No. 4
Surf Pines

MAP NO. 4

Well No. 3A
Colony Surf

PACIFIC
OCEAN

Well No. 1
South Gearhart



FMC (F)
SNCL (F)

DEPARTMENT OF ENVIRONMENTAL QUALITY — SPECIAL SURVEY DATA SHEET

Location: CLATSOP PLAINS Date: 29JUN77 Date Received (Lab): 6/30/77

Collected by: MCM-GMB Weather: PTLY OVERCAST Date Reported: 7/7/77

Purpose: SPECIAL SURVEY

FIELD INFORMATION

Lab. No.	Bottle No. DO/BOD	Bottle No. Susp. Solids	pH	Temp.	Cl_2	Flow	Depth to WATER Description	SAMPLE TIME ~~Test Required~~
WELL 3A CoLony Surf	1003	P202 / P281					10' 4 3/4"	1030 AM Cl⁻, Fe, Color o-PO4, SO4²⁻, Te, FC NH3N, NO3+NO2-N, NO2N
WELL 4 SURFPINES	434	P242 / P261					5' 4"	1100 ~~AM~~
WELL 5A WEST SUNSET	3040	P128 / P194					6' 5"	1130 ~~AM~~
WELL 5 WEST SUNSET	2077	P271 / P288					6' 2"	1145

LABORATORY RESULTS

Lab. No.	Lab. pH	DO	BOD Results	Susp. Solids ml	Susp. Solids SS	NH_3-N	NO_3+NO_2-N	NO_2-N	o-PO_4 as P	SO_4^{2-}	Cl^-	Color	Fe	TC	FC
P202/P281						0.05	0.06	<0.02	0.007	4.4	75.8	5	0.42	<45	<45
P242/P261						0.05	1.22	<0.02	0.038	10.4	38.8	5	<0.05	<45	<45
P128/P194						0.07	1.85	<0.02	0.005	8.7	22.6	10	22.0	<45	<45
P271/P288						0.04	0.04	<0.02	0.005	38.4	135.6	<1	1.53	<45	<45

DEQ/L-300-7/76

DEPARTMENT OF ENVIRONMENTAL QUALITY — SPECIAL SURVEY DATA SHEET

Location: CLATSOP PLAINS Date: 29 JUN 77 Date Received (Lab): 6/30/77

Collected by: GMB - MCM Weather: CLEAR Date Reported: 7/7/77

Purpose: SPECIAL SURVEY

FIELD INFORMATION

Lab. No.	Bottle No.		pH	Temp.	Cl_2	Flow	Depth & Water Description	Sample Time ~~Test Required~~
WELL 6 @ GILL CREEK	3056	P249 / P282					10' 7 3/4	1325
WELL 10 CAMP FILES	3022	P204 / P262					17'	1350
WELL 10A CLATSOP STATION	775	P171 / P223					4' 1 3/4"	1405
WELL 9 SEPTA FD	2088	P127 / P138					12' 11"	1435

LABORATORY RESULTS

Lab. No.	Lab. pH	DO	BOD Results	Susp. Solids ml	Susp. Solids SS	NH_3-N	NO_3+NO_2-N	NO_2-N	o PO_4 as	SO_4^{2-}	Cl^-	Colm	Fe	TC	FC
P249/P282						0.03	2.50	<0.02	0.003	2.4	17.8	5	0.20	<45	<45
P204/P262						0.04	0.11	<0.02	0.006	0.4	19.1	30	3.04	<45	<45
P171/P223						0.49	0.02	<0.02	0.073	0.5	17.6	55	14.5	<45	<45
P127/P138						0.20	0.01	<0.02	0.045	0.1	45.2	10	1.57	<45	<45

DEPARTMENT OF ENVIRONMENTAL QUALITY — SPECIAL SURVEY DATA SHEET

Location: CLATSOP PLAINS — Date: 29 JUN 77 — Date Received (Lab): 6/30/77

Collected by: GMB-MLM — Weather: CLEAR — Date Reported: 7/7/77

Purpose: SPECIAL SURVEY

FIELD INFORMATION

Lab. No.	Bottle No. ~~20 M?N~~	Bottle No. NH? / DAS?	pH	Temp.	Cl_2	Flow	DEPTH → WATER Description	SAMPLE TIME ~~Test Required~~
WELL 9A BERRA RD	1004	P165 / P199					9'10¼"	1500
WELL 8A FT STEVENS	2071	P113 / P298					9'0"	1535
DRAIN WELL RD	638	P188 / P245					12'9½"	1600
								"

49

LABORATORY RESULTS

Lab. No.	Lab. pH	DO	BOD Results	Susp. Solids ml	Susp. Solids SS	NH_3-N	NO_3+NO_2-N	NO_2-N	O-PO_4 as P	SO_4^{2-}	Cl^-	Color	Fe	TC	FC
P165/P199						0.36	16.9	<0.02	0.041	0.2	52.2	35	6.2	<45	<45
P113/P298						0.06	0.13	0.02	0.007	2.6	11.4	200	7.0	<45	<45
P188/P245						0.15	28.9	<0.02	0.005	10.1	50.0	5	0.67	<45	<45

DEQ/L-300-7/76

OREGON STATE HEALTH DIVISION
BACTERIOLOGICAL EXAMINATION

PUBLIC HEALTH LABORATORY

Agency: DEQ
Collected By: GMB - RCM
Date Collected: 29 JUN 77

Date Recieved: 1 JUL 77 1013 AM
Date Reported: 7-2-77
Reported By: GWH

Survey Area: CLATSOP PLAIN / Sample Identification	Dilution to:	Ml. per Tube:	Lact. Broth Pre-sump. Test 24 Hr	Lact. Broth Pre-sump. Test 48 Hr	Brill. Green Con-firm. Test 24 Hr	Brill. Green Con-firm. Test 48 Hr	EC Conf. @ 44.5°C	Dilution to:	Ml. per Tube:	K. F. Broth Pre-sump. Test 24 Hr	K. F. Broth Pre-sump. Test 48 Hr	E V A Broth Con-firm. Test 24 Hr	E V A Broth Con-firm. Test 48 Hr	Bacterial Counts: Indicator Organism	Bacterial Counts: MPN / 100 Ml.
Lab. Number: 20,284 WELL 3A COLONY SURF Bottle Number: 1003	100	1 1 0.1												Total Coliform Fecal Coliform Fec. Streptococci	<45 <45
Lab. Number: 20,285 WELL 4 SURF PINES Bottle Number: 434	100	1 1 0.1												Total Coliform Fecal Coliform Fec. Streptococci	<45 <45
Lab. Number: 20,286 WELL 5A WEST SUNSET Bottle Number: 3040	100	1 1 0.1												Total Coliform Fecal Coliform Fec. Streptococci	<45 <45
Lab. Number: 20,287 WELL 5 WEST SUNSET Bottle Number: 2077	100	1 1 0.1												Total Coliform Fecal Coliform Fec. Streptococci	<45 <45
Lab. Number: 20,288 WELL 6 GOLF COURSE Bottle Number: 3056	100	1 1 0.1												Total Coliform Fecal Coliform Fec. Streptococci	<45 <45
Lab. Number: 20,289 WELL 10 CAMP RILEA Bottle Number: 3022	100	1 1 0.1												Total Coliform Fecal Coliform Fec. Streptococci	<45 <45

OREGON STATE HEALTH DIVISION
BACTERIOLOGICAL EXAMINATION

PUBLIC HEALTH LABORATORY

Agency: DEQ
Collected By: GMB-MLM
Date Collected: 29 JUN 77

Date Recieved: 6-30-77
Date Reported: 7-2-77
Reported By: WSH

Survey Area: / Sample Identification	Dilution to:	M.F. test tube:	Lact. Broth Pre-sump. Test 24 Hr	Lact. Broth Pre-sump. Test 48 Hr	Brill. Green Con-firm. Test 24 Hr	Brill. Green Con-firm. Test 48 Hr	2% Conf. @ 44.5°C	Dilution to:	M.F. test tube:	K. F. Broth Pre-sump. Test 24 Hr	K. F. Broth Pre-sump. Test 48 Hr	E V A Broth Con-firm. Test 24 Hr	E V A Broth Con-firm. Test 48 Hr	Bacterial Counts: Indicator Organism	Bacterial Counts: M P N / 100 Ml.
CLATSOP PLAIN															
Lab. Number: 20,290	100	1.	—	—										Total Coliform	< 45
WELL 10 A		.1	—	—										Fecal Coliform	< 45
CLATSOP STATION		.01	—	—										Fec. Strep-tococci	
Bottle Number: 775															
Lab. Number: 20,291	100	1.	—	—										Total Coliform	< 45
WELL 9		.1	—	—										Fecal Coliform	< 45
BERMA ROAD		.01	—	—										Fec. Strep-tococci	
Bottle Number: 2088															
Lab. Number: 20,292	100	1.	—	—										Total Coliform	< 45
WELL 9A		.1	—	—										Fecal Coliform	< 45
BERMA ROAD		.01	—	—										Fec. Strep-tococci	
Bottle Number: 1004															
Lab. Number: 20,293	100	1.	—	—										Total Coliform	< 45
WELL 8A		.1	—	—										Fecal Coliform	< 45
FORT STEVENS		.01	—	—										Fec. Strep-tococci	
Bottle Number: 2071															
Lab. Number: 20,294	100	1.	—	—										Total Coliform	< 45
WELL 8B		.1	—	—										Fecal Coliform	< 45
DRAIN FILL (FT STEVENS)		.01	—	—										Fec. Strep-tococci	
Bottle Number: 638															
Lab. Number:		1.												Total Coliform	
		.1												Fecal Coliform	
Bottle Number:		.01												Fec. Strep-tococci	

GEARHART AREA - SURFACE WATER DRAINAGE

pling Station	No.	Date	Fe (mg/l)	Color (Color Units)	Cl^- (mg/l)	PO_4 (mg/l)	SO_4 (mg/l)	*NH_3-N (mg/l)	*NO_3-N + NO_2-N (mg/l)	*NO_2-N (mg/l)	MPN TC/FC (Counts/ 100 ml
l Creek is & Clark Rd.	1	9/27/76	2.0	30	9,125	0.04	1,180	0.21	0.05	<0.02	620/230
inage Way Side of Lewis lark Road	2	9/27/76	0.7	50	78.8	0.03	2.2	0.03	0.15	<0.02	>7,000/62C
inage Way end of Airport	3	9/27/76	6.5	320	25.3	0.29	2.1	0.06	0.03	<0.02	230/60
l Creek hway 101	4	9/27/76	1.5	30	9,775	0.06	1,250	0.23	0.03	<0.02	620/60
er Road port Drainage Way	5	9/27/76	5.1	120	139	0.33	38.9	0.18	0.03	<0.02	130/60
Street port Drainage Way	6	9/27/76	5.5	200	21.3	1.2	1.2	0.21	0.04	<0.02	130/130
inage Way of 6th Street (swamp)	7	9/27/76	6.4	300	25.3	0.24	1.9	0.06	0.03	<0.02	620/620
minen Road inage Way	8	9/27/76	5.1	250	26.3	0.64	5.2	0.25	<0.02	<0.02	>7,000/≥7,
coxie Creek f Course Rd.	9	9/27/76	1.2	60	25.3	0.38	2.7	0.02	0.03	<0.02	620/130
coxie Creek Street	10	7/27/76	0.5	10	45.9	0.06	5.4	0.08	0.07	-	620/130
		9/27/76	1.2	30	2,225	0.11	216	0.06	0.16	<0.02	2,400/620
coxie Creek h St. (N. Side)	11	9/27/76	0.3	20	3,625	0.07	432	0.10	0.13	<0.02	230/230
coxie Creek h St. (S. Side)	12	9/27/76	0.3	30	3,925	0.08	456	0.05	0.09	<0.02	620/620
coxie Creek St. Crossing	13	7/27/76	0.5	15	582	0.05	68.6	0.10	0.06	-	230/60

s analysis reported as Nitrogen

GEARHART AREA WELL DATA (July 27 and September 27, 1976)

ampling Station	No.	Date(s)	Fe (mg/l)	Color (Color Units)	Cl^- (mg/l)	PO_4 (mg/l)	SO_4 (mg/l)	*NH_3-N (mg/l)	*NO_3-N + NO_2-N (mg/l)	*NO_2-N (mg/l)	MPN TC/FC (Count 100 m
recraft Well	16	7/27/76	<.05	5	19.9	<0.01	6.3	0.04	8.5	<0.02	<45/<45
98 - 1st Street		9/27/76	0.3	5	20.3	0.01	10.8	0.13	1.57 -	0.09	<45/<45
erry Well	17	7/27/76	<.05	5	23.0	0.01	7.5	0.06	4.6	<0.02	<45/<45
41 - 2nd Street		9/27/76	1.8	60	12.3	0.06	1.6	0.17	1.62 -	<0.02	<45/<45
axtad Well	18	7/27/76	<.05	5	17.9	<0.01	4.1	0.06	0.9	<0.02	<45/<45
26 - 8th Street		9/27/76	<0.1	5	13.3	0.02	1.2	0.23	0.77 -	<0.02	<45/<45
in Price Well	19	7/27/76	<.05	<1	40.3	0.01	6.3	0.06	0.48	<0.02	<45/<45
07 Marion Street		9/27/76	<0.1	<1	23.3	0.05	2.2	0.03	0.40 -	<0.02	<45/<45
itte Well	26	7/27/76	<.05	<1	21.0	<0.01	5.5	0.05	7.4	<0.02	2400/60
nd of 13th Street											
aring Well	23	7/27/76	<.05	<1	14.8	0.02	4.2	0.12	7.8	<0.02	<45/<45
586 Pacific Hwy		9/27/76	<.01	<1	10.3	0.02	0.4	0.06	6.59 -	<0.02	<45/<45
enta Well	24	7/27/76	<.05	<1	10.7	<0.01	2.4	0.05	2.3	<0.02	<45/<45
t. 1 Box 550		9/27/76	<0.1	<1	10.8	0.02	0.1	0.03	4.16 -	<0.02	<45/<45
Cormic Garden											
ins Well	21	7/27/76	.05	10	21.4	<0.01	7.5	7.1	7.0	<0.02	<45/<45
01 Spruce Street		9/27/76	1.2	5	26.3	0.03	10.4	1.85	0.04 -	<0.02	<45/<45
ith Well	20	7/27/76	<.05	<1	17.3	<0.01	1.1	0.09	8.9	<0.02	<45/<45
01 S. Cottage		9/27/76	0.3	5	12.3	0.03	2.0	0.03	1.53 -	<0.02	<45/<45
ok Well	25	7/27/76	3.	40	46.9	<0.01	36.5	0.04	0.33	<0.02	<45/<45
7 F Street											
ark Well	22	7/27/76	<.05	<1	12.8	<0.01	25.8	0.17	7.8	0.18	<45/<45
th & RR Tracks		9/27/76	2.0	5	18.3	0.02	39.8	0.77	4.35 -	0.17	<45/<45
Average		Both Dates 9/27/76	.470	7.95	19.66	0.38	8.78	.557	3.85 2.35	.039	--
ffman Well	15	9/27/76	<0.1	5	13.3	0.04	1.5	0.03	1.04	<0.02	<45/<45

Hoffman well used as the control well, located between Gearhart and Surf Pines.
This analysis reported as Nitrogen.

SUNSET BEACH WELL DATA (September 27, 1976)

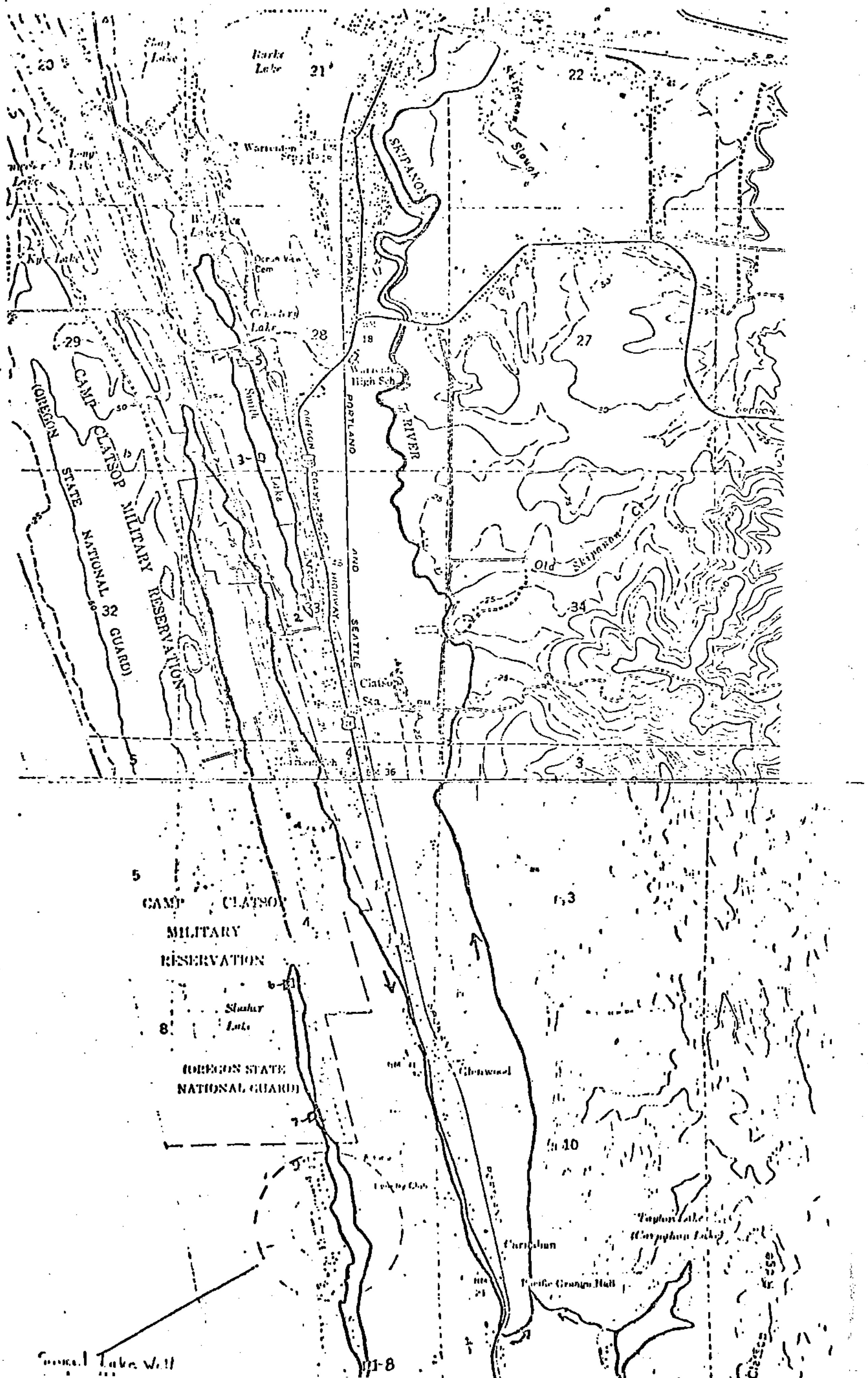
pling Station	No.	Date	Fe (mg/l)	Color (Color Units)	Cl^- (mg/l)	PO_4 (mg/l)	SO_4 (mg/l)	*NH_3-N (mg/l)	*NO_3-N + NO_2-N (mg/l)	*NO_2-N (mg/l)	MPN TC/FC (Count 100 m
lling Well	13	9/27/76	<0.1	5	19.3	0.05	1.3	0.02	1.34	<0.02	<45/<4
ington Well	14	9/27/76	0.3	<1	17.3	0.04	1.2	0.06	2.13	<0.02	<45/<4
ler Well	1	9/27/76	<0.1	5	21.8	0.09	12.4	0.08	2.45	<0.02	<45/<4
en Vacation me	2	9/27/76	1.7	5	16.3	0.07	4.3	0.19	1.56	<0.02	<45/<4
tworth Well	3	9/27/76	<0.1	5	42.3	0.63	15.5	0.04	9.73	<0.02	<45/<4
dey Well 1 Box 889	4	9/27/76	<0.1	<1	22.3	0.08	4.4	0.14	2.08	<0.02	<45/<4
f Well	5	9/27/76	<0.1	20	22.3	0.06	6.0	0.27	3.14	0.24	<45/<4
lcups set Beach	6	9/27/76	<0.1	<1	18.3	0.17	2.6	0.27	1.02	<0.02	<45/<4
rmey	7	9/27/76	<0.1	10	17.3	0.13	4.9	0.06	2.5	<0.02	<45/<4
gan Store set Beach	8	9/27/76	<0.1	5	28.8	0.09	9.4	0.08	9.38	<0.02	<45/<4
kwell	9	9/27/76	<0.1	10	17.3	0.08	3.8	0.08	2.41	<0.02	<45/<4
son	10	9/27/76	<0.1	15	35.8	0.05	7.0	0.06	1.85	<0.02	<45/<4
ster	11	9/27/76	0.7	40	16.8	0.06	5.3	0.08	4.57	<0.02	<45/<4
nnet	12	9/27/76	<0.1	<1	14.8	0.08	2.6	0.08	3.03	<0.02	<45/<4
Average			0.19	8.6	21.6	0.11	5.48	0.102	3.37	0.034	

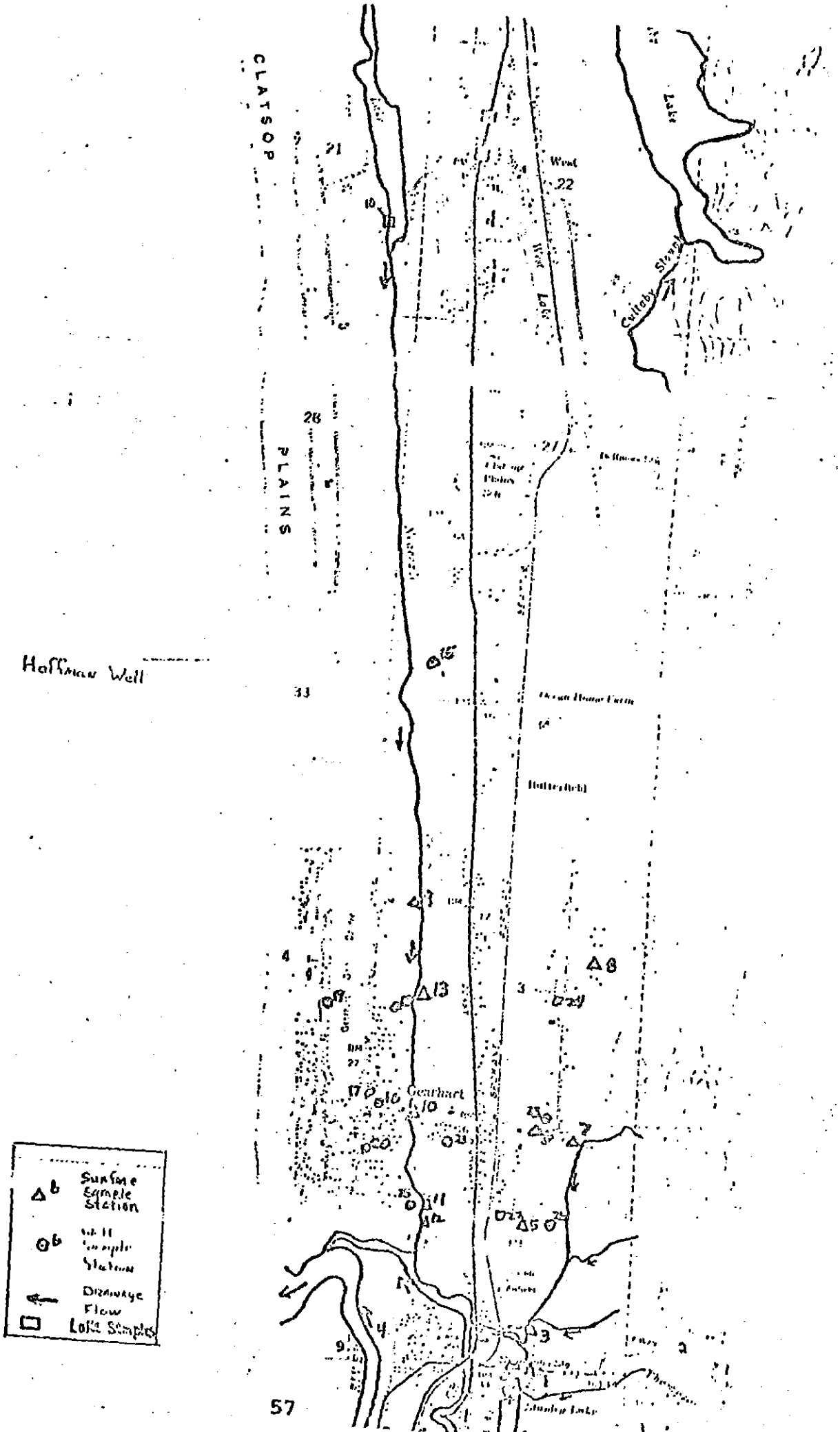
is analysis reported as Nitrogen.

