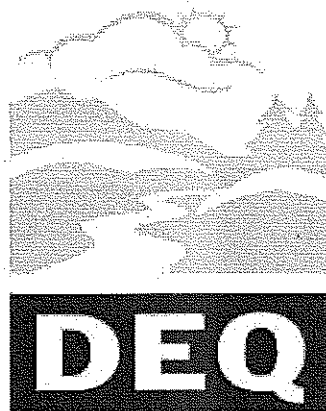


MARCH 31, 1977, EQC MEETING
Clatsop Plains Moratorium Hearing

3/31/1977

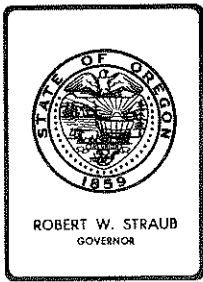
**OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS**



State of Oregon
**Department of
Environmental
Quality**

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Environmental Quality Commission

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

TO: Environmental Quality Commission
FROM: Director
SUBJECT: March 31, 1977 EQC Meeting
Clatsop Plains Area

INTRODUCTION:

On April 24, 1970, the Environmental Quality Commission adopted a Resolution Regarding the Beach Area North of Seaside, Oregon, in Clatsop County. This Resolution placed a moratorium on future high density developments using subsurface sewage or privately owned sewage treatment plants in the Clatsop Plains area. The primary purpose of this action was to protect a vast natural aquifer located beneath the sand dune complex. The Resolution was to remain in effect until a master plan of sewage collection, treatment and management for the Seaside-Gearhart-Sunset Lake-Cullaby Lake-Fort Stevens-Warrenton-Hammond area had been implemented. The moratorium still allowed development for up to five families on those tax lots created prior to April 24, 1970.

Subsequent to the Resolution, Clatsop County authorized the engineering firm of CH2M/Hill to do a master sewerage study. The EQC authorized a \$125,000 loan to Clatsop County from the Department



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to pay for the study. The study entitled, Clatsop Plains Sewerage Study, Clatsop County, Oregon, was completed on March 6, 1975.

Clatsop County accepted the study but has not adopted the report nor implemented any of the recommendations. Building pressure in the Clatsop Plains area is increasing and there have been many requests to modify the Resolution. The requests have varied from completely repealing the Resolution to enacting a complete building moratorium throughout the Plains.

BACKGROUND:

The lots within the Clatsop Plains area vary in size from 5,000 square feet to large acreage parcels. The average lot size in the urbanized areas (Gearhart, Sunset Beach, Hammond, Smith Lake, etc.) range from 5,000 to 10,000 square feet. The lots in the undeveloped county lands located between the urbanized areas range between 10,000 square feet to large acreage. Under present county zoning, the majority of the large parcels of land could be subdivided into urban density 10,000 square foot lots.

The topography of the Clatsop Plains consists primarily of active and stabilized dune lands. Active dune lands consist of wind-drifted sand in the form of dunes, ridges, or hummocks. It is generally unstable and occupies considerable acreage along the coast adjacent

to the beach. Further east, the dunes have been stabilized primarily through the efforts of the Soil Conservation Service, State Parks Commission, and beach communities by the planting of beachgrass followed by plantings of Scotchbroom and shoe pine. Essentially, the soil consists of grayish brown, unconsolidated, porous sand and fine sand, predominantly feldspathic in composition.

Depth to the underlying aquifer fluctuates on a seasonal basis with nearly all recharge through rain falling directly on the dunes. During the winter months, the aquifer has an average increased height of 6 to 8 feet. Again, actual depth to the aquifer will vary in relation to the height of the dune. In some locations the aquifer is at or near the ground surface, while in the higher areas it averages 12 to 18 feet below the ground. There is no impervious formation between the aquifer and the ground surface to protect it from surface contamination.

It has been the position of this Department that the continued use of septic tank systems in urbanized or other high density areas along the Plains would degrade and contaminate the aquifer due to the rapid permeability of sands. Once septic tank effluent has entered the dune complex, it percolates rapidly down into the underlying aquifer. Little chemical treatment is achieved due to reduced retention time and absence of clay particles for ion exchange.

