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FINAL ENVIRONMENTAL IMPACT STATEMENT

PROPOSED

ESTUARINE SANCTUARY GRANT AWARD

FOR

SOUTH SLOUGH, COOS BAY, OREGON

U.S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
2234 SOUTH HOBSON AVENUE
CHARLESTON, SC 29405-2413

HC108.C6 N38 1974
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N38
1974

PREPARED BY

Office of Coastal Zone
Management
National Oceanic and
Atmospheric Administration
U.S. Department of Commerce
Rockville, Maryland 20852

Summary

( ) Draft (X) Final Environmental Impact Statement
Department of Commerce, National Oceanic and Atmospheric Administration,
Office of Coastal Environment
For additional information about this proposed action or this statement, please contact:

Edward T. LaRoe
Office of Coastal Environment
National Oceanic and Atmospheric Administration
Rockville, Maryland 20852 Phone (301) 496-8526

1. Proposed Estuarine Sanctuary grant award, South Slough, Coos Bay, Oregon
(X) Administrative ( ) Legislative

2. It is proposed that a grant be awarded to the State of Oregon to acquire, develop, and operate an estuarine sanctuary in Coos County, Oregon pursuant to P.L. 92-583. About 4,200 acres of land and water in the southern half of South Slough would be acquired and protected. If implemented, this proposed grant would be awarded in June, 1974.

3. The acquisition and operation of the estuarine sanctuary may restrict land and water use and prohibit exploitation within the sanctuary boundaries. Timber harvest within the proposed sanctuary would be prohibited. Access by motorized watercraft may be restricted in parts of the sanctuary. Removal of the property from private ownership may reduce the tax generated revenues by about 0.1%.

4. Alternatives considered:

A. Alternative estuarine sites within the Columbian region as potential candidates.

B. Alternative boundaries for the South Slough proposal.

C. Alternative management policies for the proposed sanctuary.

D. Alternative methods of protection for the proposed sanctuary.

E. Alternative courses of action for the Office of Coastal Environment:

1) award grant in modified form
2) delay awarding the grant
3) no action

5. List of all Federal, State, and local agencies and other parties from which comments were requested; responses were received from those marked with an asterisk (*).

Federal Agencies

Department of Agriculture
Agricultural Stabilization and Conservation Service
Forest Service
*Soil Conservation Service

Department of Defense
* Army Corps of Engineers

Department of the Interior
Bureau of Land Management
Bureau of Outdoor Recreation
Bureau of Sport Fisheries and Wildlife
Geological Survey
National Park Serivce
Office of Land Use and Water Planning

Department of Transportation
Coast Guard

Environmental Protection Agency
* Regional Administrator, Region X

U. S. Water Resources Council

Department of Health, Education and Welfare
Public Health Service

*Department of Housing and Urban Development

Federal-State

*Pacific Northwest River Basins Commission

State

Oregon
* State Clearinghouse
Office of the Governor
Treasurer
Secretary of State
Water Resources Board
Marine Board
Fish Commission
Game Commission
Natural Areas Commission
* Department of Environmental Quality
Department of Commerce and Economic Development
* State Highway Division
Department of Geology and Mineral Industries
Department of Forestry
Division of State Lands
* Soil and Water Conservation Commission
Parks and Recreation Department
Land Conservation and Development Commission
Coastal Conservation and Development Commission
University of Oregon Institute of Marine Biology
* Oregon State University Sea Grant Office

California State Clearinghouse

Washington State Clearinghouse

Local

Coos County Board of Commissioners
Coos County Port Authority
Coos County Planning Commission
* Coos-Curry Council of Governments
Coos County Library

Other Parties

Coos Bay World
The Nature Conservancy
* National Audubon Society
* National Wildlife Federation
Sierra Club
National Resources Defense Council, Inc.
* Environmental Defense Fund
Izaak Walton League of America
Conservation Foundation
Oregon Association of Soil and Water Conservation Districts
* Oregon Environmental Council
Oregon Student Public Interest Research Group
Oregon Chapter, Sierra Club
Oregon Chapter, The Nature Conservancy
Oregon Division, Izaak Walton League

Additional written comments were received from

City of Coos Bay
America Association of University Women
Scott Paper Company
George G. and Marian Tracy, Charleston, Oregon
Vence Lawry, Charleston, Oregon

6. Draft statement transmitted to the Council on Environmental Quality on April 26, 1974, and made available to the public on May 3, 1974. Final environmental impact statement transmitted to the Council on Environmental Quality and to the Public on June 21, 1974.

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1. Coastal Zone Management Act of 1972 (P.L. 92-583)

2. Final Rules for Estuarine Sanctuary Grants (15 CFR 921, published June 4, 1974, Federal Register 39 (108):19922-19927)

3. Fauna and Flora of the South Slough, Coos Bay, Oregon

4. Assessment of the Economic Impact of the Designation of South Slough as an Estuarine Sanctuary

5. Written Comments Received by the Office of Coastal Zone Management

I. INTRODUCTION

In response to the intense pressures upon and conflicts within the coastal zone of the United States, the Congress in 1972 passed the Coastal Zone Management Act (PL 92-583) (Appendix I). This Act authorized a new Federal program to be administered by the National Oceanic and Atmospheric Administration (NOAA), in the Department of Commerce, to assist and encourage states to develop and implement rational programs for managing their coastal resources. The Act affirms a national interest in the effective management, beneficial use, protection and development of the coastal zone and provides three grant programs to the coastal states and territories toward that end.

Two of these grant provisions are concerned with assistance to the states to develop land and water use management programs (Section 305) and to implement and administer those programs after review and approval by the Secretary of Commerce (Section 306). The first program development grants were awarded in March, 1974, and it is anticipated that program implementation applications will be received from several states during FY 1975.

The third part of the Coastal Zone Management Act establishes an estuarine sanctuary program (Section 312) which will provide grants to states on a matching basis to acquire, develop and operate estuarine areas to be set aside as natural field laboratories. These estuarine sanctuaries will be used primarily for long-term scientific and educational purposes, especially to provide some of the information essential to coastal zone management decision-making. Examples of such objectives might include:

- To gain a thorough understanding of the ecological relationships within the estuarine environment.
- To make baseline ecological measurements.
- To serve as a natural control in order to monitor changes and assess the impacts of man's stresses on the ecosystem.
- To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and the problems which confront them.

This will be accomplished by the establishment of a series of estuarine sanctuaries which will be carefully selected to represent the major ecological types and regional variations found along our coasts.

Proposed rules for the implementation of the estuarine sanctuary program were published on March 7, 1974 (Federal Register 39(46):8924-8927). After public review and comment, the rules were revised and published in final form on June 4, 1974 (15 CFR Part 921, Federal Register 39(108):19922-19927) (Appendix II).

Using the proposed estuarine sanctuary guidelines, in April, 1974, the State of Oregon submitted to the Office of Coastal Zone Management, NOAA, Department of Commerce, an application for an estuarine sanctuary to be located in part of South Slough, Coos Bay, Oregon. While recognizing that changes in the final guidelines might necessitate amending the application, the Office of Coastal Environment, now the Office of Coastal Zone Management (OCZM), prepared a draft Environmental Impact Statement for review and comment by all interested public, private, local, State and Federal individuals and agencies. This determination was made in keeping with the spirit of the National Environmental Policy Act (NEPA) and the guidelines promulgated by the Council on Environmental Quality (CEQ) (40 CFR Chapter V, Part 1500), which require that Federal agencies assess in detail the potential environmental impact of their actions beginning at the earliest possible point and in all cases prior to agency decision.

Although the final guidelines differ in some respects from the proposed guidelines, these differences did not require changes in the application or its impact.

DESCRIPTION OF THE PROPOSED ACTION

The Oregon application requests a grant in the amount of $823,965 from OCZM, to be matched by an equivalent amount from the State of Oregon, for acquisition and establishment of an estuarine sanctuary in the southern half of South Slough, Coos Bay, Oregon (see maps, figures 1 and 2). The proposed sanctuary would include about 4,200 acres, of which about 700 acres are state-owned submerged lands or tidelands and the remainder are privately owned uplands and tidelands. The application provides that these lands may be acquired in fee simple, or a partial interest, such as development rights or a conservation easement, may be acquired. Acquisition will be through negotiation with individual landowners; condemnation will not be used.

The purpose of the Oregon estuarine sanctuary is 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. The main uses would be for direct ecological investigations and to serve as a long-term control for the assessment of man-introduced stresses in other, similar, estuarine areas. Application of this information to coastal zone management decision-making would be a primary objective.

The application proposes a management program for the sanctuary which is designed to maintain the area in its present or natural state and to protect the natural functions and values of South Slough. The management policies will protect the sanctuary from both internal and external sources of stress which may alter or affect the nature of the ecosystem, and will

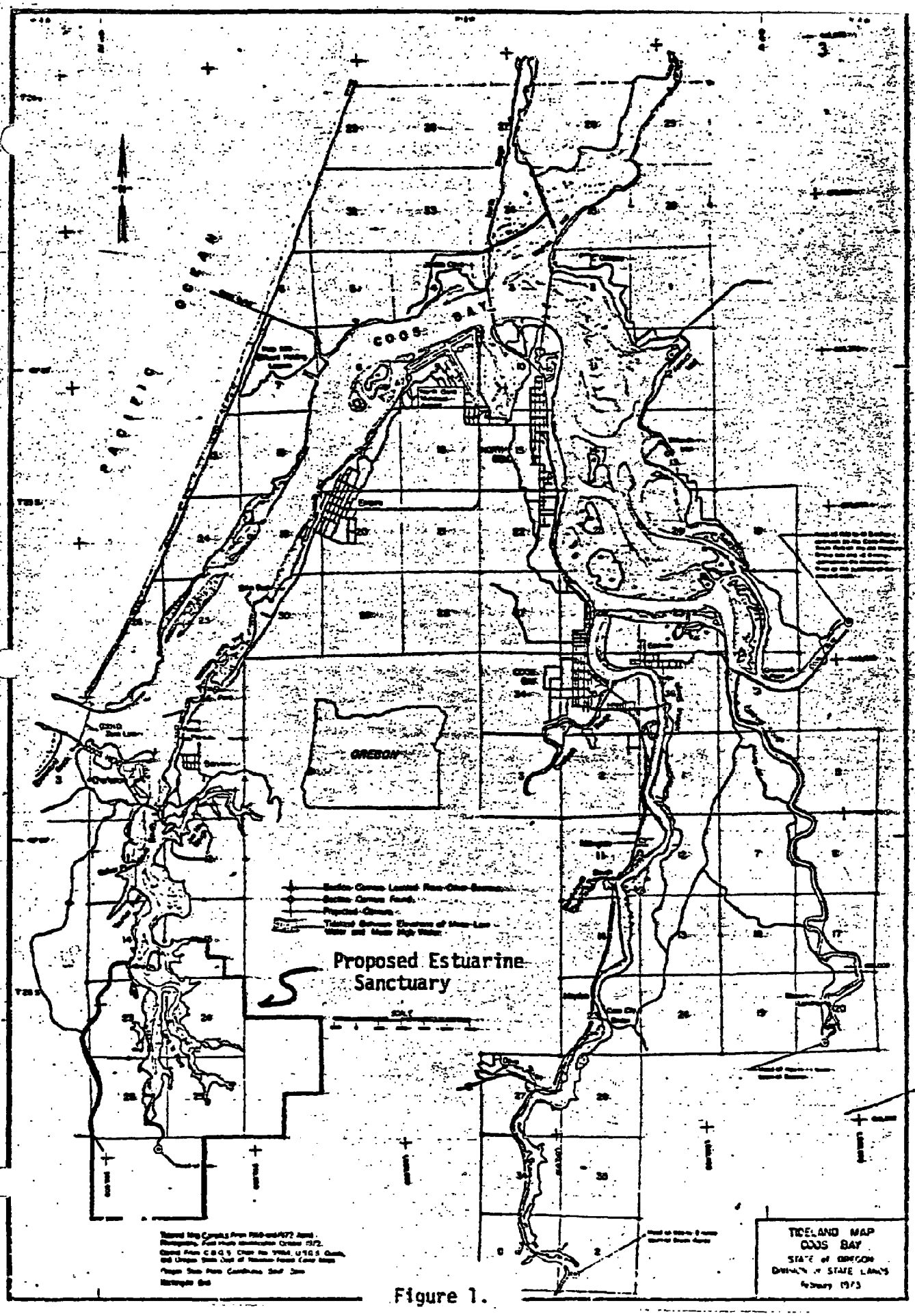
PACIFIC OCEAN
COOS BAY
OREGON
Proposed Estuarine Sanctuary
TIDELAND MAP
COOS BAY
STATE OF OREGON

Figure 1.

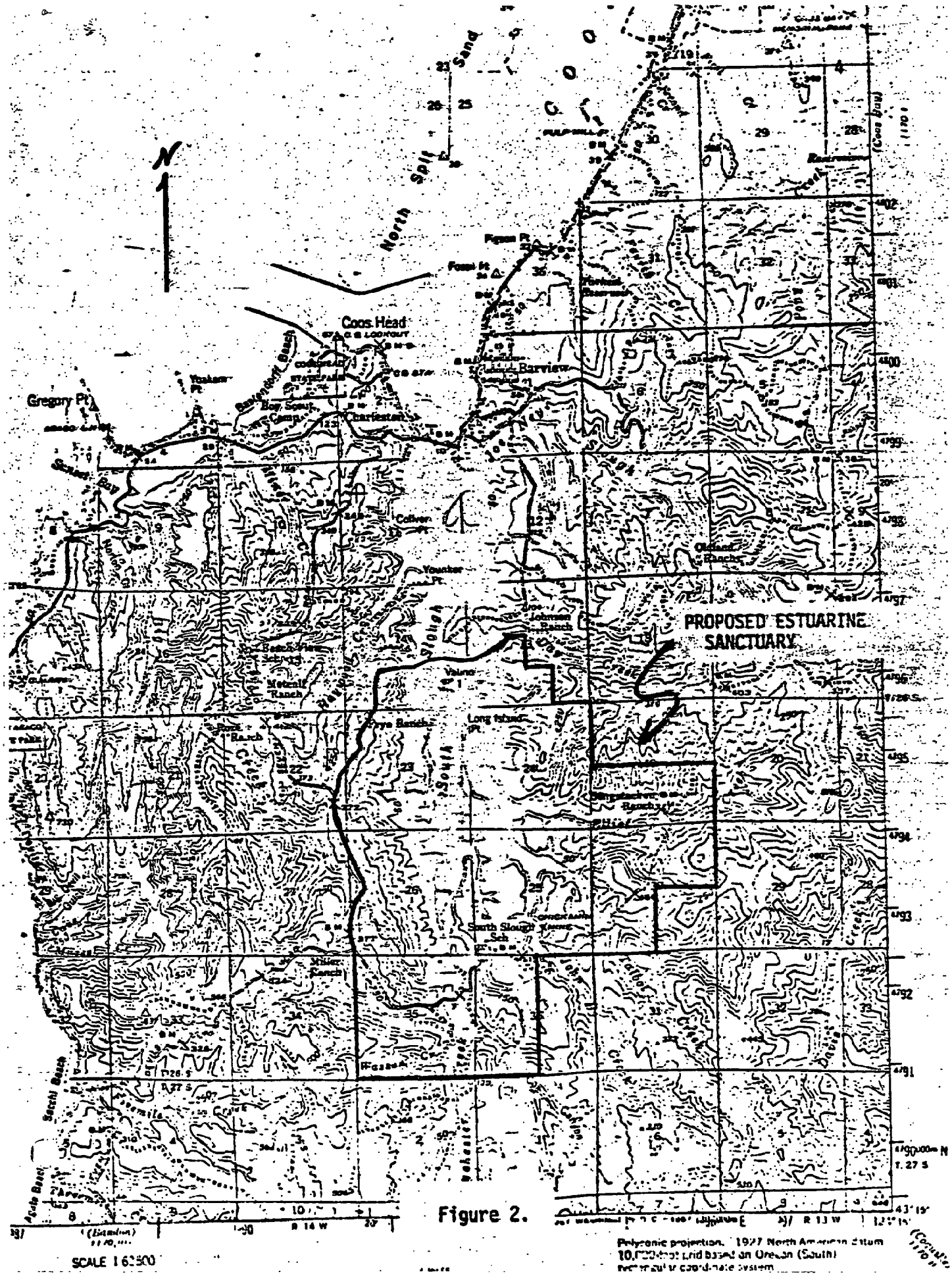
North Spit Sand
Coos Head
Barview
Charleston
Gregory Pt
Yoakam Pt
Boy Scout Camp
Colliver Pt
Younker Pt
Johnson Ranch
Oldland Ranch
PROPOSED ESTUARINE SANCTUARY
Valino
Long Island Pt
Metcalf Ranch
Frye Ranch
South Slough Sch
Miller Ranch
Sacchi Beach
R 14 W
R 13 W
SCALE 1:62500
Polyconic projection. 1927 North American datum
10,000-foot grid based on Oregon (South)
rectangular coordinate system

Figure 2.

preserve the area for long-term scientific and educational use.

Ownership of the sanctuary will be vested in the Oregon State Land Board, which has the necessary constitutional and statutory authorities to hold and manage the sanctuary for these purposes. The State Land Board will be guided by a Technical Management Task Force, consisting of representatives from the Oregon Fish Commission, Wildlife Commission, Natural Areas Committee, Department of Environmental Quality, Division of State Lands and Department of Forestry, University of Oregon Institute of Marine Biology and the Coos County Commission. A representative from NOAA's Office of Coastal Zone Management will serve as a non-voting member of the Technical Management Task Force. The Director of the Division of State Lands will handle administrative services for the sanctuary staff and provide management direction as defined by the Task Force and Land Board.

A full-time Sanctuary Program Manager will be hired to oversee the operation and coordination of all activities in the sanctuary. The Manager will be responsible to the Technical Management Task Force and ultimately the State Land Board, but administratively will be on the staff of the Division of State Lands. It will be his duty to:

1) routinely monitor environmental parameters in the sanctuary area;

2) coordinate all special studies and research activities within or related to the sanctuary area;

3) investigate alleged violations and report to the Task Force and Division of State Lands;

4) write required state and Federal reports, including the annual report to be submitted to OCZM;

5) represent the Task Force in public meetings, etc.; and

6) carry out other directives from the Task Force and Land Board.

