AN INVENTORY OF FILLED LANDS

IN

SAND LAKE ESTUARY

July 1972

ADVISORY COMMITTEE TO THE STATE LAND BOARD

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Sand Lake, one of the smaller estuaries on the Oregon coast, is located in the northwest section of Oregon and discharges directly into the Pacific Ocean north of the City Tierra Del Mar.

The total area of this estuary is 528 acres\(^1\)/ of which 397 acres\(^1\)/ are tidelands. Approximately 50 acres of these tidelands have been deeded to private owners by the State Land Board.\(^2\)/

The estuary is fed by three small creeks that drain an area of 14 square miles.\(^2\)/ However, these creeks contribute very little toward the changes in the configuration of this estuary. The ebb and flow of the tidal waters passing through the mouth of Sand Lake are primarily responsible for the shape and depth of this estuary.

Presently, there are no landfills on Sand Lake. The only man made changes to this estuary are three dike-type structures. One of these structures is a portion of the county road which provides access to the Tillamook County Park on Whalen Island. A second is located on the northern shore of the estuary and the third dike, known as Beltz Dike, is located along the southern shore.

Beltz Dike was probably constructed to extend the limits of the grazing land located on the adjacent property by restricting the tidal limits. The total area of diking is 4.1 acres of which 3.0 acres lay on submersible lands. The northern dike lies on upland and was constructed for the purpose of flood control. None of these dikes appear to have significantly altered the estuary.

There is no commercial fishing being conducted on the estuary, although flounder fishing is excellent for sportsmen. Ducks and geese are abundant on Sand Lake during the migration and wintering periods.

Tillamook County Park and Sand Lake Camp, located on the Sand Lake estuary, are two excellent campgrounds which receive heavy use by tourists and sportsmen during the spring and summer seasons.

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1/ Oregon Division of State Lands
2/ Total acreage deeded to private owners by State Land Board
3/ Oregon State Water Resources Board
The purpose of this study was to determine the location, extent, ownership, history, owner of record and use of filled lands in Sand Lake. Filled lands or "new lands" and related terms are defined by Oregon Statute Law which in many cases paraphrases English Common Law. A few of the more important definitions pertaining to filled lands are shown below.

274.905 Definitions for ORS 274.905 to 274.940.

As used in ORS 274.905 to 274.940, unless the contest requires otherwise:

(1) "New lands" means those lands, as distinguished from bridges, wharves, quays and similar structures, protruding above the line of ordinary high water, whether or not connected with the adjoining or opposite upland or riparian lands on the same side of the thread of the stream, which have been created upon submersible or submerged lands by artificial fill or deposit.

(2) "Public body" means the State of Oregon or any port organized under the laws of this state or any dock commission of any city of this state.

ORS 274.005. (7) "Submerged lands," except as provided in ORS 274.705, means lands lying below the line of ordinary low water of all navigable waters within the boundaries of this state as heretofore or hereafter established, whether such waters are tidal or nontidal.

(8) "Submersible lands," except as provided in ORS 274.705, means lands lying between the line of ordinary high water and the line of ordinary low water of all navigable waters and all islands, shore lands or other such lands held by or granted to this state by virtue of her sovereignty, wherever applicable, within the boundaries of this state as heretofore or hereafter established, whether such waters or lands are tidal or nontidal.

Selected terms pertaining to tidelands and tidal boundaries are defined in Appendix A.
A brief summary of the procedure used to obtain information about the possibility of landfills in Sand Lake is shown below.

1) Obtain copies of all U.S. Army Corps of Engineers (U.S.C.E.) permits for landfills or related projects in study area. Compile and tabulate data.

2) Obtain aerial photographs covering entire study area from U.S. Army Corps of Engineers, U.S. Forest Service, Oregon State Highway Dept., and other agencies.

3) Visit estuary to verify location of landfills. Document size, location, and use of fills.

4) Compile and complete report.

A plat showing the location and relative size of each dike is shown in Appendix B.

Sand Lake is a very pretty estuary which still remains in a pristine state. Special efforts to retain these characteristics should be considered by state and local governments.