CLATSOP PLAINS LAKES (SAMPLED 9-27-76)

Sampling Station	No.	pH	DO (mg/l)	BOD 5-day (mg/l)	MPN TC/FC (Counts/ 100 ml)	*NH_3-N (mg/l)	*NO_3-N + NO_2-N (Mg/l)	*NO_2-N (mg/l)	PO_4 (mg/l)	CL^- (mg/l)	SO_4 (mg/l)	Fe	Col
N.end Smith Lake	1.	6.0	2.8	14	230/<45	0.13	<0.02	<0.02	0.05	26.8	1.7	3.1	10
Hoagland Smith Lake	2.	6.1	3.3	4	2400/<45	0.05	<0.02	<0.02	0.01	22.3	0.8	1.2	7
Vacant Lot Smith Lake	3.	6.1	6.5	3.5	2400/<45	0.06	0.02	<0.02	0.05	22.3	0.7	1.1	5
Old Bridge Smith Lake	4.	6.3	6.1	1.9	60/60	0.02	<0.02	<0.02	0.05	21.8	1.8	4.1	6
Mr. Snow Smith Lake	5.	6.4	6.8	0.9	<45/<45	0.11	0.03	<0.02	0.01	22.3	2.5	0.9	4
Sunset Lake	6.	8.4	---	---	<45/<45	<0.01	0.02	<0.02	0.09	27.8	2.1	0.1	2
Sunset Lake	7.	8.4	9.8	1.5	<45/<45	<0.01	<0.02	<0.02	0.11	27.8	1.6	0.1	2
Sunset Lake	8.	8.4	10.8	2.3	60/<45	0.02	0.02	<0.02	0.08	39.8	1.7	0.3	1
Sunset Lake	9.	8.4	8.4	---	<45/<45	0.05	0.02	<0.02	0.06	27.3	2.0	0.2	1
Sunset Lake	10.	8.4	9.1	1.7	<45/<45	<0.01	<0.02	<0.02	0.04	25.8	1.7	<0.1	1

*This analysis reported as Nitrogen.


SKIPANON
Slough
RIVER
Warrenton High Sch
Smith Lake
OREGON COAST HIGHWAY
PORTLAND AND SEATTLE
Old Skipanon Cr
Clatsop Sta
(OREGON STATE NATIONAL GUARD)
CAMP CLATSOP MILITARY RESERVATION
CAMP CLATSOP
MILITARY
RESERVATION
(OREGON STATE
NATIONAL GUARD)
Glenwood
Pacific Grange Hall


CLATSOP
PLAINS
Hoffman Well
West Lake
Lake
Cullaby Slough
Stanley Lake
Δb Surface Sample Station
Ob Well Sample Station
Drainage Flow
Lake Sample

No. 6N/10W-2 [illegible]

Appendix D

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ______

Owner: Clatsop Co.
Address: Golf Course Rd @ Hi-way 101
Tenant: [illegible]
Address: ______

State No. ______
Other No. ______

Type of Well: Hydrograph [ ] Key [ ] Index [ ] Semiannual [ ] Quality [x]

Location: County: Clatsop Basin: Clatsop Plains No. ______

U.S.G.S. Quad. Gearhart Quad. No. ______

NE ¼ NE ¼ Section 2, Twp. 6N, Rge. 10W W.M. Meridian

Description: ~10' E of culvert under Golf Course Rd.

Reference Point description: Top of 1¼" pipe

which is ______ ft. above/below land surface. Ground Elevation ______ ft.

Reference Point Elev. ______ ft. Determined from ______

Well: Use Monitor Condition ______ Depth ______ ft.

Casing, size 1¼" in., perforations ~20-22'

Measurements By: DWR [ ] USGS [ ] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [x]

Chief Aquifer: Name dune sand Depth to Top Aq. ______ Depth to Bot. Aq. ______

Type of Material [illegible] sand Perm. Rating ______ Thickness ______

Gravel Packed? Yes [ ] No [x] Depth to Top Gr. ______ Depth to Bot. Gr. ______

Supp. Aquifer ______ Depth to Top Aq. ______ Depth to Bot. Aq. ______

Driller: [illegible] (Or. Highway Div.)

Date drilled [illegible] Log, filed ______ open (1) ______ confidential (2) ______

Equipment: Pump, type ______ make ______

Serial No. ______ Size of discharge pipe ______ in.

Power, Kind ______ Make ______

H. P. ______ Motor Serial No. ______

Elec. Meter No. ______ Transformer No. ______

Yield ______ G.P.M. Pumping level ______ ft.

Water Analysis: Min. (1) ______ San. (2) ______ H.M. (3) ______

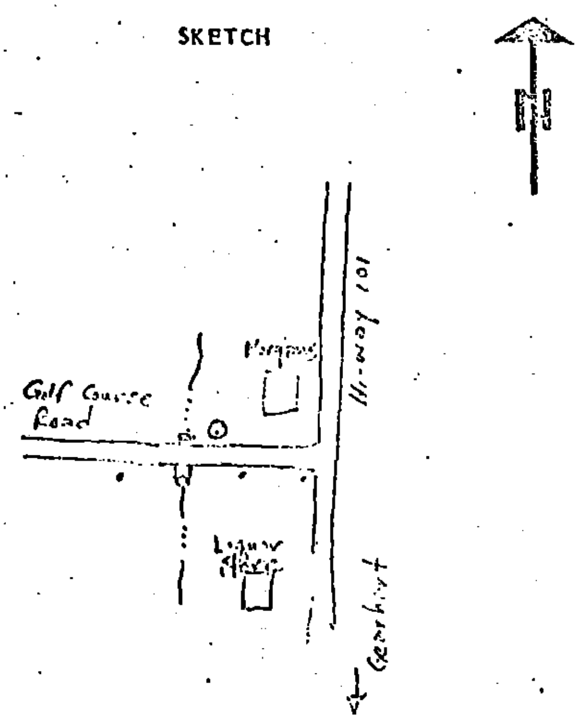
Water Levels available: Yes (1) ______ No ______

Period of Record: Begin ______ End ______

Collecting Agency: ______

Prod. Rec. (1) ______ Pump Test (2) ______ Yield (3) ______

SKETCH



REMARKS

1¼" pipe ~2' above gnd.
Sand point @ 6-7½'
[illegible] well
[illegible] 1979 [illegible]

Recorded by: ______
Date ______

No. [illegible]

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project

Owner Clatsop Co.
Address
Tenant Gearhart Golf Course
Address

State No.
Other No.

Type of Well: Hydrograph [ ] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop [illegible] No.
U.S.G.S. Quad. Gearhart Quad. No.
NW ¼ NE ¼ Section 4, Twp. 6N, Rge. 10W W111. Meridian
Description

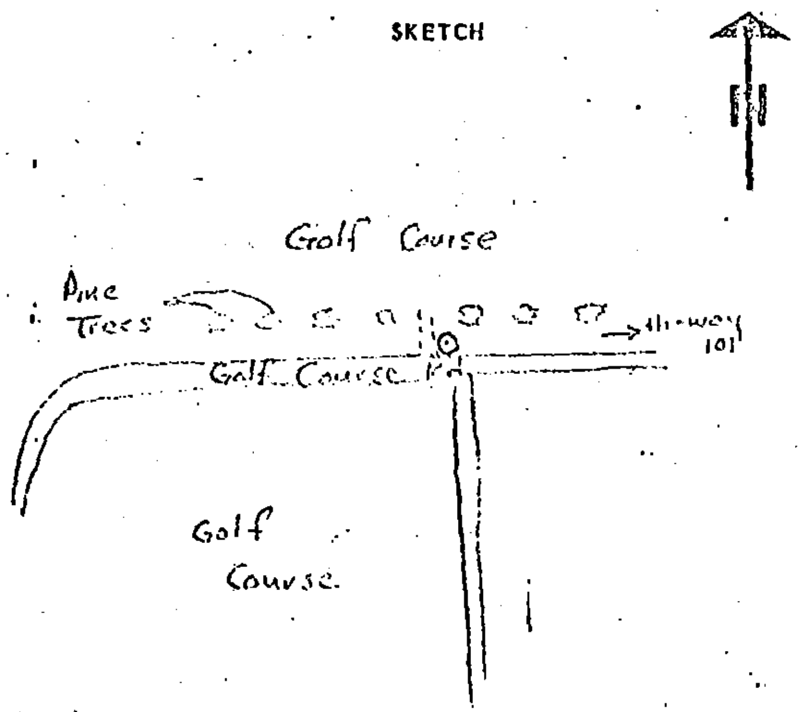
Reference Point description

which is ___ ft. above/below land surface. Ground Elevation ___ ft.
Reference Point Elev. ___ ft. Determined from
Well: Use [illegible] Condition Depth ___ ft.
Casing, size 12" in., perforations 20-22'

Measurements By: DWR [ ] USGS [ ] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X]
Chief Aquifer: Name [illegible] Depth to Top Aq. Depth to Bot. Aq.
Type of Material [illegible] Perm. Rating Thickness
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller [illegible] ([illegible])
Date drilled [illegible] Log, filed open (1) confidential (2)
Equipment: Pump, type make
Serial No. Size of discharge pipe ___ in.
Power, Kind Make
H. P. Motor Serial No.
Elec. Meter No. Transformer No.
Yield ___ G.P.M. Pumping level ___ ft.

Water Analysis: Min. (1) San. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

Adjacent to path onto Golf Course.

Replaces U.S.G.S. well [illegible]
W.S.P. 1899-? [illegible]

Recorded by:
Date

No. [illegible]

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____

Owner: Clatsop County
Address: 10th St. – Gearhart
Tenant: (St. Highway Department) [illegible]
Address: ____

State No. ____
Other No. ____

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐ Quality ☐

Location: County Clatsop Basin Clatsop Plains No. ____

U.S.G.S. Quad. Gearhart Quad. No. ____

SW ¼ NE ¼ Section 4, Twp. 6 N, Rge. 10 W W.M. Meridian

Description ____

Reference Point description: Top of 1½" pipe

which is ____ ft. above/below land surface. Ground Elevation ____ ft.

Reference Point Elev. ____ ft. Determined from ____

Well: Use [illegible] Condition ____ Depth ____ ft.

Casing, size 1½" in., perforations ~ 20' [illegible]

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐ Other ☐

Chief Aquifer: Name dune sand Depth to Top Aq. ____ Depth to Bot. Aq. ____

Type of Material [illegible] sand Perm. Rating ____ Thickness ____

Gravel Packed? Yes ☐ No ☒ Depth to Top Gr. ____ Depth to Bot. Gr. ____

Supp. Aquifer ____ Depth to Top Aq. ____ Depth to Bot. Aq. ____

Driller: [illegible] (Ore. Highway Div.)

Date drilled 9/25/[illegible] Log, filed ____ open (1) ____ confidential (2) ____

Equipment: Pump, type ____ make ____

Serial No. ____ Size of discharge pipe ____ in.

Power, Kind ____ Make ____

H. P. ____ Motor Serial No. ____

Elec. Motor No. ____ Transformer No. ____

Yield ____ G.P.M. Pumping level ____ ft.

Water Analysis: Min. (1) ____ San. (2) ____ W.M. (3) ____

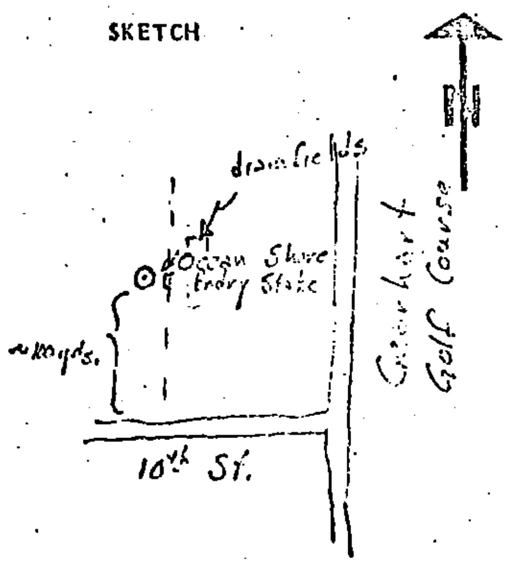
Water Levels available: Yes (1) ____ No ____

Period of Record: Begin ____ End ____

Collecting Agency: ____

Prod. Rec. (1) ____ Pump Test (2) ____ Yield (3) ____

SKETCH



REMARKS

1½" pipe – 6 ft west of Ocean Shore boundary Stake.

Drainfield for Pacific [illegible], ~24 units w/ ~ 50% [illegible] to the south.

Recorded by: ____

Date ____

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ______

Owner U.S. Geol. Survey
Address ______
Tenant ______
Address ______

State No. 7N/10W-9cc (N1)
Other Nos. ______

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No. ______
U.S.G.S. Quad. Gearhart Quad. No. ______
SW ¼ SW ¼ Section 9, Twp. 7N, Rge. 10W W.M. Meridian
Description ______

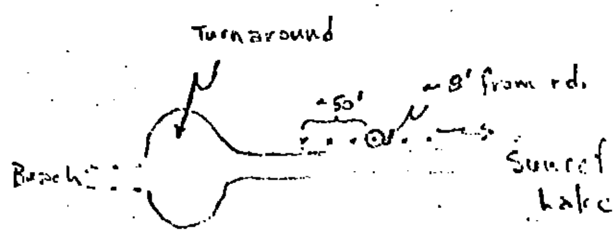
Reference Point description top of 1¼" pipe

which is ______ ft. above/below land surface. Ground Elevation ______ ft.
Reference Point Elev. 19.5 ft. Determined from ______
Well: Use monitor Condition ______ Depth ______ ft.
Casing, size 1¼" in., perforations 8.7-10.2'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X]
Chief Aquifer: Name dune-sand Depth to Top Aq. ______ Depth to Bot. Aq. ______
Type of Material fine-med sand Perm. Rating ______ Thickness ______
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. ______ Depth to Bot. Gr. ______
Supp. Aquifer ______ Depth to Top Aq. 6 Depth to Bot. Aq. ______
Driller U.S.G.S.
Date drilled 1966 Log, filed W.S.P. 1899-A open (1) ______ confidential (2) ______
Equipment Pump, type ______ make ______
Serial No. ______ Size of discharge pipe ______ in.
Power, Kind ______ Make ______
H. P. ______ Motor Serial No. ______
Elec. Motor No. ______ Transformer No. ______
Yield ______ G.P.M. Pumping level ______ ft.

Water Analysis: Min. (1) ______ San. (2) ______ H.M. (3) ______
Water Levels available: Yes (1) ______ No ______
Period of Record: Begin ______ End ______
Collecting Agency: ______
Prod. Rec. (1) ______ Pump Test (2) ______ Yield (3) ______

SKETCH



REMARKS

1¼" pipe on N side of rd., in gap of fence line

d.t.w.
6/29/77 6'5"

Recorded by: ______
Date ______

No. 9N/10W-9cd

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project

Owner U.S. Geol. Survey
Address
Tenant
Address

State No. 9N/10W-9cd (P1)
Other No.

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No.
U.S.G.S. Quad. Gearhart Quad. No.
SE ¼ SW ¼ Section 9, Twp. 9N, Rge. 10W W.M. Meridian
Description

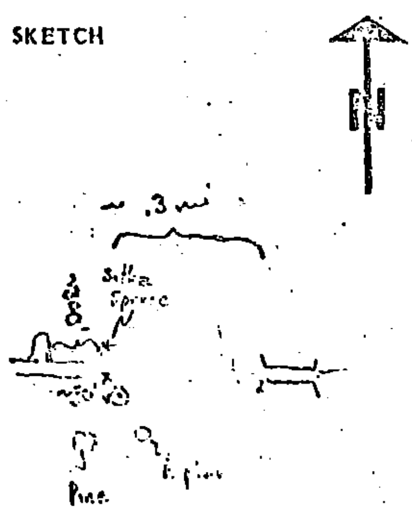
Reference Point description top of 1¼" pipe

which is ft. above/below land surface. Ground Elevation ft.
Reference Point Elev. 25.9 ft. Determined from
Well: Use [illegible] Condition Depth ft.
Casing, size 1¼" in., perforations 7.8-9.3'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [ ]
Chief Aquifer: Name dune sand Depth to Top Aq. 5 Depth to Bot. Aq.
Type of Material [illegible] sand Perm. Rating Thickness
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller U.S.G.S.
Date drilled 1966 Log, filed W.S.P. 1899-A open (1) confidential (2)
Equipment: Pump, type make
Serial No. Size of discharge pipe in.
Power, Kind Make
H. P. Motor Serial No.
Elec. Meter No. Transformer No.
Yield G.P.M. Pumping level ft.

Water Analysis: Min. (1) San. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

~6in high, 1¼" pipe

d.t.w.
6/29/77 6'2"

Recorded by:
Date

No. ____

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____

Owner Mrs. Ruth Remington
Address Nehalem Trailer Ct.
Tenant ____
Address ____

State No. ____
Other No. ____

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐ Quality ☒
Location: County Clatsop Basin Clatsop Plain No. ____
U.S.G.S. Quad. Warrenton Quad. No. ____
SW ¼ SE ¼ Section 9, Twp. 7N, Rge. 10W Will. Meridian
Description ____

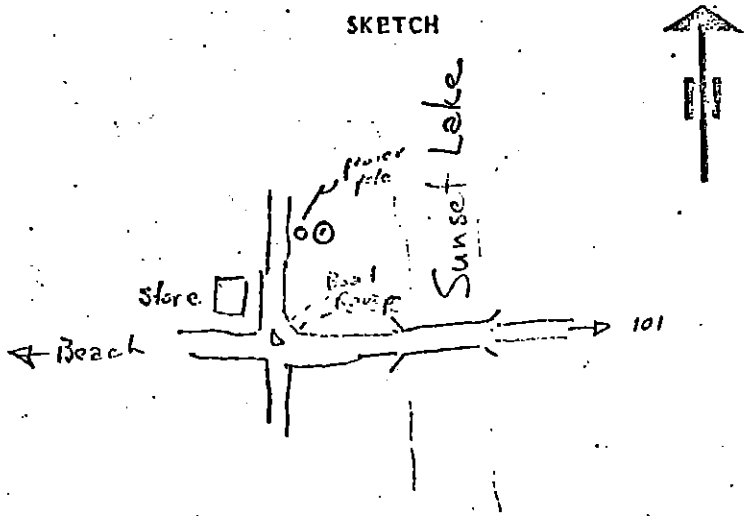
Reference Point description Lip of 1½" pipe

which is ____ ft. above / below land surface. Ground Elevation ____ ft.
Reference Point Elev. ____ ft. Determined from ____
Well: Use ____ Condition ____ Depth 20 ft.
Casing, size 1½" in., perforations ~20'

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐ Other ☒
Chief Aquifer: Name dune sand Depth to Top Aq. ____ Depth to Bot. Aq. ____
Type of Material ____ Perm. Rating ____ Thickness ____
Gravel Packed? Yes ☐ No ☒ Depth to Top Gr. ____ Depth to Bot. Gr. ____
Supp. Aquifer ____ Depth to Top Aq. ____ Depth to Bot. Aq. ____
Driller Remington
Date drilled ____ Log, filed ____ open (1) ____ confidential (2) ____
Equipment Pump, type ____ make ____
Serial No. ____ Size of discharge pipe ____ In.
Power, Kind ____ Make ____
H. P. ____ Motor Serial No. ____
Elec. Motor No. ____ Transformer No. ____
Yield ____ G.P.M. Pumping level ____ ft.

Water Analysis: Min. (1) ____ San. (2) ____ H.M. (3) ____
Water Levels available: Yes (1) ____ No ____
Period of Record: Begin ____ End ____
Collecting Agency: ____
Prod. Rec. (1) ____ Pump Test (2) ____ Yield (3) ____

SKETCH



REMARKS

1½" drive pt., 10 ft. East of power pole.

Recorded by: ____
Date ____

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____

Owner U.S. Geol. Survey
Address [illegible]
Tenant [illegible]
Address ____

State No. 7N/10W-9dd (R1)
Other No. ____

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No. ____
U.S.G.S. Quad. Gearhart Quad. No. ____
SE ¼ SE ¼ Section 9, Twp. 7N, Rge. 10W WIll. Meridian
Description ____

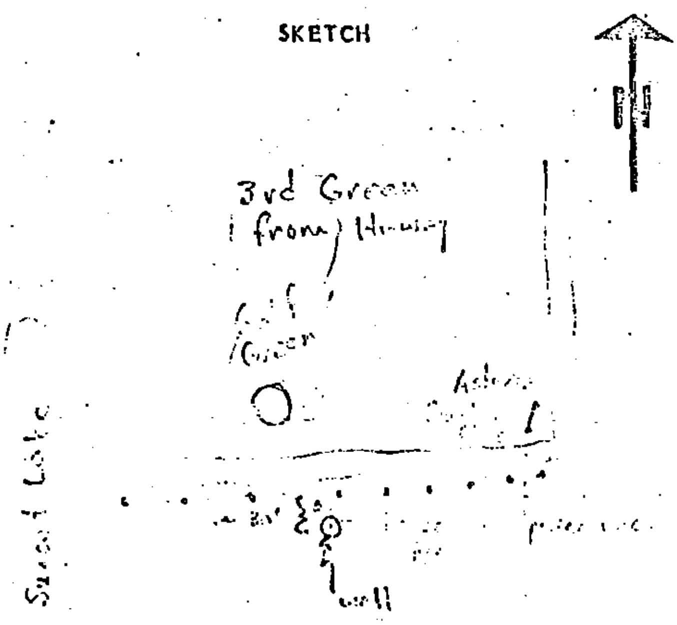
Reference Point description Top of 1¼" pipe

which is ____ ft. above/below land surface. Ground Elevation ____ ft.
Reference Point Elev. 31.43 ft. Determined from ____
Well: Use Monitoring Condition ____ Depth ____ ft.
Casing, size 1¼" in., perforations 13.5-15'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [ ]
Chief Aquifer: Name dune sand Depth to Top Aq. ____ Depth to Bot. Aq. ____
Type of Material [illegible] sand Perm. Rating ____ Thickness ____
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. ____ Depth to Bot. Gr. ____
Supp. Aquifer ____ Depth to Top Aq. ____ Depth to Bot. Aq. ____
Driller U.S.G.S.
Date drilled 1966 Log, filed W.S.P. 1999-A open (1) ____ confidential (2) ____
Equipment: Pump, type ____ make ____
Serial No. ____ Size of discharge pipe ____ in.
Power, Kind ____ Make ____
H. P. ____ Motor Serial No. ____
Elec. Motor No. ____ Transformer No. ____
Yield ____ G.P.M. Pumping level ____ ft.

Water Analysis: Min. (1) ____ San. (2) ____ H.M. (3) ____
Water Levels available: Yes (1) ____ No ____
Period of Record: Begin ____ End ____
Collecting Agency: ____
Prod. Rec. (1) ____ Pump Test (2) ____ Yield (3) ____

SKETCH



REMARKS

1¼" drive pt. 10' SSE of [illegible]

d.t.w. [illegible]
6/29/77 11' 7¾"

Recorded by: ____
Date ____

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project

Owner U.S. Geol. Survey
Address
Tenant Scott Pines
Address

State No. 7N/10W-28 ab (B,)
Other No.

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No.
U.S.G.S. Quad. Gearhart Quad. No.
NW ¼ NE ¼ Sec. 28, Twp. 7N, Rge. 10W Will. Meridian
Description

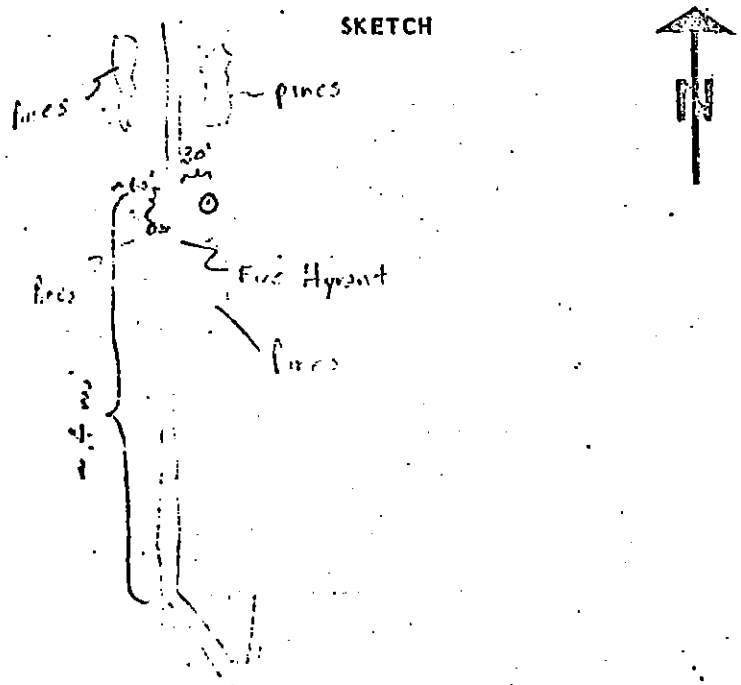
Reference Point description

which is ft. above / below land surface. Ground Elevation ft.
Reference Point Elev. 16.22 ft. Determined from
Well: Use monitor Condition Depth ft.
Casing, size 1¼" in., perforations 7.7 - 9.2'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X]
Chief Aquifer: Name dune sand Depth to Top Aq. 4 Depth to Bot. Aq.
Type of Material unconsol. sand Perm. Rating Thickness
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller U.S.G.S.
Date drilled 1966 Log, filed W.S.P. 1899-A open (1) confidential (2)
Equipment: Pump, type make
Serial No. Size of discharge pipe in.
Power, Kind Make
H.P. Motor Serial No.
Elec. Motor No. Transformer No.
Yield G.P.M. Pumping level ft.