Acquisition and designation of the area as an estuarine sanctuary would result in restrictions being placed on the use and future development of the area. As a general guideline, uses which would alter the natural environment would be prohibited.

While not intended as a recreation area, the sanctuary will be available for use by the general public so long as the level and kind of use does not detract from or otherwise alter the natural environment or the research use of the sanctuary. Current levels of recreational fishing, shellfish harvest and hunting, which are now quite low, would be permitted; increased levels would be viewed as appropriate so long as they did not alter the ecosystem. Camping would not be prohibited, but no special facilities,

such as roads or campsites, would be constructed or provided. Oyster culture as now practiced will be permitted. The total area leased for oyster culture may be enlarged to about twice its present size, but the culture technique would be limited to stake or bottom culture and raft or float culture would be prohibited.

All such uses may be restricted or prohibited if overuse or misuse threatens the viability of the sanctuary.

If residents now living within the sanctuary so choose, they may retain a partial interest in their property. This partial interest would permit presently existing low intensity residential and farming uses to continue; however, the expansion of these activities, in either area or intensity, or the introduction of new commercial activities, would not be permitted.

Except as necessary to maintain the health of the ecosystem, timber harvest would be prohibited within the sanctuary. Such harvest would permit the prophylactic removal of dead or diseased trees and thinning of reforested areas according to good forestry practices; this level of harvest would not, however, be commercially productive.

Motorized vessels will be prohibited in the sanctuary waters; exception may be provided by special permit granted by the Management Task Force, but it is anticipated that such permits will be restricted to vessels used for research or for the commercial harvest of oysters. Limited restrictions may also be placed on the use of motorized vehicles in the upland portion of the sanctuary.

The use or discharge of pollutants, including pesticides, herbicides and fertilizers, within the sanctuary would be prohibited.

All uses of the sanctuary will be closely monitored by the research efforts coordinated by the Sanctuary Manager. Based on this monitoring and the results of any other research and information, the potential or actual impact on and compatibility of each use with the sanctuary will continually be reassessed, and the management program altered as necessary to maintain the long-term health of the estuarine ecosystem.

The use of those lands outside of the proposed sanctuary boundaries but within the 26 square mile watershed which contributes to the sanctuary may also be controlled if necessary by the application of zoning ordinances under state and local authority. Specific threats may come from logging within the watershed, and from water pollution caused by commercial or industrial development along the waterfront in the lower portion of South Slough. The effects of logging will be controlled by vigorous monitoring and enforcement of the State Forest Practices Act of 1971. Potential water pollution or harmful discharges will be subject to the state water non-degradation clause enforced by the Oregon Department of Environmental Quality.

All research within the estuarine sanctuary will be approved and coordinated by the Program Manager and the Technical Management Task Force. The University of Oregon Institute of Marine Biology is located at Charleston, Oregon, on South Slough north of the proposed sanctuary; it would probably be a major research user of the sanctuary. Other agencies or groups expected to utilize the area for research are Southwestern Oregon Community College, Terramar (a private field science facility), Oregon Fish Commission, Oregon Wildlife Commission, and Oregon Department of Environmental Quality.

The state has identified as general areas of research appropriate in the sanctuary the following:

1) General Understanding of Estuarine Ecosystems. Studies would include productivity measurement, distribution and life history studies of estuarine organisms, energy flow dynamics, etc, as well as physical, chemical and hydrographic studies.

2) Use as Baseline. To establish natural conditions in an undisturbed sanctuary, and subsequently monitor the sanctuary to detect later changes.

3) Policy Development and Management Criteria. Use of South Slough as a control against which changes in other areas, either in lower South Slough or in other estuaries, can be compared as they are developed and coastal zone management programs are implemented.

Through contract conditions in the grant award, the OCZM will retain ultimate responsibility for assuring the continued maintenance of the area consonant with the conditions of an estuarine sanctuary. Individuals or organizations which are concerned about possible improper use or restrictions of use of estuarine sanctuaries may petition the State Land Board and the Office of Coastal Zone Management directly for review of the management program.

III. DESCRIPTION OF THE ENVIRONMENT AFFECTED *

The proposed sanctuary includes the upper (southern) half of South Slough and the adjacent lands which contribute to it, constituting the main features of a natural unit. South Slough itself is an isolated arm of Coos Bay, which is the second largest estuary in Oregon, and is a representative of the Columbian class of estuaries as defined in the Estuarine Sanctuary Guidelines.

*Description primarily from information supplied with application.

Coos Bay is a major industrial and commercial port. The patterns of population growth; residential, agricultural and industrial development; tourism; and waste disposal in the area have adversely affected the Bay water quality and the estuarine ecosystem. Because of the scarce upland development in the South Slough watershed, and because of the proximity of the mouth of South Slough to the ocean, which allows it to remain unaffected by Coos Bay water, the South Slough area in contrast remains in a clean, productive and relatively unaltered condition. This condition has not resulted from careful management, however, but rather from the protective insularity afforded by natural inaccessibility.

While representing only about 16% of the total of Coos Bay estuary, South Slough is of major significance to the health and productivity of the estuarine system. Its large areas of undisturbed tideflats and extensive fringe marshes represent the only major wetland areas in the Coos Bay estuary which have not been significantly modified by man's activities (Akins, 1973).

The geological history of the region is complex. A rapid regional uplift, which continues to the present day, coupled with fluctuations in sea-level during glacial periods, has resulted in rapid erosion, severely dissected hills and thick deposits of sediments. It is these sediments which form the basis for the marshes and tidelands.

The proposed sanctuary includes two prominent geographic features: Valino Island, a 23 acre forest and brush covered island with steep sandstone bluffs at the sides, guards the mouth of the proposed sanctuary; and Long Island Point, a narrow forested finger of land stretching northward and dividing the slough into two arms - the Sengstacken arm on the east and the Winchester arm on the west. Three major creeks feed freshwater to the Sengstacken arm while Winchester Creek is the major source of freshwater inflow to the Winchester arm. Several small creeks were diked at one time to prevent tidal flooding and create farm lands. However, these dikes are now in disrepair and tidal action has been returned, resulting in the natural restoration of marsh areas.

The South Slough watershed receives heavy rainfall and moderating winds from the Pacific Ocean all year around. As a result it is densely covered with a coastal rainforest containing a variety of upland plants. Sitka Spruce, Western Hemlock, Port Orford Cedar, and Douglas Fir dominate mature forest areas. There is little mature forest in the proposed sanctuary area, however. The shallow slopes on the east side of the Sengstacken arm are covered by young, third growth timber and brush; and the western side of the more steeply sloped Winchester arm has a forest cover varying from maturing second growth to young reforestation. In such areas Beach Pine, Red Alder, Vine Maple, and Coastal Willow may occur with the younger conifers. A variety of shrubs and bushes crown the perimeter of the Slough itself. Well developed fringe marshes mark the interface between tidal and upland areas, and the submerged estuary bottom supports extensive, lush eelgrass beds.

The upland and marsh environments support a wide variety of animals and birds (see Appendix III). South Slough is an important area for migrating waterfowl, and its Class AA waters are an important spawning, nursery and feeding ground for fish and shellfish. Under the health regulation governing the harvest of oysters, South Slough is the only area in the Coos Bay system where edible oysters may be collected. (Akins, 1973; Gaumer et al, 1973, and USDI, 1971.)

Largely as a result of their inaccessibility, the lands and waters within the boundaries of the proposed sanctuary are only lightly used by man. The primary use has been timber harvest, and much of the forested lands have been cut and harvested twice. A few residences occur along Seven Devils Road, which marks the western boundary of the sanctuary, and the bottomlands of Winchester Creek currently serve as grazing lands for small, low intensity farms. The primary use of the area is for water oriented recreation such as duck hunting, fishing, clam digging and general pleasure boating. However, even this use has been at very low intensity. For example, the 1971 Coos Bay Resource Use Study (Gaumer et al, 1973) reported that only 1,547 (2.3%) of the 67,900 resource user trips (boat, shore and tideflat users) measured for the Coos Bay study area between March and October, 1971, occurred in South Slough. Slightly over 79 acres of submerged lands in South Slough are leased for commercial oyster production; only 46 of these are in the proposed sanctuary area. The annual commercial yield from these leases in South Slough varies greatly. The following table summarizes the catch for all of South Slough, including those areas outside of the proposed sanctuary:

YEAR	LANDINGS gallons of oyster meat (1 gal = about 8 lbs.)
1969	939
1970	1,969
1971	26
1972	866
1973	1,513

The value of this fishery has also varied over a large range: the 1971 landings were valued at $169; based on present values (1974) in Seattle, the 1973 landings were worth about $16,450. (Source: Oregon Fish Commission)

Reflecting its long history of human habitation, a number of historic or cultural features occur within the proposed sanctuary, including pioneer gravesites, an abandoned gold mine, and an old school house. A prehistoric Indian midden has been uncovered in South Slough, and other Indian sites and trails occur. Approximately nine residences are now maintained within the sanctuary boundaries, mostly along the western boundary; this represents a gradual decline from the peak residential use about half a century ago.

Parts of the proposed sanctuary site, however, have recently been threatened by plans for dense subdivision development, and by plans for intense recreational use. In the last year, two specific sites, totalling 577 acres, have been proposed for residential subdivisions. These proposals have led to strong local interest in preserving the existing amenities within South Slough.

IV. RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS FOR THE AREA

The estuarine sanctuary proposal reflects the thoughtful input of a variety of local citizens and governmental bodies as well as state resource and planning agencies. As such, it is not only compatible with, but is an integral part of, the plans and guidelines which they have developed.

A number of generalized guidelines have been initiated by the State of Oregon. The Oregon State University Sea Grant Extension Marine Advisory Program published Crisis in Oregon Estuaries in 1969. This summarized the environmental factors and resource conflicts in Oregon's estuaries, and recommended that an integrated land and water use plan was needed for Coos Bay.

By Executive Order (#01-070-07, March 3, 1970), Governor McCall took action to protect Oregon's coast by halting any state activities that would modify the natural environment of the coast, including its estuaries. The Oregon Coastal Conservation and Development Commission (OCCDC) recommended guidelines which would protect all saltmarsh areas from irreversible acts until thorough plans and standards are adopted.

Although no final land use plan now exists for South Slough or Coos County, a number of County level agencies and groups have taken specific action recognizing the importance of the upper South Slough area and recommended its protection. In the summer of 1971, a citizen committee was formed to develop a land use plan for the Charleston-Barview area (two small communities which straddle the mouth of South Slough). This group developed a plan for protecting the south half of South Slough, above Valino Island, and a one-fourth mile wide buffer strip around the water and tidelands. After approval at a public meeting in December, 1971, the plan was presented to and adopted by the Coos County Planning Commission and ultimately the Coos County Board of Commissioners and incorporated into the 1990 Temporary Land Use Map. In April, 1972, the County Board of Commissioners appointed the Coos Bay Estuary Committee to study land and water use in the Coos Bay estuary. This Committee's report, in January, 1973, also recommended similar protection for the south half of South Slough; it also urged that a method of compensation to the owners of property within the protected area be developed.

The District #5 Citizen Advisory Committee, appointed to develop zoning for the area, recommended that the one-fourth mile buffer strip be designated Interim Natural Resource and that the remainder of privately owned land in the watershed be zoned Interim Forest and Grazing-40 (one residence permitted per 40 acres).

These classifications were designed to protect the natural conditions in the upper end of South Slough. In addition, upon the recommendation of its own Estuarine Sanctuary Research Committee in June, 1973, the Port of Coos Bay voted to support the Planning Commission sanctuary proposal and urged that a non-development zone be established for the same area.

Because of the concern for compensating owners of property within the proposed protected area, the local citizens began an investigation into means for securing funding to acquire the lands. Both private and governmental sources were considered. By late 1972 the local government had contacted state agencies and The Nature Conservancy concerning possible assistance in protecting and acquiring a portion of South Slough, and official contact was first made with OCZM in Spring, 1973.

The proposal for an estuarine sanctuary is consistent with the concern demonstrated by these citizens and governmental groups. Not only would it offer the protection they seek for the upper half of South Slough, but it would provide a vehicle for acquiring the adjacent lands and thus compensating the land owners whose use of the land would be restricted.

V. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

If awarded, a grant from OCZM would enable the State of Oregon to acquire and protect a portion of South Slough for use as an estuarine sanctuary. The creation of this sanctuary would have a number of both beneficial and adverse impacts. The most direct environmental impact to be derived from this action would be the long-term benefits associated with the assured use of the area for scientific, educational and other consistent purposes.

By providing a base for education and research, the sanctuary will enrich our understanding of estuarine ecosystems and resources, which is of essential but incalculable importance to the development of a rational coastal zone management program at the local, state and regional levels. Without a sound scientific basis, and without a provision enabling controlled long-term monitoring, such management programs could not adequately cope with the issues and conflicts which occur in the nation's coastal zone. The proposed sanctuary, which has been carefully chosen as a typical or representative estuary for the Columbian region, would provide a control area to use as a basis for measuring the success of coastal land and water management efforts not only in Coos Bay but for other Columbian estuaries as well.

In addition to the scientific benefits, the sanctuary would provide a vehicle for increasing public knowledge and awareness of the complex ture of estuarine systems and the problems which confront them. The terest, concern and cooperation of an aroused public citizenry will be necessary for environmentally sound planning and management programs to succeed.

Another beneficial environmental impact would be associated with the positive action taken to preserve this undisturbed and ecologically important area. Designation of the sanctuary would prevent damage to the natural environment and provide a refuge for stocks of fish, shellfish, birds and wildlife which are stressed by loss of habitat, loss of water quality and overexploitation. Such natural resources assume increased importance when their role in maintaining productivity in the stressed Coos Bay system is considered. Protection of the marshes and wetlands will also serve to protect and maintain water quality. Establishment of the sanctuary would also permit the long-term maintenance of the recreational uses and the aesthetic charm which the area now provides, and which would be destroyed by intense development of the area, as has been proposed. Such amenities are necessary ingredients in maintaining the quality of life which we know today.

While preserving the existing resources, human uses and benefits of the lands and waters within the sanctuary boundary, there may be some adverse socio-economic impact on the local community. Initially three impacts of possible significance were identified and discussed; these were loss f tax revenues; loss of revenues from timber harvest; and impact on ommercial fishing, especially oyster culture. This initial analysis indicated that the losses from the first two caused by creation of an estuarine sanctuary would be insignificantly small, and that there would be no loss, but actual benefit, to the oyster culture operations.

In response to concern expressed most clearly by the Coos-Curry Council of Governments, as well as others, about the possible inadequacy of the economic data in the draft environmental impact statement, the Office of Coastal Zone Management contracted for a special, additional study on the economic impact of creating the proposed estuarine sanctuary. The report of this study, which was written by Dr. Julia Friedman, Resource Economist, University of Oregon, Eugene, Oregon, is included in toto as Appendix 4.

Using an input-output model, and discounting future values to derive comparable values at the present time, the study identified and examined the following possible detrimental or adverse economic impacts on the community which might be caused by designation of South Slough as an estuarine sanctuary:

Loss of single housing construction,
Loss of commercial and sport fish culture,
Loss of timber harvest value,
Loss of high density residential/recreational potential,
Loss of mineral extraction potential,
Loss of tax base.

In addition, some areas of possible beneficial or desirable economic impact were also identified and assessed:

- Increase in field research grants,
- Funding for management of the estuarine sanctuary,
- Increase in educational use of the area,
- Payment of adjustment taxes from state on land held under Reforestation Order,
- Economic estimate of the aesthetic/scientific value of preservation of the South Slough.

Table I summarizes the findings of the study.

TABLE I

Total Estimated Impact Caused by Designation of Part of South Slough as an Estuarine Sanctuary

(- indicates potential benefit which may be sacrificed if the sanctuary is established;
+ indicates potential benefit which may result only if the sanctuary is established.)

	Present Value of Total Economic Impact	
Single unit housing development (1/5 years)	- $176,500	
Timber harvest on Reforestation Order lands	- 1,002,000	
Harvest of all timber(12" DBH or greater)	- 1,312,000	
Maximum sustained yield of timber beginning 2025	- 710,000	(maximum loss; could be as small as zero)
Minerals	?	(may be a negative value in future years)
High density development	000	(not possible under proposed zoning)
Oyster culture/recreational fishing	000	(may be a positive value in future years)
Economic stimulus from tax adjustment	+ 49,000	
Management expenditures for estuarine sanctuary	+ 2,327,850	
Research grants	+ 1,344,000	
Educational use of sanctuary	+ 395,000	
Scientific/aesthetic/recreational value	+ 800,000	MINIMUM (may be a large positive value in future years)
Stimulus from sanctuary acquisition on Coos County	+ 1,100,000	*

*-The report indicates two figures for the economic stimulus on Coos County from sanctuary acquisition: $550,000 and 1,100,000. The former represents the value if 1/2 of the lands were acquired; the latter if all lands, or a substantial interest therein, were acquired. Since other impacts were determined based on acquisition of the entire sanctuary, for comparative purposes, the latter figure was used.

It is important to recognize that the values in Table I are meant as guide to the general magnitude of possible economic impacts resulting from the proposed action. Each number represents the current value of a different time stream of economic events and employment activities, and the numbers, therefore, are not directly comparable. Moreover, it is important to note that many of the negative impacts are mutually exclusive. Dense residential development and timber harvest could not occur at the same time, for example, for one use would preclude the other just as effectively as sanctuary designation would. For this reason, the negative impacts are not additive. In contrast, the positive benefits are compatible and not mutually exclusive, and would all accrue if the sanctuary were designated.

A few other potential impacts were not addressed in the study. The most significant of these are the beneficial values of marshlands and wetlands in providing and maintaining water quality, the possible impact of sanctuary designation on the value of adjacent properties, and the effect of diversification on the local economy. Odum (1973) has calculated that the value of coastal marshes and wetlands in maintaining water quality is worth $80,000/year/acre. This figure was derived from data on marshes in Georgia and may not be strictly transferable. Whatever value they produce is already provided, and creation of an estuarine sanctuary would not increase this benefit; it will, however, guarantee the long-term benefit from this source, which would be lost if the area were developed.