A series of recent surveys were made at the request of the South Clatsop Plains Sewerage Advisory Committee on existing wells within the Gearhart and Sunset Beach area. The studies indicate a trend that the aquifer beneath high density developed areas is being contaminated by nitrates. Since nitrates are some of the main by-products of septic tank effluent, it appears the concentrated use of septic tanks is the cause. The U.S. Public Health Service, EPA, and Oregon State Health Division indicate that once the nitrate concentration of water has reached 10 mg/l it can no longer be considered a safe supply. Once unacceptable levels have been reached, there is no economically feasible way to remove the nitrates. Since development and the use of septic tank systems in urbanized areas are continuing in the Clatsop Plains without the implementation of the recommendations of the master sewerage study, it is likely that degradation of the aquifer will continue.

Four sewerage systems presently exist within the Clatsop Plains area. They are: (1) the City of Warrenton; (2) Shoreline Estates Sanitary District; (3) the City of Seaside; and (4) the City of Hammond.

Warrenton is served by a municipal sewage collection and 2-cell lagoon treatment facility capable of handling 4500 people (450,000 gallons per day). Presently, 1500 people are being served and the system is being maintained and operated in excellent fashion. Discharge is to the Columbia River.

Shoreline Estates Sanitary District is a 125 lot subdivision surrounding Cullaby Lake and served by a 50,000 gallons per day extended aeration treatment system which discharges to the Skipanon River. Approximately 40 of the 125 lots have been developed. The owner of the subdivision has been informed that expansion of the existing treatment facilities would not be considered without being an integral part of the master sewerage program for the Plains. The treatment system is being operated within the limitations of the District's National Pollutant Discharge Elimination System (NPDES) Permit.

The City of Seaside operates a 1.0 million gallons per day (MGD) treatment plant consisting of a secondary trickling filter preceded by an interim aeration lagoon with the final effluent discharged to the Necanicum River. The plant's efficiency has degraded over the last few years and is unable to consistently maintain the required treatment standards. The City of Seaside must upgrade or replace the existing treatment facility and repair the leaky sewer system.

The City of Hammond disposes of sewage by (1) subsurface sewage disposal and (2) through raw sewage discharges into the Columbia River (16,000 to 19,000 gallons per day). The homes located in the lower area and served by septic tank systems have malfunctioning problems due to high ground water and poor soils. Pressure for

subdivision development is present within the city limits. The City of Hammond must eliminate the three raw sewage discharges and inadequate septic tank systems.

CONCLUSIONS:

1. A unique geological situation exists in the Clatsop Plains area, resulting in a large available reservoir of good quality ground water under the sand dune complex. Present use of the ground water is insignificant in terms of the potential. No impervious layer exists between this reservoir and the surface of the land in order to protect this resource.
2. The ground water resource must be protected to prevent contamination by sewage and recreational use.
3. The Department of Environmental Quality's water quality surveys of the ground water (wells) show a substantial increase in Nitrate-Nitrogen ($\text{NO}_3\text{-N}$) as the housing density increases (Gearhart, Sunset Beach). The data shows that concentrations vary with changing conditions, but are lower than the allowable drinking water standard of 10 mg/1 $\text{NO}_3\text{-N}$. The ground water degradation trend can only worsen with the construction of new housing in subdivisions of urban densities without sewers.

4. Many wells (Sand Point) exist within the Clatsop Plains area, most of which are used for lawn irrigation. No controls are provided which prevent people, especially children, from drinking from these wells.
5. The Clatsop Plains Sewerage Study has not been adopted since its completion in March, 1975. No governmental entity or organization of governments for implementing the master sewerage plan has been assembled and/or coordinated for implementing the plan.
6. Sewage disposal is by septic tank and drainfield systems except for the City of Seaside, part of the City of Warrenton, Shoreline Estates Sanitary District, and three areas of the City of Hammond. Except for areas of high ground water, disposal is not a problem. Adequate treatment and the direct tie between ground water, surface waters, and rainfall due to permeable sand is a problem.
7. A sewage collection system needs to be installed in the City of Hammond and connected to the City of Warrenton to eliminate the (1) three raw sewage discharges to the Columbia River and (2) inadequate septic tank systems.
8. The City of Seaside's sewage treatment plant does not consistently meet secondary treatment requirements and must be upgraded. Due to its location and discharge point, a high effluent quality will be required (5 mg/1 of BOD₅ and 5 mg/1 of S.S.).