Water Analysis: Min. (1) San. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

1½" pipe

d.tw.
6/29/77 5'4"

Recorded by:
Date

No. ____

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____

Owner: U.S. Geol. Survey
Address: ____
Tenant: Ft. Stevens St. Park
Address: ____

State No.: 8N/10W-17bb (D1)
Other No.: ____

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No. ____
U.S.G.S. Quad. Warrenton Quad. No. ____
NW ¼ NW ¼ Section 17, Twp. 8N, Rge. 10W W.M. Meridian
Description ____

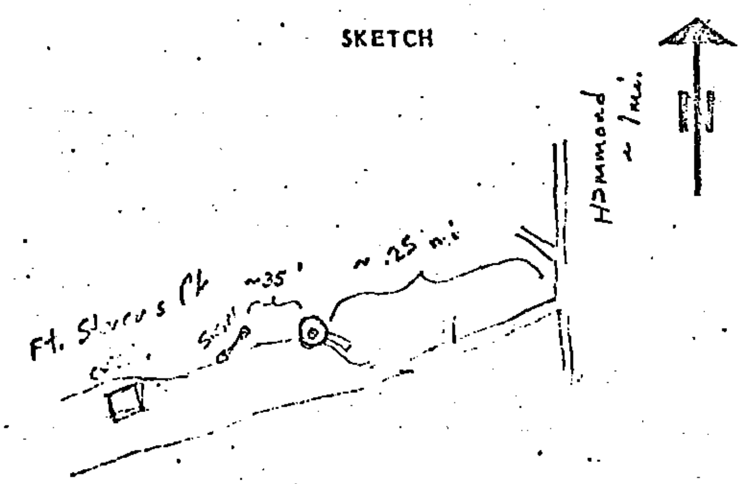
Reference Point description ____

which is ____ ft. above/below land surface. Ground Elevation ____ ft.
Reference Point Elev. 22.33 ft. Determined from ____
Well: Use ____ Condition ____ Depth ____ ft.
Casing, size 1¼ in., perforations 15-16.5'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [ ]
Chief Aquifer: Name dune-sand Depth to Top Aq. ____ Depth to Bot. Aq. ____
Type of Material sand Perm. Rating ____ Thickness ____
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. ____ Depth to Bot. Gr. ____
Supp. Aquifer ____ Depth to Top Aq. ____ Depth to Bot. Aq. ____
Driller U.S.G.S.
Date drilled 1966 Log, filed W.S.P. 1899-A open (1) ____ confidential (2) ____
Equipment Pump, type ____ make ____
Serial No. ____ Size of discharge pipe ____ in.
Power, Kind ____ Make ____
H. P. ____ Motor Serial No. ____
Elec. Motor No. ____ Transformer No. ____
Yield ____ G.P.M. Pumping level ____ ft.

Water Analysis: Min. (1) ____ San. (2) ____ H.M. (3) ____
Water Levels available: Yes (1) ____ No ____
Period of Record: Begin ____ End ____
Collecting Agency: ____
Prod. Rec. (1) ____ Pump Test (2) ____ Yield (3) ____

SKETCH



REMARKS

1¼" galvanized pipe w/ 2'
slot screen end.

dtw.
6/29/07 9'

Recorded by: ____
Date ____

No. 7N/10W-33ac

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project

Owner U.S. Geological Survey
Address
Tenant
Address

State No. 7N/10W - 33 ac (G.)
Other No.

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No.
U.S.G.S. Quad. Grenhart Quad. No.
SW ¼ NE ¼ Section 33, Twp. 7N, Rge. 10 W Will. Meridian
Description

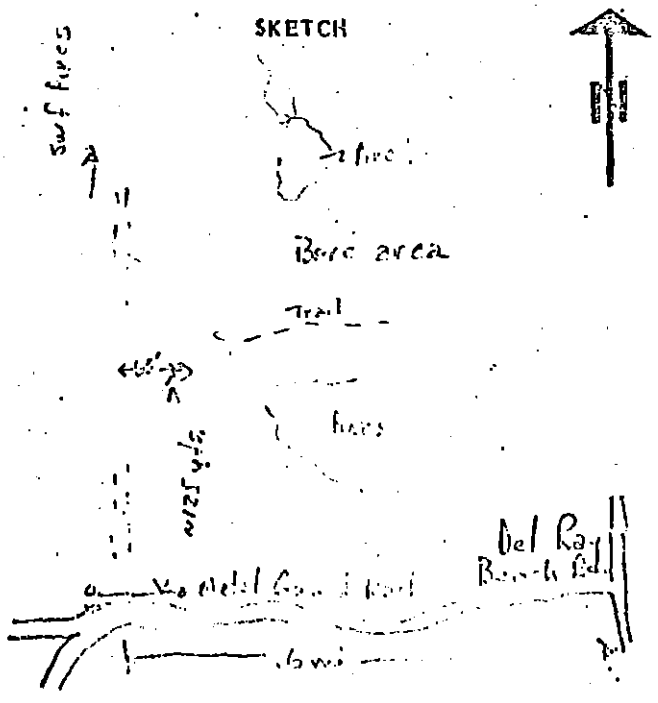
Reference Point description top of 1¼" pipe

which is ft. above/below land surface. Ground Elevation ft.
Reference Point Elev. 19.67 ft. Determined from
Well: Use Monitor Condition Depth ft.
Casing, size 1¼" in., perforations 11.8 - 13.3'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X] DEQ
Chief Aquifer: Name dune sand Depth to Top Aq. 10 Depth to Bot. Aq.
Type of Material fine sand Perm. Rating Thickness
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller U.S.G.S.
Date drilled 1976 Log, filed W.S.P. 1999-A open (1) confidential (2)
Equipment: Pump, type make
Serial No. Size of discharge pipe in.
Power, Kind Make
H. P. Motor Serial No.
Elec. Meter No. Transformer No.
Yield G.P.M. Pumping level ft.

Water Analysis: Min. (1) San. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

1¼" pipe cut
East @ Del Ray Beach access rd.
d.t.w.
6/29/77 10' 4 3/8"

Recorded by:
Date

No. [illegible]

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ______

Owner [illegible] | State No. ______
Address ______ | Other No. ______
Tenant ______
Address ______

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐ Quality ☒

Location: County [illegible] Basin Clatsop Plain No. ______

U.S.G.S. Quad. [illegible] Quad. No. ______

NW ¼ SE ¼ Section 17, Twp. 8 N, Rge. 10 W WILL. Meridian

Description ______

Reference Point description ______

which is ______ ft. above/below land surface. Ground Elevation ______ ft.

Reference Point Elev. ______ ft. Determined from ______

Well: Use [illegible] Condition ______ Depth 17.5 ft.

Casing, size 1¼" in., perforations ______

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐ Other ☐

Chief Aquifer: Name [illegible] Depth to Top Aq. ______ Depth to Bot. Aq. ______

Type of Material Sand Perm. Rating ______ Thickness ______

Gravel Packed? Yes ☐ No ☒ Depth to Top Gr. ______ Depth to Bot. Gr. ______

Supp. Aquifer ______ Depth to Top Aq. ______ Depth to Bot. Aq. ______

Driller ______

Date drilled ? Log, filed No open (1) ______ confidential (2) ______

Equipment: Pump, type ______ make ______

Serial No. ______ Size of discharge pipe ______ in. | Water Analysis: Min. (1) ______ San. (2) ______ H.B. (3) ______

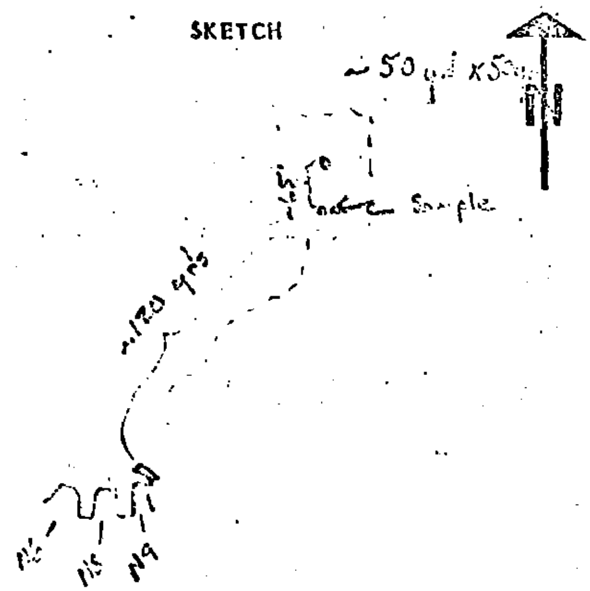
Power, Kind ______ Make ______ | Water Levels available: Yes (1) ______ No ______

H. P. ______ Motor Serial No ______ | Period of Record: Begin ______ End ______

Elec. Meter No. ______ Transformer No. ______ | Collecting Agency: ______

Yield ______ G.P.M. Pumping level ______ ft. | Prod. Rec. (1) ______ Pump Test (2) ______ Yield (3) ______

SKETCH



REMARKS

Two 1¼" wells [illegible]
[illegible]

[illegible]
[illegible]

[illegible]
[illegible]

Located [illegible]
[illegible] Section [illegible]
[illegible] and fill (?).

Recorded by: ______

Date ______

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____________

Owner Ft. Stevens St. Park
Address ____________
Tenant ____________
Address ____________

State No. ____________
Other No. ____________

Type of Well: Hydrograph [ ] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plain No. ____
U.S.G.S. Quad. Warrenton Quad. No. ____
SW ¼ NE ¼ Section 18, Twp. 8N, Rge. 10W W.M. Meridian
Description ____________

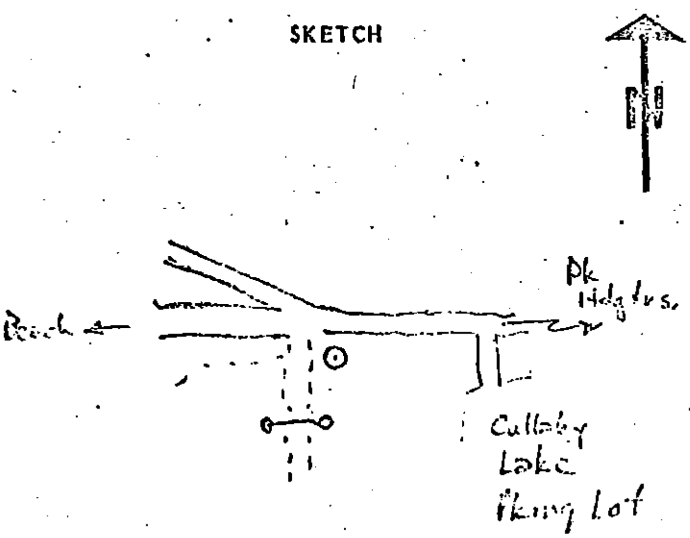
Reference Point description top of 1½" pipe

which is ______ ft. above/below land surface. Ground Elevation ______ ft.
Reference Point Elev. ______ ft. Determined from ______
Well: Use [illegible] Condition ______ Depth ______ ft.
Casing, size 1½" In., perforations @ 20-22'

Measurements By: DWR [ ] USGS [ ] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X]
Chief Aquifer: Name dune - sand Depth to Top Aq. ______ Depth to Bot. Aq. ______
Type of Material ______ Perm. Rating ______ Thickness ______
Gravel Packed? Yes [ ] No [ ] Depth to Top Gr. ______ Depth to Bot. Gr. ______
Supp. Aquifer ______ Depth to Top Aq. ______ Depth to Bot. Aq. ______
Driller [illegible] (Ore. Highway Div.)
Date drilled [illegible] Log, filed ______ open (1) ______ confidential (2) ______
Equipment Pump, type ______ make ______
Serial No. ______ Size of discharge pipe ______ In.
Power, Kind ______ Make ______
H. P. ______ Motor Serial No. ______
Elec. Motor No. ______ Transformer No. ______
Yield ______ G.P.M. Pumping level ______ ft.

Water Analysis: Min. (1) ______ San. (2) ______ H.M. (3) ______
Water Levels available: Yes (1) ______ No ______
Period of Record: Begin ______ End ______
Collecting Agency: ______
Prod. Rec. (1) ______ Pump Test (2) ______ Yield (3) ______

SKETCH



REMARKS

1½" pipe, 1' above grd.

Screen perf. @ 20-22'
[illegible] U.S.G.S. [illegible] well, see
W.S.P. [illegible]

Recorded by: ______
Date ______

No. 24/10W-20C6

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project

Owner U.S. Geol. Survey
Address
Tenant
Address

State No. 8N/10W - 20 C 6 (M)
Other No.

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [ ]
Location: County Clatsop Basin Clatsop Plain No.
U.S.G.S. Quad. Olney Astoria Quad. No.
NW ¼ SW ¼ Section 20, Twp. 8N, Rge. 10W Will. Meridian
Description

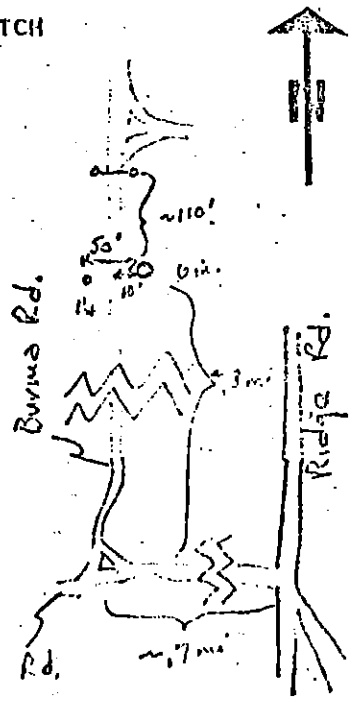
Reference Point description

which is ft. above/below land surface. Ground Elevation ft.
Reference Point Elev. 25 ft. Determined from
Well: Use monitor & testing Condition Depth ft.
Casing, size 6" in., perforations 105 - 120'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X]
Chief Aquifer: Name dune - sand Depth to Top Aq. 10 Depth to Bot. Aq.
Type of Material sand Perm. Rating Thickness
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller U.S.G.S. (Jensen)
Date drilled 1967 Log, filed W.S.P. 1879-A open (1) confidential (2)
Equipment: Pump, type make
Serial No. Size of discharge pipe In.
Power, Kind Make
H. P. Motor Serial No.
Elec. Meter No. Transformer No.
Yield G.P.M. Pumping level ft.

Water Analysis: Min. (1) San. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

6" casing on east side of rd. and 12" pipe on west side of rd.
Exit Ridge Rd. to De Lauva Rd. & Burma Rd.

d.t.w.
6/23/97 12'11"

Recorded by:
Date

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____________

Owner U. S. Geol. Survey
Address
Tenant
Address

State No. 8N/10W-20cb (M2)
Other No.

Type of Well: Hydrograph [x] Key [ ] Index [ ] Semiannual [ ] Quality [x]
Location: County Clatsop Basin Clatsop Plain No.
U.S.G.S. Quad. Warrenton Quad. No.
NW ¼ SW ¼ Section 20, Twp. 8N, Rge. 10W WIII. Meridian
Description

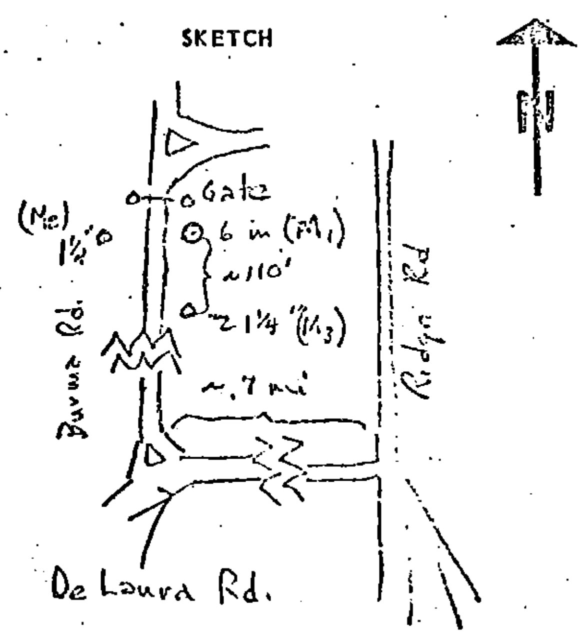
Reference Point description

which is ____ ft. above/below land surface. Ground Elevation ____ ft.
Reference Point Elev. 23 ft. Determined from
Well: Use monitor Condition Depth 15 ft.
Casing, size 1¼ in., perforations 14.5-15'

Measurements By: DWR [ ] USGS [x] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [x]
Chief Aquifer: Name dune-sand Depth to Top Aq. Depth to Bot. Aq.
Type of Material Sand Perm. Rating Thickness
Gravel Packed? Yes [ ] No [x] Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller U. S. G. S.
Date drilled 1966 Log, filed U. S. P. 1899-A open (1) confidential (2)
Equipment Pump, type make
Serial No. Size of discharge pipe in.
Power, Kind Make
H. P. Motor Serial No.
Elec. Motor No. Transformer No.
Yield G.P.H. Pumping level ft.

Water Analysis: Min. (1) San. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

1¼" pipe on west side of rd.
(see 8N/10W-20cb M1)

Exit Ridge Rd. to De Laura Beach Rd. to Burma Rd.

d.t.w.
6/29/77 9'10¼"

Recorded by:
Date

No. [illegible]

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project ____________

Owner U.S. Geol. Survey
Address ____________
Tenant ____________
Address ____________

State No. 8N/10W - 33dd (R.)
Other No. ____________

Type of Well: Hydrograph [ ] Key [ ] Index [ ] Semiannual [ ] Quality [X]
Location: County Clatsop Basin Clatsop Plains No. ____
U.S.G.S. Quad. Warrenton Quad. No. ____
SE ¼ SE ¼ Section 33, Twp. 8 N, Rge. 10 W W.M. Meridian
Description ____________

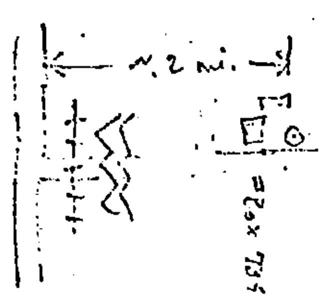
Reference Point description Top of 1¼" threaded pipe

which is ______ ft. above/below land surface. Ground Elevation ______ ft.
Reference Point Elev. 10.5 ft. Determined from ______
Well: Use [illegible] Condition ______ Depth ______ ft.
Casing, size 1¼" in., perforations 15.4 - 16.9'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [X] [illegible]
Chief Aquifer: Name dune sand Depth to Top Aq. 4 Depth to Bot. Aq. ______
Type of Material fine-med. sand Perm. Rating ______ Thickness ______
Gravel Packed? Yes [ ] No [X] Depth to Top Gr. ______ Depth to Bot. Gr. ______
Supp. Aquifer ______ Depth to Top Aq. ______ Depth to Bot. Aq. ______
Driller U.S.G.S.
Date drilled 1966 Log, filed W.S.P. 1899-A open (1) ______ confidential (2) ______
Equipment: Pump, type ______ make ______
Serial No. ______ Size of discharge pipe ______ in.
Power, Kind ______ Make ______
H. P. ______ Motor Serial No. ______
Elec. Motor No. ______ Transformer No. ______
Yield ______ G.P.M. Pumping level ______ ft.

Water Analysis: Min. (1) ______ San. (2) ______ H.M. (3) ______
Water Levels available: Yes (1) ______ No ______
Period of Record: Begin ______ End ______
Collecting Agency: ______
Prod. Rec. (1) ______ Pump Test (2) ______ Yield (3) ______

SKETCH



REMARKS

1¼" pipe at corner of lot
[illegible]
~.2 mi. [illegible]

[illegible]
[illegible] [illegible]

Recorded by: ______
Date ______

No. 8N/10W-33 cc

ENVIRONMENTAL GEOLOGY & GROUND WATER
WELL DATA

Project

Owner: U.S. Geol. Survey
Address:
Tenant:
Address:

State No.: 8N/10W-33 cc (H1)
Other No.:

Type of Well: Hydrograph [X] Key [ ] Index [ ] Semiannual [ ] Quality [X]

Location: County: Clatsop Basin: Clatsop Plains No.:

U.S.G.S. Quad.: Warrenton Quad. No.:

SW ¼ SW ¼ Section 33, Twp. 8 N, Rge. 10 W W.M., Meridian

Description:

Reference Point description: Top of 6" casing

which is ____ ft. above/below land surface. Ground Elevation ____ ft.

Reference Point Elev. 24.63 ft. Determined from

Well: Use: Pump test & quality Condition: Depth: 135 ft.

Casing, size: 6" in., perforations: 73-92'

Measurements By: DWR [ ] USGS [X] USBR [ ] County [ ] Irr. Dist. [ ] Water Dist. [ ] Cons. Dist. [ ] Other [ ] S.P.

Chief Aquifer: Name: dune sand Depth to Top Aq.: 14' Depth to Bot. Aq.: 132'

Type of Material: fine-med. sand Perm. Rating: Thickness:

Gravel Packed? Yes [ ] No [X] Depth to Top Gr.: Depth to Bot. Gr.:

Supp. Aquifer: Depth to Top Aq.: Depth to Bot. Aq.:

Driller: U.S.G.S. (Jensen)

Date drilled: 1937 Log, filed: W.S.P. 1899-A open (1) confidential (2)

Equipment: Pump, type: make:

Serial No.: Size of discharge pipe: in.

Power, Kind: Make:

H. P.: Motor Serial No.:

Elec. Meter No.: Transformer No.:

Yield: G.P.M. Pumping level: ft.

Water Analysis: Min. (1) San. (2) H.M. (3)

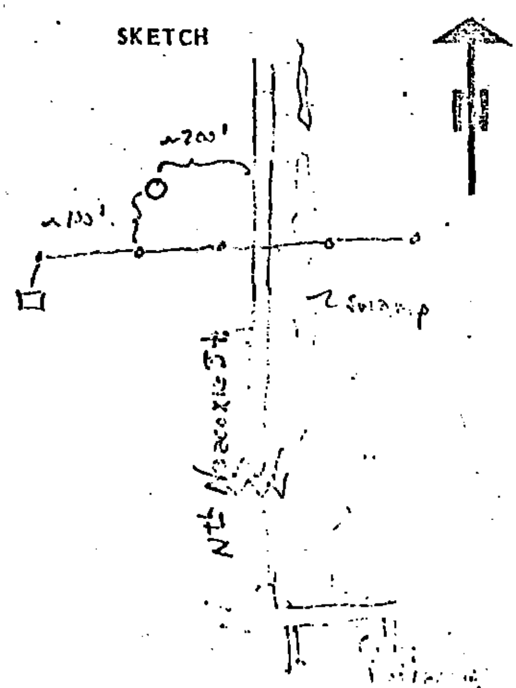
Water Levels available: Yes (1) No

Period of Record: Begin End

Collecting Agency:

Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



REMARKS

6" drilled well w/ counter balance tube adjacent

	d.t.w.
6/29/77	17' 4½"

Recorded by:

Date:

Attachment D

ROBERT W. STRAUB
GOVERNOR

Department of Environmental Quality

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5324

August 4, 1977

Clatsop County Board of Commissioners
P. O. Box 179
Astoria, OR 97103

Gentlemen:

Re: Groundwater Management Study,
WQ - Clatsop Plains

We have reviewed the limited available information relative to acceptable nitrogen species levels in groundwater. The federal publication "Quality Criteria for Water, EPA-440/9-76-023" recommends 10 mg/l NO_3-N as an upper limit for domestic water supplies. This publication also states, "Waters with nitrite-nitrogen concentrations over 1 mg/l should not be used for infant feeding." (See attached copy.)