Experience with similar proposals in other areas has shown that designation of a sanctuary frequently results in raising the market value, and thus the tax revenues, on adjacent properties. Once long-term protection is assured for the aesthetic and resource amenities within the sanctuary, adjacent properties may become more desirable for residential and recreational uses. Their higher value results in a positive effect on the tax base, which may fully compensate for anticipated tax loss. This effect will be tempered by the proposed zoning ordinances, which would limit the surrounding lands to forestry and agricultural uses.

Finally, the introduction of a new research and educational facility would result in diversifying the economy, which is now strongly dependent upon the timber industry and would be beneficial to the overall stabilization of the local economic well-being. Indeed, the Coos-Curry-Douglas Economic Development Association has decided that diversification of the local economy should be its number 2 priority goal (CCD Economic Improvement Association, 1972).

In addition to these impacts, acquisition by the state will remove these private lands from the tax rolls. Lands within the proposed sanctuary boundaries contribute to six different tax districts. In addition to the annual ad valorem tax revenues of $13,488.37, the report calculates that the expected adjustment tax on Reforestation Order lands within the proposed sanctuary boundaries, due to taxes deferred until timber harvest,

would be $3550 for 1975. Thus a total tax loss of about $17,000 could be expected. This ranges from about 0.12 to 0.27% of the revenues collected by each individual agency, or 0.18% of the tax generated revenues collected by all agencies in the district (Table II), and is so small as to be insignificant in comparison to the total tax structure. It might also be pointed out that even these small sums are gross tax revenues; that the county provides some services in the area; and that as the state acquires the land, these services will no longer be provided by the county.

The major adverse economic impact would therefore be the loss of timber harvest. In terms of timber production from other areas in Coos County, this is not felt to be a significant loss. The total tax loss is an insignificant fraction of the six taxing authorities. In addition, a number of positive or desirable economic gains will accrue as a result of designating the area an estuarine sanctuary, and these would more than offset the adverse economic impacts.

Restrictions will also be applied to the kinds and intensity of recreational and commercial fishing activities within the sanctuary. The primary impact would derive from the suggested management policy which would prohibit the use of motorized craft in at least part (the eastern arm) of the sanctuary. As indicated above, there is only very limited use of the sanctuary area at present. There are virtually no commercial fishing operations within the sanctuary, and as indicated earlier, recreational use represents a very small proportion (less than 3%) of the total for Coos Bay. Furthermore, most of the recreational fishing and activity within South Slough occurs near the mouth of the slough, between Charleston and Valino Island, rather than within the proposed sanctuary boundaries. Restrictions on total use would not affect present or foreseeable levels of use, but could reduce a theoretical potential use.

The prohibition on motorized vessels was suggested by the local citizens, and has received their strong support. The prohibition may serve as an inconvenience to some users, primarily duck hunters, but since the area will still be accessible by canoe or rowboat, it will be little more than that, and will enhance the enjoyment of the area by others.

Although a lease for oyster farming on 46 acres of submerged lands within the proposed sanctuary has already been granted, there is as yet only very limited production and harvest. Special significance has been attached to the potential for expansion of this activity in South Slough, however, because of the very limited areas where oyster harvest can occur in Oregon. The combination of hydrographic features peculiar to the Oregon coast and degradation of water quality from industrial, commercial and residential activities narrowly delimits those areas suitable for oyster harvest. The sanctuary would permit low-level but long-term oyster production and stake farming in identified areas and under controlled conditions. Because of factors such as salinity, depth, and tidal range, only a small area (about 70 to 100 acres) of the proposed sanctuary waters would be suitable for oyster culture, and none of the potential oyster area in the sanctuary would be amendable to raft culture.

TABLE II

TAX LOSS

GOVERNMENT AGENCY	(A) TOTAL REVENUES FOR AGENCY*	(B) AD VALOREM TAX REVENUES GENERATED BY SANCTUARY LANDS (INCLUDING MINERAL RIGHTS)	(C) ADJUSTMENT TAX FOR R.O. YIELD** WITHIN SANCTUARY BOUNDARY	(D) TOTAL TAX REVENUES GENERATED BY SANCTUARY LANDS (B+C)	(E) % OF TOTAL DISTRICT REVENUE FROM SANCTUARY LANDS ***(D/A)
Coos Bay	$ 820,298.	$ 754.41	$ 191.70	$ 946.11	0.12 %
School District #9	3,683,358.	7,901.76	2,019.95	9,921.71	0.27
Intermediate Education District	3,560,671.	3,274.70	837.80	4,112.50	0.12
Southwestern Oregon Community College	838,521.	771.13	198.80	969.93	0.12
Port of Coos Bay	129,230.	133.53	49.70	183.23	0.14
Bay Area Hospital	701.983.	652.84	252.05	904.89	0.13
TOTAL	$ 9,734,061.	$13,488.37	$3,550.00	$17,038.37	0.18%

*Omits adjustment tax for Reforestation Order lands, except that calculated for those lands within the sanctuary boundaries; it is therefore smaller than actual figure if adjustment tax for all Reforestation Order lands were included.

**Based on 1975 calculated adjustment tax loss of $3,550.

***Column E represents that proportion of the ad valorem tax revenues, lacking R.O. adjustment tax except for that from sanctuary, which the total revenues from the sanctuary lands, including R.O. adjustment tax, represents. If revenues from R.O. adjustment tax in the remainder of the district were included, the ratio would be still smalle

On the other hand, if the sanctuary were not created and South Slough were developed as has been the remainder of Coos Bay, the potential for oyster farming would be short-lived, for degradation of water quality would likely result in closed harvest here as elsewhere.

Arrangements may also be made for the continued occupancy of existing residential structures within the sanctuary borders.

In a less direct sense, one significant long-term impact may be the redirection in population growth and distribution which would be created by the establishment of the sanctuary. Acquisition for an estuarine sanctuary of the lands surrounding the upper half of South Slough would remove the increasing pressure for large-scale residential development and prevent the total destruction of the Coos Bay estuary. by permitting a small share to remain in its natural state. The growth induced impacts, which would accompany any large-scale development in this area, and their concomitant demands on public services and natural resources, would be avoided. The proposed action may well dampen the pressures for urban sprawl generating from the commmities located around the Coos Bay and provide the focus for a more thoughtful and consciously directed growth.

In summary, the net environmental impact of an estuarine sanctuary in South Slough will be to encourage a productive and enjoyable harmony between man and his environment, to protect an estuary for long-term educational and scientific uses, and to stimulate his long-term health and welfare.

VI. ALTERNATIVES

At all stages in the development of this estuarine sanctuary proposal - including at the local citizen, county government, state resource and planning and Federal review stages - a rigorous examination has been made of alternatives to the proposed action. These have included, at one or more times, consideration of:

- A. Alternatives to the site selected.
- B. Alternative boundaries for this sanctuary.
- C. Alternative management programs.
- D. Alternative methods for protection.
- E. Alternative courses of action for OCZM, including the "no action" option.

A. Alternatives to the site selected

During the development of this proposal, from its original concept at the local level to a formal estuarine sanctuary application by the OCCDC, a number of sites were examined by the state as potential candidates under this program. Early in its deliberations the OCCDC formed an Estuarine Sanctuary Committee to review the Federal estuarine sanctuary program, determine whether any of Oregon's estuaries were suitable, and recommend appropriate action based on its findings. This Committee contained a variety of expertise and its members represented the interests of coastal cities, counties, port authorities, state land and resource agencies and the state universities. After public meetings, and with the assistance of concerned citizens, the Committee identified nine candidate areas (Swash Lake of the Columbia; Netarts Bay; Sand Lake; Salmon River; Milport Slough; Siletz Bay; McCaffery Slough, Yaquina Bay; North Channel, Alsea Bay; South Slough, Siuslaw Bay; South Slough, Coos Bay). After further discussion at subsequent meetings these were narrowed to five candidates. The Committee then constructed a matrix containing the essential criteria of the estuarine sanctuary guidelines. Specific items of equal value considered in the matrix were: research potential; natural productivity; perceived threats; cost; availability; conflict with existing land use and ownership patterns; whether the area represented a natural unit; and the impact of selection on the local area. After lengthy public discussion the Committee reached a consensus rating of the five remaining candidates. As reflected in the totals from the matrix, two - McCaffery Slough in Yaquina Bay and South Slough in Coos Bay - were far more qualified than the others. A detailed investigation was made into the appropriateness of these two areas as sanctuary sites, and after further meetings it was decided, largely on the basis of feasibility and public support, to proceed with South Slough. The selection process, therefore, was the result of a wide variety of input and careful consideration of many different factors.

The intense local concern and support for the South Slough candidate was a major factor in its final selection. Between 1971 and the present time a number of private citizens, citizen advisory committees, and the County Planning Commission, Board of Commissioners and Port Authority repeatedly voiced their support for protection and preserving the south half of South Slough and a one-fourth mile wide strip of adjacent lands.

Another important factor was the low intensity land and water use within the sanctuary proposal in South Slough and accordingly the low potential for conflict which would result if the area were made a sanctuary. Compatibility with existing or projected land use plans was another significant consideration. Another benefit to be derived from the South Slough location was the proximity of the University of Oregon Institute of Marine Biology, located in Charleston, which was desirable from the view of research uses. No other candidate for consideration had such a blend of favorable features.

The OCCDC also considered the possibility of a Columbian class sanctuary in estuaries in either Washington or Northern California. Both states were contacted concerning the status of their efforts. Neither state has made application for a sanctuary at this date. Although both states contain suitable sanctuary candidates, it would appear as if neither has an area similar in nature to the South Slough type of estuary which is equally as suitable for sanctuary designation.

B. Alternative boundaries for this sanctuary

The citizen effort originating in the summer of 1971 was designed to protect the South Slough estuary itself. The initial concerns were thus directed at maintaining water quality. By the time of the public hearing in December 1971, which finalized the report to the Coos County Planning Commission, it was realized that in order to adequately protect the estuary a strip of land surrounding the Slough would be necessary as a buffer. At the December hearing, the public approved a plan for protecting a one-fourth mile wide strip of land around South Slough in addition to the waters of the Slough itself.

This proposal, which was made prior to the passage of the Coastal Zone Management Act and before there was serious hope for acquisition of the land, was based on three major objectives:

1. Afford protection to water quality and wildlife values of the Slough itself;
2. Present minimal "taking" of private properties - whether by zoning controls or by compensation to reluctant sellers; and
3. Adequately preserve the visual wilderness characteristics of the area.

During the meetings and hearings which followed, based primarily on the idea of controlling the land through zoning authority, this specific proposal received widespread support.

When the state began to develop the application to OCZM to designate and acquire South Slough as an estuarine sanctuary, it reassessed this choice of boundaries. Its considerations ranged from protection of the estuary but no acquisition of land (protection largely through zoning) to acquisition of the entire 26 square mile watershed which empties into South Slough. Specific criteria which the state considered included the degree to which the area approximated a natural ecological unit; existing conflicting uses; the degree to which the sanctuary would be affected by stresses from outside its boundaries; cost; and feasibility. It was obvious, for example, that it was both unfeasible from a cost basis and undesirable in terms of existing uses to acquire the entire watershed. At the other extreme the no acquisition choice was not felt to afford sufficient protection.

Because of the strong local support, special consideration was given to the choice of acquiring the one-fourth mile wide buffer strip. With ti , however, it became apparent that this alternative was unsuitable for two reasons: First, it was not a feasible boundary in a legal or geographic sense. Short of an accurate survey to determine the exact location of mean high tide (the edge of state owned lands) and another complete survey to measure in one-fourth mile from this line, this line could not be located. The costs of the surveyed line, necessary for land acquisition, would have equalled a major share of the acquisition cost itself, and the determination of the line would have been very time consuming.

Second, it was decided that a more appropriate boundary should better reflect natural features. An arbitrary determination would not reflect the natural processes or relationships which were essential for maintenance of a healthy system. An appropriate boundary could both provide an adequate buffer and, by creating a barrier to external stresses, protect the ecosystem from degrading influences originating outside of the sanctuary itself.

While considering the choice of the boundary itself, concern arose about control of the lands and waters outside of the sanctuary. Although proper selection of the boundary would reduce the impact of external land and water uses and stresses originating outside of the sanctuary on the sanctuary itself, there would always be a boundary permitting some degree of interaction. The potential threats and availability of n ssary controls would therefore affect the choice of boundaries. The primary potential threats to the sanctuary which are perceived are impacts from timber harvest and from residential development on adjacent lands and upstream in the watershed, and from water pollution occurring along lower South Slough and being introduced by tidal exchange. These problems were discussed with appropriate state agencies, and it was concluded that existing controls or authority - including local zoning (the proposed zoning ordinances would preclude intense development around the sanctuary), strict enforcement and monitoring of the State Forest Practices Act of 1971 (which would control the adverse impacts of logging), and the state water non-degradation clause (to be monitored and enforced by the Oregon Department of Environmental Quality) - would provide adequate control to protect the sanctuary if the boundaries themselves were wisely chosen and reflected the natural system.

Using the above criteria and a series of specially prepared maps and overlays, which represented both natural (e.g. slope, erosion potential, timber type, soil capabilities) and cultural (e.g. ownership patterns, tax value, visual impact) features, the boundaries of this proposal were developed. The original one-fourth mile buffer concept was relocated westward to the crest of a slight ridge, marked by Seven Devils Road. This ridge will provide protection from water related stresses originating beyond the boundary, and acquisition to the road will remove the pressures a ociated with potential development.

The southern and eastern boundaries were enlarged slightly in order to provide desired protection to streambeds, wetlands, and other physiographic features. These new boundaries include about twice as much uplands, at twice the estimated cost, of the original one-fourth mile wide buffer strip proposal. Although this may present new problems, especially in funding and possibly in conflicts with present land owners, this boundary seems to offer a solution which optimizes the factors of cost, ecosystem considerations, sanctuary viability, avoidance of conflict, and feasibility.

C. Alternative management programs

The determination of the management policy, especially the selection of compatible uses, the types of research, the prohibition of conflicting uses, and the choice of management agency is another issue involving many alternatives.

The original objective which rallied local support was the maintenance of water quality in and the productivity and wilderness characteristics of the South Slough estuary. As the application for consideration as a candidate in the estuarine sanctuary program was developed, this objective was expanded to ensure the permanent protection of the area for use as a natural field laboratory for scientists and students to provide information relevant to coastal zone management decision-making. Other uses, which would not alter the nature of the ecosystem and which were compatible with this primary objective, would be permitted.

Some consideration was given to prohibiting all except scientific and educational uses of the area and resources within the sanctuary. However, both the State of Oregon and the OCZM have a sincere desire for multi-purpose use of the sanctuary area consistent with the primary objectives. Such restriction of low level recreational use would appear both unnecessary and contrary to the guidelines for the Estuarine Sanctuary Program. The management program will always remain somewhat open. The impact of different uses will be continually assessed, and controlled, regulated or prohibited as necessary. It is anticipated that low intensity recreational uses such as boating, fishing, hunting and hiking will be permitted, but that in general the expansion of commercial enterprises will not.

Detailed consideration was given to the problems associated with two commercial uses: timber harvest and oyster farming. Because of the great importance of the timber industry in the local economy, the question was raised whether, if carefully regulated, the harvesting of timber might be permitted within the sanctuary boundaries. Suggested regulations included the requirement for a buffer between the harvest operation and the estuary, prohibition of clearcut techniques, additional requirements for prompt reforestation, and restrictions on the use of pesticides and fertilizers. Only after careful consideration of the terrain, slope, erosion potential and aesthetic impact, was it determined that timber harvest would be incompatible with the sanctuary objective.

Because of comments received as a result of the draft Environmental Impact Statement, the State of Oregon and the OCZM carefully reassessed the boundary and the timber harvest prohibition. A "two-tiered" management scheme, in which timber harvest would be prohibited within an inner buffer area, but controlled harvest would be permitted in the outer periphery of the sanctuary, was specifically considered. Such harvest would be subject to strict regulations designed to control impact on the estuarine ecosystem; examples of possible controls included restrictions such as:

a) Selective cutting only; no clearcutting

b) No use of pesticides, herbicides, or fertilizers

c) No construction of roads or skid trails; removal of timber by balloon or helicopter; or, alternatively, no use of mechanized equipment

d) Harvest only during specified periods to avoid interference with critical stages of wildlife life-cycles

e) Immediate reforestation and soil stabilization

f) Prohibition on logging on steep slopes, or in wetlands, or in the 100-year floodplain

g) Extensive baseline studies; monitoring and follow-up studies would be required for each activity, and would be funded by the harvesting agency

The continuation of timber harvest within at least part of the sanctuary boundaries would enable some tax return to be provided to Coos County, and might permit a trade of privately owned lands held by timber interests within the sanctuary for state owned forest lands in other parts of Coos County. (The state agencies involved may not permit such a trade unless timber harvest would be permitted within the sanctuary.)

After thoughtful consideration, the "two-tiered" management alternative was rejected and the prohibition on timber harvest was retained. The decision was based on the following considerations:

a) If a sanctuary is created, the use as a control will be a primary objective. Such use demands that the sanctuary remain as natural as feasible. In order to test for the effects of logging or other activities, one area must be provided where such activities do not occur. The proposed sanctuary, then, would serve as a control or base against which the impacts of logging in other areas might be determined. Only through such comparative studies can an actual assessment be made. While it is true that South Slough has remained a fairly productive unit, this does not mean logging has had no impact; there is no way of telling what its condition or productivity might be today because there has been no scientific control.

b) The necessary management restrictions were so severe that, in reality, harvest would be economically infeasible; the harvest potential would be illusory.

c) The prohibition of timber harvest would be a cleaner management policy, easier to administer and less open to misinterpretation in the future.

d) There was overwhelming public and competent scientific support for the enlarged boundaries and proposed management policies, including the prohibition on timber harvest, at the public hearing on June 3, 1974.

Timber harvest in the remainder of the watershed would continue. Such harvest would be under the regulation of the Oregon Forest Practices Act of 1971. Vigorous monitoring and enforcement of this Act should provide necessary protection from logging practices outside of the sanctuary. Additional controls might be implemented by the state or local government if necessary to maintain water quality in South Slough.