9. The City of Gearhart has not been affected to any degree by the April 24, 1970 Environmental Quality Resolution, since most of the City was subdivided for development prior to that action. The City is growing with 27 new housing permits issued from January 1 to November 26, 1976. Other subdivisions within the Clatsop Plains area created prior to the EQC action were also unaffected.

10. Camp Rilea wishes to solve their existing problem now, due to the lack of action by Clatsop County on implementing the master sewerage plan or necessary parts thereof.

11. The Clatsop Plains area consists of large areas of undeveloped land interspersed with high density developments. To develop and implement a ground water protection plan within a master sewerage program, the area needs to be divided into smaller areas for interim program development. These are:
 - a. Seaside, Gearhart, and county developed land north and northwest of Gearhart.

 - b. Undeveloped or low density developed land in the county between Gearhart and the Sunset Beach-Camp Rilea-Cullaby Lake area.

 - c. Sunset Beach, Cullaby Lake (Shoreline Estates), and Camp Rilea lands.

- d. Smith Lake.
 - e. Fort Stevens State Park and City of Hammond.
 - f. Undeveloped or low density developed land in the county between Camp Rilea-Smith Lake-Hammond-Warrenton and Fort Stevens State Park.
12. The April 24, 1970 Environmental Quality Commission Resolution is almost 7 years old and needs to be updated.
 13. Future ground water problems in undeveloped or low density areas could be prevented by adoption of land use plans which consider Clatsop Plains' sewerage needs. At this time, most of the land within the Clatsop Plains area is zoned for a density of 10,000 square foot lots, which is considered urban density.
 14. Building pressure in the Clatsop Plains area is increasing and will be more intense once Brown and Root begins construction and operation.
 15. The master sewerage study has been completed and the \$125,000 Department loan to Clatsop County needs to be finalized with a payback program developed, agreed upon, and implemented.

DIRECTOR'S RECOMMENDATIONS:

1. It is recommended that the Environmental Quality Commission acknowledge the Clatsop Plains report sent to them by the Director on March 4, 1977 and enter it into the record of this hearing.

2. It is recommended that the Environmental Quality Commission recognize the Clatsop Plains Sewerage Study, Clatsop County, Oregon, completed by CH₂M/Hill on March 6, 1975, as the initial master sewerage plan for the Clatsop Plains area, subject to revision as necessary to conform to existing and future land use designations.

This action will provide a reasonable basis for continued funding of needed projects at Seaside and at Hammond/Fort Stevens.

3. It is recommended that the City of Seaside be required to proceed immediately to improve its sewage treatment facilities to meet minimum standards. The necessary improvements cannot be in operation by the July 1, 1977 federal deadline. Since the city's permit cannot be modified to extend the compliance date beyond July 1,

1977, it will be necessary to return to the Commission at a later date to consider entering a stipulated order establishing a reasonable and attainable schedule.

4. It is recommended that the town of Hammond be placed on a formal schedule by Commission order for completing its on-going efforts toward eliminating the present raw sewage discharges. Such an order is considered necessary with respect to the time that will be necessary for completion beyond the July 1, 1977 federal deadline. This matter is on the Commission agenda for April 1, 1977.
5. It is recommended that Fort Stevens State Park be required to install sewage facilities to connect their wastes to the City of Warrenton sewage treatment plant. The schedule for completion must yet be determined since it may be dependent on legislative funding.
6. It is recommended that the Environmental Quality Commission act to protect and enhance the natural ground water and surface waters in the Clatsop Plains area by adopting a rule prohibiting issuance of permits for new construction of subsurface sewage

disposal systems. The recommended rule is contained in Exhibit A. The rule prohibiting new permit issuance would be subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. The petition would be expected to provide reasonable technical evidence that development using subsurface sewage disposal in accordance with single family unit equivalent densities specified in the local land use plan for the area would not cause further ground water or surface water quality degradation. This rule would not prohibit construction of sewer systems or connection to existing approved sewers or sewage systems.