We do not believe it prudent to use the limits cited above for planning purposes since they contain no margin of safety in protecting public health.

For nitrate-nitrogen, we believe that 5 mg/l NO_3-N may be used as an upper limit for planning purposes providing that a reasonable factor of safety is included in the various assumptions made in the calculation process.

For nitrite-nitrogen, we believe a wider margin of safety is desirable. The upper limit for planning purposes should not exceed 0.2 mg/l NO_2-N, again providing that a reasonable factor of safety is included in the various assumptions made in the calculation process.

We are open to further discussion of this matter if you so desire.

Sincerely,

Harold L. Sawyer, Administrator
Water Quality Division

HLS:elk
Enclosure

cc: Bob Paeth, Regional Operations Division - DEQ
Russ Fetrow, Salem-North Coast Region Office - DEQ

DEQ North Coast Branch
Dept. of Environmental Quality
RECEIVED
AUG 11 1977

COPY

Attachment E

Attached + - City of Warrenton
- Fort Stevens State Park

CLATSOP COUNTY

Courthouse . . . . Astoria, Oregon 97103

August 31, 1977

Mr. Russell Fetrow
Department of Environmental Quality
Salem-North Coast Region
796 Winter St. NE
Salem, Oregon 97310

Re: Clatsop Plains Moratorium

Dear Mr. Fetrow:

Enclosed are the legal descriptions of those areas to be retained for domestic water supply and the "high" density areas which would continue under the moratorium until such time as the County has a program to alleviate the septic tank wastes.

We have enclosed for your convenience a vicinity map indicating the location of the various parcels described along with larger scale maps indicating in detail the location of the parcels. Parcels 1 and 2 indicate the areas to be set aside for domestic water supply development and Parcels 3 through 7 are those high density areas mentioned above.

Please utilize these for the public notices setting up the Thursday, October 6, 1977 hearing here in the Board of Commissioners Chambers that we discussed yesterday. Pertaining to that notice, will you be placing that advertisement in local newspapers?

Thank you again for your assistance. Have a nice Labor Day weekend!

Sincerely,

Albert W. Palmer

ALBERT W. PALMER, CHAIRMAN
Board of County Commissioners

cc: Department of Planning and Development

CLATSOP PLAINS LOCATION

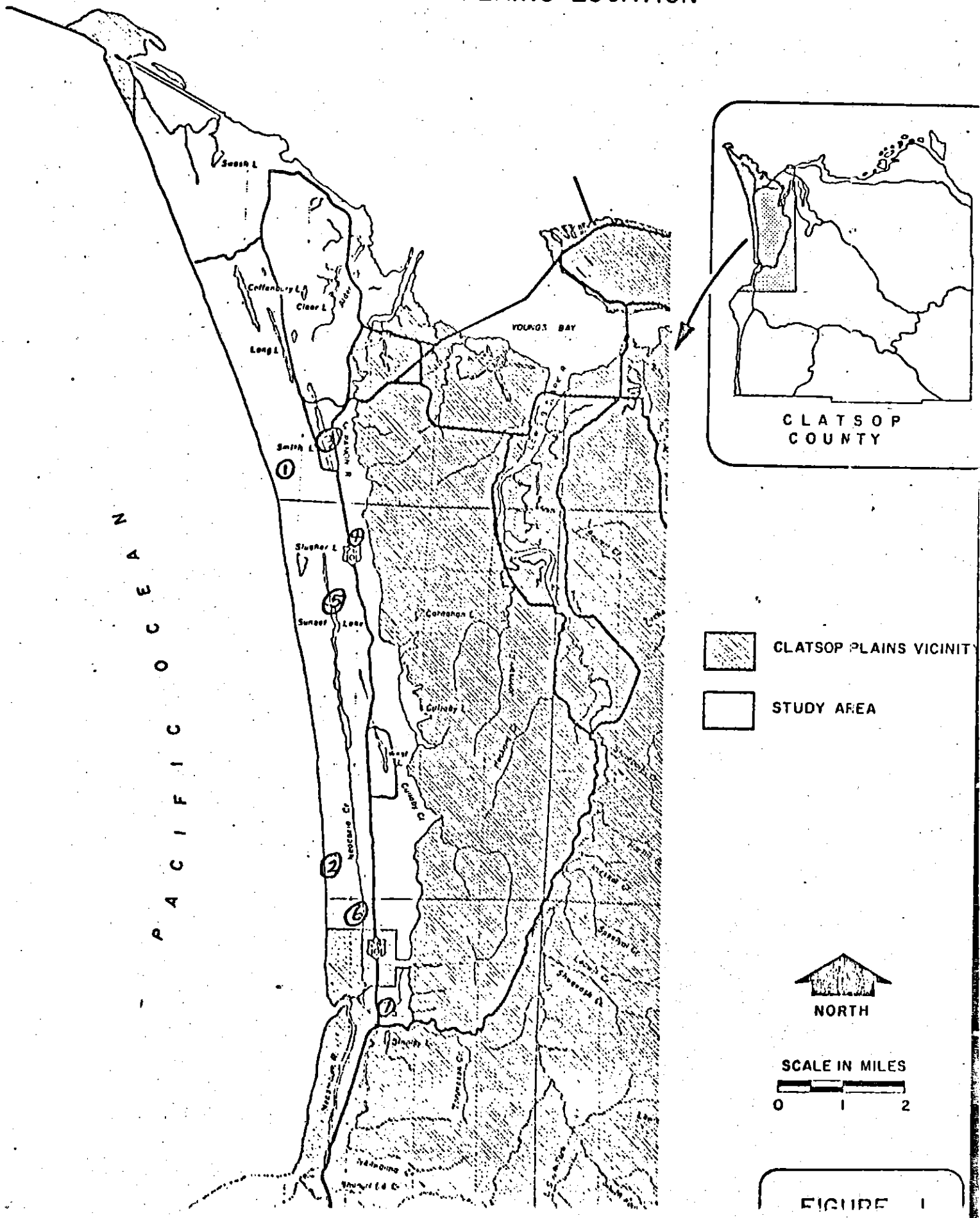


FIGURE 1

Parcel #2

The Del Rey Beach Subdivision located in Section 33, Township 7 North, Range 10 West, Willamette Meridian, as shown on Plate 7-10-33A, Clatsop County, Oregon.

Beginning at the intersection of Clark Boulevard with County Road #31 in Delaura Beach subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon;
thence Southerly along the center line of Clark Boulevard to the South right-of-way line of College Avenue;
thence West along the South right-of-way line of said College Avenue to the East bank of the West branch of Neacoxie Creek;
thence Southerly along the East bank of said creek to the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian;
thence East along the South line of said Neacoxie subdivison and the extension thereof to the West line of Ridge Road;
thence Southerly along the West line of said Ridge Road and East along the Southerly right-of-way line of Columbia Beach Road to its intersection with the East right-of-way line of Oregon Coast Highway 101;
thence South along the East right-of-way line of said Hwy 101 to its intersection with the North right-of-way line of Perkins Road;
thence East along the North right-of-way line of said Perkins Road to its intersection with the West right-of-way line of Rodney Acres Road;
thence Northerly along the West line of Rodney Acres Road to the center line of Skipanon Creek;
thence Northwesterly along the needle of Skipanon Creek to the South line of Warrenton City limits;
thence following the Warrenton City limits boundary in a Northwesterly direction to the point of beginning.

Parcel #4

Beginning at a point where the North line of that certain tract conveyed to Michael Palmer by deed recorded in Book 400, Page 576-587, Clatsop County Record of Deeds, intersects the East right-of-way line of the Burlington Northern Railroad in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon;

thence East along the North line of the said Palmer tract to the Northeast corner thereof;

thence South along the East boundary of said tract to the Southeast corner thereof;

thence West along the South boundary of said tract to its intersection with the East line of the Burlington Northern Railraod right-of-way as aforesaid;

thence North along the East line of said right-of-way to the point of beginning.

Said parcel being located in Sections 9 and 10, Township 7 North, Range 10 West, Willamette Meridian.

Parcel #5

Beginning at the Southwest corner of Ivyloo Acres Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon;
thence South 13° 32' East a distance of 370 ' more or less to the North line of that certain right-of-way reserved by Frank L. Hurlburt in his conveyance to Charles V. Brown as recorded in Book 65, Page 527, said point being the true point of beginning of parcel herein described;
thence continuing South 13° 32' East a distance of ' more or less to its intersection with the South line of the John Hobson D.L.C.;
thence West along the South line of said Hobson D.L.C. to the East bank of Neacoxie Creek;
thence Southerly along the East bank of said Neacoxie Creek to the South right-of-way line of Sunset Beach Road;
thence East along the Southerly right-of-way line of said Sunset Beach Road to the Northeast corner of Sunset Terrace subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian;
thence Southeasterly along the Easterly line of said Sunset Terrace and its extension thereof to the North line of Loch Haven Highlands subdivision as platted in Section 16, Township 7 North, Range 10 West, Willamette Meridian;
thence East along the North line of said Loch Haven Highlands Subdivision to the Northeast corner thereof;
thence Southeasterly to the Southeast corner thereof;
thence following the Loch Haven Highlands subdivision boundaries as platted Westerly, Southerly, Southwesterly, and Westerly to the where the South line of Loch Haven Highlands subdivision intersects the East bank of Neacoxie Lake;
thence Southerly along the East bank of said Neacoxie Lake to a point East of the Southeast corner of that certain tract conveyed to Anthony M. and Alberta M. Stramiello by deed recorded in Book 333, Page 523;
thence West to the Southeast corner of said Stramiello tract;
thence West along the South line of said tract and the extension thereof a distance of 718.8' to a point;
thence South 389.7' to a point;
thence West 400' to a point;
thence North 00° 02' West to the Northwest corner of D.L.C. #42, said point being in the South line of the Sunset Beach subdivision, as platted in Sec. 9, T7N,
thence West along the South line of said subdivision to the Westerly right-of-way line of Columbia Boulevard in said subdivision;
thence Northerly along the Westerly right-of-way line of said Columbia Boulevard to the North line of said Sunset Beach subdivision;
thence West along the North line of said subdivision to the Pacific Ocean;
thence North along the Pacific Ocean to its intersection with the North line of that certain right-of-way reserved by Frank L. Hurlburt as aforesaid;
thence East along the North line of said right-of-way to the point of beginning.

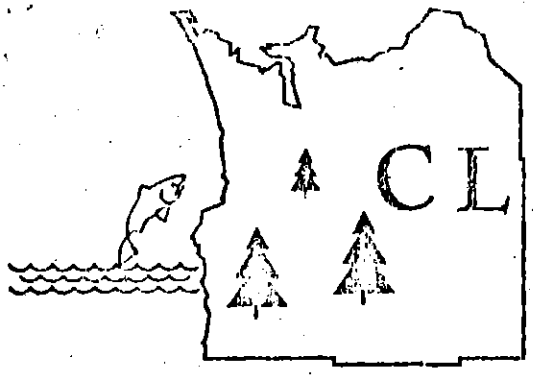
Parcel #6

Bounded on the North by the North line of the Gearhart Donation Land Claim; bounded on the East by Burlington Northern Railroad; bounded on the South by the North boundary of the Gearhart City Limits; bounded on the west by the Pacific Ocean.

Excepting therefrom, however, the following described parcel. Beginning at the intersection of the North line of the Gearhart City Limits with the Westerly right-of-way line of Marion Avenue; thence North and East along the said westerly right-of-way to its intersection with the East boundary of the platted Gearhart Green Subdivision; thence North along the East line of said Subdivision and the extension thereof to the North boundary of the Gearhart Donation Land Claim; thence East along the North line of said Donation Land Claim to the center line of Neacoxie Creek; thence Southerly along the needle of said creek to the North line of the Gearhart City Limits; thence west along the North line of said City Limits to the point of beginning. All above described property being in Sections 3 and 4, Township 6 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon.

Parcel #7

Bounded on the West and North by the South boundary of the Gearhart City Limits; on the East by Burlington Northern and on the South by Seaside City Limits.



CLATSOP COUNTY

Courthouse . . : . Astoria, Oregon 97103

September 1, 1977

Mr. William H. Young
Director
Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

Dear Mr. Young:

Clatsop County has just reviewed and approved the recent hydrogeological work completed by Mr. Randy Sweet as per our agreement with the Environmental Quality Commission relating to the Clatsop Plains moratorium.

As a result of the facts established in Mr. Sweet's study in cooperation with your staff, we have designated the area in the plains where the moratorium would continue and areas where it may be lifted.

The Randy Sweet study indicates that a lot size of 1.2 acre in the areas where the moratorium would be lifted would adequately maintain the purity of the aquifer.

Because the computations in the Sweet study, which result in the 1.2 acre size are arrived through very conservative application of data, and do not consider the vast acreage of open space, we request consideration of a minimum building site size of one acre which will be much more manageable to administer.

Roadways, streams, foredunes, parks, military reservation, golf courses, etc. provide considerable open area.

We would like to thank you in advance for your cooperation in this matter and assure you of our on going cooperation.

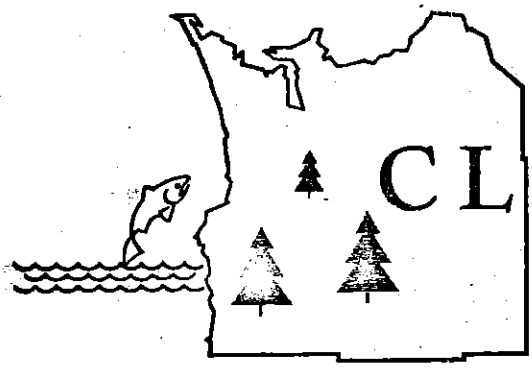
Sincerely,

Albert W. Palmer

Albert W. Palmer, Chairman
Board of County Commissioners

AWP:mt

Attachment F



CLATSOP COUNTY

Courthouse . . . . Astoria, Oregon 97103

October 4, 1977

MEMO

TO: Mr. Bill Young

FROM: Clatsop County Board of Commissioners

RE: Discussion of DEQ staff report pertaining to Clatsop Plains Moratorium

The following is a summary outline of the issues the Board of Commissioners wish to discuss concerning the above described report:

1. Determination of criteria and its use in each of the seven drainage basins.
2. Change of density factor from 1.2 acres to one acre.
3. Method of computation of one acre.
4. Consideration of preexisting lots of less than one acre.
   a. Minimum size.
   b. Consideration of each lot on its own merits.
   c. Accommodation of preexisting lots through averaging of future development lot sizes on a basin by basin consideration.
   d. Alternative uses of lots of less than minimum size.
5. Interpretation of subsection (b)(C) on page 9 of report.

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

October 18, 1977

To: Environmental Quality Commission

From: Hearing Officer

Subject: Hearing Report on October 11, 1977 Hearing re: "Clatsop Plains Moratorium" (OAR 340-71-020(7))

SUMMARY OF PROCEDURE

Pursuant to notice as required for rule making and by ORS 454.685 a public hearing was convened in the Clatsop County Courthouse at 7:30 p.m. on October 11, 1977. The purpose was to receive testimony regarding possible modification of the "Clatsop Plains Moratorium" (on subsurface sewage system installation - OAR 340-71-020(7) as adopted April 1, 1977).

More specifically, the hearing was in response to a request by Clatsop County that septic tank installation not more dense than one acre per single family dwelling be allowed in the moratorium area with the exception of the following areas set aside as valuable for future water supply or already densely developed.

1) Camp Rilea and some twenty or so acres of county-owned land to the south of the camp.
2) The Del Rey Beach Subdivision.
3) The Smith Lake area.
4) The Glenwood Mobile Home Park.
5) The Sunset Lake area.
6) Except land between Neacoxie Creek and the Gearhart Green Subdivision, all the area north of Gearhart, west of the Burlington Northern Railroad, and within the Gearhart Donation Land Claim.
7) The area southeast of Gearhart, north of Seaside, and west of the Burlington Northern Railroad.
8) The cities of Gearhart, Hammond and Warrenton.
9) Fort Stevens State Park.

Oral testimony was offered by Clatsop County Commissioners Orvo Nikula and Don O. Corkill, by Clatsop County Planner Curtis J. Schneider, Hydrogeologist Randy Sweet, and by Mr. William Vassell and Mr. John S. Lisoski.

Written testimony was offered by Commissioner Nikula, on behalf of Clatsop County (attached), the City of Gearhart (attached), Mildred M. McKee, Mrs. Donald M. MacRae, Mrs. H.M. Steele, and Mr. Rodney C. Adams. Also,

as forwarded to the members of the Commission under separate cover, Mr. H. Randy Sweet's August 20, 1977 report entitled "Carrying Capacity of the Clatsop Plains Sand-Dune Aquifer" is of record in this matter (hereinafter, Sweet Report).

SUMMARY OF TESTIMONY

Clatsop County (see attached) noted that, in addition to the reasons given by the staff for reducing the recommended 1.2 acre/single family density to one acre, the reduction would be supported by other factors not accounted for in the Sweet Report.

Also, the County recommended that some seventy-five undersized, existing, undeveloped lots of record (as taken from the tax assessor's computer bank) are statistically insignificant in the 14 square mile study area to the protection of the aquifer and should be allowed septic systems. These lots lie outside the areas where the county recommended retention of the moratorium and are not in sewered areas.

The County urged that the language in the proposal be worded to allow for planned-unit developments.

The County suggested that the term "unacceptable" precede the term degradation so the rule would be compatible with the language of the Sweet Report.

Finally, the County suggested that the lots be free of any disposal system restrictions at such time as sewers are available to any of them.

The City of Gearhart objected to the County's determinations regarding the City's wastewater needs, lamented a lack of opportunity to participate in the Sweet study even though the City would have to pay for some of it, cited and included materials by its consultant that were critical of the report, and urged that the Commission/Department take the lead in gaining County/City cooperation in funding a regional solution to the problem.

Mr. Rodney C. Adams, owner of a lot of 1.02 acres just north of Gearhart (Surf Pines area) noted that his tract was laid out many years ago, purchased by him ten years ago and (in common with the beach front lots near it) has many features conducive to a septic system including 1) 300 to 600 feet in which to lay drain lines, all east of the fore dune, large lots in the area ranging from 3/4 to 3 acres, and many lots which will not be built on for years.

Further, Mr. Adams noted that many in the area who already have large, comfortable homes on septic systems oppose sewers or other means by which newcomers would be facilitated.

Mrs. Elaine Steele pointed out special circumstances in an area just south of Camp Rilea, bounded on the west by Oceanview Drive, on the south by Taylor Street, and on the east by Lakeview Avenue. The area has platted

lots of 10,000 square feet. These lots have been the subject of exchange negotiations with the military. After arduous proceedings involving the Governor's office and the Legislature, the lots were chosen as possible compensation for other lots long ago "swallowed up" by Camp Rilea. After this process, the April 1, 1977 moratorium leaves doubt that the lots will be buildable. Mrs. Steele asks special consideration of these circumstances, noting that there is very little developed property in the area at present.

Mrs. Donald M. MacRae (also involved in the "Camp Rilea Property Exchange" mentioned by Mrs. Steele) cited the recent drought and many discoveries of harmful components in drinking water as reminders that we should conserve water, for ourselves and for those of the future.

Mrs. Mildred M. McKee reported that her lot had been reasssessed from $8,750 up to $32,000. She said the taxes were prohibitive and she decided to sell only to be told the lot was almost worthless with the moratorium in place. She asked when the moratorium was imposed and what its duration would be.

Mr. John S. Lisoski of Portland owns a 100 x 100 foot lot in Gearhart which he purchased five years ago with the intention of retiring on it. He retired last April. On the tenth of April he discovered the moratorium prevented his getting a building permit. In the five years of his ownership, the assessor's valuation of his lot has risen by at least $1,000 (more than doubled). Mr. Lisoski found the requirement of paying taxes coupled with the prohibition on building to be unreasonable. He noted that building costs were rising by 27% a year and that his planned development went up $3,000 during the month of September alone. The waiting of two, three, or five years, he said, would defeat his plans entirely. It was apparent from his testimony that if Mr. Lisoski had applied for a septic tank permit prior to April 1, 1977 he could have built a dwelling on his property. It is located in a subdivided tract of semi-developed land between Cottage and Marion Streets in Gearhart. He added that considerable land around the tract remains undeveloped.

RECOMMENDATIONS

Your hearing officer's recommendations in this matter come in a separate document added to the agenda item for the October 21, 1977 Commission meeting.

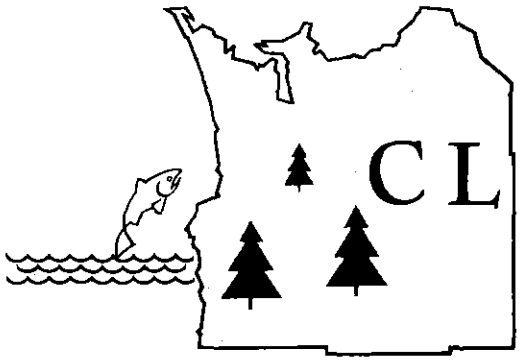
Respectfully submitted,

Peter W. McSwain
Hearing Officer

PWM:vt

Attachments:

1. Testimony by Clatsop County
2. Testimony by the City of Gearhart



CLATSOP COUNTY

Courthouse . . . . Astoria, Oregon 97103

TESTIMONY OF CLATSOP COUNTY
DEPARTMENT OF ENVIRONMENTAL QUALITY HEARING
CLATSOP COUNTY COURT HOUSE
ASTORIA, OREGON

October 11, 1977

The following information is presented at this hearing as a result of the D.E.Q. staff reviews and subsequent meetings between Clatsop County, Department of Environmental Quality and Consultant, Randy Sweet. Three questions have evolved from these meetings:

1. On-site disposal area density, net vs. gross requirements;
2. Existing lots of less than the required area; and
3. Clarification of Proposed Amendment language including "undivided parcel of one acre", "owned fully" and "degredation?"

"Carrying Capacity of the Clatsop Plains Sand-Dune Aquifer" surmised that an on-site disposal density not exceeding one dwelling unit (du) per 1.2 acres would meet the D.E.Q. water quality "upper limit for planning purposes," i.e. NO_3-N would not exceed 5 mg/l. During staff review, D.E.Q. indicated that consideration of roadways and other public utility areas would justify a net density of one acre per du.

Clatsop County is in agreement that the size limitation change from 1.2 acres to one acre is appropriate. However, our motivations and reasoning in reaching that conclusion are somewhat different. In addition to the justification indicated in the D.E.Q. staff reviews and summarized above, we would like to suggest additional particularly relevant reasons for reduction of the net area requirement:

(a) The computation to determine density was extremely conservative and was made without regard for any area being eliminated for on-site disposal such as the aquifer reserve areas totalling more than 1.6 square miles, which constitutes 9 percent of the area being considered for rule revision.

(b) No consideration was given to the amount of land to be excluded from development through existing rules and regulations, e.g. fore-dune (3 square miles, 12 percent of the total study area).

(c) All residential property was considered on the basis of full time habitation as part of the conservative approach, i.e. the recreational (part-time residential) nature of the Clatsop Plains.

(d) Parcels of property which when divided produce a fraction over an even division are precluded from using the fraction; this increases the average size. Thus, all those with 1.25 acres can still accommodate only one dwelling unit.

(e) Clatsop County has an average of 2.68 persons per dwelling unit. This figure was rounded up to three, a factor of more than 10 percent.

The above points emphasize the conservative approach utilized in this study. Although one cannot attach a total cumulative percentage to the various factors, they do show that a more than adequate margin of safety has been considered. For this reason Clatsop County, in agreement with their consultant, maintains that an on-site disposal density not exceeding one dwelling unit disposal site per gross acre will not compromise the water quality criteria as dictated by the D.E.Q.

In an effort to quantify the like number of existing undeveloped lots of record in the Clatsop Plains which are less than one acre in size Clatsop County has completed an inventory of those lots as requested by D.E.Q. A summary of that inventory follows:

EXISTING UNDEVELOPED LOTS LESS THAN ONE ACRE	NUMBER OF LOTS	
TOTAL AREA PROPOSED FOR RULE MODIFICATION	141	
AQUIFER RESERVE AREA	53	
SEWERED AREA	13	
UNSEWERED AREAS		
0.99 - 0.75 acre	8	75
0.74 - 0.50 acre	27	
0.49 - 0.25 acre	24	
0.24 - 0.00 acre	16	

This shows that of the 141 lots; 53 are in aquifer reserve areas; 13 in sewered areas; and the balance of 75 are in areas located in the proposed rule modification area.

The County proposes that this number (75) is statistically insignificant with respect to the total study area and that in order to provide a practical administrative avenue for application of the proposed rule modification those existing lots of record which will meet current rules and regulations for on-site disposal be considered for approval.