As indicated earlier (page 8) the problems associated with oyster farming also required special attention. In contrast to timber harvesting, oyster production in Oregon is very restricted, and South Slough is one of the few areas with a high potential for growing oysters. Because of salinity levels, only a small portion of the proposed sanctuary is suitable for oyster production. Consideration was given to permitting oyster culture without special restrictions; permitting such culture but with special restrictions; and prohibiting oyster culture altogether. Because of the very restricted oyster culture potential in Oregon, involved state resource agencies argued strongly that such activity should be permitted to continue subject to controls necessary to protect the sanctuary. After careful consideration of the potential impact of oyster farming on the sanctuary (especially the impact of eelgrass beds, the aesthetic impact, and the possible spatial competition with other uses) it was decided that low intensity oyster farming, restricted to stake culture in limited and defined areas, would be permitted so long as future research did not reveal any significant adverse impact on the estuary.

In considering the types of research appropriate within the sanctuary, the state has again referred to the objective of ensuring the long-term protection and use of the South Slough estuary as a natural field laboratory. Although a valid need exists for manipulative research wherein the impact of alterations and pertubations on estuarine systems are assessed, the state feels such research is not compatible with the long-term objectives of the sanctuary program. Further, insofar as ample opportunities exist to study disturbed estuarine ecosystems in other areas, a sanctuary is not necessary for this purpose. Consequently, manipulative or destructive research will not be permitted within the sanctuary. Its major research benefits will derive from long-term studies of ecological relationships within an undisturbed area, and from its use as a natural control against which the impacts of man-induced stresses on other systems can be compared.

The choice of a management program also involved many options. A variety of agencies, including the Oregon Fish Commission, State Land Board, and university system, were considered. It was decided, however, that no single agency had the required array of expertise and authority to assure proper management capability. It was also desired that the management agency contain an assurance of stability and continuity, and freedom from political overtones.

With the cooperation of many agencies, the state ultimately chose a management team to direct and administer the program at the state level. The team would consist of a representative from the Oregon Fish Commission, Wildlife Commission, Department of Environmental Quality, Division of State Lands, Department of Forestry, Natural Areas Committee, the University of Oregon Institute of Marine Biology and Coos County, with a representative from NOAA's Office of Coastal Zone Management sitting as a non-voting member. These representatives would be carefully chosen for their technical abilities. The variety of persons involved would ensure a wide range of resource and research expertise and would provide a long-term perspective and continuity to the program.

D. Alternative methods for protection

Two alternatives were considered to protect the South Slough estuary: zoning and acquisition. Zoning controls were first recommended by the Citizens Advisory Committee in consultation with the Coos County Planning Commission, and specific zoning classifications designed to protect the slough were developed and recommended, at least on an interim basis. However, it became apparent that zoning controls sufficient to protect the estuary were so stringent that the "taking" issue arose: could landowners be denied virtually all use of their land without compensation? Subsequently the county agencies, while supporting the sanctuary proposal, urged that remedies be sought to provide compensation to owners of property within the protected or preserved areas.

Some concern was also raised whether zoning would provide the necessary long-term assurance of protection that was desired. Although a recent Oregon Supreme Court decision (Fasano v. Washington County) places an increased burden upon the petitioner to demonstrate the significant public benefits of proposed zoning changes, it was determined that a more equitable solution to the landowner, and a more permanent assurance of protection, could be provided through acquisition of at least those lands of critical importance in the protection of South Slough. However, to reduce the overall costs of the program, acquisition will be restricted to just the essential lands, and adjoining lands beyond them would be regulated by less restrictive zoning and other land use controls.

After the decision was made to acquire those lands necessary to protect the estuary, a variety of possible sources of funding were examined. In August, 1972, the Coos County Planning and Programming Department initiated contacts with the Oregon Coastal Conservation and Development Commission requesting assistance in preserving and protecting South Slough; a similar request for assistance was transmitted to The Nature Conservancy in November, 1972. In the same month the Planning and Programming Department contacted Congressman John Dellenback, requesting information concerning the then newly enacted Coastal Zone Management Act. As the proposal continued to progress, from local citizens, to county agencies, to the state, potential sources of funding were continuously investigated. At one or more times these sources included:

a) Local acquisition
b) State acquisition
c) Federal actuisition
   i) Pittman-Roberts Fund
   ii) Dingell-Johnson Act
   iii) Migratory Bird Conservation Act
   iv) Endangered Species Act
   v) Land and Water Conservation Fund
   vi) Estuarine Sanctuary Program
d) Private Funds

Although the County endorsed the concept of acquisition of lands to be controlled around the estuary and at one time offered to trade 80 acres of lands, or the proceeds from their sale (estimated value $80,000 to 120,000) for privately held lands within the protected zone, it determined that it was not capable of providing the financial resources required to acquire the land.

The primary authority for state action to preserve the sanctuary for the purposes desired would be the Oregon Natural Area Preserves Act of 1973. This Act, however, requires that such natural areas already be in state ownership, or be acquired without the expenditure of state funds. Other state land acquisition programs were not entirely compatible with the purposes intended for the area, as most heavily emphasized recreational use. In addition, a number of state parks already exist in the immediate area.

The Oregon Wildlife Commission received almost $2,500,000 this year from Pittman-Roberts and Dingell-Johnson Funds, and has largely utilized the funds for vital fish and wildlife habitat enhancement and research programs. For the biennium ending July 1, 1975, only $150,000 of the Dingell-Johnson funds and none of the Pittman-Roberts funds were budgeted for land acquisition. The objectives of the Migratory Bird Conservation Fund, which is apportioned nationally for the purchase of Federal migratory bird sanctuaries, differ significantly from the intended purpose of the South Slough area. The Endangered Species Act also differs in purpose, and funding for the Act has not to date been released. Land and Water Conservation Act funds for the state have been greatly reduced, and are almost totally committed to ongoing major acquisition programs such as the Willamette Valley Greenway project. Again, the

conflict between the emphasis within the Land and Water Conservation Act upon lands for recreational uses and the intended purposes of this sanctuary, and the existing abundance of state and Federal recreational areas in the vicinity of Coos Bay, raises questions concerning its appropriateness here.

In contrast, consideration of the funding status and the objectives of the Estuarine Sanctuary Program of the Coastal Zone Management Act indicated it would be a highly appropriate source for this proposal.

The Nature Conservancy has also expressed an interest in and willingness to help protect and preserve the South Slough, and has apparently made a commitment to assist the state raise its share of the matching funds. It, too, however, was unable to acquire the entire parcel by itself.

Consideration was also given to designating South Slough a marine sanctuary under Federal authority pursuant to Title III of the Marine Protection, Research and Sanctuaries Act (PL 92-532), rather than an estuarine sanctuary as proposed. A marine sanctuary could provide the same or broader objectives and purposes for the area and its uses, and could be effected by Federal proclamation with the concurrence of the Governor; basically it would be a Federal action, under the Department of Commerce, rather than a state action.

However, the marine sanctuary authority is limited to tidal waters, and does not extend landward to include adjacent uplands; nor does it include any provision for funds for acquisition of land. Therefore, although offering nominal protection to the estuarine water body, it would not provide the control of land uses necessary to prevent adverse impact on the estuarine ecosystem. Because no acquisition of uplands would be involved, and control would still be dependent upon zoning, there would also be no relief for the concern over the "taking" issue.

E. Alternative courses of action for the Office of Coastal Zone Management

Because the estuarine sanctuary program is basically one of Federal response to state initiatives, the alternatives for Federal action are limited. The Office of Coastal Zone Management can accept the application as presented or after modification, awarding a grant in either case; or refuse to accept the application and decline the grant. OCZM has worked closely with the State of Oregon since it first indicated interest in the estuarine sanctuary program, and that Office's input has caused some modification of the proposal. The option remains, however, whether to award, delay or refuse the grant.

Delay of the grant would permit other states within the Columbian classification (Washington and northern California) to develop estuarine sanctuary proposals for submission to NOAA. However, the states are not in direct competition for designation of a single sanctuary and the award of a grant does not preclude other grants in the same region. Delay of the grant would also permit the potential for further destruction of the estuarine area, the development of

incompatible uses and conflicts where no significant ones now exist, and the inflation of land values.

Unless the application lacked merit, the outright refusal to award a grant would serve no purpose. Indeed, in view of the widely acknowledged need for such a program (see, for example, the National Estuary Study, 1970, and Ketchum, 1972), such action would be contrary to the public interest. After careful consideration, OCZM determined that the proposed sanctuary is an appropriate natural unit representative of the Columbian class of estuaries, and that the management and research policies reflect the intention of the estuarine sanctuary program.

The State of Oregon was one of the first three states to receive a program development grant (Section 305) and is now moving swiftly to develop its management program. The state is expecting to begin implementation of its management program within 12 to 18 months. Because of this, Oregon is in a position to fully utilize an estuarine sanctuary; the research results it may produce would contribute greatly to the timely completion of the state task.

VII. PROBABLY ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

There are three potential adverse environmental impacts which may not be avoidable. These are the loss of resource use, restrictions on land and water use, and loss of tax revenues.

As indicated earlier, the prohibition on timber harvest within the sanctuary boundaries will reduce the yield of that resource within Coos County. About two-thirds of the land within the proposed sanctuary boundaries might be classified as timber producing lands, although not all are suitable for harvest. Most of the timber has already been logged on one or more occasions, and much of it is immature reforestation. Timber harvesting occurs only sporadically within the proposed sanctuary boundaries, and is not a continued or large-scale operation. Through the acquisition of their lands, landowners would be compensated for the property loss.

Some restrictions will also be placed on land and water use within the sanctuary. Because of the very scarce use which the area now receives, this is expected to be a minimal impact; however, the potential for intense use of the sanctuary lands and waters will be reduced. Low intensity recreational uses such as now occur would be permitted to continue, but intensified use, such as might occur with a commercial camping ground or park, would be restricted. The use of motorized vessels in the sanctuary would be prohibited.

To lessen the adverse impact of use restrictions, special effort has been given to accommodate those uses which now occur and which would be compatible or would not affect the intended objectives of the sanctuary. Thus the existing grazing farms at the south end of the Slough, and the residential uses along the western boundary would be permitted to continue at existing levels. Oyster farming may also continue under controlled conditions.

As discussed earlier, the public acquisition of the proposed sanctuary lands will remove about 3,500 acres of land from the County tax rolls. This land, which has an assessed evaluation of approximately $560,000, contributes about 0.2% of the tax-generated revenues of six taxing districts.

III. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

While designation of the proposed estuarine sanctuary would restrict local, short-term uses of the environment, it will also provide long-term assurance that the natural resources and benefits of the area will be available for future use and enjoyment. Without sanctuary designation, intense short-term uses and gain, such as provided by intense aquaculture or residential development, might be realized. However, such uses would most likely result in long-term restrictions on use and benefit because of degradation of environmental factors. Without some additional control, the traditional conflicts between estuarine users - residential, commercial, industrial and wildlife - could be expected to occur.

Over the long-term, the research derived from the estuarine sanctuary will assist in the coastal zone management decision-making process, and will provide a basis for the wise use of the estuarine resources. These results, which will apply to areas beyond the scope of South Slough, will help avoid conflicts and mitigate adverse impacts caused by use of the coastal zone.

By protecting the natural system, the proposed sanctuary would directly contribute to the long-term maintenance of the environment. By serving as a refuge and stock for living resources, the sanctuary would provide a direct enhancement of productivity. Long-term but low level use could be made of the resource.

IX. IRREVOCABLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Insofar as the resources within the proposed sanctuary will be protected and preserved, rather than destroyed or removed, there will be no actual irrecoverable or irretrievable loss or commitment of resources involved in this proposed action. However, as the intention of this action is to provide the permanent protection of the estuary and adjacent lands, in practice a limited amount of timber resources will be removed from direct commercial exploitation.

X. CONSULTATION AND COORDINATION WITH OTHERS

A. Preparation of the Draft Environmental Impact Statement

During preparation of the draft environmental impact statement, information and comments on particular issues were requested from state and local persons and agencies familiar with the proposal, including individuals from the Office of the Governor, Oregon Division of State Lands, Oregon Coastal Conservation and Development Commission, the Oregon Fish Commission, the University of Oregon Institute of Marine Biology, the Coos Bay Port Authority Estuarine Sanctuary Committee and The Nature Conservancy.

The draft document was also reviewed internally by the Department of Commerce prior to release. Pursuant to an agreement between the Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife, Department of the Interior, and the Office of Coastal Zone Management, NOAA, Department of Commerce, notice of the proposed action was transmitted to the Fish and Wildlife Service prior to development and release of the Draft Environmental Impact Statement. Favorable comments on the proposal were received from that agency.

B. Coordination and Review of the Draft Environmental Impact Statement and Preparation of the Final Impact Statement

After the draft statement was prepared, copies were distributed to interested Federal, state and local governmental agencies and to the public. Information, comments and views on the draft statement as well as the proposed action were solicited from all parties. In addition, the Oregon Coastal Conservation and Development Commission reproduced extra copies of the draft statement, and circulated it to interested parties, including property owners within the proposed sanctuary.

A distribution list for the draft statement as distributed by the OCZM is provided in the summary; responses were received from those marked with an asterisk. Other persons or agencies submitting written comments are also listed in the summary. A total of 23 letters of comments were received by June 20, 1974. Copies of all written comments, and where appropriate, their disposition or response, are included as Appendix 5 of this final statement. The originals of this correspondence are on

file at the Office of Coastal Zone Management.

In addition, comments and advice on the proposed action and the adequacy of the draft statement were solicited from the public and any interested parties at a Public Hearing held on June 3, 1974, at the Coos Bay Library, Coos Bay, Oregon. Notice of the public hearing was provided in the draft statement, and was further announced through both formal and informal means. About 190 to 200 persons attended the meeting, and 44 persons presented statements for the record. Recordings of the hearing are on file in the Office of Coastal Zone Management.

While in Oregon for the Public Hearing, representatives of the Office of Coastal Zone Management met with the Coos Bay County Commissioners to discuss their interest in and concern about the proposed action. An effort was made by both the State of Oregon representatives and OCZM to address these concerns in the final statement.

The Oregon Coastal Conservation and Development Commission submitted the application and the draft Environmental Impact Statement to the Oregon State Clearinghouse and to the Coos-Curry Council of Governments for review and comments. The responses of these two agencies are included in Appendix 5.

Primarily at the request of the Coos-Curry Council of Governments, which indicated concern about the economic impact data in the draft statement, a special contract was awarded to provide a further assessment of the possible economic impact of the proposed sanctuary. The report of this study is presented in Appendix 4.

In addition, the Office of Coastal Zone Management solicited comments and information from a variety of state agencies while revising the draft statement. On most, but not all, occasions OCZM utilized the Oregon Coastal Conservation and Development Commission as the contact for coordinating such comments and information. Agencies contacted included the Office of the Governor, Oregon Department of Environmental Quality, Oregon Fish Commission, Department of Forestry, Oregon State University, University of Oregon Institute of Marine Biology and various private citizens.

All of the comments received by the Office of Coastal Zone Management including those submitted at the Public Hearing have been considered in the preparation of this Final Environmental Impact Statement. The draft statement has been revised and much new additional information has been included. The Office of Coastal Zone Management wishes to express its sincere appreciation for the many concerned individuals and agencies who contributed comments and information.

The majority of the comments received were strongly in favor of the proposed action. Major concerns submitted by more than two individuals included (a) a desire for a more detailed statement of the management policies and techniques; (b) the prohibition of timber harvest within the sanctuary boundaries; (c) the selection of the boundaries and desire to reduce the sanctuary to the minimum possible size; and (d) the potential economic impact. Each of these sections have been substantially enlarged and treated in greater detail. In addition, a copy of the draft special award conditions for the proposed sanctuary have been included (see the response to the National Audubon Society, Appendix 5). This draft defines the objectives and management policy for the sanctuary.

A few individuals apparently misunderstood the purpose of the land acquisition and the nature of the use of the proposed sanctuary. The Estuarine Sanctuary Program is intended to assure the long-term protection of selected, representative estuarine ecosystems. The intention of the program is not merely to preserve estuarine water areas, but to protect the ecosystem for scientific and educational uses. To attempt to preserve the water without the adjacent uplands, which are an integral part of the estuarine system, would be meaningless. Because the two parts - land and water - are portions of the same system, one cannot be studied, or protected, without the other.

In addition, the use of the sanctuary as a control is dependent upon it remaining in its present or natural state. This is perhaps the greatest benefit from, and reason to acquire, such areas. This use is largely independent of past activities, but it is greatly dependent upon maintenance of the natural system and freedom from present or future man-induced impacts.

Copies of this final statement have been furnished to those individuals and agencies who responded to the draft statement with written comments, or who have requested the final statement. A notice of availability of the Final Environmental Impact Statement has been made in the Federal Register.

APPENDIX 1.

COASTAL ZONE MANAGEMENT ACT OF 1972 (P.L.92-583)

Public Law 92-583
92nd Congress, S. 3507
October 27, 1972

An Act

86 STAT. 1280

To establish a national policy and develop a national program for the management, beneficial use, protection, and development of the land and water resources of the Nation's coastal zones, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That the Act entitled "An Act to provide for a comprehensive, long-range, and coordinated national program in marine science, to establish a National Council on Marine Resources and Engineering Development, and a Commission on Marine Science, Engineering and Resources, and for other purposes", approved June 17, 1966 (80 Stat. 203), as amended (33 U.S.C. 1101–1124), is further amended by adding at the end thereof the following new title:

Marine Resources and Engineering Development Act of 1966, amendment.

80 Stat. 998; 84 Stat. 865.

TITLE III—MANAGEMENT OF THE COASTAL ZONE

SHORT TITLE

SEC. 301. This title may be cited as the "Coastal Zone Management Act of 1972".