We wish to take this opportunity to thank all the people and agencies which provided portions of the necessary information enabling the completion of this report. In particular, we wish to extend our gratitude to the following groups:

U.S. Army Corps of Engineers, Portland District
Oregon State Water Resources Board
Oregon Division of State Lands
Tillamook County Assessor
Definitions Used by
U. S. Coast and Geodetic Survey
from
Shore and Sea Boundaries
by
Aaron L. Shalowitz

Mean Higher High Tide. - Same as Mean Higher High Water.

Mean Higher-High-Tide line. - Same as Mean Higher-High-Water line.

Mean Higher High Water. - The average height of the higher high waters over a 19-year period. See Higher High Water, Nineteen-year Tidal Cycle.

Mean Higher High Water Line. - The intersection of the tidal plane of mean higher high water with the shore. See Mean Higher High Water.

Mean High Tide. - Same as Mean High Water.

Mean High Water. - The average height of the high waters over a 19-year period. All high waters are included in the average where the tide is either semiannual or mixed. Where the type of tide is predominantly diurnal, only the higher high-water heights are included in the average on those days when the tide is semiannual. See mixed tides, semiannual tides, diurnal tides, Nineteen-year Tidal Cycle.

Mean High-Water Line. - The intersection of the tidal plane of mean high water with the shore.

Mean High-Water Mark. - Same as Mean High-Water Line.

Mean Lower Low Water. - The average height of the lower low waters over a 19-year period. The tidal plane used on the Pacific Coast as a datum for soundings on the hydrographic surveys and nautical charts of the Coast and Geodetic Survey.
Mean Low Water. - The average height of the low waters over a 19-year period. All low water heights are included in the average where the type of tide is either semi-diurnal or mixed. Where the type of tide is predominantly diurnal, only the lower low water heights are included in the average on those days when the tide becomes semi-diurnal.

Mean Low-Water Line. - The intersection of the tidal plane of mean low water with the shore.

Mean Sea Level. - The average height of the surface of the sea for all stages of the tide over a 19-year period, usually determined from hourly height readings. A determination of mean sea level that has been adopted as a standard for heights is called a sea level datum.

Mean Tide Level. - Same as Half-tide Level. A tidal datum midway between Mean High Water and Mean Low Water.

Ordinary High Water. - A nontechnical term considered by the Coast and Geodetic Survey to be the same as the tidal plane of mean high water.

Ordinary Low Water. - A nontechnical term considered by the Coast and Geodetic Survey to be the same as the tidal plane of mean low water.

Diurnal Tide. - Tides having a period or cycle of approximately one tidal day. Such tides exhibit only one high and one low water during a tidal day; the predominant type of tide in the Gulf of Mexico.

Semidiurnal Tides. - Tides having a period of approximately one-half a tidal day; the type of tide that is predominant throughout the world, with two high waters and two low waters each tidal day. Tides along the Atlantic Coast are of this type.

Mixed Tides. - Tides in which the presence of a diurnal wave is conspicuous by a large inequality in either the high or low-water heights, or in both, with two high waters and two low waters occurring each tidal day. Tides along the California (and Oregon) Coast are of the mixed type.

Tidelands. - The land that is covered and uncovered by the daily rise and fall of the tide. More specifically, it is the zone between the mean high-water line and the mean low-water line along a coast, and is commonly known as the "shore" or "beach." Referred to in legal decisions as between ordinary high-water mark and ordinary low-water mark. Tidelands presuppose a high-water line as the upper boundary.
General Shore Profile
Relationship to Tidal Range

Typical Tidal Range

Highest Recorded Tide

Lowest Recorded Tide

Submerged Lands

Beach or Shore

Sea Approach

Coast Terrain Exits

Upland

Tideland

Which is owned or was sold by the State of Oregon
APPENDIX B

CHARTS AND MAPS
Maps and Charts used in this Study

U.S.C. and G.S. Charts for the years

1955
1971

Tillamook County Assessors maps.

U.S. Army Corps of Engineers aerial photos

1939  1963
1962  1965

Oregon State Highway Department aerial photos

1970
1971
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LANDFILL INVENTORY
of
SAND LAKE
T3S R10W
SHADED AREA DENOTES
FILLED LAND