The County suggests that the "undivided parcel" and "owned fully" language in the Proposed Amendment be altered to allow for such circumstances as planned developments with common areas in joint ownership as long as the disposal area density relationship does not exceed the density requirement of one on-site d.u. disposal site per acre. Also in order to make the County-D.E.Q.-Consultant contract language compatible with the Proposed Amendment the County suggests that reference be made to "unacceptable" degredation of ground water.

In conclusion Clatsop County requests that the Proposed Amendment state that in the event sewerage facility(s) are constructed in the Clatsop Plains, or portions thereof, those areas shall be released from any on-site disposal area requirements. However, those areas shall conform to the policies of the Clatsop Plains Comprehensive Plan and applicable standards in the zoning ordinance.

BOARD OF COUNTY COMMISSIONERS
FOR CLATSOP COUNTY, OREGON

BY 
Orvo A. Nikula

CITY OF GEARHART

"Gearhart By The Sea"
Drawer "D"
Gearhart, Oregon 97138
Phone 738-5501

October 11, 1977

Oregon State Environmental Quality Commission
c/o Mr. William Young, Director
Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Gentlemen:

On behalf of the City of Gearhart, I wish to offer the following comments with regard to the proposed modification to Oregon Administrative Rule 340-71-020(7) which among other things provides for maintaining the moratorium against new subsurface sewage disposal system for the City of Gearhart. The order states that "the areas Clatsop County wishes to remain subject to the order are delineated with particularity in the files of Clatsop County Department of Planning and Development in Astoria continuation." It then goes on to state that the Cities of Gearhart and Warrenton will continue to be subject to the moratorium.

The City of Gearhart objects to any determination by Clatsop County as to the wastewater requirements for the City of Gearhart. Gearhart wishes to cooperate with the County and the other incorporated cities with regard to wastewater requirements for the Clatsop Plains area but, unfortunately, was not given the opportunity to participate in the recent groundwater study commissioned by the County. This study was apparently the basis for the modification of the ruling of the Environmental Quality Commission. The County specifically excluded the City of Gearhart and other incorporated cities within the Clatsop Plains from the scope of the groundwater study.

Gearhart has been obligated to proceed at its own expense to address the moratorium issue. At the City's request, our engineering consultant has reviewed and commented on the County's groundwater study. These remarks have previously been transmitted to the County and are attached for your information. At the same time, the City will have to pay for a portion of the County's groundwater study which has provided no benefit to Gearhart.

We firmly believe that any solution to the wastewater problems of the Clatsop Plains area must address the requirements for the entire geographical area including both incorporated cities and unincorporated County areas. We maintain that the Environmental Quality Commission and the Department of Environmental Quality have a responsibility for insuring coordination between

the Cities and the County prior to releasing any funds to any of the respective jurisdictions. We question whether the County is the appropriate lead agency in this regard.

CITY OF GEARHART

Orren A. Kulland, Mayor

OAK:wv
Encl.

R. W. BECK AND ASSOCIATES

ENGINEERS AND CONSULTANTS

PLANNING
DESIGN
RATES
ANALYSES
EVALUATIONS
MANAGEMENT

200 TOWER BUILDING
SEATTLE, WASHINGTON 98101
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SEATTLE, WASHINGTON
DENVER, COLORADO
PHOENIX, ARIZONA
ORLANDO, FLORIDA
COLUMBUS, NEBRASKA
WELLESLEY, MASSACHUSETTS
INDIANAPOLIS, INDIANA
MINNEAPOLIS, MINNESOTA

FILE NO. WW-1448-WP1-MB

September 7, 1977

City of Gearhart
Drawer "D"
Gearhart, Oregon 97128

Attention: Mr. Bruce Maltman

Gentlemen:

Subject: Report on the Clatsop Plains Sand Dune Aquifer Carrying Capacity

This letter is in response to your request that we review the draft report of the subject study which was prepared for the Clatsop County Commission by H. Randy Sweet, Geologist/Hydrogeologist. This review has been made with special reference to Gearhart and the implications of the findings on the present on-site waste disposal practices in Gearhart. In making this review, we have drawn on information obtained during our recent preparation of the Gearhart Comprehensive Sewer Plan and have supplemented this data with further research and discussions with groundwater experts.

The purpose of the Clatsop Plains Sand Dune Aquifer Study as summarized from the study scope of work was to identify the portions of the groundwater aquifer within the Clatsop Plains that should be protected as a future source of water supply, to identify background levels of nitrate in the groundwater from natural sources, and to estimate the quantity of nitrates introduced by man's activities. We do not find that the report fulfills all of these objectives as will be discussed below.

Groundwater Hydrology

The groundwater report identifies the groundwater flow patterns within the Clatsop Plains aquifer and divides the groundwater aquifer into a number of discrete drainage basins as shown on Plate 1 in the Report. Gearhart is referred to as the Neacoxie Creek Basin. The Report indicates that groundwater changes within Gearhart will not have an influence on the rest of the Clatsop Plains aquifer.

The Report does not identify the geographical limits of the productive groundwater aquifer which has value as a potential source of water supply. Several groundwater geologists knowledgeable as to the Clatsop Plains area have suggested that the Gearhart area should not be considered within the productive aquifer due to its proximity to the Ocean and the Necanicum River which results in generally lower groundwater levels than in other areas of the aquifer and increases the danger of sea water intrusion if substantial quantities of groundwater were withdrawn such as for municipal supply. This issue is not, however, addressed in the Report.

Groundwater Quality

The Clatsop Plains Sand Dune Aquifer Report presents considerable secondary data as a basis for determining both the natural and man-made contributions of nitrates to the groundwater within the study area. The Report does not present any new evidence or monitoring results on the groundwater aquifer although it is our understanding that some water quality monitoring is under way and will be added as an addendum to the Report.

The Report uses 5 mg/l as the maximum allowable nitrate concentration. It is not clear whether this criteria refers to areas that should be protected as a future source of water supply or for all areas within the Clatsop Plains. The maximum of 5 mg/l has apparently been agreed upon with the Oregon State Department of Environmental Quality as a conservative estimate to preclude the possibility that the nitrate levels would exceed the 10 mg/l limit specified in the U.S. Environmental Protection Agency drinking water standards. It should be noted, however, that the 10 mg/l is only relevant where the groundwater is used as a source of potable water supply so that if Gearhart lies outside the productive aquifer areas, this limit has no particular significance.

The Clatsop Plains Sand Dune Aquifer Report makes a number of assumptions and cites previous research in determining the amount of development that can be allowed without exceeding the 5 mg/l concentration of nitrates in the groundwater. There are a number of these assumptions which are either erroneous or questionable:

1. The Report assumes that 5 lbs/dwelling unit is a reasonable fertilizer application and that all of the nitrogen in the fertilizer leaches into the groundwater table. The nitrogen is applied to lawns and even in sandy soils, a substantial percentage of this nitrogen is taken up by this ground cover and does not reach the groundwater table.

2. The Report cites several references to determine the nitrogen contribution from septic tanks in the Report. These references are inconsistent and the Report utilizes the highest recorded figure of 73 lbs of nitrogen for a family of 4 in the calculations (Walker 1973b). This figure has been modified to an assumed occupancy rate of 2.68 persons/dwelling unit (56 lbs) in the Report. A review of two of the references cited and discussion with one of the authors indicates that the figure of 73 lbs for a family of 4 was not intended to be used for determmining the nitrogen contribution by septic tank effluent. The measurements were taken at the bottom of septic tank seepage beds which were located under fertilized lawns and landscaping so that the readings were undoubtedly influenced by other sources of nitrogen. The research report also states that clay subsoil in the area was high in nitrogen which may be indigenous to the lattice structure of the clay.

The above research effort was part of a series of studies conducted by the University of Wisconsin into on-site waste management. A later report which was prepared as part of this same research effort by Siegrist et al is also cited in the Clatsop Plains Sand Dune Aquifer Report. This later report was directed specifically towards identifying the flow and quality of septic tank effluents. The Siegrist findings are based upon not only the independent research of the authors but a review of similar studies being conducted in Wisconsin and elsewhere. The value used in the Clatsop Plains Sand Dune Aquifer Report is 35% higher than the highest value reported in the Siegrist study. Siegrist concludes that the loading rates are influenced by climate, soil, life style, and geographic area. The average reported by Siegrist from his research is only 20% of the value used in the Clatsop Plains Aquifer Report. The above information was not taken into consideration in the Clatsop Plains Report and the results obtained by using the Walker information are extremely high.

Another assumption made in the Clatsop Plains Sand Dune Report which results in high estimates of nitrate-nitrogen is that all dwelling units house permanent residents. Activity in the Clatsop Plains Area is highly oriented towards seasonal recreational activity. For instance, in Gearhart 40% of the dwelling units are seasonally occupied. The occupancy of condominiums, motels, and other commercial facilities is even more highly seasonal.

The Clatsop Plains Sand Dune Aquifer Report does not address the hydrodynamic features of the groundwater aquifer which certainly have a major impact on the level of nitrates and their persistence within the groundwater aquifer. All of the calculations presented in the Report assume the equal distribution of

and 3 units per acre may be acceptable without exceeding a nitrate concentration of 5 mg/l using the criteria presented in the Sand Dune Aquifer Report.

3. In order to accurately assess the carrying capacity of the land lying over the productive aquifer area to protect the aquifer, it is recommended that a more detailed study be undertaken considering the hydrologic features of the aquifer, the persistence and dispersion of induced nitrates and other pollutants within the aquifer, and the discharge rate of the aquifer itself.

As for Gearhart, it is recommended that the City await the determination of the geographic limits of the productive aquifer area. If Gearhart is shown to lie outside the productive aquifer, it is our belief that on-site waste disposal should be an acceptable solution for single-family residential areas within Gearhart without degrading water quality. This issue should be pursued in discussions with representatives of the Oregon State Department of Environmental Quality and the Environmental Quality Commission to resolve the present moratorium placed on development in Gearhart. If Gearhart lies over the productive aquifer area, it is recommended that the City request funds from the Department of Environmental Quality for a Step 1 - Wastewater Facilities Planning Study or a Section 208 Study to consider the options available for wastewater disposal. The scope can include a detailed investigation of groundwater quality and hydrology within the area during the course of determining the best wastewater management system.

Very truly yours,

R. W. BECK AND ASSOCIATES

R. A. Bushley

R. A. Bushley, Associate and
Executive Engineer

RAB:mls

cc: Dennis R. Rittenback

Exhibit A

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

October 18, 1977

To: Environmental Quality Commission

From: Hearing Officer

Subject: Agenda Item G, October 21, 1977, EQC Meeting

Addendum to Previous Agenda Item

BACKGROUND

The October 11, 1977 hearing on this rule-amendment petition could not have occurred sooner and still have complied with Oregon law regarding public notice (ORS 454.685). This statutorily imposed time schedule, coupled with the requirement of staff time to present a responsible recommendation to the Commission has rendered this report quite late in contrast with normal Commission business of this magnitude. If the Commission decides deferment is in order for this problem, the reason is apparent.

The effort to get this matter before the Commission is reciprocal to the efforts of Clatsop County in locally exploring alternatives to the April 1, 1977 "Clatsop Plains moratorium" which the County then opposed. Since the County has diligently worked toward a basic modification that will still protect groundwater reserves, the Department has attempted to honor this effort by local government and bring this matter before the Commission at this late hour. The comments set forth below will result in a revision of the Proposed Rule Amendment and a revised recommendation. It should be noted that all are made independently of the Director who has not had opportunity for review. He may agree or disagree at the time of Commission deliberation.

PLANNED UNIT DEVELOPMENTS

Clatsop County has asked that planned unit developments (where the dwellings may be in a single building or otherwise concentrated but accompanied by land sufficient to provide at least one acre for each single family unit) be permitted in the proposed rule. We have attempted to comply in our latest draft. (See subparagraphs (c) and (d) on page 9 of the Proposal).

GRANDFATHERING OF EXISTING LOTS

We are assured in interviewing personnel in the Clatsop County Assessor's office that new lots of record (deeded or platted and filed under the subdivision law) receive tax lot numbers (which would have been included in our information) within two months of their recording. Hence, there is no danger that lots of record on or before April 1, 1977 have escaped our notice.

For each recorded lot under one acre in size in the proposed areas for one acre/family systems there may well be an owner of a large parcel who bought, built, and waited with the intention of selling a small part of his parcel to another builder later. Also, for each undersized lot there may well be a large lot whose owner intended planned unit development denser than one acre per family. Nevertheless, the undersized lots of record have constituted a dividing line the County has urged the Commission to draw. Therefore, it is recommended below that the 75 lots subject to Clatsop County's testimony, though of less than one acre in size, be allowed systems if they were of record prior to April 1, 1977. The 75 lots are a minor aspect of the 14 square mile study area. There will be available at the Commission meeting a map showing these lots. The use of the April 1 cutoff date will preclude preferential, windfall benefits for those who may have partitioned after the original moratorium for reasons other than development.

USE OF PARCELS WITH EXISTING SYSTEMS FOR AVOIDANCE OF THE RULE

A simple requirement that parcels be of a one acre/family equivalent size would leave open undesirable options. For example: A and B own contiguous 3/4 acre lots with houses and disposal systems located on the farthest 1/4 acre from their common property line. Already we have less than the desired one acre density. They could still each convey half an acre to C so as to make C's parcel eligible for a system and increase overall density to two families per acre. Wording has been proposed to prevent this.

CLATSOP COUNTY'S RELATION TO GEARHART ON THIS ISSUE

It was not entirely accurate for the drafter of the public hearing notice in this matter to characterize Gearhart as a place wherein the County wishes to see the moratorium remain. Gearhart took exception to this language and we apologize for it. Suffice it to say our information is that Gearhart is not among the areas where the County wishes to have the moratorium modified or removed. With regard to Gearhart, Hammond, and Warrenton, the staff continues to be respectful of the duties and rights of local government in this matter and will give serious consideration to such proposals as these cities may make in the future. At this point, we do not understand the County to be taking an incompatible position with ours and did not mean to imply otherwise.

CRITICISM OF THE SWEET REPORT

Among the conclusions of the consultant hired to evaluate the Sweet Report was the conjecture that more thorough review may indicate in the future that three families per acre on septic tank drainfield systems are appropriate in Gearhart. We neither endorse nor dispute this appraisal of the Gearhart area. The comments submitted tend, in general, to point out that the Sweet Report is conservative. We understand its author to be in agreement with this appraisal. Also, we understand the County to be cognizant of this aspect of the report. Our present recommendation is strengthened by such comment. It further emphasizes, for example, our inability to give sound technical reasons for denial of a permit to one intending to build on one acre. Reasons for lesser (or greater) restrictions may come in the future. When this happens, we will deal accordingly.

FUTURE MODIFICATION

In the next ten months, the subject area is expected to develop a comprehensive plan. In a few months thereafter there will be zoning to implement the plan. It is readily apparent that the present recommendation should be considered temporary in nature. Future reexamination should address problems like that of Mrs. Steele and her neighbors to see if denial of a permit remains a sound course. Also, the impact on groundwater of the comprehensive plan and its resultant zoning will probably give new options to property owners. The present recommendation protects the aquifer with what conservative information is available and continues to leave open the opportunity for further evaluation.

UNACCEPTABLE DEGRADATION

We have addressed requirements of future modification to "unacceptable" degradation as requested by the County.

PROPOSED AMENDED DIRECTOR'S RECOMMENDATION

The Director recommends that the Commission take the following actions:

1) Enter findings that

   a) The protection of the groundwater in the moratorium area requires continuation of the existing moratorium in the five unincorporated areas outlined in the County's letter of August 31, 1977. (Attachment E of the original agenda item G for October 21, 1977).

   b) The preservation of water supplies for the future makes advisable the continuation of the moratorium in the two parcels of county-owned land and in Camp Rilea. This land was designated for future reserves in the County's August 31 letter.

   c) There is no petition to modify the moratorium within the incorporated areas of Gearhart, Hammond, or Warrenton before the Commission and the moratorium should remain undisturbed until such time as the cities themselves or some other person petitions for modification and gives sufficient reason.

   d) The seventy-five lots of record which are less than one acre in size but are not in the above-mentioned sub-areas of the moratorium do not threaten the 14 square mile aquifer study area with unacceptable groundwater degradation. While preferential, windfall benefits would accrue to allow systems on lots recorded after the April 1, 1977 moratorium date, the County's request to allow one single family system on such of these lots as were of record on April 1, 1977 and as otherwise qualify should be granted.

   e) In the moratorium areas not mentioned above, septic tank/drainfield development not to exceed one single family flow equivalent per acre can take place without contributing unacceptable levels of nitrates of nitrogen to the groundwater beneath.

f) The attached proposed rule amendment will continue to prevent unacceptable degradation of groundwater while allowing such development as, at present, appears to be compatible with preserving the quality of the groundwater.

g) The proposal, based upon conservative information, is subject to further review and does not prejudice future proposals which may be based on new information.

h) At the time a comprehensive plan and appropriate zoning are accomplished it is expected further review will be appropriate.

2) Adopt the attached proposed amendment to OAR 340-71-020(7) as a permanent rule to take effect immediately upon its filing with the Secretary of State.

Attachments

9/__/77

PROPOSED AMENDMENT TO OAR 340-71-020(7)

(a) Pursuant to ORS 454.685, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of Clatsop County [~~where there are unconsolidated sands or unconsolidated loamy sands~~]:

(A) [~~All areas located south of the Columbia River, west of the Skipanon River (or Skipanon Waterway), and north of the southernmost part of Cullaby Lake,~~] That area bounded on the South by the North line at that certain right-of-way reserved by Frank L. Hurlburt, et al, in a deed to Charles V. Brown as recorded in Book 65, Page 527, Clatsop County Record of Deeds; Bounded on the West by the high tide line of the Pacific Ocean; Bounded on the North and East by a line extending from the Pacific Ocean Easterly to the Southwest corner of that certain tract conveyed to the State of Oregon as recorded in Book 230, Page 485, Clatsop County Record of Deeds;
thence Easterly and Southerly along the South line of said tract to the Southeast corner thereof;
thence running Easterly to the Westerly right-of-way line of the Fort Stevens - Camp Clatsop Highway, commonly referred to as "Ridge Road," said point being the Easterly terminus of the North boundary of tract herein described;
thence Southerly along the Westerly right-of-way line of said Ridge Road to its intersection with the South line of the Hobson D.L.C.;

thence West along the South line of said Hobson D.L.C. to the Northwest corner of that certain tract conveyed to Stanley I. and Elvira M. Guild as recorded in Book 260, Page 161, Clatsop County Record of Deeds;

thence Southerly along the West boundary line of the said Guild tract and the extension thereof to the South right-of-way line of County Road #34, commonly known as DeLaura Beach Road;

thence East along the Southerly right-of-way line of said County Road a distance of 2275' more or less to the Easterly right-of-way line of Clark Boulevard as platted in DeLaura Subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian;

thence Southeasterly along the Easterly right-of-way line of said Clark Boulevard to its intersection with the East bank of the West branch of Neacoxie Creek;

thence Southerly along the East bank of the said West branch of Neacoxie Creek to an intersection with the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian;

thence East along the South line of said Neacoxie Subdivision to the Westerly right-of-way line of aforesaid Ridge Road;

thence South and East along the Westerly right-of-way line of said Ridge Road to its intersection with the West bank of the East branch of Neacoxie Creek;

thence Southerly along the West bank of the East branch of said Neacoxie Creek to the Northeast corner of that certain tract conveyed to Ben D. and Muriel Hayes by deed recorded in Book 213, Page 446, Clatsop County Record of Deeds;

thence West along the North line of said Hayes property to the Northwest corner thereof;

thence Southeasterly along the Westerly line of the said Hayes property to the Southwest corner thereof, said point being the Northwest corner of property conveyed to Donald R. and Helen A. Falleur by deed recorded in Book 364, Page 282-83, Clatsop County Record of Deeds;

thence continuing Southeasterly along the Westerly line of said Falluer property to the North Boundary line of the Platted Ivyloo Subdivision in Section 9, Township 7 North, Range 10 West, Willamette Meridian;

thence West along the North line of said Ivyloo Subdivision to the Northwest corner thereof;

thence South 13° 32' East along the Westerly line of said Ivyloo Subdivision and the extension thereof to the North line of that certain right-of-way reserved by Frank L. Hurlburt as aforesaid.

(B) ~~[All areas within the Shoreline Estates Sanitary District];~~ ~~and~~

The Del Rey Beach Subdivision located in Section 33, Township 7 North, Range 10 West, Willamette Meridian, as shown on Plate 7-10-33A, Clatsop County, Oregon.

(C) ~~[All areas south of the southernmost part of Cuttaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one half mile due east of U. S. Highway 101.]~~

That area beginning at the intersection of Clark Boulevard with County Road #34 in DeLaura Beach Subdivision as platted in Section 29, Township 8 North, Range 10 West, Willamette Meridian, Clatosp County, State of Oregon;

thence Southerly along the center line of Clark Boulevard to the South right-of-way line of College Avenue;

thence West along the South right-of-way line of said College Avenue to the East bank of the West branch of Neacoxie Creek;

thence Southerly along the East bank of said creek to the South line of Neacoxie Subdivision as platted in Section 33, Township 8 North, Range 10 West, Willamette Meridian;

thence East along the South line of said Neacoxie Subdivision and the extension thereof to the West line of Ridge Road;

thence Southerly along the West line of said Ridge Road and East along the Southerly right-of-way line of Columbia Beach Road to its intersection with the East right-of-way line of Oregon Coast Highway 101;

thence South along the East right-of-way line of said Hwy 101 to its intersection with the North right-of-way line of Perkins Road;

thence East along the North right-of-way line of said Perkins Road to its intersection with the West right-of-way line of Rodney Acres Road;

thence Northerly along the West line of Rodney Acres Road to the center line of Skipanon Creek;

thence Northwesterly along the needle of Skipanon Creek to the South line of Warrenton City limits;

thence following the Warrenton City limits boundary in a Northwesterly direction to the point of beginning.

(D) That area beginning at a point where the North line of that certain tract conveyed to Michael Palmer by deed recorded in Book 400, Page 576-587, Clatsop County Rocord of Deeds, intersects the East right-of-way line of the Burlington Northern Railroad in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence East along the North line of the said Palmer tract to the Northeast corner thereof;
thence South along the East boundary of said tract to the Southeast corner thereof;
thence West along the South boundary of said tract to its intersection with the East line of the Burlington Northern Railroad right-of-way as aforesaid;
thence North along the East line of said right-of-way to the point of beginning.
Said parcel being located in Sections 9 and 10, Township 7 North, Range 10 West, Willamette Meridian.

(E) That area beginning at the Southwest corner of Ivyloo Acres Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon; thence South 13° 32' East a distance of 370' more or less to the North line of that certain right-of-way reserved by Frank L. Hurlburt in his conveyance to Charles V. Brown as recorded in Book 65, Page 527, said point being the true point of beginning of parcel herein described;

thence continuing South 13° 32' East a distance of ' more or less to its intersection with the South line of the John Hobson D.L.C.;

thence West along the South line of said Hobson D.L.C. to the East bank of Neacoxie Creek;

thence Southerly along the East bank of said Neacoxie Creek to the South right-of-way line of Sunset Beach Road;

thence East along the Southerly right-of-way line of said Sunset Beach Road to the Northeast corner of Sunset Terrace Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian;

thence Southeasterly along the Easterly line of said Sunset Terrace and its extension thereof to the North line of Loch Haven Highlands Subdivision as platted in Section 16, Township 7 North, Range 10 West, Willamette Meridian;

thence East along the North line of said Loch Haven Highlands Subdivision to the Northeast corner thereof;

thence Southeasterly to the Southeast corner thereof;

thence following the Loch Haven Highlands Subdivision boundaries as platted Westerly, Southerly, Southwesterly, and Westerly to where the South line of Loch Haven Highlands Subdivision intersects the East bank of Neacoxie Lake;

thence Southerly along the East bank of said Neacoxie Lake to a point East of the Southeast corner of that certain tract conveyed to Anthony M. and Alberta M. Stramiello by deed recorded in Book 333, Page 523;

thence West to the Southeast corner of said Stramiello tract;

thence West along the South line of said tract and the extension thereof a distance of 718.8' to a point;

thence South 389.7' to a point;

thence West 400' to a point;

thence North 00° 02' West to the Northwest corner of D.L.C. #42, said point being in the South line of the Sunset Beach Subdivision, as platted in Section 9, Township 7 North,

thence West along the South line of said subdivision to the Westerly right-of-way line of Columbia Boulevard in said subdivision;

thence Northerly along the Westerly right-of-way line of said Columbia Boulevard to the North line of said Sunset Beach Subdivision;

thence West along the North line of said subdivision to the Pacific Ocean;

thence North along the Pacific Ocean to its intersection with the North line of that certain right-of-way reserved by Frank L. Hurlburt as aforesaid;

thence East along the North line of said right-of-way to the point of beginning.