CONGRESSIONAL FINDINGS

SEC. 302. The Congress finds that—

(a) There is a national interest in the effective management, beneficial use, protection, and development of the coastal zone;

(b) The coastal zone is rich in a variety of natural, commercial, recreational, industrial, and esthetic resources of immediate and potential value to the present and future well-being of the Nation;

(c) The increasing and competing demands upon the lands and waters of our coastal zone occasioned by population growth and economic development, including requirements for industry, commerce, residential development, recreation, extraction of mineral resources and fossil fuels, transportation and navigation, waste disposal, and harvesting of fish, shellfish, and other living marine resources, have resulted in the loss of living marine resources, wildlife, nutrient-rich areas, permanent and adverse changes to ecological systems, decreasing open space for public use, and shoreline erosion;

(d) The coastal zone, and the fish, shellfish, other living marine resources, and wildlife therein, are ecologically fragile and consequently extremely vulnerable to destruction by man's alterations;

(e) Important ecological, cultural, historic, and esthetic values in the coastal zone which are essential to the well-being of all citizens are being irretrievably damaged or lost;

(f) Special natural and scenic characteristics are being damaged by ill-planned development that threatens these values;

(g) In light of competing demands and the urgent need to protect and to give high priority to natural systems in the coastal zone, present state and local institutional arrangements for planning and regulating land and water uses in such areas are inadequate; and

(h) The key to more effective protection and use of the land and water resources of the coastal zone is to encourage the states to exercise their full authority over the lands and waters in the coastal zone by assisting the states, in cooperation with Federal and local governments and other vitally affected interests, in developing land and water use programs for the coastal zone, including unified policies, criteria, standards, methods, and processes for dealing with land and water use decisions of more than local significance.

DECLARATION OF POLICY

SEC. 303. The Congress finds and declares that it is the national policy (a) to preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations, (b) to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone giving full consideration to ecological, cultural, historic, and esthetic values as well as to needs for economic development, (c) for all Federal agencies engaged in programs affecting the coastal zone to cooperate and participate with state and local governments and regional agencies in effectuating the purposes of this title, and (d) to encourage the participation of the public, of Federal, state, and local governments and of regional agencies in the development of coastal zone management programs. With respect to implementation of such managament programs, it is the national policy to encourage cooperation among the various state and regional agencies including establishment of interstate and regional agreements, cooperative procedures, and joint action particularly regarding environmental problems.

DEFINITIONS

SEC. 304. For the purposes of this title—

(a) "Coastal zone" means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches. The zone extends, in Great Lakes waters, to the international boundary between the United States and Canada and, in other areas, seaward to the outer limit of the United States territorial sea. The zone extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters. Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents.

(b) "Coastal waters" means (1) in the Great Lakes area, the waters within the territorial jurisdiction of the United States consisting of the Great Lakes, their connecting waters, harbors, roadsteads, and estuary-type areas such as bays, shallows, and marshes and (2) in other areas, those waters, adjacent to the shorelines, which contain a measurable quantity or percentage of sea water, including, but not limited to, sounds, bays, lagoons, bayous, ponds, and estuaries.

(c) "Coastal state" means a state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico, Long Island Sound, or one or more of the Great Lakes. For the purposes of this title, the term also includes Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(d) "Estuary" means that part of a river or stream or other body of water having unimpaired connection with the open sea, where the sea water is measurably diluted with fresh water derived from land drainage. The term includes estuary-type areas of the Great Lakes.

(e) "Estuarine sanctuary" means a research area which may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands, constituting to the extent feasible a natural unit, set

aside to provide scientists and students the opportunity to examine over a period of time the ecological relationships within the area.

(f) "Secretary" means the Secretary of Commerce.

(g) "Management program" includes, but is not limited to, a comprehensive statement in words, maps, illustrations, or other media of communication, prepared and adopted by the state in accordance with the provisions of this title, setting forth objectives, policies, and standards to guide public and private uses of lands and waters in the coastal zone.

(h) "Water use" means activities which are conducted in or on the water; but does not mean or include the establishment of any water quality standard or criteria or the regulation of the discharge or runoff of water pollutants except the standards, criteria, or regulations which are incorporated in any program as required by the provisions of section 307(f).

(i) "Land use" means activities which are conducted in or on the shorelands within the coastal zone, subject to the requirements outlined in section 307(g).

MANAGEMENT PROGRAM DEVELOPMENT GRANTS

SEC. 305. (a) The Secretary is authorized to make annual grants to any coastal state for the purpose of assisting in the development of a management program for the land and water resources of its coastal zone.

(b) Such management program shall include:

(1) an identification of the boundaries of the coastal zone subject to the management program;

(2) a definition of what shall constitute permissible land and water uses within the coastal zone which have a direct and significant impact on the coastal waters;

(3) an inventory and designation of areas of particular concern within the coastal zone;

(4) an identification of the means by which the state proposes to exert control over the land and water uses referred to in paragraph (2) of this subsection, including a listing of relevant constitutional provisions, legislative enactments, regulations, and judicial decisions;

(5) broad guidelines on priority of uses in particular areas, including specifically those uses of lowest priority;

(6) a description of the organizational structure proposed to implement the management program, including the responsibilities and interrelationships of local, areawide, state, regional, and interstate agencies in the management process.

(c) The grants shall not exceed 66⅔ per centum of the costs of the program in any one year and no state shall be eligible to receive more than three annual grants pursuant to this section. Federal funds received from other sources shall not be used to match such grants. In order to qualify for grants under this section, the state must reasonably demonstrate to the satisfaction of the Secretary that such grants will be used to develop a management program consistent with the requirements set forth in section 306 of this title. After making the initial grant to a coastal state, no subsequent grant shall be made under this section unless the Secretary finds that the state is satisfactorily developing such management program. Limitation.

(d) Upon completion of the development of the state's management program, the state shall submit such program to the Secretary for

review and approval pursuant to the provisions of section 306 of this title, or such other action as he deems necessary. On final approval of such program by the Secretary, the state's eligibility for further grants under this section shall terminate, and the state shall be eligible for grants under section 306 of this title.

Grants, allocation.

(e) Grants under this section shall be allocated to the states based on rules and regulations promulgated by the Secretary: *Provided, however*, That no management program development grant under this section shall be made in excess of 10 per centum nor less than 1 per centum of the total amount appropriated to carry out the purposes of this section.

(f) Grants or portions thereof not obligated by a state during the fiscal year for which they were first authorized to be obligated by the state, or during the fiscal year immediately following, shall revert to the Secretary, and shall be added by him to the funds available for grants under this section.

(g) With the approval of the Secretary, the state may allocate to a local government, to an areawide agency designated under section 204 of the Demonstration Cities and Metropolitan Development Act of 1966, to a regional agency, or to an interstate agency, a portion of the grant under this section, for the purpose of carrying out the provisions of this section.

80 Stat. 1262; 82 Stat. 208. 42 USC 3334.

Expiration date.

(h) The authority to make grants under this section shall expire on June 30, 1977.

ADMINISTRATIVE GRANTS

Limitation.

SEC. 306. (a) The Secretary is authorized to make annual grants to any coastal state for not more than 66⅔ per centum of the costs of administering the state's management program, if he approves such program in accordance with subsection (c) hereof. Federal funds received from other sources shall not be used to pay the state's share of costs.

Allocation.

(b) Such grants shall be allocated to the states with approved programs based on rules and regulations promulgated by the Secretary which shall take into account the extent and nature of the shoreline and area covered by the plan, population of the area, and other relevant factors: *Provided, however*, That no annual administrative grant under this section shall be made in excess of 10 per centum nor less than 1 per centum of the total amount appropriated to carry out the purposes of this section.

Program requirements.

(c) Prior to granting approval of a management program submitted by a coastal state, the Secretary shall find that:

(1) The state has developed and adopted a management program for its coastal zone in accordance with rules and regulations promulgated by the Secretary, after notice, and with the opportunity of full participation by relevant Federal agencies, state agencies, local governments, regional organizations, port authorities, and other interested parties, public and private, which is adequate to carry out the purposes of this title and is consistent with the policy declared in section 303 of this title.

(2) The state has:

(A) coordinated its program with local, areawide, and interstate plans applicable to areas within the coastal zone existing on January 1 of the year in which the state's management program is submitted to the Secretary, which plans have been developed by a local government, an areawide agency designated pursuant to regulations established under section 204 of the Demonstration

Cities and Metropolitan Development Act of 1966, a regional agency, or an interstate agency; and

80 Stat. 1262; 82 Stat. 208. 42 USC 3334.

(B) established an effective mechanism for continuing consultation and coordination between the management agency designated pursuant to paragraph (5) of this subsection and with local governments, interstate agencies, regional agencies, and areawide agencies within the coastal zone to assure the full participation of such local governments and agencies in carrying out the purposes of this title.

(3) The state has held public hearings in the development of the management program.

(4) The management program and any changes thereto have been reviewed and approved by the Governor.

(5) The Governor of the state has designated a single agency to receive and administer the grants for implementing the management program required under paragraph (1) of this subsection.

(6) The state is organized to implement the management program required under paragraph (1) of this subsection.

(7) The state has the authorities necessary to implement the program, including the authority required under subsection (d) of this section.

(8) The management program provides for adequate consideration of the national interest involved in the siting of facilities necessary to meet requirements which are other than local in nature.

(9) The management program makes provision for procedures whereby specific areas may be designated for the purpose of preserving or restoring them for their conservation, recreational, ecological, or esthetic values.

(d) Prior to granting approval of the management program, the Secretary shall find that the state, acting through its chosen agency or agencies, including local governments, areawide agencies designated under section 204 of the Demonstration Cities and Metropolitan Development Act of 1966, regional agencies, or interstate agencies, has authority for the management of the coastal zone in accordance with the management program. Such authority shall include power—

(1) to administer land and water use regulations, control development in order to ensure compliance with the management program, and to resolve conflicts among competing uses; and

(2) to acquire fee simple and less than fee simple interests in lands, waters, and other property through condemnation or other means when necessary to achieve conformance with the management program.

(e) Prior to granting approval, the Secretary shall also find that the program provides:

(1) for any one or a combination of the following general techniques for control of land and water uses within the coastal zone;

(A) State establishment of criteria and standards for local implementation, subject to administrative review and enforcement of compliance;

(B) Direct state land and water use planning and regulation; or

(C) State administrative review for consistency with the management program of all development plans, projects, or land and water use regulations, including exceptions and variances thereto, proposed by any state or local authority or private developer, with power to approve or disapprove after public notice and an opportunity for hearings.

(2) for a method of assuring that local land and water use regulations within the coastal zone do not unreasonably restrict or exclude land and water uses of regional benefit.

(f) With the approval of the Secretary, a state may allocate to a local government, an areawide agency designated under section 204 of the Demonstration Cities and Metropolitan Development Act of 1966, a regional agency, or an interstate agency, a portion of the grant under this section for the purpose of carrying out the provisions of this section: *Provided*, That such allocation shall not relieve the state of the responsibility for ensuring that any funds so allocated are applied in furtherance of such state's approved management program.

80 Stat. 1262; 82 Stat. 203. 42 USC 3334.

Program modification.

(g) The state shall be authorized to amend the management program. The modification shall be in accordance with the procedures required under subsection (c) of this section. Any amendment or modification of the program must be approved by the Secretary before additional administrative grants are made to the state under the program as amended.

Segmental development.

(h) At the discretion of the state and with the approval of the Secretary, a management program may be developed and adopted in segments so that immediate attention may be devoted to those areas within the coastal zone which most urgently need management programs: *Provided*, That the state adequately provides for the ultimate coordination of the various segments of the management program into a single unified program and that the unified program will be completed as soon as is reasonably practicable.

INTERAGENCY COORDINATION AND COOPERATION

SEC. 307. (a) In carrying out his functions and responsibilities under this title, the Secretary shall consult with, cooperate with, and, to the maximum extent practicable, coordinate his activities with other interested Federal agencies.

(b) The Secretary shall not approve the management program submitted by a state pursuant to section 306 unless the views of Federal agencies principally affected by such program have been adequately considered. In case of serious disagreement between any Federal agency and the state in the development of the program the Secretary, in cooperation with the Executive Office of the President, shall seek to mediate the differences.

(c)(1) Each Federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs.

(2) Any Federal agency which shall undertake any development project in the coastal zone of a state shall insure that the project is, to the maximum extent practicable, consistent with approved state management programs.

Certification.

(3) After final approval by the Secretary of a state's management program, any applicant for a required Federal license or permit to conduct an activity affecting land or water uses in the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the state's approved program and that such activity will be conducted in a manner consistent with the program. At the same time, the applicant shall furnish to the state or its designated agency a copy of the certification, with all necessary information and data. Each coastal state shall establish procedures for public notice in the case of all such

certifications and, to the extent it deems appropriate, procedures for public hearings in connection therewith. At the earliest practicable time, the state or its designated agency shall notify the Federal agency concerned that the state concurs with or objects to the applicant's certification. If the state or its designated agency fails to furnish the required notification within six months after receipt of its copy of the applicant's certification, the state's concurrence with the certification shall be conclusively presumed. No license or permit shall be granted by the Federal agency until the state or its designated agency has concurred with the applicant's certification or until, by the state's failure to act, the concurrence is conclusively presumed, unless the Secretary, on his own initiative or upon appeal by the applicant, finds, after providing a reasonable opportunity for detailed comments from the Federal agency involved and from the state, that the activity is consistent with the objectives of this title or is otherwise necessary in the interest of national security. Notification.

(d) State and local governments submitting applications for Federal assistance under other Federal programs affecting the coastal zone shall indicate the views of the appropriate state or local agency as to the relationship of such activities to the approved management program for the coastal zone. Such applications shall be submitted and coordinated in accordance with the provisions of title IV of the Intergovernmental Coordination Act of 1968 (82 Stat. 1098). Federal agencies shall not approve proposed projects that are inconsistent with a coastal state's management program, except upon a finding by the Secretary that such project is consistent with the purposes of this title or necessary in the interest of national security. 42 USC 4231.

(e) Nothing in this title shall be construed—

(1) to diminish either Federal or state jurisdiction, responsibility, or rights in the field of planning, development, or control of water resources, submerged lands, or navigable waters; nor to displace, supersede, limit, or modify any interstate compact or the jurisdiction or responsibility of any legally established joint or common agency of two or more states or of two or more states and the Federal Government; nor to limit the authority of Congress to authorize and fund projects;

(2) as superseding, modifying, or repealing existing laws applicable to the various Federal agencies; nor to affect the jurisdiction, powers, or prerogatives of the International Joint Commission, United States and Canada, the Permanent Engineering Board, and the United States operating entity or entities established pursuant to the Columbia River Basin Treaty, signed at Washington, January 17, 1961, or the International Boundary and Water Commission, United States and Mexico.

(f) Notwithstanding any other provision of this title, nothing in this title shall in any way affect any requirement (1) established by the Federal Water Pollution Control Act, as amended, or the Clean Air Act, as amended, or (2) established by the Federal Government or by any state or local government pursuant to such Acts. Such requirements shall be incorporated in any program developed pursuant to this title and shall be the water pollution control and air pollution control requirements applicable to such program. Ante, p. 816. 81 Stat. 485; 84 Stat. 1676. 42 USC 1857 note.

(g) When any state's coastal zone management program, submitted for approval or proposed for modification pursuant to section 306 of this title, includes requirements as to shorelands which also would be subject to any Federally supported national land use program which may be hereafter enacted, the Secretary, prior to approving such pro-

gram, shall obtain the concurrence of the Secretary of the Interior, or such other Federal official as may be designated to administer the national land use program, with respect to that portion of the coastal zone management program affecting such inland areas.

PUBLIC HEARINGS

SEC. 308. All public hearings required under this title must be announced at least thirty days prior to the hearing date. At the time of the announcement, all agency materials pertinent to the hearings, including documents, studies, and other data, must be made available to the public for review and study. As similar materials are subsequently developed, they shall be made available to the public as they become available to the agency.

REVIEW OF PERFORMANCE

SEC. 309. (a) The Secretary shall conduct a continuing review of the management programs of the coastal states and of the performance of each state.

Financial assistance, termination.

(b) The Secretary shall have the authority to terminate any financial assistance extended under section 306 and to withdraw any unexpended portion of such assistance if (1) he determines that the state is failing to adhere to and is not justified in deviating from the program approved by the Secretary; and (2) the state has been given notice of the proposed termination and withdrawal and given an opportunity to present evidence of adherence or justification for altering its program.

RECORDS

SEC. 310. (a) Each recipient of a grant under this title shall keep such records as the Secretary shall prescribe, including records which fully disclose the amount and disposition of the funds received under the grant, the total cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

Audit.

(b) The Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipient of the grant that are pertinent to the determination that funds granted are used in accordance with this title.

ADVISORY COMMITTEE

Coastal Zone Management Advisory Committee, establishment; membership.

SEC. 311. (a) The Secretary is authorized and directed to establish a Coastal Zone Management Advisory Committee to advise, consult with, and make recommendations to the Secretary on matters of policy concerning the coastal zone. Such committee shall be composed of not more than fifteen persons designated by the Secretary and shall perform such functions and operate in such a manner as the Secretary may direct. The Secretary shall insure that the committee membership as a group possesses a broad range of experience and knowledge relating to problems involving management, use, conservation, protection, and development of coastal zone resources.

Compensation, travel expenses.

(b) Members of the committee who are not regular full-time employees of the United States, while serving on the business of the committee, including traveltime, may receive compensation at rates not exceeding $100 per diem; and while so serving away from their

homes or regular places of business may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for individuals in the Government service employed intermittently. 80 Stat. 499; 83 Stat. 190.

ESTUARINE SANCTUARIES

SEC. 312. The Secretary, in accordance with rules and regulations promulgated by him, is authorized to make available to a coastal state grants of up to 50 per centum of the costs of acquisition, development, and operation of estuarine sanctuaries for the purpose of creating natural field laboratories to gather data and make studies of the natural and human processes occurring within the estuaries of the coastal zone. The Federal share of the cost for each such sanctuary shall not exceed $2,000,000. No Federal funds received pursuant to section 305 or section 306 shall be used for the purpose of this section. Grants. Federal share.

ANNUAL REPORT

SEC. 313. (a) The Secretary shall prepare and submit to the President for transmittal to the Congress not later than November 1 of each year a report on the administration of this title for the preceding fiscal year. The report shall include but not be restricted to (1) an identification of the state programs approved pursuant to this title during the preceding Federal fiscal year and a description of those programs; (2) a listing of the states participating in the provisions of this title and a description of the status of each state's programs and its accomplishments during the preceding Federal fiscal year; (3) an itemization of the allocation of funds to the various coastal states and a breakdown of the major projects and areas on which these funds were expended; (4) an identification of any state programs which have been reviewed and disapproved or with respect to which grants have been terminated under this title, and a statement of the reasons for such action; (5) a listing of all activities and projects which, pursuant to the provisions of subsection (c) or subsection (d) of section 307, are not consistent with an applicable approved state management program; (6) a summary of the regulations issued by the Secretary or in effect during the preceding Federal fiscal year; (7) a summary of a coordinated national strategy and program for the Nation's coastal zone including identification and discussion of Federal, regional, state, and local responsibilities and functions therein; (8) a summary of outstanding problems arising in the administration of this title in order of priority; and (9) such other information as may be appropriate.