7. It is recommended that the Department be instructed to make written demand upon Clatsop County on October 1, 1977 for repayment of the planning loan and accrued interest by not later than October 1, 1980, unless prior to October 1, 1977 a program is worked out with the Department for coordinating repayment with any anticipated federal grant payments. This should give the local agencies reasonable time to decide on the course of action they wish to pursue.



WILLIAM H. YOUNG
Director

Exhibit 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 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:

- (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 technical 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/PWM:ak
March 21, 1977

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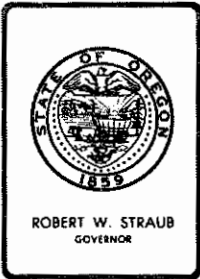
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HLS/PWM:ak

March 21, 1977

Pwmc



Department of Land Conservation and Development

1175 COURT STREET N.E., SALEM, OREGON 97310 PHONE (503) 378-4926

March 21, 1977

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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MAR 23 1977

Mr. Bill Young
1234 SW Morrison
Department of Environmental
Quality
Portland, Oregon

OFFICE OF THE DIRECTOR

Dear Mr. Young:

What follows are our comments both on the staff report and recommendations you are considering for the Clatsop Plains area and on Geographic Region Rule B.

The Biological and Water Quality Survey section of the report indicates that the purpose of the sampling program was to show if a trend in ground water degradation is occurring due to concentrated septic tank usage. The results suggest such a trend and serves, in our estimation, only to highlight the long standing nature of the problem and to reinforce the critical need for its timely resolution.

From our perspective we feel that solutions can only come about when they are developed in the context of completing local comprehensive land use plans. And, as you know, this must be done through a cooperative effort involving citizens and local and state government. Only in this way can the often single purpose interests be knit together to develop a balanced plan that serves to guide development and protect valuable resources.

At the present time all local governments in the Clatsop Plains area are making progress in developing their comprehensive plans. Some are in initial stages while others have accomplished a great deal. All of them, however, have a considerable amount of work to complete before they would be in compliance with the Statewide Planning Goals and Guidelines. This is due, in part, to the Land Conservation and Development Commissions' recent adoption of four goals directly relevant to coastal resources (e.g. Estuaries, Shorelands, Beaches and Dunes and the Ocean). Accordingly, local governments need to consider these Goals in addition to the fourteen Goals previously adopted.

Local governments in Clatsop County also need to address the impacts that may be generated with the possible development of the Brown and Root platform fabrication facility in Warrenton. These will not be known for some time yet so there is an added factor of uncertainty. Amidst these items there is local concern for water quality and the groundwater resource; as well as, interest in how your Departments facilities (201), river basin (303) and non-point source (208) planning programs can be interfaced with local efforts now underway or those to be developed.

With this as background, we can now address your staffs recommendations.

First, we do not feel that blanket recommendations for pursuing facility planning are appropriate in every case. Rather, those governments who desire to do so should be accommodated in a manner that is consistent with their overall comprehensive planning process.

This may mean an adjustment in the dates your staff has recommended. It also needs to be recognized that as a result of the planning process a point may be reached where a decision needs to be made as to pursuing the phased process for facility planning. This point would most appropriately be at that time when an adequate and systematic assessment of point and non-point pollution sources, and their impacts, are identified and quantified. Then decisions, considering the views of citizens and state agencies, based on sound facts could be made with regard to what types of facilities are appropriate and are needed to support and service uses associated with urban, urbanizable and rural lands.