Excepting therefrom, however, the following described parcel. Beginning at the Southwest corner of Ivyloo Subdivision as platted in Section 9, Township 7 North, Range 10 West, Willamette Meridian; thence South 19° 32' East a distance of 375' more or less to the Northerly line of that certain 60'

strip reserved as a right-of-way by Frank L. Hurlburt in his conveyance to Charles V. Brown and recorded in Book 65, Page 527 Clatsop County Record of Deeds; said point being the true point of beginning of tract herein described; thence West along the North line of said right-of-way to the Pacific Ocean; thence Southerly along the high tide line of the Pacific Ocean to an intersection with the South boundary line of the John Hobson D.L.C. extended; thence East along the South boundary line of the said Hobson D.L.C. to a point 339.1' East of the East bank of Neacoxie Lake; thence North 19° 32' West a distance of 1290' more or less to the point of beginning.

(F) That area bounded on the North by the North line of the Gearhart Donation Land Claim; bounded on the East by Burlington Northern Railroad; bounded on the South by the North boundary of the Gearhart City Limits; bounded on the West by the Pacific Ocean.

Excepting therefrom, however, the following described parcel. Beginning at the intersection of the North line of the Gearhart City Limits with the Westerly right-of-way line of Marion Avenue; thence North and East along the said Westerly right-of-Way to its intersection with the East boundary of the platted Gearhart Green Subdivision; thence North along the East line of said subdivision and the extension thereof to the North boundary of the Gearhart Donation Land Claim; thence East along the North line of said Donation Land Claim to the center line of Neacoxie Creek; thence Southerly along the needle of said

creek to the North line of the Gearhart City Limits; thence West along the North line of said City Limits to the point of beginning. All above described property being in Sections 3 and 4, Township 6 North, Range 10 West, Willamette Meridian, Clatsop County, State of Oregon.

(G) That area bounded on the West and North by the South boundary of the Gearhart City Limits; on the East by Burlington Northern Railroad and on the South by Seaside City Limits.

(H) The Cities of Gearhart, Hammond, and Warrenton.

(I) Fort Stevens State Park.

(b) Pursuant to ORS 454.685, within the areas set forth in subsection (c) below, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability, except to construct systems to be used under the following circumstances:

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

(B) The system is not to be installed within any of the areas subject to the prohibition set forth in subsection (a) above.

(C) The system is to be installed on an undivided parcel of one acre or more in size upon which the dwellings or buildings to be served by the system are located and which is owned fully or fully subject to a contract of purchase by the same person or persons who own or are contract purchasers of the dwellings or buildings to be served by the system.

(D) The dwellings or buildings to be constructed or existing on the land parcel when fully occupied or used allow for no more than

the equivalent of sewage flow for one single family per acre of the land parcel.

(E) The land parcel upon which the system is to be constructed did not become of a size conforming to the requirement of paragraphs (C) and (D) of this subsection through any platting, partitioning or exchange of ownership which results or may result in any subsurface sewage disposal system being used, installed, or under a permit to be installed on any other parcel of land which does not conform to paragraphs (C) and (D) of this subsection or which did not previously conform to paragraphs (C) and (D) of this subsection and, after such platting, partitioning, or exchange of ownership, is in even greater nonconformance to paragraphs (C) and (D) above.

(c) The minimum parcel size requirement of subsection (b) above shall apply to all of the following areas [which are not subject to the complete prohibition set forth in subsection (a) above] of Clatsop County where there are unconsolidated loamy sands:

(A) All areas located south of the Columbia River, west of the Skipanon River (or Skipanon Waterway), and north of the southernmost part of Cullaby Lake,

(B) All areas within the Shoreline Estates Sanitary District, and

(C) All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one-half mile due east of U. S. Highway 101.

[~~(b)~~] (d) The restrictions set forth in [~~subparagraph~~] [~~(A) above is~~] this rule are subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems in accordance with single family unit equivalent densities specified in the local land use plan for the area will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal.

(e) The restrictions set forth in subsections (b) and (c) above shall not apply to prohibit permits for systems to serve one single family dwelling per parcel of land of less than one acre if such parcel's legal description was on file in the deed records of Clatsop County prior to April 2, 1977, either as the result of conveyance or as part of a platted subdivision.

[~~(c)~~] (f) The restrictions set forth in [~~subparagraph~~] subsections [~~(A)~~] (a), (b) and (c) above shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Director or his authorized representative pursuant to ORS 454.755 (1)(b) where such report was issued prior to the effective date of this subsection (7).

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. H, October 21, 1977, EQC Meeting

Consideration of Amendment to Administrative Rule 340-71-020, Subsurface and Alternative Sewage Disposal, Imposing Moratorium on New Subsurface Sewage Disposal Systems in Dexter Area, Lane County

Background

The Board of Commissioners for Lane County, by resolution dated June 8, 1977, requested the Commission to impose a moratorium upon issuance of construction permits and favorable reports of evaluation of site suitability for new subsurface sewage disposal systems within the community of Dexter, Lane County.

The Commission, at its June 24, 1977 meeting in Eugene, authorized a public hearing to receive testimony on the question of imposing a moratorium in the Dexter area.

The public hearing, after proper notice, was conducted by the Commission at its September 23, 1977 meeting. The Commission further ordered the hearing held open until October 5, 1977 for additional written testimony.

Lane County provided the only testimony at the hearing on September 23, 1977. No additional written testimony had been received by October 5, 1977.

Lane County's testimony addressed the eleven (11) factors required to be considered by the Commission before imposing a moratorium under Oregon Revised Statutes (ORS) 454.685.

Evaluation

Two (2) house-to-house surveys have been conducted in the Dexter area by the Lane County Environmental Health Division. The first conducted in January 1968 indicated 61% of the homes surveyed had either failing or marginal systems. The second survey conducted in May 1976 (a much dryer month) indicated 40% failing or marginal systems. Not all the same systems were failing in 1976 that were failing in 1968. This indicates there is a continuing sewage disposal system failure rate which cannot be solved solely by repairing presently failing systems.

There was no public testimony to refute the survey findings of the Lane County Division of Environmental Health.

Summation

1. Oregon Administrative Rule (OAR) Chapter 340, Section 71-010 (66) states: "A malfunctioning or surfacing subsurface sewage disposal system constitutes a public health hazard."

2. Lane County, by house-to-house survey, has documented a health hazard based upon a high percentage of failing subsurface sewage systems in the Dexter area.

3. The Lane County Board of Commissioners has petitioned the Commission to impose a moratorium on new subsurface sewage system construction permits and favorable reports of evaluation of site suitability.

4. ORS 454.685 provides that the Commission may issue an order, after public hearing, limiting or prohibiting construction of subsurface or alternative sewage disposal systems in an area. The order would issue in the form of an amendment to OAR Chapter 340, Section 71-020.

Director's Recommendation

It is the Director's recommendation that:

> The Commission issue an order prohibiting construction of new subsurface sewage disposal system construction permits and the issuance of favorable reports of evaluation of site suitability within the Dexter

area of Lane County, by adopting the proposed amendment to OAR Chapter 340, Section 71-020 as shown on Exhibit A, attached.

Bill

WILLIAM H. YOUNG
Director

Jack Osborne/jms
229-6218
October 4, 1977
Attachments:
(1) Exhibit A - proposed amendment to OAR 340-71-020
(2) Staff Report - Dexter moratorium hearing
Lane County Water Pollution Control Division

EXHIBIT A

PROPOSED

Amend Oregon Administrative Rules 340-71-020 by adding a new subsection (8) to read as follows:

"(8) Pursuant to ORS 454.685, neither the Director nor his authorized representatives shall issue either construction permits or favorable reports of evaluation of site suitability for new subsurface sewage disposal systems within the boundaries of the following described geographic area of the State:

The area generally known as Dexter, and defined by the Boundary submitted by the Board of County Commissioners for Lane which is bounded on the Northeast by Willamette Highway #58, and contains those properties south westerly of Highway #58 in the following tax assessment maps of Lane County. Twp-19 R-01 Sec-16.2, Twp-19 R-01 Sec-16.32, Twp-19 R-01 Sec-16.31, Twp 19 R-01 Sec-16.42, and Twp-10 R-01 Sec-16 and index located totally within Lane County."

STAFF REPORT
DEXTER MORATORIUM HEARING
By
Lane County Water Pollution Control Division

By resolution of the Lane County Board of Commissioners, dated June 8, 1977, the Oregon Environmental Quality Commission (EQC) was requested to consider establishment of a moratorium on the issuance of new construction permits and favorable reports of evaluation of site suitability for new subsurface sewage disposal systems. The resolution by the Board of Commissioners was based upon a series of surveys and reports considering the operational suitability of existing subsurface sewage disposal systems and the physical limitations affecting the installation of new systems. A copy of the Board of Commissioners' resolution is attached as Exhibit A of this report.

Oregon Revised Statute (ORS) 454.685 provides the EQC with the authority to limit or prohibit the construction of subsurface sewage disposal systems in an area if it finds that such construction should be restricted. ORS 454.85 further describes the factors which the EQC must consider in arriving at a finding which will limit or prohibit the construction of subsurface sewage dispsoal systems. The purpose of this staff report is to present a discussion of the items specified by ORS 454.685 for consideration at the hearing scheduled by the EQC, as follows:

A. Present and projected density of population. The community of Dexter has an estimated (1975) population of approximately 570 people. The population of Dexter is currently projected to increase slowly at a rate consistent with other rural communities in Lane County to a year-2000 estimated population of 795 people. A copy of a table of population projections for the rural areas of the Willamette Basin portion of Lane County is attached as Exhibit B.

The boundaries currently proposed for consideration at this moratorium hearing contained an area of approximately 340 acres. Based upon this area, the proposed moratorium area has a population density of approximately 1.7 people per acre (1975) and would have a projected year-2000 population density of approximately 2.3 people per acre.

B. Size of building lots. Existing lots in the community of Dexter range in size from smaller than 7,500 square feet (0.2 acre) to in excess of 10 acres. Further,

developed lots in Dexter vary from a single residence or other structure on the parcel to mobile home parks containing several dwelling units.

Lots created in the community of Dexter in the future will be required to conform to the minimum sizes prescribed by the land use zones. The major portion of the proposed moratorium area is zoned rural residential (minimum lot size of 1, 2 or 5 acres depending upon circumstances) with smaller areas zoned farm-forestry 20 (minimum parcel size of 20 acres). AGT (minimum lot size of 5 acres) and commercial. The map attached as Exhibit C represents the zoning now existing within the community of Dexter.

C. Topography. The community of Dexter is located on the older alluvial terraces of the Middle Fork Willamette River and its tributary, Lost Creek. The area is generally gently rolling and flat with slopes usually less than 5 percent.

D. Porosity and absorbency of soil. Soils typical of much of the proposed moratorium area consists of silty clay loam over clay or clay cemented gravels. The low porosity and absorbency of these soils is evidenced by the presence of temporarily perched water at or near the ground surface (0 to 24 inches) during much of the winter.

The upper terrace east of the community of Dexter has dense clay soils over smooth weathered bedrock, which results in a sheeting effect of surface runoff. The area along Lost Creek is represented by poorly drained gravelly loam soils over very gravelly clay loams interspersed by limited areas of deep silty clay loam soils and open gravels.

E. Geological formations adversely affecting subsurface sewage disposal. The community of Dexter is located within the transitional area between the Willamette Valley and western Cascades geologic provinces. Erosion has been the most recent dominant geological process and, consequently, the valley bottoms of the Middle Fork Willamette River, Lost Creek and Rattlesnake Creek have been filled with river sediments. Suitability for subsurface sewage disposal is much more closely related

to the characteristics of these sediment deposits than to the underlying geologic characteristics.

F. Ground and surface water conditions and variations therein from time to time. As previously presented, the proposed moratorium area lies in a geological and soil transition area; consequently the groundwater quantity and quality vary widely. Groundwater supplies in the younger alluvium along Lost Creek and in the older, high river terraces are generally adequate. In limited areas, generally in the upland and hillside areas, groundwater may be found to be naturally contaminated by arsenic.

Major surface waters in the vicinity of the proposed moratorium area includes Dexter Reservoir, the Middle Fork Willamette River and Lost Creek. Generally, the quality of these major surface waters is acceptable except for seasonal problems associated with low summer flows, high temperatures and occasional organic and bacterial enrichment in Lost Creek. Water quality monitoring performed in the small ditches and drainageways of the community of Dexter in 1973 found significant concentrations of total and fecal coliform bacteria.

G. Climatic conditions. The climate of the proposed moratorium area is typical of the Willamette Valley with warm dry summers and mild wet winters. Annual precipitation averages 45 to 50 inches, most of which occures from November to March. Rainfall during these winter months averages from 5 to 8 inches per month.

H. Present and projected availability of water from unpolluted sources. Residents of the proposed moratorium area utilize individually owned wells as their only source of domestic water. As has been previously discussed, water for domestic use is readily available in moderate quantities from shallow aquifers underlaying the area. These aquifers are generally protected from surface contamination by the intervening clay soils. However, improperly constructed wells in proximity to malfunctioning subsurface sewage disposal systems could present a threat to the continued acceptability of such aquifers.

I. Type of and proximity to existing domestic water supply sources. The City of Lowell, located across Dexter Reservoir from the proposed moratorium area, operates a community water supply system serving its residents. The U.S. Corps of Engineers operates a small water supply system utilizing Dexter Lake as a water source, but the service area of this system is limited to Dexter Park.

With the exception of the groundwater currently supplying the individual wells within Dexter, the Middle Fork Willamette River and Dexter Lake are the only likely sources of domestic water supply in the area. Both of these potential water supply sources would require the construction of water treatment facilities to insure the potability of the water.

J. Type of and proximity to existing surface waters. The only surface water of any consequence actually within the proposed moratorium area is a portion of Lost Creek. Lost Creek is a small stream with a dry-weather low flow of approximately 10 cfs. Dexter Lake, a reregulation reservoir of approximately 1025 acres, and the Middle Fork Willamette River, a moderate-sized river with a dry-weather low flow of approximately 1,500 cfs, are other surface waters in relative proximity to the proposed moratorium area.

K. Capacity of existing subsurface sewage disposal systems. The operational status of the existing individual subsurface sewage disposal systems within the proposed moratorium area has been evaluated several times beginning in 1967-68 with the most recent survey completed in May, 1976. All of the surveys indicate the existence of serious problem with failing or marginally operating subsurface sewage disposal systems in the community of Dexter. The results of the 1968 and 1976 sanitary surveys are summarized in Exhibit D (from Appendix G from the "Dexter-Lowell Area Facilities Plan", Lane Council of Governments).

More recently, in April and May 1977, the Lane County Water Pollution Control Division conducted a more detailed evaluation of those subsurface sewage disposal systems identified as failing in the 1976 community survey. It is anticipated, as a result of

that evaluation, that satisfactory repair of the currently failing systems will be both difficult and expensive and that even such expensive repairs may have only a limited life expectancy. Exhibit E presents the conclusions of the study performed by the Water Pollution Control Division.

GCS/gr

APPENDIX 'A'

PROPOSED MORATORIUM BOUNDARY

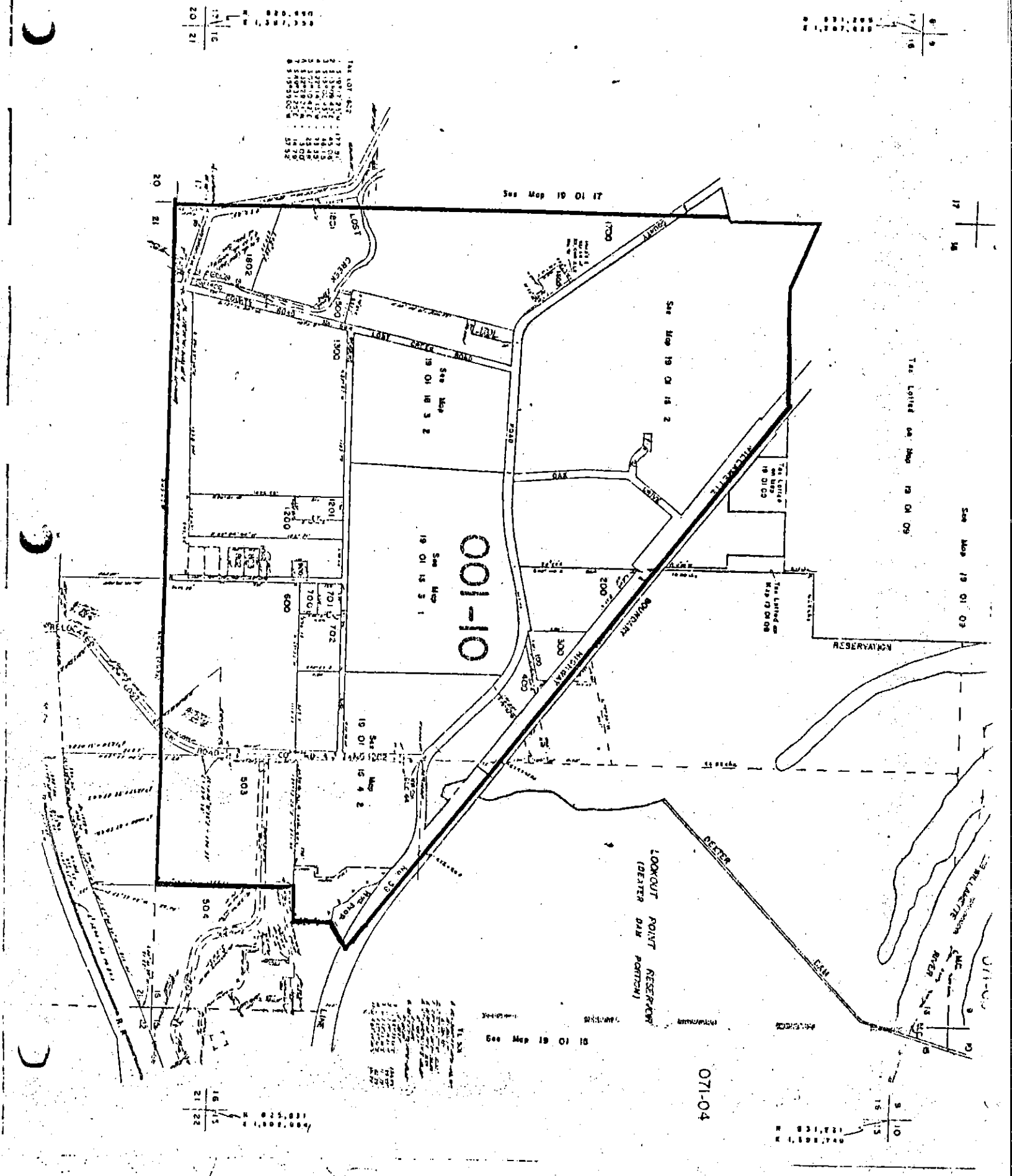


EXHIBIT A

IN THE BOARD OF COUNTY COMMISSIONERS OF LANE COUNTY, OREGON

)	IN THE MATTER OF ESTABLISHING
)	A MORATORIUM ON CONSTRUCTION
R E S O L U T I O N)	PERMITS FOR SUBSURFACE SEWAGE
)	DISPOSAL SYSTEMS IN DEXTER,
)	OREGON

77-6-8-12

WHEREAS, the Lane County Environmental Health Division, in a May, 1976, survey of on-site subsurface sewage disposal systems in the unincorporated community of Dexter, Oregon found a large percentage of these disposal systems to have failed or to be marginally operative, and

WHEREAS, the Lane County Water Pollution Control Division, through on-site investigations, has determined that the failing subsurface sewage disposal systems in the community of Dexter are caused by a combination of system age, the silty clay composition of the area soils, and poor installation and design practices during construction, and

WHEREAS, the high number of subsurface sewage disposal system failures in the community of Dexter represents a potential health hazard to the citizens of Dexter and, because the Dexter Reservoir attracts many visitors each year, to other Lane County residents, and

WHEREAS, the State of Oregon Environmental Quality Commission, pursuant to ORS 454.605 to 454.745, has been granted the authority over subsurface sewage disposal systems within the State of Oregon, and therefore be it hereby

RESOLVED that the State of Oregon Environmental Quality Commission be requested to place a moratorium upon the issuance of construction permits and favorable reports of evaluation of site suitability for new subsurface sewage disposal systems within the boundaries of Dexter, Oregon, hereinafter attached as Appendix A.

RESOLVED that this moratorium shall last only so long as the above-listed conditions continue to cause a high number of subsurface sewage disposal failures in Dexter, Oregon.

DATED this 8th day of June, 1977.

BOARD OF COUNTY COMMISSIONERS,
LANE COUNTY, OREGON

Archie Wilmsten
Chairman

APPROVED AS TO FORM
DATE June 9 1977
By Arthur T. Clark
OFFICE OF LEGAL COUNSEL

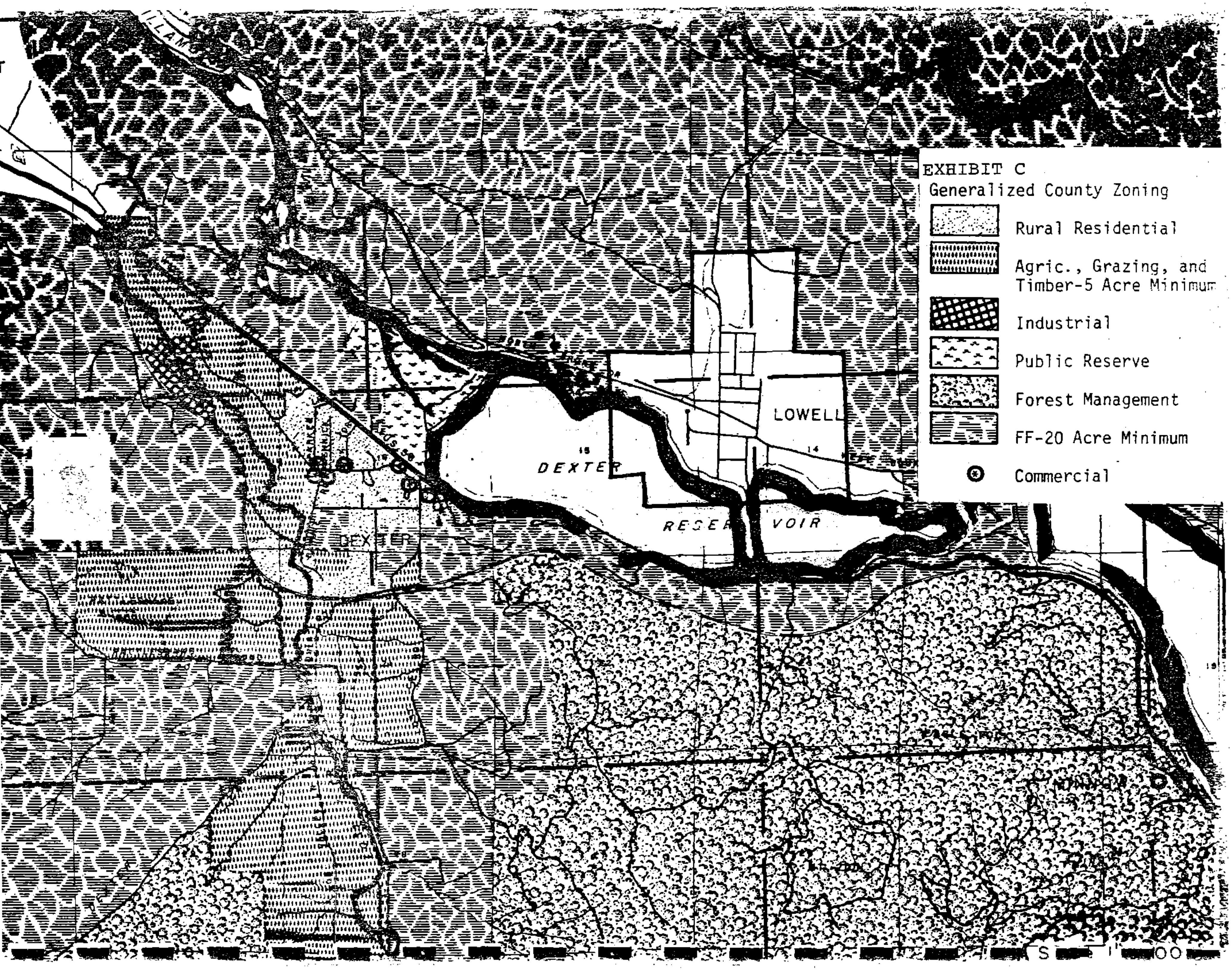


EXHIBIT C
Generalized County Zoning
Rural Residential
Agric., Grazing, and Timber-5 Acre Minimum
Industrial
Public Reserve
Forest Management
FF-20 Acre Minimum
Commercial
LOWELL
DEXTER
DEXTER RESERVOIR

REVISED POPULATION PROJECTIONS BY SUB-BASINS (2-10-76)

	1970	1975	1980	1985	1990	1995	2000
SUB-BASIN #1							
Urban: Creswell	1,199	1,500(1,525)**	1,700	2,000	2,300	2,650	3,053
Creswell Urbanizing	1,100	1,250	1,450	1,650	1,950	2,250	2,550
Sub-Total: Creswell	2,299	2,750	3,150	3,650	4,250	4,900	5,603
Cottage Grove	6,004	6,900(6,700)	8,000	9,250	10,750	12,800	15,241
Cottage Grove Urbanizing	2,200	2,500	2,900	3,400	3,900	4,650	5,650
Sub-Total: Cottage Grove	8,204	9,400	10,900	12,650	14,650	17,450	20,891
TOTAL URBAN	10,503	12,150	14,050	16,300	18,900	22,350	26,494
RURAL*	7,177	6,714	7,231	7,808	8,483	9,128	9,886
GRAND TOTAL - SUB-BASIN #1	17,680	18,864	21,281	24,108	27,338	31,478	36,380
SUB-BASIN #2							
Urban: Dexter	525	570	615	660	705	750	795
Lowell	567	646(620)	725	804	883	960	1,137
Sub-Total: Dexter-Lowell	1,092	1,216	1,340	1,464	1,588	1,710	1,932
Oakridge	3,422	3,590(3,910)	3,770	3,958	4,156	4,364	4,582
TOTAL URBAN	4,514	4,806	5,110	5,422	5,744	6,074	6,514
RURAL	6,071	6,434	6,812	7,189	7,575	8,039	8,447
GRAND TOTAL - SUB-BASIN #2	10,585	11,240	11,922	12,611	13,319	14,113	14,961
SUB-BASIN #3							
Urban: Blue River	520	530	550	560	570	590	600
Marcola	560	570	590	600	620	630	650
Coburg	713	770(830)	830	890	960	1,040	1,127
TOTAL URBAN	1,793	1,870	1,970	2,050	2,150	2,260	2,377
RURAL	5,923	6,518	7,107	7,929	8,733	9,625	10,627
GRAND TOTAL - SUB-BASIN #3	7,716	8,388	9,077	9,979	10,883	11,885	13,004
SUB-BASIN #4							
Urban: Junction City	2,373	2,740(2,730)	3,200	3,630	4,010	4,430	4,894
Elmira	600	675	760	860	970	1,095	1,236
Veneta	1,377	1,558(1,990)	1,763	1,995	2,257	2,554	2,890
TOTAL URBAN	4,350	4,973	5,723	6,485	7,237	8,079	9,020
RURAL	14,871	16,619	18,544	20,755	23,229	26,016	29,144
GRAND TOTAL - SUB-BASIN #4	19,221	21,592	24,267	27,240	30,466	34,095	33,164

* Does not include Goshen area.