(b) The report required by subsection (a) shall contain such recommendations for additional legislation as the Secretary deems necessary to achieve the objectives of this title and enhance its effective operation.

RULES AND REGULATIONS

SEC. 314. The Secretary shall develop and promulgate, pursuant to section 553 of title 5, United States Code, after notice and opportunity for full participation by relevant Federal agencies, state agencies, local governments, regional organizations, port authorities, and other interested parties, both public and private, such rules and regulations as may be necessary to carry out the provisions of this title. 80 Stat. 383.

AUTHORIZATION OF APPROPRIATIONS

SEC. 315. (a) There are authorized to be appropriated—

(1) the sum of $9,000,000 for the fiscal year ending June 30, 1973, and for each of the fiscal years 1974 through 1977 for grants under section 305, to remain available until expended;

(2) such sums, not to exceed $30,000,000, for the fiscal year ending June 30, 1974, and for each of the fiscal years 1975 through 1977, as may be necessary, for grants under section 306 to remain available until expended; and

(3) such sums, not to exceed $6,000,000 for the fiscal year ending June 30, 1974, as may be necessary, for grants under section 312, to remain available until expended.

(b) There are also authorized to be appropriated such sums, not to exceed $3,000,000, for fiscal year 1973 and for each of the four succeeding fiscal years, as may be necessary for administrative expenses incident to the administration of this title.

Approved October 27, 1972.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 92-1049 accompanying H.R. 14146 (Comm. on Merchant Marine and Fisheries) and No. 92-1544 (Comm. of Conference).
SENATE REPORT No. 92-753 (Comm. on Commerce).
CONGRESSIONAL RECORD, Vol. 118 (1972):
Apr. 25, considered and passed Senate.
Aug. 2, considered and passed House, amended, in lieu of H.R. 14146.
Oct. 12, House and Senate agreed to conference report.
WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 8, No. 44:
Oct. 28, Presidential statement.

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APPENDIX 2.

FINAL RULES FOR ESTUARINE SANCTUARY GRANTS

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PART IV

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

■

Estuarine Sanctuary Guidelines

Title 15—Commerce and Foreign Trade

CHAPTER IX—NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

PART 921—ESTURAINE SANCTUARY GUIDELINES

The National Oceanic and Atmospheric Administration (NOAA) on March 7, 1974, proposed guidelines (15 CFR Part 921) pursuant to section 312 of the Coastal Zone Management Act of 1972 (Pub. L. 92-583, 86 Stat. 1280), hereinafter referred to as the "Act," for the purpose of establishing the policy and procedures for the nomination, selection and management of estuarine sanctuaries.

Written comments were to be submitted to the Office of Coastal Environment (now the Office of Coastal Zone Management), National Oceanic and Atmospheric Administration, before April 8, 1974, and consideration has been given those comments.

The Act recognizes that the coastal zone is rich in a variety of natural, commercial, recreational, industrial and esthetic resources of immediate and potential value to the present and future well-being of the nation. States are encouraged to develop and implement management programs to achieve wise use of the resources of the coastal zone, and the Act authorizes Federal grants to the States for these purposes (sections 305 and 306).

In addition, under section 312 of the Act, the Secretary of Commerce is authorized to make available to a coastal State grants of up to 50 per centum of the cost of acquisition, development and operation of estuarine sanctuaries. The guidelines contained in this part are for grants under section 312.

In general, section 312 provides that grants may be awarded to States on a matching basis to acquire, develop and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time ecological relationships within the area. The purpose of these guidelines is to establish the rules and regulations for implementation of this program.

The National Oceanic and Atmospheric Administration is publishing herewith the final regulations describing the procedures for applications to receive grants for estuarine sanctuaries under section 312 of the Act. The final regulations and criteria were revised from the proposed guidelines based on the comments received. A total of fifty (50) States, agencies, organizations and individuals submitted responses to the proposed section 312 guidelines published in the FEDERAL REGISTER on March 7, 1974. Of those responses received, eight (8) offered no comment or were wholly favorable as to the nature and content of the guidelines as originally proposed. Forty-two (42) commentators submitted suggestions concerning the proposed section 312 guidelines.

The following summary analyzes key comments received on various sections of the proposed regulations and presents the rationale for the responses made.

Section 921.2 *Definitions*. Three comments requested that the term "estuary" be defined. Although the term is defined in the Act and also in the regulations dealing with Coastal Zone Management Program Development Grants (Part 920 of this chapter) published November 29, 1973, it has been added to these regulations and broadened slightly to include marine lagoons with restricted freshwater input such as might occur along the south Texas coast.

Two other comments requested that the "primary purpose" referred to in § 921.2(b) be clearly defined. Although elaborated upon in § 921.3(a), for the purpose of clarity this change has been made.

Section 921.3 *Objectives and Implementation*. Several comments suggested that the estuarine sanctuary program objectives were too narrowly defined and specifically that they should be broadened to include the acquisition and preservation of unique or endangered estuaries for wildlife or ecological reasons. Although the Act (section 302) declares it the nation's policy to preserve, protect, develop, and where possible, to restore or enhance coastal resources, this is perceived to be achievable through State actions pursuant to sections 305 and 305. While it is recognized that the creation of an estuarine sanctuary may in fact serve to preserve or protect an area or biological community, the legislative history of section 312 clearly indicates the estuarine sanctuary program was not intended to duplicate existing broad purpose Federal preservation programs, such as might be accommodated by use of the Land and Water Conservation Fund Act. Instead, both in the Act as well as its legislative history, the objective is defined as preserving representative estuarine areas for long-term research and educational uses.

Three other comments suggested the objectives of the program should be enlarged to include the restoration of environmentally degraded areas. This, too, is perceived to be a State requirement separate from section 312. In addition, adequate authority for restoring degraded water areas now exists (for example, Pub. L. 92-500 in addition to sections 302, 305 and 306 of the Act). No significant additional benefit would appear to result from declaring an area an estuarine sanctuary for the purposes of restoration.

A few comments indicated that the examples of sanctuary use were too heavily weighted toward scientific uses to the exclusion of educational uses. Public education concerning the value and benefits of, and the nature of conflict within the coastal zone, will be essential to the success of a coastal zone management program. The section has been changed to reflect an appropriate concern for educational use.

Some commentators suggested changes in or additions to the specific examples of sanctuary uses and purposes. These examples were taken from the Senate and House Committee Reports and are considered sufficient to reflect the kinds of uses intended within an estuarine sanctuary.

Several comments were received pertaining to § 921.3(c) involving the restrictions against overemphasis of destructive or manipulative research. Ten comments indicated that the section was too weak and would not provide sufficient long-term protection for the sanctuary ecosystem. Several commentators specifically recommended deleting the words "would not normally be permitted" and inserting in their place "will not be permitted." In contrast, three respondents indicated that the potential use of estuarine sanctuaries for manipulative or destructive research was too restricted, and that these uses should be generally permitted if not encouraged.

The legislative history of section 312 clearly indicates that the intent of the estuarine sanctuary program should be to preserve representative estuarine areas so that they may provide long-term (virtually permanent) scientific and educational use. The uses perceived are compatible with what has been defined as "research natural areas." In an era of rapidly degrading estuarine environments, the estuarine sanctuary program will ensure that a representative series of natural areas will be available for scientific or educational uses dependent on that natural character, for example, for baseline studies, for use in understanding the functioning of natural ecological systems, for controls against which the impacts of development in other areas might be compared, and as interpretive centers for educational purposes. Any use, research or otherwise, which would destroy or detract from the natural system, would be inappropriate under this program.

In general, the necessity of or benefit from permitting manipulative or destructive research within an estuarine sanctuary is unclear. While there is a legitimate need for such kinds of research, ample opportunity for manipulative or destructive research to assess directly man's impact or stresses on the estuarine environment exists now without the need for creation or use of an estuarine sanctuary for this purpose. In contrast, a clear need exists for natural areas to serve as controls for manipulative research or research on altered systems.

The section on manipulative research has been changed to reflect the concern for continued maintenance of the area as a natural system. However, the modifier "normally" has been retained because, within these limits, it is not felt necessary to preclude all such uses; the occasion may rarely arise when because of a thoroughly demonstrated direct benefit, such research may be permitted.

Several comments suggested that the program should include degraded estuarine systems, rather than be limited to areas which are "relatively undisturbed by human activities." Such areas would permit research efforts designed to restore an estuarine area. As indicated

above, an ample legislative mandate to restore environmentally degraded areas already exists; the benefits to be derived from declaring such areas estuarine sanctuaries would be marginal. Indeed, it would appear that if restoration efforts cannot occur without estuarine sanctuary designation, then, given the limited resources of this program, such efforts would not be feasible.

A few commentators suggested that the phrase (§ 921.3(e)) "if sufficient permanence and control by the State can be assured, the acquisition of a sanctuary may involve less than the acquisition of a fee simple interest" be more clearly defined. Explanatory language has been added to that section.

Section 921.4 *Zoogeographic Classification.* Because the classification scheme utilized plants as well as animals, two commentators suggested that zoogeographic be changed to biogeographic. This change is reflected in the final regulations.

One comment suggested that selection of sanctuaries should depend on the pressures and threats being brought to bear upon the natural areas involved even if this meant selecting several sanctuaries from one classification and none from another.

The legislative history of section 312 clearly shows the intent to select estuarine sanctuaries on a rational basis which would reflect regional differentiation and a variety of ecosystems. The biogeographic classification system, which reflects geographic, hydrographic, and biologic differences, fulfills that intention. A scheme which would abandon that system, or another similar one, and would not fulfill the requirements of providing regional differentiation and a variety of ecosystems, would not be consistent with the intended purpose of the Act.

A few comments received suggested that the biogeographic classification scheme be enlarged by the addition of a new class reflecting an area or State of special concern or interest to the respondent. (No two commentators suggested the same area.) It is felt that adequate national representation is provided by the biogeographic scheme proposed, and that the changes offered were in most cases examples of sub-categories that might be utilized.

One comment suggested a specific change in the definition of the "Great Lakes" category. Portions of that suggestion have been incorporated into the final rules.

Two commentators requested assurance that sub-categories of the biogeographic scheme will in fact be utilized. The final language substitutes "will be developed and utilized" for "may be developed and utilized."

Section 921.5 *Multiple Use.* Several comments were received pertaining to the multiple use concept. Three commentators suggested that the multiple use directive was contrary to or absent from the Act and should be omitted. Ten respondents felt the concept should be more explicitly defined and restricted so that the primary purpose of the sanctuary would be more clearly protected. In contrast, two commentators felt that the definition might prove too restrictive and should be broadened. Several commentators suggested that examples of anticipated multiple use might be appropriate.

While recognizing that it is not always possible to accommodate more than a single use in an environmentally sensitive area, it is not the intention to unnecessarily preclude the uses of sanctuary areas where they are clearly compatible with and do not detract from the long-term protection of the ecosystem for scientific and educational purposes. The language of § 921.5 has been changed accordingly.

Section 921.6 *Relationship to Other Provisions of the Act and to Marine Sanctuaries.* Several comments were received which commended and stressed the need for close coordination between the development of State coastal zone management programs, especially and land and water use controls, and the estuarine sanctuary program.

The relationship between the two programs is emphasized: estuarine sanctuaries should provide benefit—both short-term and long-term—to coastal zone management decision-makers; and State coastal zone management programs must provide necessary protection for estuarine sanctuaries. This necessary coordination is discussed not only in the estuarine sanctuary regulations, but will also be addressed in an appropriate fashion in guidelines and rules for Coastal Zone Management Program Approval Criteria and Administrative Grants.

Three commentators discussed the need for swift action by both State and Federal governments to establish and acquire estuarine sanctuaries. The Office of Coastal Zone Management intends to pursue the program as swiftly as available manpower restraints will permit.

A few comments sought reassurance that the estuarine sanctuaries program will in fact be coordinated with the Marine Sanctuaries Program (Title III, Pub. L. 92-532). The guidelines have been changed to reflect that both programs will be administered by the same office.

SUBPART B—APPLICATION FOR GRANTS

Section 921.10 *General.* One reviewer indicated uncertainty about which State agency may submit applications for grants under section 312. Although individual States may vary in the choice of individual agencies to apply for an estuarine sanctuary, because of the necessity for coordination with the State coastal zone management program the entity within the State which is the certified contact with the Office of Coastal Zone Management, NOAA, responsible for the administration of the coastal zone management program must endorse or approve an estuarine sanctuary application.

Appropriate language has been included to ensure this coordination.

Section 921.11 *Initial Application for Acquisition, Development and Operation Grants.* Two comments requested that the source and nature of acceptable matching funds should be explicitly identified.

OMB Circular A-102 generally defines and identifies legitimate "match" for Federal grant projects. In general, reference should be made to that document. However, the section has been expanded in response to some specific and frequent questions.

Two comments stressed the need for increased availability of research funds to adequately utilize the potential of estuarine sanctuaries. While not an appropriate function of the estuarine sanctuary program, the Office of Coastal Zone Management is discussing the necessity of adequate funding with appropriate agencies.

One comment suggested that the term "legal description" of the sanctuary (§ 921.11(a)) is not appropriate for all categories of information requested. The word "legal" has been omitted.

Three reviewers indicated that the Act provides no basis for consideration of socio-economic impacts (§ 921.11(l)) and that this criterion seemed inappropriate to selecting estuarine sanctuaries. Apparently these reviewers misunderstood the intention of this requirement. The information in this section is necessary for preparation of an environmental impact statement which will be prepared pursuant to NEPA. Although required in the application, such information is not a part of the selection criteria, which are addressed in Subpart C, § 921.20.

One similar comment was received with regard to consideration of existing and potential uses and conflicts (§ 921.11(h)). This item is also discussed under selection criteria (§ 921.20(h)). It is intended that this criterion will only be considered when choosing between two or more sanctuary applications within the same biogeographic category which are of otherwise equal merit.

One comment drew attention to an apparent typographic error in § 921.11 (m) where the term "marine estuaries" seems out of context. This has been corrected.

Two commentators suggested that public hearings should be required in the development of an estuarine sanctuary application. Although such a hearing is deemed desirable by the Office of Coastal Zone Management, it would not always seem to be necessary. The language in § 920.11(1) has been changed to reflect the sincere concern for the adequate involvement of the public, which is also addressed under a new § 920.21.

One respondent suggested that a new section be added requiring the applicant to discuss alternative methods of acquisition or control of the area, including the designation of a marine sanctuary, in place of establishing an estuarine sanctuary. A new section (§ 920.11(n)) has been added for this purpose.

Section 921.12 *Subsequent Application for Development and Operation Grants.* Three commentators expressed concern that the intent of § 921.12 be more clearly expressed. Appropriate changes have been made.

One comment was made that a provision should be included to use existing Federally owned land for the purpose of the estuarine sanctuary program. A section has been added for that purpose.

Section 921.20 *Criteria for Selection.* One comment suggested that the consideration of conflict with existing or potential competing uses should not be included as a selection criterion. As discussed above, this criterion is considered appropriate.

Another reviewer suggested the addition of a new criterion, consideration of "the need to protect a particular estuary from harmful development." As discussed earlier, this criterion is not considered appropriate. Such a basis for determining selection would lead to a reactionary, random series of estuarine sanctuaries, rather than the rationally chosen representative series mandated in the legislative history.

Two reviewers commented that the limitation on the Federal share ($2,000,000 for each sanctuary) was too low and would severely restrict the usefulness of the program. However, this limitation is provided by the Act.

Another commentator suggested that § 921.20(g) was unnecessarily restrictive in that it might prevent selecting an estuarine sanctuary in an area adjacent to existing preserved lands where the conjunction might be mutually beneficial. The language of § 921.20(g) does not preclude such action, but has been changed to specifically permit this possibility.

Two commentators inquired whether the reference to a "draft" environmental impact statement (§ 921.20, last paragraph) indicated an intention to avoid further compliance with NEPA. It is the firm intention of the Office of Coastal Zone Management to fully comply in all respects with NEPA. The word "draft" has been struck.

Three reviewers addressed the problems of providing adequate public participation in the review and selection process. In addition to the change in § 920.11(1), a new section has been added to address this issue.

SUBPART D—OPERATION

Section 921.30 *General.* One commentator suggested that during contract negotiations, there should be a meeting between the applicant agency and proposed sanctuary management team, and representatives of the Office of Coastal Zone Management. The general provisions have been broadened to provide for this suggestion.

Two comments were submitted which urged that some discretion be exercised in the use and access to the sanctuary by scientists and students. Two other comments were received which requested specific protection for use by the general public. The guidelines have been changed to include these suggestions.

One comment was received suggesting language to clarify § 921.30(g). This was incorporated into the guidelines.

Two commentators expressed concern for enforcement capabilities and activities to ensure protection of the estuarine sanctuaries. A new section has been added which addresses this issue.

Finally, one suggestion was received that a vehicle for change in the management policy or research programs should be provided. A new section has been added for that purpose.

Accordingly, having considered the comments received and other relevant information, the Secretary concludes by adopting the final regulations describing the procedure for applications to receive estuarine sanctuary grants under section 312 of the Act, as modified and set forth below.

Effective date: June 3, 1974.

Dated: May 31, 1974.

ROBERT M. WHITE,
Administrator.

Subpart A—General

Sec.
921.1 Policy and objectives.
921.2 Definitions.
921.3 Objectives and implementation of the program.
921.4 Biogeographic classification.
921.5 Multiple use.
921.6 Relationship to other provisions of the Act and to marine sanctuaries.

Subpart B—Application for Grants

921.10 General.
921.11 Application for initial acquisition, development and operation grants.
921.12 Application for subsequent development and operation grants.
921.13 Federally owned lands.

Subpart C—Selection Criteria

921.20 Criteria for selection.
921.21 Public participation.

Subpart D—Operation

921.30 General.
921.31 Changes in the sanctuary boundary, management policy or research program.
921.32 Program review.

AUTHORITY: Sec. 312 of the Coastal Zone Management Act of 1972 (Pub. L. 92-583, 86 Stat. 1280).