With regard to assessment of water quality problems, we strongly encourage that you take an approach which integrates the upcoming 208 planning program with local comprehensive land use planning; including, any 201 facilities work local government may wish to pursue. We also realize that to do this a greater level of funding than that which is now available may be needed to develop a water quality monitoring system. We suggest that every effort be made to obtain such funding and will, ourselves, look into how we might contribute to such a program if necessary.

Secondly, we fully support your staffs third recommendation on page 16 with modifications to parts A and B. Here the moratorium should remain in effect and be aggressively enforced only until Clatsop County has adopted a comprehensive land use plan which contains whatever controls are necessary and sufficient to assure that the ground water resource under the Clatsop Plains area is protected.

The determination of controls necessary and sufficient to limiting subsurface sewage disposal is of course a task which requires,

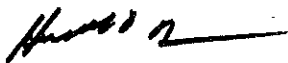
indeed demands, technical assistance from state agencies such as your Department; as well as, the Department of Water Resources. In this connection a minimum acreage size, for instance, should not be picked arbitrarily. Rather it, or any control, needs to have some basis in fact.

As an alternative to the above recommendation, we would also support continuance of the existing moratorium until similar conditions were established by Clatsop County. Our reasoning is simply that a lack of controls, or controls which are ineffective, even for a short period of time if significant development pressures arise, would possibly result in irreversible and irretrievable commitments of valuable water and land resources. Under such a situation it would be difficult if not impossible to develop balanced comprehensive land use plans.

Finally, with regard to the sand-on-sand rule, we would encourage you not to approve or implement it until and unless it is known what its impacts will be relative to specific locations where it may or may not be suitable. Again, this is a determination that should be based on factual data within the context of developing local comprehensive land use plans. Once this has been done the rule could then be approved and used effectively as an implementing mechanism for the plan.

Should you have any questions, please give me a call.

Sincerely,



Harold F. Brauner,
Director

cc: Russ Fetrow
DEQ
Salem-North Coast Regional Manager

December 29, 1976

Environmental Quality Commission
1234 Southwest Morrison Street
Portland, Oregon 97205

RECEIVED

JAN - 4 1977

DEPT. OF ENVIRONMENTAL QUALITY

Re: Clatsop Plains Moratorium, Clatsop County, Oregon

Gentlemen:

The Clatsop Plains area is a unique combination of dune ridges, wetlands and coastal lakes, paralleling the Pacific Ocean. This area, as it is, has a very high ecological impact with its natural habitat for many varieties of birds, as well as fish and deer. It also includes a large aquifer containing quantities of water with a very high commercial value. This area is, at present, not only being enjoyed and used by the few residents but also by the whole greater area, the people of the State and tourists in general. The impact of the tourist industry alone would make the area well worth protecting.

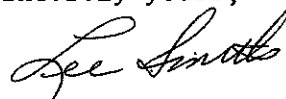
In recent time, there has been a drive by development-minded individuals to exploit the area. This has been partly held in check by the Clatsop Plains Citizen Advisory Committee (CAC) and other interested groups and individuals with the aid of a Department of Environmental Quality (DEQ) Moratorium. Now the Moratorium is to be reviewed with the possibility of its being relaxed. With the advent of the Brown and Root industry arriving, along with other pressures, the area could be lost forever to the people who are able to use and enjoy it.

It will be nearly a year before the Comprehensive Land Use Plan for this area is completed and accepted. The County was just awarded a planning grant from the Land Conservation and Development Commission (LCDC), and Clatsop Plains is a top priority. If the County's planning study is frustrated by a change of policy at this time, then our CAC's effort over the past three years and the taxpayers' money is wasted.

Therefore, at our December 6, 1976 meeting, we made the following resolution:

"As the Citizen Advisory Committee of Clatsop Plains and having been authorized by a vote of the people in the area to fulfill Goal #1 Citizen Involvement of the LCDC, we are on record as being opposed to any reconsideration of the DEQ Moratorium at present in effect in Clatsop Plains, until the County can complete and adopt its Comprehensive Plan."

Sincerely yours,



Lee Smith, Chairman

Clatsop Plains Citizen Advisory Committee