** Figures in parentheses are estimates by Center for Population Research & Census, Portland State Uni

EXHIBIT B

EXHIBIT D

APPENDIX G

Dexter Area Survey Update*
1976

In the way of background information, a health hazard survey was conducted in the Dexter area in 1968 to determine the adequacy of the sewage disposal systems in that area.

As a result of a request from the Committee of Concerned Citizens for Better Living in Dexter through the Lane Council of Governments, an update of the 1968 health hazard survey was conducted by this division.

Surveys are normally conducted during the heavy rainy season, however, in order to accommodate the request of the Dexter people for an update of the work done in 1968, the survey was conducted in May 1976, a relatively dry month. The survey team reported that they found no water flowing in ditches, drainage ways or on the surface of the ground. In contrast, the 1968 survey was conducted in January, a relatively wet month.

The 1976 survey was concerned primarily with the condition of the existing subsurface sewage disposal systems and other individual means of sewage disposal.

Some of the data may appear to be in conflict when comparing the totals for the study. The following facts will help resolve any apparent discrepencies.

1. More than one structure exists on some tax lots.
2. Some structures have been removed.
3. Unable to determine location or condition (see footnotes).
4. Some of the older failing systems have been repaired.
5. New failures were noted in 1976 which were not noted in 1968.
6. 1976 was a relatively dry year and the rainy season had already passed.

*Prepared by
Lane County Environmental
Health Division.

Data Comparison of 1976 and 1968 Dexter Environmental Surveys

	1976	1968
Properties visited* (tax lots)	147	92 less U.T.D.
Structures investigated	202	Not Given
Number of failing SDS	54	35
Number of marginal SDS	27	20
Number of satisfactory SDS	108	34
Percent of failing systems	26.7	39
Percent of marginal systems	13.4	22
Number of U.T.D**	13	14
Percent of failing and marginal systems	40.1	61

---

* 1968 report does not list U.T.D. in total of properties visited. There is a difference of 41 properties visited in the two surveys. Some of this difference may be accounted for by partitioning of the tax lots since 1968, but a check of tax lot survey forms against the original composite study area map does not account for this difference.

** U.T.D. - denotes unable to determine the condition of sewage disposal system for various reasons such as refusal of entry to property by owner, dogs, property overgrown with grass and weeds, or a lack of any clues as to the location of sewage disposal system.

Conclusions and Observations

Considering the time of year and the dryness of the season, a significant number of marginal or failing sewage disposal systems were noted in the 1976 survey (40.1 percent). It is felt that with a failure rate this high in the month of May, that if the survey had been conducted during the heighth of the rainy season, this percentage could have even exceeded the 1968 results which were 61 percent.

Another interesting factor to consider is that not all the same properties were failing in 1976 as compared to 1968. This indicates that there is a continuing sewage disposal system failure rate which cannot be solved merely by repairing the presently failing systems.

EXHIBIT E

EXCERPTED FROM: "Staff Report-Dexter Individual Waste Disposal Evaluation", Lane County Water Pollution Control Division, May 1977

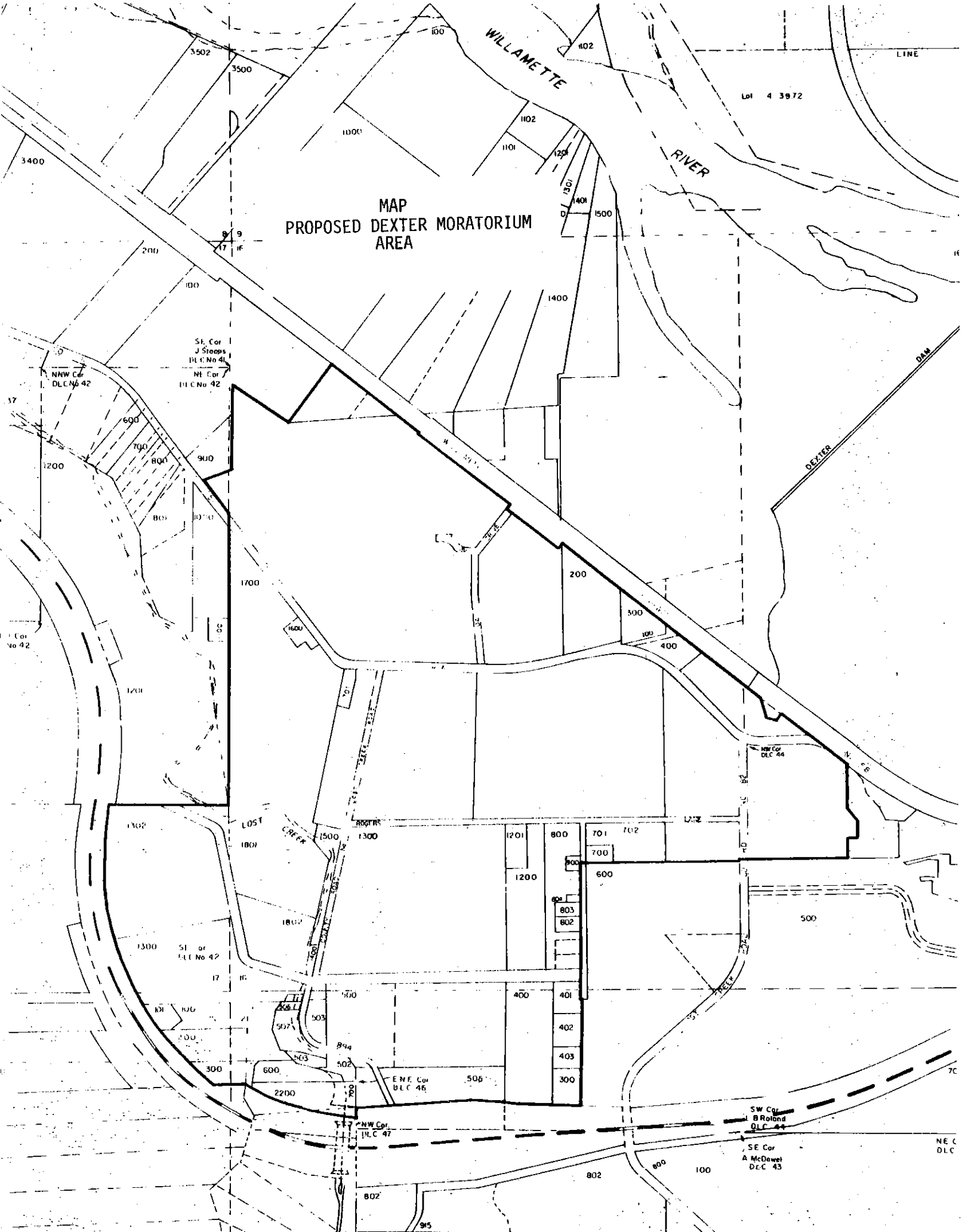
CONCLUSIONS:

In summary, the Water Pollution Control Division identified twenty (20) parcels within the community of Dexter containing approximately 53 dwelling units which are presently being served by the failing on-site waste disposal systems. Based upon the use of mounded disposal systems as a means of solving the identified waste disposal problems, it is estimated that an expenditure of approximately $98,000 would be required.

In addition, another thirteen (13) dwelling units within the community of Dexter are being served by on-site waste disposal systems which are suspected of failing, but the system failure has not been confirmed. If all of these systems are found to be actually failing, preliminary estimates indicate that approximately $25,000 to $40,000 would be required for installation of appropriate repair systems.

In developing the estimated costs for upgrading failing on-site waste disposal systems serving many of the dwellings in the community of Dexter, every effort was made to provide repair systems which would have a reasonable chance of survival. However, in some instances the physical limitations are so severe that even the proposed design may have only a limited effective service life before failure occurs and the system would have to again be repaired.

GCS/gr


MAP
PROPOSED DEXTER MORATORIUM
AREA
WILLAMETTE
RIVER
DEXTER
DAM
LOST
CREEK
LINE
NW Cor
DLC No 42
NE Cor
DLC No 42
SE Cor
J Stoops
DLC No 41
SE Cor
DLC No 42
NW Cor
DLC 44
ENE Cor
DLC 46
NW Cor
DLC 47
SW Cor
J B Roland
DLC 44
SE Cor
A McDowell
DLC 43
Lot 4 39.72

WRITTEN DESCRIPTION
DEXTER MORATORIUM AREA

Starting at the intersection of the West line of Section 16, Township 19 South, Range 1 West, Willamette Meridian, the intersection of the Northerly right of way line of County Road No. 95 (Dexter Road); run thence Northerly along said North right of way line of said County Road No. 95, 370 feet, more or less; thence north 72° 27' East 230 feet, more or less; thence North 600 feet, more or less; thence South 69° East 460 feet, more or less; thence North 38° 420 feet, more or less, to the Southerly right of way line of State Highway No. 58 (Willamette Highway); run thence easterly along the said South right of way line of said State Highway No. 58, 4700 feet, more or less, to a point; thence South 300 feet, more or less; thence Southeasterly 115 feet, more or less; thence South 120 feet, more or less; thence West 66 feet, more or less; thence South 145 feet, more or less; thence West 770 feet, more or less, to the Westerly right of way line of County Road No. 1282 (Lost Creek Road); thence South 20 feet, more or less, along said West line of said County Road; thence WEst 1140 feet, more or less; thence South 870 feet, more or less; thence East 20 feet, more or less; thence South 1110 feet, more or less, to the Southerly right of way line of the Southern Pacific Railroad; thence Westerly along the said Southerly right of way line of said Southern Pacific Railroad to its intersection with the North line of the South one-half of the Southeast one-quarter of Section 17, said Township and Range; thence east to the east line of Section 17 of said Township and Range; thence North along the said West line of said Section 17, said Township and Range to the point of Beginning in Lane County, Oregon.

PETITION
TO
OREGON ENVIRONMENTAL QUALITY COMMISSION
FOR
CHANGE TO OREGON ADMINISTRATIVE RULES
DEXTER MORATORIUM AREA

(a) The petitioner hereby requests that the Oregon Environmental Quality Commission instruct the Director of the Department of Environmental Quality to immediately develop the necessary changes or additions to the Oregon Administrative Rules which would prohibit the issuance of construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of the unincorporated community of Dexter, Oregon:

Starting at the intersection of the West line of Section 16, Township 19 South, Range 1 West, Willamette Meridian, the intersection of the Northerly right of way line of County Road No. 95 (Dexter Road); run thence Northerly along said North right of way line of said County Road No. 95, 370 feet, more or less; thence North 72° 27' East 230 feet, more or less; thence North 600 feet, more or less; thence South 69° East 460 feet, more or less; thence North 38° 420 feet, more or less, to the Southerly right of way line of State Highway No. 58 (Willamette Highway); run thence Easterly along the said South right of way line of said State Highway No. 58, 4700 feet, more or less, to a point; thence South 300 feet, more or less; thence Southeasterly 115 feet, more or less; thence South 120 feet, more or less; thence West 66 feet, more or less; thence South 145 feet, more or less; thence West 770 feet, more or less, to the Westerly right of way line of County Road No. 1282 (Lost Creek Road); thence South 20 feet, more or less, along said West line of said County Road; thence West 1140 feet, more or less; thence South 870 feet, more or less; thence East 20 feet, more or less; thence South 1110 feet, more or less, to the Southerly right of way line of the Southern Pacific Railroad; thence Westerly along the said Southerly right of way line of said Southern Pacific Railroad to its intersection with the North line of the South one-half of the Southeast one-quarter of Section 17, said Township and Range; thence east to the east line of Section 17 of said Township and Range; thence North along the said West line of said Section 17, said Township and Range to the point of Beginning in Lane County, Oregon.

(b) The petitioner alleges the following facts in support of his request for the adoption of the proposed rule:

1. A May 1976 survey of on-site systems in Dexter, performed by the Lane County Health Division, indicated that the number of system failures and marginally operative systems were 27% and 13%, respectively.

2. Large portions of the soils of the Dexter area are largely permeable, coarse gravels, slowly permeable silty clay loams and clays, or dense clay situated over smooth weathered bedrock.[1]

3. The unincorporated community of Dexter is no longer primarily at rural densities.

4. The large percentage of subsurface sewage disposal systems, with attendant surfacing of largely untreated sewage, represents a serious potential for a communicable disease health hazard.

(c) Petitioner alleges that the following propositions of law pertain to the adoption of the proposed rule:

1. ORS 454.605 to 454.745, which pertain to the regulation of subsurface sewage disposal in Oregon. Petitioner specifically relies upon ORS 454.685 which authorizes the Oregon Environmental Quality Commission to limit the construction of subsurface sewage disposal systems.

(d) Petitioner alleges substantial interest in the adoption of this rule in the following specifics:

1. Petitioner, as an agent and representative of the Lane County Board of Commissioners, in charged with protecting the health, safety, and general welfare of the residents of Lane County, Oregon.

2. Petitioner, as a resident and private citizen of Lane County, is personally interested in the promulgation of the proposed rule in that he has, and plans to continue, to visit the Dexter area for recreational purposes.

Roy L. Burns

ROY L. BURNS, DIRECTOR
WATER POLLUTION CONTROL DIVISION

ROBERT W. STRAUB
GOVERNOR

DEPARTMENT OF ENVIRONMENTAL QUALITY
MIDWEST REGION
16 OAKWAY MALL • EUGENE, OREGON • 97401 • Phone (503) 686-7601

September 20, 1977

Roy Burns
Lane County
Dept. Environmental Management
125 East 8th
Eugene, Oregon 97401

Dear Mr. Burns:

Based upon informational meetings, document review, and cursory inspection of the proposed moritorium area of Dexter, the Department of Environmental Quality offers its concurrence with the proposed subsurface sewage disposal moritorium and its purpose to provide relief to the community of Dexter from continued and mounting exposure to health hazards in the form of human sewage.

This concurrence is based upon committment of Lane County to provide, as an integral part of this moritorium, an active program to accomplish repair or solution to the existing failing sewage disposal systems and to plan for a suitable means of sewage treatment and disposal related to future growth and welfare of the community of Dexter.

Sincerely,

Verner J. Adkison
Region Manager

DSJ/jnf
cc: DEQ/Subsurface Sewage Division
Regional Operations

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. I, October 21, 1977 EQC Meeting

NPDES July 1, 1977 Compliance Date - Request for approval of Stipulated Consent Orders for permittees not meeting July 1, 1977 compliance deadline.

Background

The Department has been taking enforcement action against NPDES Permittees that are in violation of the July 1, 1977 deadline for achieving secondary treatment or implementing best practicable control technology currently available. That action has been by stipulated consent orders which impose a reasonably achievable and enforceable compliance schedule.

Summation

The Department has now reached agreement on new compliance schedules with three entities that treat municipal sewage but cannot consistently achieve secondary treatment. The South Suburban Sanitary District, the City of Cannon Beach and the City of Rockaway Consent Orders are now ready for Commission action.

Director's Recommendation

I recommend that the Commission approve the following Consent Orders:

1. Department of Environmental Quality v. South Suburban Sanitary District, Stipulation and Final Order, No. WQ-CR-77-163.

2. Department of Environmental Quality v. City of Cannon Beach, Stipulation and Final Order, No. WQ-SNCR-77-212.

3. Department of Environmental Quality v. City of Rockaway, Stipulation and Final Order, No. WQ-SNCR-77-160.

Bill

WILLIAM H. YOUNG

FMB:gcd
229-5372
October 10, 1977
Attachments: Page Two

Attachments:

1. South Suburban Sanitary District Final Order
2. City of Cannon Beach Final Order
3. City of Rockaway Final Order

BEFORE THE ENVIRONMENTAL QUAL'TY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, of the STATE OF OREGON, Department, v. SOUTH SUBURBAN SANITARY DISTRICT, Respondent.	)	STIPULATION AND FINAL ORDER WQ-CR-77-163 KLAMATH COUNTY

1. The Department of Environmental Quality ("Department") will soon issue National Pollutant Discharge Elimination System Waste Discharge Permit ("Permit") Number _____(to be assigned upon issuance of the Permit) to SOUTH SUBURBAN SANITARY DISTRICT ("Respondent") pursuant to Oregon Revised Statutes ("ORS") 468.740 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500. The Permit authorizes the Respondent to construct, install, modify or operate waste water treatment, control and disposal facilities and discharge adequately treated waste waters into waters of the State in conformance with the requirements, limitations and conditions set forth in the Permit. The Permit expires on July 31, 1982.

2. Condition 1 of Schedule A of the Permit does not allow Respondent to exceed the following waste discharge limitations after the Permit issuance date:

	Average Effluent Concentrations		Effluent Loadings Monthly Average		Weekly Average		Daily Maximum	
Parameter	Monthly	Weekly	kg/day	lb/day	kg/day	lb/day	kg	(lbs)
June 1 - Oct 31:								
BOD	30 mg/l	45 mg/l	261	(575)	392	(862)	553	(1151)
TSS	30 mg/l	45 mg/l	261	(575)	392	(862)	553	(1151
Nov 1 - May 31:								
BOD	30 mg/l	45 mg/l	261	(575)	392	(862)	553	(1151)
TSS	30 mg/l	45 mg/l	261	(575)	392	(862)	553	(1151)

///

3. Respondent proposes to comply with all the above effluent limitations of its Permit by constructing and operating a new or modified waste water treatment facility. Respondent has not completed construction and has not commenced operation thereof.

4. Respondent presently is capable of treating its effluent so as to meet the following effluent limitations, measured as specified in the Permit:

Parameter	Average Effluent Concentrations Monthly	Weekly	Effluent Loadings Monthly Average kg/day	(lg/day)	Weekly Average kg/day	(lb/day)	Daily Maximum kg	(lbs)
Jun 1 - Oct 31:								
BOD	50 mg/l	75 mg/l	435	(959)	653	(1439)	804	(1770)
TSS	60 mg/l	90 mg/l	523	(1151)	784	(1726)	908	(2000)
Nov 1 - May 31:								
BOD	50 mg/l	75 mg/l	435	(959)	653	(1439)	804	(1770)
TSS	60 mg/l	90 mg/l	523	(1151)	784	(1726)	908	(2000)

5. The Department and Respondent recognize and admit that:

a. Until the proposed new or modified waste water treatment facility is completed and put into full operation, Respondent will violate the effluent limitations set forth in Paragraph 2 above the vast majority, if not all, of the time that any effluent is discharged.

b. Respondent has committed violations of its NPDES Waste Discharge Permit No. 1987-J and related statutes and regulations.

1) Effluent violations have been disclosed in Respondent's waste discharge monitoring reports to the Department, covering the period from March 18, 1975 through the date which the order below is issued by the Environmental Quality Commission.

2) Respondent did not submit a regional sewage plan, an infiltration and inflow analysis report and a facility plan report, by

January 1, 1977, as required by Conditions S1, S2 and S3, respectively.

6. The Department and Respondent also recognize that the Environmental Quality Commission has the power to impose a civil penalty and to issue an abatement order for any such violation. Therefore, pursuant to ORS 183.415(4), the Department and Respondent wish to resolve those violations in advance by stipulated final order requiring certain action, and waiving certain legal rights to notices, answers, hearings and judicial review on these matters.

7. The Department and Respondent intend to limit the violations which this stipulated final order will settle to all those violations specified in paragraph 5 above, occurring through (a) the date that compliance with all effluent limitations is required, as specified in Paragraph A(1)(b)(vi) below, or (b) the date upon which the Permit is presently scheduled to expire, or (c) the date upon which this Stipulation and Final Order shall terminate as specified in Paragraph (a)(1)(c) below, whichever first occurs.

8. This stipulated final order is not intended to settle any violation of any effluent limitations set forth in Paragraph 4 above. Furthermore, this stipulated final order is not intended to limit, in any way, the Department's right to proceed against Respondent in any forum for any past or future violations not expressly settled herein.

NOW THEREFORE, it is stipulated and agreed that:

A. The Environmental Quality Commission shall issue a final order:

(1) Requiring Respondent to comply with the following schedule:

(a) Submit proper and complete facility plan report by March 1, 1978. If consultant has not completed facility plan report by March 1, 1978, respondent shall have until May 1, 1978 to complete the report in - house.

(b) If the final recommended alternative presented in the

above facility plan report is for a single regional sewerage facility, then Respondent, in conjunction with the other sewage agencies identified in the plan, shall:

(i) Submit a proper and complete Step II Grant Application by March 1, 1978.

(ii) Submit complete and biddable final plans and specifications and a proper and complete Step III Grant Application within 10 months of Step II Grant offer.

(iii) Start construction within 4 months of Step III Grant offer.

(iv) Submit progress report within 12 months of Step III Grant offer.

(v) Complete construction within 20 months of Step III Grant offer.

(vi) Demonstrate compliance with the final effluent limitations specified in Schedule A of the Permit within 30 days of completing construction.

(c) If the final recommended alternative presented in the above facility plan report is other than that of a single regional sewage facility, then Respondent shall submit a proper and complete Step II Grant Application by June 15, 1978. This Stipulation and Final Order shall then terminate on August 15, 1978.

(2) Requiring Respondent to meet the interim effluent limitations set forth

in Paragraph 4 above until the date set in the schedule in Paragraph A(1) above for achieving compliance with the final effluent limitations.

(3) Requiring Respondent to comply with all the terms, schedules and conditions of the Permit, except those modified by Paragraph A(1) above.

B. Regarding the violations set forth in Paragraph 5 above, which are expressly settled herein, the parties hereby waive any and all of their rights under United States and Oregon Constitutions, statutes and administrative rules and regulations to any and all notices, hearings, judicial review, and to service of a copy of the final order herein.

C. Respondent acknowledges that it has actual notice of the contents and requirements of this stipulated and final order and that failure to fulfill any of the requirements hereof would constitute a violation of this stipulated final order. Therefore, should Respondent commit any violation of this stipulated final order, Respondent hereby waives any rights it might then have to any and all ORS 468.125(1) advance notices prior to the assessment of civil penalties for any and all such violations. However, Respondent does not waive its rights to any and all ORS 468.135 (1) notices of assessment of civil penalty for any and all violations of this stipulated final order.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Date: OCT 12 1977, 197_.