Subpart A—General

§ 921.1 Policy and Objectives.

The estuarine sanctuaries program will provide grants to States on a matching basis to acquire, develop and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time the ecological relationships within the area. The purpose of these guidelines is to establish the rules and regulations for implementation of the program.

§ 921.2 Definitions.

(a) In addition to the definitions found in the Act and in the regulations dealing with Coastal Zone Management Program Development Grants published November 29, 1973 (Part 920 of this chapter) the term "estuarine sanctuary" as defined in the Act, means a research area which may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands constituting to the extent feasible a natural unit, set aside to provide scientists and students the opportunity to examine over a period of time the ecological relationships within the area.

(b) For the purposes of this section, "estuary" means that part of a river or stream or other body of water having unimpared connection with the open sea where the seawater is measurably diluted with freshwater derived from land drainage. The term includes estuary-type areas of the Great Lakes as well as lagoons in more arid coastal regions.

(c) The term "multiple use" as used in this section shall mean the simultaneous utilization of an area or resource for a variety of compatible purposes or to provide more than one benefit. The term implies the long-term, continued uses of such resources in such a fashion that other uses will not interfere with, diminish or prevent the primary purpose, which is the long-term protection of the area for scientific and educational use.

§ 921.3 Objectives and implementation of the program.

(a) General. The purpose of the estuarine sanctuaries program is to create natural field laboratories in which to gather data and make studies of the natural and human processes occurring within the estuaries of the coastal zone. This shall be accomplished by the establishment of a series of estuarine sanctuaries which will be designated so that at least one representative of each type of estuarine ecosystem will endure into the future for scientific and educational purposes. The primary use of estuarine sanctuaries shall be for research and educational purposes, especially to provide some of the information essential to coastal zone management decision-making. Specific examples of such purposes and uses include but are not limited to:

(1) To gain a thorough understanding of the ecological relationships within the estuarine environment.

(2) To make baseline ecological measurements.

(3) To monitor significant or vital changes in the estuarine environment.

(4) To assess the effects of man's stresses on the ecosystem and to forecast and mitigate possible deterioration from human activities.

(5) To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and the problems which confront them.

(b) The emphasis within the program will be on the designation as estuarine sanctuaries of areas which will serve as natural field laboratories for studies and investigations over an extended period. The area chosen as an estuarine sanctuary shall, to the extent feasible, include water and land masses constituting a natural ecological unit.

(c) In order that the estuarine sanctuary will be available for future studies, research involving the destruction of any portion of an estuarine sanctuary which would permanently alter the nature of the ecosystem shall not normally be

permitted. In the unusual circumstances where permitted, manipulative field research shall be carefully controlled. No experiment which involves manipulative research shall be initiated until the termination date is specified and evidence given that the environment will be returned to its condition which existed prior to the experiment.

(d) It is anticipated that most of the areas selected as sanctuaries will be relatively undisturbed by human activities at the time of acquisition. Therefore, most of the areas selected will be areas with a minimum of development, industry or habitation.

(e) If sufficient permanence and control by the State can be assured, the acquisition of a sanctuary may involve less than the acquisition of a fee simple interest. Such interest may be, for example, the acquisition of a conservation easement, "development rights", or other partial interest sufficient to assure the protection of the natural system. Leasing, which would not assure permanent protection of the system, would not be an acceptable alternative.

§ 921.4 Biogeographic classification.

(a) It is intended that estuarine sanctuaries should not be chosen at random, but should reflect regional differentiation and a variety of ecosystems so as to cover all significant variations. To ensure adequate representation of all estuarine types reflecting regional differentiation and a variety of ecosystems, selections will be made by the Secretary from the following biogeographic classifications:

1. *Arcadian.* Northeast Atlantic coast south to Cape Cod, glaciated shoreline subject to winter icing; well developed algal flora; boreal biota.

2. *Virginian.* Middle Atlantic coast from Cape Cod to Cape Hatteras; lowland streams, coastal marshes and muddy bottoms; characteristics transitional between 1 and 3; biota primarily temperate with some boreal representatives.

3. *Carolinian.* South Atlantic coast, from Cape Hatteras to Cape Kennedy; extensive marshes and swamps; waters turbid and productive; biota temperate with seasonal tropical elements.

4. *West Indian.* South Florida coast from Cape Kennedy to Cedar Key; and Caribbean Islands; shoreland low-lying limestone; calcareous sands, marls and coral reefs; coastal marshes and mangroves; tropical biota.

5. *Louisianian.* Northern Gulf of Mexico, from Cedar Key to Mexico; characteristics of 3, with components of 4; strongly influenced by terrigenous factors; biota primarily temperate.

6. *Californian.* South Pacific coast from Mexico to Cape Mendocino; shoreland influenced by coastal mountains; rocky coasts with reduced fresh-water runoff; general absence of marshes and swamps; biota temperate.

7. *Columbian.* North Pacific coast from Cape Mendocino to Canada; mountainous shoreland; rocky coasts; extensive algal communities; biota primarily temperate with some boreal.

8. *Fiords.* South coast Alaska and Aleutians; precipitous mountains; deep estuaries, some with glaciers; shoreline heavily indented and subject to winter icing; biota boreal to sub-Arctic.

9. *Subarctic.* West and north coasts of Alaska; ice stressed coasts; biota Arctic and sub-Arctic.

10. *Insular.* Larger islands, sometimes with precipitous mountains; considerable wave action; frequently with endemic species; larger island groups primarily with tropical biota.

11. *Great Lakes.* Great Lakes of North America; bluff-dune or rocky, glaciated shoreline; limited wetlands; freshwater only; biota a mixture of boreal and temperate species with anadromous species and some marine invaders.

(b) Various sub-categories will be developed and utilized as appropriate.

§ 921.5 Multiple use.

(a) While the primary purpose of estuarine sanctuaries is to provide long-term protection for natural areas so that they may be used for scientific and educational purposes, multiple use of estuarine sanctuaries will be encouraged to the extent that such use is compatible with this primary sanctuary purpose. The capacity of a given sanctuary to accommodate additional uses, and the kinds and intensity of such use, will be determined on a case by case basis. While it is anticipated that compatible uses may generally include activities such as low intensity recreation, fishing, hunting, and wildlife observation, it is recognized that the exclusive use of an area for scientific or educational purposes may provide the optimum benefit to coastal zone management and resource use and may on occasion be necessary.

(b) There shall be no effort to balance or optimize uses of an estuarine sanctuary on economic or other bases. All additional uses of the sanctuary are clearly secondary to the primary purpose and uses, which are long-term maintenance of the ecosystem for scientific and educational uses. Non-compatible uses, including those uses which would cause significant short or long-term ecological change or would otherwise detract from or restrict the use of the sanctuary as a natural field laboratory, will be prohibited.

§ 921.6 Relationship to other provisions of the act and to marine sanctuaries.

(a) The estuarine sanctuary program must interact with the overall coastal zone management program in two ways: (1) the intended research use of the sanctuary should provide relevant data and conclusions of assistance to coastal zone management decision-making, and (2) when developed, the State's coastal zone management program must recognize and be designed to protect the estuarine sanctuary; appropriate land and water use regulations and planning considerations must apply to adjacent lands. Although estuarine sanctuaries should be incorporated into the State coastal zone management program, their designation need not await the development and approval of the management program where operation of the estuarine sanctuary would aid in the development of a program.

(b) The estuarine sanctuaries program will be conducted in close cooperation with the marine sanctuaries program (Title III of the Marine Protection, Research Act of 1972, Pub. L. 92-532, which is also administered by the Office of Coastal Zone Management, NOAA), which recognizes that certain areas of the ocean waters, as far seaward as the outer edge of the Continental Shelf, or other coastal waters where the tide ebbs and flows, or of the Great Lakes and their connecting waters, need to be preserved or restored for their conservation, recreational, ecologic or esthetic values. It is anticipated that the Secretary on occasion may establish marine sanctuaries to complement the designation by States of estuarine sanctuaries, where this may be mutually beneficial.

Subpart B—Application for Grants

§ 921.10 General.

Section 312 authorizes Federal grants to coastal States so that the States may establish sanctuaries according to regulations promulgated by the Secretary. Coastal States may file applications for grants with the Director, Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Rockville, Maryland 20852. That agency which has been certified to the Office of Coastal Zone Management as the entity responsible for administration of the State coastal zone management program may either submit an application directly, or must endorse and approve applications submitted by other agencies within the State.

§ 921.11 Application for initial acquisition, development and operation grants.

(a) Grants may be awarded on a matching basis to cover the costs of acquisition, development and operation of estuarine sanctuaries. States may use donations of land or money to satisfy all or part of the matching cost requirements.

(b) In general, lands acquired pursuant to this section, including State owned lands but not State owned submerged lands or bay bottoms, that occur within the proposed sanctuary boundary are legitimate costs and their fair market value may be included as match. However, the value of lands donated to or by the State for inclusion in the sanctuary may only be used to match other costs of land acquisition. In the event that lands already exist in a protected status, their value cannot be used as match for sanctuary development and operation grants, which will require their own matching funds.

(c) Development and operation costs may include the administrative expenses necessary to monitor the sanctuary, to ensure its continued viability and to protect the integrity of the ecosystem. Research will not normally be funded by Section 312 grants. It is anticipated that other sources of Federal, State and

private funds will be available for research in estuarine sanctuaries.

(d) Initial applications should contain the following information:

(1) Description of the proposed sanctuary include location, boundaries, size and cost of acquisition, operation and development. A map should be included, as well as an aerial photograph, if available.

(2) Classification of the proposed sanctuary according to the biogeographic scheme set forth in § 921.4.

(3) Description of the major physical, geographic and biological characteristics and resources of the proposed sanctuary.

(4) Identification of ownership patterns; proportion of land already in the public domain.

(5) Description of intended research uses, potential research organizations or agencies and benefits to the overall coastal zone management program.

(6) Demonstration of necessary authority to acquire or control and manage the sanctuary.

(7) Description of proposed management techniques, including the management agency, principles and proposed budget including both State and Federal shares.

(8) Description of existing and potential uses of and conflicts within the area if it were not declared an estuarine sanctuary; potential use, use restrictions and conflicts if the sanctuary is established.

(i) Assessment of the environmental and socio-economic impacts of declaring the area an estuarine sanctuary, including the economic impact of such a designation on the surrounding community and its tax base.

(9) Description of planned or anticipated land and water use and controls for contiguous lands surrounding the proposed sanctuary (including if appropriate an analysis of the desirability of creating a marine sanctuary in adjacent areas).

(10) List of protected sites, either within the estuarine sanctuaries program or within other Federal, State or private programs, which are located in the same regional or biogeographic classification.

(i) It is essential that the opportunity be provided for public involvement and input in the development of the sanctuary proposal and application. Where the application is controversial or where controversial issues are addressed, the State should provide adequate means to ensure that all interested parties have the opportunity to present their views. This may be in the form of an adequately advertised public hearing.

(ii) During the development of an estuarine sanctuary application, all landowners within the proposed boundaries should be informed in writing of the proposed grant application.

(iii) The application should indicate the manner in which the State solicited the views of all interested parties prior to the actual submission of the application.

(e) In order to develop a truly representative scheme of estuarine sanctuaries, the States should attempt to coordinate their activities. This will help to minimize the possibility of similar estuarine types being proposed for designation in the same region. The application should indicate the extent to which neighboring States were consulted.

(f) Discussion, including cost and feasibility, of alternative methods for acquisition, control and protection of the area to provide similar uses. Use of the Marine Sanctuary authority and funds from the Land and Water Conservation Fund Act should be specifically addressed.

§ 921.12 Application for subsequent development and operation grants.

(a) Although the initial grant application for creation of an estuarine sanctuary should include initial development and operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional development and operation funds. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 312 grants.

(b) After the creation of an estuarine sanctuary established under this program, applications for such development and operation grants should include at least the following information:

(1) Identification of the boundary.

(2) Specifications of the management program, including managing agency and techniques.

(3) Detailed budget.

(4) Discussion of recent and projected use of the sanctuary.

(5) Perceived threats to the integrity of the sanctuary.

§ 921.13 Federally owned lands.

(a) Where Federally owned lands are a part of or adjacent to the area proposed for designation as an estuarine sanctuary, or where the control of land and water uses on such lands is necessary to protect the natural system within the sanctuary, the State should contact the Federal agency maintaining control of the land to request cooperation in providing coordinated management policies. Such lands and State request, and the Federal agency response, should be identified and conveyed to the Office of Coastal Zone Management.

(b) Where such proposed use or control of Federally owned lands would not conflict with the Federal use of their lands, such cooperation and coordination is encouraged to the maximum extent feasible.

(c) Section 312 grants may not be awarded to Federal agencies for creation of estuarine sanctuaries in Federally owned lands; however, a similar status may be provided on a voluntary basis for Federally owned lands under the provisions of the Federal Committee on Ecological Preserves program.

Subpart C—Selection Criteria

§ 921.20 Criteria for selection.

Applications for grants to establish estuarine sanctuaries will be reviewed and judged on criteria including:

(a) Benefit to the coastal zone management program. Applications should demonstrate the benefit of the proposal to the development or operations of the overall coastal zone management program, including how well the proposal fits into the national program of representative estuarine types; the national or regional benefits; and the usefulness in research.

(b) The ecological characteristics of the ecosystem, including its biological productivity, diversity and representativeness. Extent of alteration of the natural system, its ability to remain a viable and healthy system in view of the present and possible development of external stresses.

(c) Size and choice of boundaries. To the extent feasible, estuarine sanctuaries should approximate a natural ecological unit. The minimal acceptable size will vary greatly and will depend on the nature of the ecosystem.

(d) Cost. Although the Act limits the Federal share of the cost for each sanctuary to $2,000,000, it is anticipated that in practice the average grant will be substantially less than this.

(e) Enhancement of non-competitive uses.

(f) Proximity and access to existing research facilities.

(g) Availability of suitable alternative sites already protected which might be capable of providing the same use or benefit. Unnecessary duplication of existing activities under other programs should be avoided. However, estuarine sanctuaries might be established adjacent to existing preserved lands where mutual enhancement or benefit of each might occur.

(h) Conflict with existing or potential competing uses.

(i) Compatibility with existing or proposed land and water use in contiguous areas.

If the initial review demonstrates the feasibility of the application, an environmental impact statement will be prepared by the Office of Coastal Zone Management in accordance with the National Environmental Policy Act of 1969 and implementing CEQ guidelines.

§ 921.21 Public participation.

Public participation will be an essential factor in the selection of estuarine sanctuaries. In addition to the participation during the application development process (§ 921.11(e)), public participation will be ensured at the Federal level by the NEPA process and by public hearings where desirable subsequent to NEPA. Such public hearings shall be held by the Office of Coastal Zone Management in the area to be affected by the proposed sanctuary no sooner than 30 days after it issues a draft environmental impact

statement on the sanctuary proposal. It will be the responsibility of the Office of Coastal Zone Management, with the assistance of the applicant State, to issue adequate public notice of its intention to hold a public hearing. Such public notice shall be distributed widely, especially in the area of the proposed sanctuary; affected property owners and those agencies, organizations or individuals with an identified interest in the area or estuarine sanctuary program shall be notified of the public hearing. The public notice shall contain the name, address and phone number of the appropriate Federal and State officials to contact for additional information about the proposal.

Subpart D—Operation

§ 921.30 General.

Management of estuarine sanctuaries shall be the responsibility of the applicant State or its agent. However, the research uses and management program must be in conformance with these guidelines and regulations, and others implemented by the provisions of individual grants. It is suggested that prior to the grant award, representatives of the proposed sanctuary management team and the Office of Coastal Zone Management meet to discuss management policy and standards. It is anticipated that the grant provisions will vary with individual circumstances and will be mutually agreed to by the applicant and the granting agency. As a minimum, the grant document for each sanctuary shall:

(a) Define the intended research purposes of the estuarine sanctuary.

(b) Define permitted, compatible, restricted and prohibited uses of the sanctuary.

(c) Include a provision for monitoring the uses of the sanctuary, to ensure compliance with the intended uses.

(d) Ensure ready access to land use of the sanctuary by scientists, students and the general public as desirable and permissible for coordinated research and education uses, as well as for other compatible purposes.

(e) Ensure public availability and reasonable distribution of research results for timely use in the development of coastal zone management programs.

(f) Provide a basis for annual review of the status of the sanctuary, its value to the coastal zone program.

(g) Specify how the integrity of the system which the sanctuary represents will be maintained.

(h) Provide adequate authority and intent to enforce management policy and use restrictions.

§ 921.31 Changes in the sanctuary boundary, management policy or research program.

(a) The approved sanctuary boundaries; management policy, including permissible and prohibited uses; and research program may only be changed after public notice and the opportunity of public review and participation such as outlined in § 921.21.

(b) Individuals or organizations which are concerned about possible improper use or restriction of use of estuarine sanctuaries may petition the State management agency and the Office of Coastal Zone Management directly for review of the management program.

§ 921.32 Program review.

It is anticipated that reports will be required from the applicant State on a regular basis, no more frequently than annually, on the status of each estuarine sanctuary. The estuarine sanctuary program will be regularly reviewed to ensure that the objectives of the program are being met and that the program itself is scientifically sound. The key to the success of the estuarine sanctuaries program is to assure that the results of the studies and research conducted in these sanctuaries are available in a timely fashion so that the States can develop and administer land and water use programs for the coastal zone. Accordingly, all information and reports, including annual reports, relating to estuarine sanctuaries shall be part of the public record and available at all times for inspection by the public.

[FR Doc.74-12775 Filed 5-31-74;9:57 am]

APPENDIX 3.