By William H. Young
WILLIAM H. YOUNG
Director

RESPONDENT

Date: Sept. 14th, 1977

By Homer Chaverley
Name
Title President of the Board

F I N A L O R D E R

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: _____,197_.

By _____
WILLIAM H. YOUNG, Director
Department of Environmental Quality
Pursuant to OAR 340-11-136(1)

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, of the STATE OF OREGON, Department, v. CITY OF CANNON BEACH, Respondent.	STIPULATION AND FINAL ORDER WQ-SNCR-77-212 CLATSOP COUNTY

W H E R E A S

1. The Department of Environmental Quality ("Department") will soon issue National Pollutant Discharge Elimination System Waste Discharge Permit ("Permit") Number_____(to be assigned upon issurance of the Permit) to the CITY OF CANNON BEACH ("Respondent") pursuant to Oregon Revised Statutes ("ORS") 468.740 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500. The Permit authorizes the Respondent to construct, install, modify or operate waste water treatment, control and disposal facilities and discharge adequately treated waste waters into waters of the State in conformance with the requirements, limitations and conditions set forth in the Permit. The Permit expires on September 30, 1982.

2. Condition 1 of Schedule A of the Permit does not allow Respondent to exceed the following waste discharge limitations after the Permit issuance date:

	Average Effluent Concentrations		Effluent Loadings Monthly Average		Weekly Average		Daily Maximum	
Parameter	Monthly	Weekly	kg/day	(lb/day)	kg/day	(lb/day)	kg	(lbs)
May 20 - Sept 19:	No discharge without written permission from the Department							
Sept 20 - May 19:								
BOD	30 mg/l	45 mg/l	86	(184)	128	(282)	170	(376)
TSS	50 mg/l	80 mg/l	142	(312)	129	(282)	284	(624)

3. Respondent proposes to comply with all the above effluent limitations of

its Permit by constructing and operating a new or modified waste water treatment facility. Respondent has not completed construction and has not commenced operation thereof.

4. Respondent presently is capable of treating its effluent so as to meet the following effluent limitations, measured as specified in the Permit:

	Average Effluent Concentrations		Effluent Loadings: Monthly Average		Weekly Average		Daily Maximum	
Parameter	Monthly	Weekly	kg/day	(lb/day)	kg/day	(lb/day)	kg	(lbs)
May 20 - Sep 19	No discharge without written permission from the Department							
Sep 20 - May 19	45 mg/l	60 mg/l	128	(282)	190	(376)	256	(562)
	60 mg/l	90 mg/l	170	(376)	256	(562)	340	(752)

5. The Department and Respondent recognize and admit that:

a. Until the proposed new or modified waste water treatment facility is completed and put into full operation, Respondent will violate the effluent limitations set forth in Paragraph 2 above the vast majority, if not all, of the time that any effluent is discharged.

b. Respondent has committed violations of its NPDES Waste Discharge Permit No. 1721-J and related statutes and regulations. Those violations have been disclosed in Respondent's waste discharge monitoring reports to the Department, covering the period from August 30, 1974 through the date which the order below is issued by the Environmental Quality Commission.

6. The Department and Respondent also recognize that the Environmental Quality Commission has the power to impose a civil penalty and to issue an abatement order for any such violation. Therefore, pursuant to ORS 183.415(4), the Department

and Respondent wish to resolve those violations in advance by stipulated final order requiring certain action, and waiving certain legal rights to notices, answers, hearings and judicial review on these matters.

7. The Department and Respondent intend to limit the violations which this stipulated final order will settle to all those violations specified in Paragraph 5 above, occurring through (a) the date that compliance with all effluent limitations is required, as specified in Paragraph A(1) below, or (b) the date upon which the Permit is presently scheduled to expire, whichever first occurs.

8. This stipulated final order is not intended to settle any violation of any effluent limitations set forth in Paragraph 4 above. Furthermore, this stipulated final order is not intended to limit, in any way, the Department's right to proceed against Respondent in any forum for any past or future violation not expressly settled herein.

NOW THEREFORE, it is stipulated and agreed that:

A. The Environmental Quality Commission shall issue a final order:

(1) Requiring Respondent to comply with the following schedule:

(a) Submit proper and complete facility plan report and Step II grant application by December 31, 1977.

(b) Submit complete and biddable final plans and specifications and a proper and complete Step III grant application within ten (10) months of Step II grant offer.

(c) Complete construction within fifteen (15) months of Step III grant offer.

(d) Demonstrate compliance with the final effluent limitations specified in Schedule A of the Permit within

30 days of completing construction.

(2) Requiring Respondent to meet the interim effluent limitations set forth in Paragraph 4 above until the date set in the schedule in Paragraph A(1) above for achieving compliance with the final effluent limitations.

(3) Requiring Respondent to comply with all the terms, schedules and conditions of the Permit, except those modified by Paragraph A(1) and A(2)

B. Regarding the violations set forth in Paragraph 5 above, which are expressly settled herein, the parties hereby waive any and all of their rights under United States and Oregon Constitutions, statutes and administrative rules and regulations to any and all notices, hearings, judicial review, and to service of a copy of the final order herein.

C. Respondent acknowledges that it has actual notice of the contents and requirements of this stipulated and final order and that failure to fulfill any of the requirements hereof would constitute a violation of this stipulated final order. Therefore, should Respondent commit any violation of this stipulated final order, Respondent hereby waives any rights it might then have to any and all ORS 468.125(1) advance notices prior to the assessment of civil penalties for any and all such violations. However, Respondent does not waive its rights to any and all ORS 468.135 (1) notices of assessment of civil penalty for any and all violations of this stipulated final order.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Date: OCT 12 1977 197_.

By William H. Young
WILLIAM H. YOUNG
Director

///

///

RESPONDENT

Date: 9-21 1977. By Bruce M. Gashell
Name
Title Mayor

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: _____ 197_. By _____
WILLIAM H. YOUNG, Director
Department of Environmental Quality
Pursuant to OAR 340-11-136(1)

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, of the STATE OF OREGON, Department, v. CITY OF ROCKAWAY, Respondent.	STIPULATION AND FINAL ORDER WQ-SNCR-77-160 TILLAMOOK COUNTY

W H E R E A S

1. The Department of Environmental Quality ("Department") issued National Pollutant Discharge Elimination System Waste Discharge Permit ("Permit") Number 2578-J to CITY OF ROCKAWAY ("Respondent") pursuant to Oregon Revised Statutes ("ORS") 468.740 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500. The Permit authorizes the Respondent to construct, install, modify or operate waste water treatment, control and disposal facilities and discharge adequately treated waste waters into waters of the State in conformance with the requirements, limitations and conditions set forth in the Permit. The Permit expires on February 28, 1982.

2. Condition 1 of Schedule A of the Permit does not allow Respondent to exceed the following waste discharge limitations after the Permit issuance date:

	Average Effluent Concentrations		Effluent Loadings Monthly Average		Weekly Average		Daily Maximum	
Parameter	Monthly	Weekly	kg/day	(lb/day)	kg/day	(lb/day)	kg	(Lbs)
Jun 1 - Oct 31: TSS	30 mg/l	45 mg/l	43	(94)	64	(141)	86	(188)
Nov 1 - May 31: TSS	30 mg/l	45 mg/l	43	(94)	64	(141)	86	(188)

3. Respondent proposes to comply with all the above effluent limitations of its Permit by constructing and operating a new or modified waste water treatment

facility. Respondent has not completed construction and has not commenced operation thereof.

4. Respondent presently is capable of treating its effluent so as to meet the following effluent limitations, measured as specified in the Permit:

Parameter	Average Effluent Concentrations		Effluent Loadings					
			Monthly Average		Weekly Average		Daily Maximum	
	Monthly	Weekly	kg/day	(lb/day)	kg/day	(lb/day)	kg	(lbs)
Jun 1 - Oct 31:								
TSS	45 mg/l	60 mg/l	64	(141)	96	(212)	128	(282)
Nov 1 - May 31:								
TSS	45 mg/l	60 mg/l	64	(141)	96	(212)	128	(282)

5. The Department and Respondent recognize and admit that until the proposed new or modified waste water treatment facility is completed and put into full operation, Respondent will violate the effluent limitations set forth in Paragraph 2 above the vast majority, if not all, of the time that any effluent is discharged.

6. The Department and Respondent also recognize that the Environmental Quality Commission has the power to impose a civil penalty and to issue an abatement order for any such violation. Therefore, pursuant to ORS 183.415(4), the Department and Respondent wish to resolve those violations in advance by stipulated final order requiring certain action, and waiving certain legal rights to notices, answers, hearings and judicial review on these matters.

7. The Department and Respondent intend to limit the violations which this stipulated final order will settle to all those violations specified in Paragraph 5 above, occurring through (a) the date that compliance with all effluent limitations is required, as specified in Paragraph A(1) below, or (b) the date upon which the Permit is presently scheduled to expire, whichever occurs first.

8. This stipulated final order is not intended to settle any violation of any effluent limitations set forth in Paragraph 4 above. Furthermore, this stipulated

final order is not intended to limit, in any way, the Department's right to proceed against Respondent in any forum for any past or future violation not expressly settled herein.

NOW THEREFORE, it is stipulated and agreed that:

A. The Environmental Quality Commission shall issue a final order:

(1) Requiring Respondent to comply with the following schedule:

(a) Submit proper and complete final plans and Step III grant application within 7 months of Step II grant offer.

(b) Start construction within 4 months of Step III grant offer.

(c) Submit progress report within 10 months of Step III grant offer.

(d) Complete construction within 16 months of Step III grant offer.

(e) Demonstrate compliance with the final effluent limitations specified in Schedule A of the Permit within 30 days of completing construction.

(2) Requiring Respondent to meet the interim effluent limitations set forth in Paragraph 4 above until the date set in the schedule in Paragraph A(1) above for achieving compliance with the final effluent limitations.

(3) Requiring Respondent to comply with all the terms, schedules and conditions of the Permit, except those modified by Paragraph A(1) and A(2) above.

B. Regarding the violations set forth in Paragraph 5 above, which are expressly settled herein, the parties hereby waive any and all of their rights under United States and Oregon Constitutions, statutes and administrative rules and regulations to any and all notices, hearings, judicial review, and to service of a copy of the

final order herein.

C. Respondent acknowledges that it has actual notice of the contents and requirements of this stipulated and final order and that failure to fulfill any of the requirements hereof would constitute a violation of this stipulated final order. Therefore, should Respondent commit any violation of this stipulated final order, Respondent hereby waives any rights it might then have to any and all ORS 468.125(1) advance notices prior to the assessment of civil penalties for any and all such violations. However, Respondent does not waive its rights to any and all ORS 468.135 (1) notices of assessment of civil penalty for any and all violations of this stipulated final order.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Date: OCT 12 1977 197_.

By William H. Young
WILLIAM H. YOUNG
Director

RESPONDENT

Date: Oct. 8 197 7.

By Kenneth O. Christensen
Name Kenneth O. Christensen
Title Mayor

F I N A L O R D E R

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: _____ 197_.

By _____
WILLIAM H. YOUNG, Director
Department of Environmental Quality
Pursuant to OAR 340-11-136(1)

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item J, October 21, 1977, EQC Meeting

Sulfur Content of Fuels - Adoption of Policy

Background

At the September 23, 1977 Environmental Quality Commission (EQC) meeting (Agenda Item K), the Department proposed a statement of policy concerning the sulfur content of residual oil in the Portland Air Quality Maintenance Area (AQMA). This policy statement was not accepted by the EQC on the grounds that the timetable which was specified therein (for when more stringent sulfur content regulations might be adopted) would not allow the passage of new low sulfur content regulations before July 1979, even if the need became apparent sooner. The EQC wanted the policy statement to clarify that low sulfur regulations might be adopted prior to July 1979 if the Portland AQMA Data Base Improvement Project study (to be completed October 1978) clearly indicates a need for lower sulfur residual oil before July 1979.

As additional background, a policy statement concerning residual oil sulfur content was first proposed to the EQC by the Department at the July 29, 1977 EQC meeting (Agenda Item F). The EQC declined to adopt that policy statement, and requested that the Department draft a stronger policy statement. Such a modified policy statement was presented at the September 23, 1977 EQC meeting (Agenda Item K).

Evaluation

In response to the Commission's request, the Department has amended the proposed policy statement concerning the sulfur content of residual oil (Attachment A). Section (4) has been inserted to clarify that low sulfur regulations might be adopted prior to July 1979 if results from the Portland AQMA Data Base Improvement Project clearly indicate the need for lower sulfur residual oil before that time.

This policy statement would clarify the Commission's position regarding future low sulfur content regulations for the Portland AQMA, and would encourage users and suppliers to seek the cleanest fuels practicably available. The policy statement would clarify when such more stringent sulfur content regulations might be adopted. Following its adoption, it would be circulated by the Department to a wide variety of users and suppliers, and other interested parties.

Summation

The residual oil sulfur content policy statement which was proposed at the September 23, 1977 EQC meeting has been modified to clarify that new low sulfur content regulations might be adopted prior to July 1979 if results from the Portland Data Base Improvement Project clearly indicate that such regulations are needed prior to that date.

Director's Recommendation

It is the Director's recommendation that a policy statement be adopted (see Attachment A) regarding the Environmental Quality Commission's position on more stringent sulfur content of fuel oil regulations for the Portland AQMA.

Since the proposed policy statement is not an administrative rule, no specific statutory authority is necessary for the EQC to adopt the policy statement.

Bill

WILLIAM H. YOUNG

William T. Greene:sw
(503) 229-6087
October 3, 1977
Attachment A: Proposed Policy Statement Concerning the Sulfur Content of Residual Oil

ATTACHMENT A

STATEMENT OF POLICY OF THE ENVIRONMENTAL QUALITY COMMISSION CONCERNING SULFUR CONTENT OF RESIDUAL FUEL OIL

The following statement of general policy is set forth to guide both users and suppliers of residual fuel oil in the Portland Air Quality Maintenance Area (AQMA) regarding the Environmental Quality Commission's (EQC) position on more stringent sulfur content regulations for the Portland AQMA.

(1) A future need for low sulfur residual oil in the Portland AQMA is highly probable considering:

a) Present evidence which indicates that residual oil combustion has a significant adverse air quality impact in the Portland AQMA.

b) Potential increases in the use of high sulfur residual oil in the Portland AQMA because of the projected West Coast oversupply of high sulfur oil.

c) The need to develop a new particulate attainment/maintenance strategy for the Portland AQMA.

d) The likely adoption of sulfate ambient air quality standards by the U. S. Environmental Protection Agency during the early 1980's.

e) The need for future emission trade-offs in the Portland AQMA to allow for continued industrial growth.

(2) In consideration of the adverse air quality impact of residual oil combustion, it is the policy of the Environmental Quality Commission to encourage the supply and use of the cleanest fuel oils practicably available in the Portland AQMA, and to encourage oil suppliers to develop new supplies of cleaner fuel oils to this area in the shortest time practicable and in consideration of the timetable set forth in (3) and (4) below.

(3) So that interested parties may know when such more stringent sulfur content regulations may be adopted, the following schedule is presented for the process of revising the State Implementation Plan for the Portland AQMA.

a) A Draft Plan for new particulate and sulfur dioxide control strategies for the Portland AQMA to be established by January 1979.

b) Public hearings on the Draft Plan to begin by April 1979.

c) Revisions to the State Implementation Plan for the Portland AQMA to be adopted by July 1979.

(4) If the ongoing Portland AQMA Data Base Improvement Project indicates a need for lower sulfur oil in order to attain and maintain National Ambient Air Quality Standards, it is the intent of the Commission to promulgate rules requiring the use of lower sulfur content residual oil in the area at the earliest practicable time, which may be earlier than the dates in (3) above.

(5) The Department is directed to monitor and report to the Commission on a semiannual basis, beginning in January 1978, the progress of oil suppliers in securing the cleanest oil supplies available.

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. K, October 21, 1977, EQC Meeting

Authorization to Conduct a Public Hearing on the Question of Amending the Administrative Rules Governing Subsurface and Alternative Sewage Disposal

Background

Subsurface and alternative sewage disposal systems are administered under Oregon Administrative Rules (OAR) Chapter 340, Section 71-005 to Section 71-045; Chapter 340, Section 72-010 to Section 72-030; Chapter 340, Section 74-005 to Section 74-020 and Chapter 340, Section 75-010 to Section 75-056. These rules, adopted by the Commission, are provided for by statute, Oregon Revised Statutes (ORS) 454.605 through 454.745.

The administrative rules may be amended by the Commission after public hearing. The need for amendments occur periodically as a result of recent legislation, minor errors or unclear rules that require correction or clarification, or the necessity to address substantive environmental issues.

Evaluation

A number of amendments to the administrative rules governing subsurface and alternative sewage disposal need to be considered. The Subsurface and Alternative Sewage Systems Section is developing a package of amendments dealing with new legislation, housekeeping amendments and substantive issues. Included in this package are amendments to the variance rules that will provide for appeal to the Commission for denied variances, as well as amended rules for the experimental systems program.

Summation

ORS 454.625 provides that the Commission, after public hearing, may adopt rules it considers necessary for the purpose of carrying out ORS 454.605 to 454.745.

Director's Recommendation

It is the Director's recommendation that the Commission authorize public hearings, before a hearings officer, to take testimony on the question of amending the administrative rules governing subsurface and alternative sewage disposal.

Bill

WILLIAM H. YOUNG
Director

Jack Osborne/jms
229-6218
October 4, 1977

ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

MEMO

TO: Bill, Joe, Grace, Ron, Al

FROM: Jackie

RE: Expermimental subsurface systems (what else?) 9/28/77

Help!

Is there anything we can do for Mrs. Gunn? Clearly, they didn't comply to the letter with their permit. But it is alleged that the staff completely altered the kind of system permitted a year after the fact, too --- so is there any way, without risking the public health --- that the system could be monitored (perhaps with a civil penalty for failure to comply with the pre-cover exam portion of their permit), so they wouldn't have to dig this system up?

I'm still not technically second-guessing the staff, but unless they know the second experimental system will work absolutely, and are that certain the installed system won't work -- would our rules permit any kind of compromise in this case?

It isn't clear to me whether the Gunns have violated any other portion of their permit, and I'm just seeking your advice as to whether there is any way they can be permitted to experiment with the installed system.

In any case, will appreciate knowing how we can respond to Mrs. Gunn as soon as possible.

Thanks,

Jackie

ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

September 28, 1977

Mrs. Barbara Gunn
90163 Baker Road
Elmira, Oregon 97437

Dear Mrs. Gunn:

I wish I could simply tell you that I can help, but I'm not sure I can help.

By copy of this letter, I'm seeking the advice of the other Commissioners and the staff to determine if, under our rules and the law, it is possible to grant you some sort of temporary variance from your permit requirements, after the permit has been violated.

It doesn't seem to me that complying with the requirement of a pre-cover examination would have cost much in time and money, and I wish you had done that. On the other hand, if the department has changed its requirements about the type of gray water system you must install on the basis of that failure to comply with your permit (even though you were forewarned that failure to comply with any portion of the permit would result in the permit being nullified), perhaps some adjudication might be possible.
I assume failure to have the pre-cover examination made it impossible for you to obtain a Certificate of Satisfactory Compliance, so I'm not sure where to go from here.

I realize that the permit requirements and our rules might seem cumbersome at times, but they exist to protect the public health and waters and not to frustrate the applicants -- so I'm afraid I can't tell you what can be done until the Commission and staff have made a determination.

I'll seek a prompt response.

Sincerely,

Jackie Hallock

cc: Bill Young

9-23-77

Dear Ms. Hallick

My husband and I are residents of Elmira, Oregon. We are currently building our own house and have received a special permit from the Department of Environmental Quality to install a gray water system and Clivus Multrum composting toilet. The permit, with it's attached stipulations was granted effective from August 30, 1976 to August 30, 1977. In that period of time we were to have our alternative sewage system installed and inspected by Lane County Environmental Management Dept. In June of this year a Lane County inspector visited our house (without our knowledge) and discovered that 1) we were using our gray water system without having called for a pre-cover examination and 2) were using an "outhouse". The county then corresponded with D.E.Q. who in turn informed us of our violations and sent us a set

of plans for a gray water system we had never seen before. We suspect that D.E.Q. had not seen those plans before either as the received date stamped on them was 7-8-77, almost a year after our gray water permit was granted. They tried to tell us that those were the original plans for which they had granted a permit in August 1976, and they have given us an October 15 deadline by which to install the new system.

We realize that we were at fault in not complying totally with our permit requirements but it was not negligence on our part, merely a lack of time and money. Our intentions were good and we had fully planned to have the gray water system and composting toilet functional by the 8-30-77 deadline. Now we are faced with tearing out our gray water system and installing the new one that DEQ and Lane County have come up with.

We feel that D.E.Q is not interested in helping us devise an effective alternative sewage system but is

simply forcing their power on us. We believe that the system we have installed and functioning shows promise for workability. It is similar to systems already proven effective in Sweden and Maine and we feel that D.E.Q. could at least moniter it for a given period of time to test it's effectiveness. To make us tear it out and put in another system before proving it does or doesn't work seems like a waste.

We realize that their is little we can do to change Mr. Young and the Experimental Review Committee's minds, and would appreciate any help you could give us in convincing them to at least give our current system a try before condemning it.

Sincerely,
Barbara Gunn

(COPY) The Honorable Albert Densmore

HAND DELIVERED THIS DAY

Elaine Steele
4023 S. E. 16th Ave.
Portland, Or. 97202
October 12, 1977

CITY MANAGERS OFFICE
OCT 20 1977
AM 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 PM

Mr. Peter McSwain, Hearings Officer
1234 S. W. Morrison
Portland, Oregon

RE: Clatsop Plains Study and Moratorium at Sunset Beach

Dear Mr. McSwain:

The protection of the water and aquifer in this area is certainly of prime importance and is understood.

However, it is a particularly ironic and sad thing that the moratorium should happen to a certain group of 34 people who are involved in the proposed land exchange at Sunset Beach with the Oregon National Guard at Camp Rilea.

The land exchange property is composed of approximately 16 acres for 29 owners. The lots are 10,000 sq. ft. The other five owners will have lots on the lake front if the new Sam West Subdivision is approved Nov. 6. For the "land" owners--the area is bounded on the west by Oceanview Ave.; on the east by Lakeview Ave; on the south by Taylor St., which runs from Hwy. 101, to the Ocean; and on the north by Camp Rilea.

I do not think there is any way the land could be expanded to one acre for a buildable lot and it would not be economically feasible if it could. In other words, I think it would be landlocked.

It appears that to proceed with the land exchange and to have buildable, salable or usable land forces the owners to a sewer. Our next meeting with the Military is set tentatively for November 5. I realize that it is beside th point in your considerations but I think the background of this particular group and the land exchange should be known.

Briefly, these prsons own lots in an old townsite which many years ago was platted, butnot divided on the ground, all lying in what has since been encompassedby Camp Rilea. These persons have paid taxes on the property over all these years. (My parents purchased our property November 17, 1915 some of the others go back to 1909). Even though Camp Rilea has utilized this property for many, many years without permission, these persons were not compensated for it.

In 1975, Mrs. Rosalie Curran Bjerkman and I contacted Speaker Lang,

House of Representatives, and through the efforts of Governor Straub, Speaker Lang, Joe Smith, who was Speaker Lang's capable executive assistant at that time, and the cooperation of the Military and Clatsop County officials, a remedial program was approved by the Emergency Board, under which the State Military Department would give the land owners land comparable in Sunset Beach in exchange for the title of property theyown in Camp Riles. This was in June, 1976.

We were told then that the lots were buildable with water available in the fall of 1976. With the passage of HB 2641 by the last legislature perhaps water will be available b y the fall of 1978. It still remains to be seen, possibly on Nov. 22--the next date set for suit--if Mrs. Remington's claim to the water rights is valid nad, if so, how much it will cost, and what effect it will have on the time when water will be available.

And then, of course, the blow of the moratorium fell April 1, 1977.

It seems incredible it could happen to this group of people who have been denied the use of their property all these many years.

We are confident the Environmental Quality Commission will thoroughly study the situation and make its decision accordingly.

We only hope it could be determined safe to lift the moratorium in this particular area, or that by some means it would be possible to build on 10,000 square feet, with water available from Warrenton, at least, available.

Thank you for your time and consideration.

Sincerely yours,

Elaine Steele (Mrs. A. M.)

(Wrote on original in Mr. McSwain's office)

I failed to point out that in this particular area there are only a few homes, on Louis Ave. mainly.

(Mr. McSwain wrote on original.)

Receipt of original on October 13, 1977 for inclusion in Oct. 11, "Clatsop Plains" hearing report.
Peter W. McSwain
Hearings Officer