FAUNA AND FLORA OF SOUTH SLOUGH,

COOS BAY, OREGON

A Partial List of Mammals for South Slough

Mammals:	Scientific Name	Common Name
	Procyon lotor	Raccoon
	Ursus americanus	Black bear
	Eutamias spp.	Chipmunk
	Tamiasciurus hudsonicus	Squirrel
	Lynx rufus	Bobcat
	Glaucomys spp.	Flying squirrel
	Phoca vitulina	Harbor seal
	Lutra canadensis	Otter
	Ondatra zibethicus	Muskrat
	Castor canadensis	Beaver
	Canis latrans	Coyote
	Urocyon cinereoargenteus	Fox
	Odocoileus columbianus	Blacktail deer
	Aplodontia rufa	Mountain beaver
	Sylvilagus bachmani	Brush rabbit

A Partial List of Upland Plants in South Slough

Ferns & Horsetails:		
	Polypodium Scouleri	Polypody
	Pteridium aquilinum	Bracken
	Equisetum spp.	Horsetail
	Blechnum spp.	Deer-Fern
Higher Plants:		
	Lysichitum americanum	Yellow Skunk Cabbage
	Lilium columbianum	Tiger Lily
	Abronia latifolia	Sand-Verbena
	Fragaria chiloensis	Beach Strawberry
	Rubus parviflorus	Thimbleberry
	Rubis spectabilis	Salmonberry
	Gaultheria shallon	Salal
	Rhododendron macrophyllum	Rhododendron
	Vaccinium ovatum	Huckleberry
	Sambucus callicarpa	Elderberry
	Lonicera involucrata	Twinberry
Trees:		
	Pinus contorta	Beach Pine
	Picea sitchensis	Sitka Spruce
	Pseudotsuga Menziesii	Douglas Fir
	Tsuga heterophylla	Hemlock
	Chamaecynaris Lawsoniana	Port Orford Cedar

Scientific Name	Common Name
Alnus oregona	Red Alder
Quercus Garryana	Oregon Oak
Lithocarpus densiflora	Tan Oak
Myrica californica	Wax Myrtle
Acer macrophyllum	Big Leaf Maple
Acer circinatum	Vine Maple
Salix Hooleriana	Coast Willow
Salix Scouleriana	Scouler's Willow

A Partial List of Wetland Plants of South Slough

Monocots		
Family Ruppiaceae		
	Ruppia maritima	Ditchgrass
Family Zosteraceae		
	Zostera marina	Eel grass
Family Juncaginaceae		
	Triglochin maritima	Seaside Arrowgrass
Family Gramineae		
	Agrostis alba	Bent grass
	Distichlis spicata	Salt grass
Family Cyperaceae		
	Carex sp.	Sedge
	Eleocharis sp.	Spike rush
	Scirpus acutus	Hard-stem bulrush
	S. robustus	Salt marsh bulrush
	S. americanus	Common three square bulrush
Family Juncaceae		
	Juncus balticus	Baltic rush
Dicots		
Family Polygonaceae		
	Rumex sp.	Dock
Family Chenopodiaceae		
	Atriplex sp.	Salt bush
	Salicornia pacifica	Pickleweed
Family Caryophyllaceae		
	Spergularia marina	Salt marsh sand sponge
Family Rosaceae		
	Potentilla sp.	Cinquefoil

	Scientific Name	Common Name
Family Umbelliferae		
	Lilaeopsis occidentalis	Western lilacopsis
Family Primulaceae		
	Glaux maritima	Milkwort
Family Convolvulaceae		
	Cuscuta salina	Slat marsh deddei
Family Scrophulariaceae		
	Orthocarpus castillejoides	Paint brush
Family Plantaginaceae		
	Plantago juncoides (Peck)	Plantin
Family Compositae		
	Cotula coronopifolia	Brass buttons
	Grindelia sp.	Gumplant
	Jaumea carnosa	Fleshy jaumea

A Check List of Fishes that Commonly Utilize South Slough

Sturgeons
- Acipenser medirostris - Green
- Acipenser transmontanus - White

Herrings
- Clupea harengus pallasi - Pacific Herring

Anchovies
- Engraulis mordax - Northern Anchovy

Trouts, Salmon
- Oncorhynchus kisutch - Coho Salmon
- Oncorhynchus tshawytscha - Chinook Salmon
- Salmo clarki - Cutthroat Trout

Smelts
- Spirinchus thaleichthys - Longfin

Silversides
- Atherinops affinis - Topsmelt

Sticklebacks
- Gasterosteus aculeatus - Threespine

Pipefish
- Syngnathus griseolineatus - Bay Pipefish

Sea Bass
- Morone saxatillis - Striped Bass

Surfperch
- Amphistichus rhodoterus - Redtail

Cymatogaster aggregata - Shiner
Embiotoca lateralis - Striped
Rhacochilus vacca - Pile

Gobies
Clevlandia los - Arrow goby

Rockfish
Sebastes melonops - Black rockfish

Greenlings
Hexagrammos lagocephalus - Rock
Hexagrammos decagrammus - Kelp

Sculpins
Cottus asper - Prickly
Enophrys bison - Buffalo
Leptocottus armatus - Pacific Staghorn

Lefteye Flounders
Citharichthys stigmaeus - Speckled Sanddab

Righteye Flounders
Parophrys vetulus - English Sole
Platichthys stellatus - Starry Flounder
Psettichthys melanostictus - Sand Sole

A Partial List of Algae Found in South Slough

Cyanophyta - Blue-green algae

Chlorophyta - Green algae

Enteromorpha clathrata
Ulva fenestrata (Scagel)
Rhizoclonium riparium

Chrysophyta - Yellow-green and golden-brown algae and diatoms

Melospira sp.
Navicula sp.
Rhizosolenia sp.

Phaeophyta - Brown Algae

Nerocystis luetkeana
Fucus edentatus (Scagel)

A Partial List of Marine Invertebrates of South Slough

Sponges

Boring Sponge	*Cliona sp.*
Violet Encrusting Sponge	*Haliclona permollis*

Hydroids

Campanularia sp.
Garveia annulata
Syncoryne eximia
Tubularia marina

Jellyfish

Polyorchis pacifica
p. penicillatus
Aequorea sp.

Sea Anemones

Green Anemone	*Haliplanella leucolena*
	Metridium sp.
	Nematostella sp.

Comb Jellies	
Sea Walnut	*Pleurograchia bachei*
Endoproct	*Barentsia gracilis*
Bryozoans	
Moss Animals	*Bowerbankia gracilis*
Encrusting Bryozoan	*Membranipora tuberculata*
Polychaetes	
	Abarenicola pacifica
	Anobothrus gracilis
	Capitella capitata
	C. ovincola
	Heteromastus filiformis
	H. filobranchus
	Cirratulus cirratus
	Eunice sp.
	Eudistylia vancouveri
	Serpula vermicularis
	Pista pacifica
	Glycera americana
	Glycinde armigera
	Nephtys caecoides
	Nereis brandti (*Neanthes brandti*)
	N. limnicola (*Neanthes diversicola*)
	N. vexillosa
Echinoderms - Starfish	
Shortspined Pisaster	*Pisaster brevispinus*
Ochre Starfish	*P. ochraceous*
Mollusca	
Button Tellen	*Tellina buttoni*
European Shipworm	*Teredo navalis*
Gaper Clam	*Tresus nuttallii*
Nudibranch	*Acanthodoris columbina*
	Aeolidia papillosa
Sea Lemon Nudibranch	*Anisodoris nobilis*
	Archidoris montereyensis
Opalescent	*Hermissenda crassicornis*
Moon Snail	*Polinices draconis*
Purple Olive Snail	*Olivella biplicata*
Pea Pod Borer	*Botula californiensis*
Bay Mussel	*Mytilus edulis*
Basket Cockle	*Cardium nuttallii*
False Mya	*Cryptomya californica*

Baltic Macoma	Macoma balthica
Bent-nose Clam	M. nasuta
Soft-shell Clam	Mya arenaria
Common Littleneck	Protothaca staminea
Arthropods	
Isopods	
Pill bugs/rock lice	Gmorimosphaeroma oregonensis
	Idothea aculeata
	Ligia pallasii
	Porcellio scaber scaber
Amphipods	
Beach flea	Corophium acherusicum
Sand flea	Orchestoidea californiana
Crabs and Shrimp	
Black tailed shrimp	Crago nigricauda
Broken back shrimp	Spirontocaris paludicola
Rock Crab	Cancer antennarius
Red cancer crab	C. productus
Hairy Shore Crab	Hemigrapsus oregonensis
Purple (Beach) Shore Crab	H. nudus
Pea Crab	Scleroplax granulata
Ghost Shrimp	Callianassa californiensis
Blue Mud Shrimp	Upogebia pugettensis
Dungeness crab	Cancer magister
Barnacles	
Horse Barnacle	Balanus cariosus
Acorn Barnacle	B. glandula

Partial Checklist of the Birds of the South Slough Area

ABUNDANCE STATUS

VC	-	very common; 50 or more birds per day/observer/area
C	-	common; 10-49 birds per day/observer/area
U	-	uncommon; 0-9 birds per day/observer/area
R	-	rare; 5 or less birds per year/observer/area
VR	-	very rare; 5 or less birds per year/observer/area

SEASONAL STATUS

R	-	resident; found all year
WV	-	winter visitor
SV	-	summer visitor
SR	-	summer resident
M	-	migrant; seen only in transit

Name	Scientific Name	Seasonal Status	Preferred Habitat	Abundance
Order Gaviiformes				
Family Faviidae				
Common Loon	Gavia immer	R	Ocean, estuary, lakes	C
Arctic Loon	Gavia arctica	M	Estuary, ocean	U
Order Podicipediformes				
Family Podicipedidae				
Horned Grebe	Podiceps auritus	WV	Lakes, rivers, estuary	C
Western Grebe	Aechmophorus occidentalis	WV	Lakes, estuary	C
Pied-billed Grebe	Podilymbus podiceps	R	Rivers, marshes, estuary	U

Name	Scientific Name	Seasonal Status	Preferred Habitat	Abundance
Order Pelecaniformes				
Family Phalcrocoracidae				
Brandt's Cormorant	Phalacrocorax penicillatus	R	Ocean, offshore rocks estuary	VC
Pelagic Cormorant	Phalacrocorax pelagicus	R	Ocean, offshore rocks, estuary	VC
Order Ciconiformes				
Family Ardeidae				
Great Blue Heron	Ardea herodias	R	Estuary, lakes, streams marshes	C
Green Heron	Butorides virescens	SR	Marshes, lakes, rivers	U
Common Egret	Casmerodius albus	R	Marshes, lakes	R
Order Anseriformes				
Family Anatidae				
Black Brant	Branta nigricans	WV	Estuary, open ocean	VC
Mallard	Anas platyrhynchos	R	Lakes, rivers, estuary	VC
Pintail	Anas acuta	R	Lakes, ponds	VC
Green-winged Teal	Anas carolinensis	R	Marshes, estuary	C
American Widgeon	Mareca americana	WV	Marshes, lakes, fields	VC
Wood Duck	Aix sponsa	R	Lakes, streams	C
Canvasback	Aythya valisineria	WV	Marshes,estuary, lakes	VC
Greater Scaup	Aythya marila	WV	Lakes, estuary	C
Common Goldeneye	Bucephala clangula	WV	Lakes, ponds, rivers	C
Harlequin Duck	Histrionicus histrionicus	WV	Ocean, estuary	U
White-winged Scoter	Melanitta deglandi	R	Ocean, lakes, estuary	VC
Surf Scoter	Melanitta perspicillata	R	Ocean, lakes, estuary	VC
Common Scoter	Oidemia nigra	R	Ocean, lakes, estuary	U
Rudy Duck	Oxyura jamaicensis	R	Lakes, marshes, estuary	C
Hooded Merganser	Lophodytes cucullatus	R	Lakes, streams	U
Common Merganser	Mergus merganser	R	Streams, lakes, estuary	U
Red-breasted Merganser	Mergus serrator	WV	Rivers, estuary	U
Order Falconiformes				
Family Cathartidae				
Turkey Vulture	Cathartes aura	SR	Woodlands	U

Name	Scientific Nam	Seasonal Status	Preferred Habitat	Abundance
Family Accupitridae				
Sharp-shinned Hawk	Accipiter striatus	R	Forests, woodlands	U
Cooper's Hawk	Accipiter cooperii	R	Woodlands	U
Red-tailed Hawk	Buteo jamaicensis	R	Woodlands, farm lands	C
Rough-legged Hawk	Buteo lagopus	WV	Marshes	U
Family Pandionidae				
Osprey	Pandion haliatus	SR	Lakes, rivers	U
Order Galliformes				
Family Tetraonidae				
Blue Grouse	Dendragapus obscurus	R	Forest	C
Family Phasianidae				
Mountain Quail	Oreortyx pictus	R	Woodlots, forests	U
Family Rallidae				
American Coot	Fulica americana	R	Lakes, estuary, marshes, fields	VC
Order Charadriiformes				
Family Charadriidae				
Semipalmated Plover	Charadrius semipalmatus	M	Shores, tideflats	U
Killdeer	Charadrius vociferus	R	Field, tideflats	C
Black-bellied Plover	Squatarola squatarola	M	Mudflats, open marshes	C
Surfbird	Aphriza virgata	M	Rocky coasts, jetties	C
Family Scolopacidae				
Whimbrel	Numenius phaeopus	M	Mudflats, open marshes	U
Spotted Sandpiper	Actitis macularia	R	Streams, marshes	U
Solitary Sandpiper	Tringa solitaria	M	Streams, marshes	R
Willet	Catoptrophorus semipalmatus	M	Marshes, beaches	U
Dunlin	Erolia alpina	WV	Beaches, tidal flats	VC
Short-billed Dowitcher	Limnodromus griseus	M	Mudflats	C
Long-billed Dowitcher	Limnodromus scolopaceus	M	Mudflats	VC
Semipalmated Sandpiper	Ereunetes pusillus	M	Beaches, mudflats	R
Western Sandpiper	Ereunetes mauri	M	Mudflats, beaches	VC
Sanderling	Crocethia alba	M	Sandy beaches	C

Name	Scientific Name	Seasonal Status	Preferred Habitat	Abundance
Family Phalaropodidae				
Red Phalarope	Phalaropus fulicarius	M	Ocean	C
Northern Phalarope	Lobipes lobatus	M	Ocean	VC
Family Stercorariidae				
Parasitic Jaeger	Stercorarius parasiticus	M	Ocean	U
Family Laridae				
Glaucous Gull	Larus hyperboreus	WV	Estuary, garbage dumps	R
Glaucous-winged Gull	Larus glaucescens	R	Estuary, garbage dumps, fields	C
Western Gull	Larus occidentalis	R	Estuary, ocean, lakes, islands	C
California Gull	Larus californicus	R	Estuary, lakes, rivers	C
Bonaparte's Gull	Larus philadelphia	M	Ocean, estuary, lakes	U
Caspian Tern	Hydroprogne caspia	M	Lakes, estuary, ocean	U
Family Alcidae				
Common Muure	Uria aalge	R	Ocean, estuary, offshore rocks	VC
Pigeon Guillemot	Cepphus columba	R	Ocean, estuary, offshore rocks	C
Marbled Murrelet	Brachyramphus marmoratum	R	Ocean, estuary	U
Order Columb iformes				
Family Columbidae				
Band-tailed Pigeon	Columba fasciata	R	Conifers, mixed woods	C
Order Strigiformes				
Family Strigidae				
Screech Owl	Otus asio	R	Grassland, open woodlands	U
Great Horned Owl	Bubo virginianus	R	Fields, grassland, woodlands	
Saw-whet Owl	Aegolius acadicus	R	Mixed woods	U

Name	Scientific Name	Seasonal Status	Preferred Habitat	Abundance
Order Caprimulgiformes				
Family Caprimulgidae				
Common Nighthawk	*Chordeiles minor*	SR	All open lands	C
Order Apodiformes				
Family Trochilidae				
Rufous Hummingbird	*Selasphorus rufus*	SR	Mixed woods, urban areas	C
Order Coraciiformes				
Family Alcedinidae				
Belted Kingfisher	*Megaceryle alcyon*	R	Streams, estuary	C
Order Piciformes				
Family Picidae				
Red-shafted Flicker	*Colaptes cafer*	R	Mixed woods	C
Pileated Woodpecker	*Dryocopus pileatus*	R	Conifers	U
Yellow-bellied Sapsucker	*Sphyrapicus varius*	R	Mixed woods	U
Hairy Woodpecker	*Dendrocopos villosus*	R	Mixed woods	U
Downy Woodpecker	*Dendrocopos pubescens*	R	Deciduous woods	U
Order Passeriformes				
Family Tyrannidae				
Western Wood Pewee	*Contopus sordidulus*	SR	Woodlands	C
Olive-sided Flycatcher	*Nuttallornis borealis*	SR	Open woods	C
Family Hirundinidae				
Violet-green Swallow	*Tachycineta thalassina*	SR	Open woodlands, adjacent to water, urban areas	VC
Tree Swallow	*Iridoprocne bicolor*	SR	Rivers, marshes	VC
Bank Swallow	*Riparia riparia*	SR	Around water	R
Rough-winged Swallow	*Stelgidopteryx ruficollis*	SR	Around water	R
Barn Swallow	*Hirundo rustica*	SR	Around water	VC
Family Corvidae				
Steller's Jay	*Cyanocitta stelleri*	R	Conifers	C
Scrub Jay	*Aphelocoma coerulescens*	R	Brush, urban	U
Common Crow	*Corvus brachyrhynchos*	R	Open woods, farms	C

Name	Scientific Name	Seasonal Status	Preferred Habitat	Abundance
Family Paridae				
Black-capped Chickadee	*Parus atricapillus*	R	Deciduous woods	C
Chestnut-backed Chickadee	*Parus rufescens*	R	Conifers	VC
Common Bushtit	*Psaltriparus minimus*	R	Deciduous woods	VC
Family Sittidae				
White-breasted Nuthatch	*Sitta carolinensis*	R	Deciduous, mixed woods	C
Red-breasted Nuthatch	*Sitta canadensis*	R	Conifers, mixed woods	C
Family Chamaeidae				
Wrentit	*Chamaea fasciata*	R	Mixed woods, brush	C
Family Vireonidae				
Warbling Vireo	*Vireo gilvus*	SR	Deciduous woods	C
Family Parulidae				
Audubon's Warbler	*Dendroica auduboni*	R	Mixed woods, conifers	C
Yellowthroat	*Geothlypis trichas*	SR	Fresh-water marshes	C
Wilson's Warbler	*Wilsonia pusilla*	SR	Deciduous and mixed woods	C
Family Icteridae				
Red-winged Blackbird	*Agelaius phoeniceus*	R	Marshes, fields	VC
Brewer's Blackbird	*Euphagus cyanocephalus*	R	Fields, farms	VC
Family Troglodytidae				
Winter Wren	*Troglodytes troglodytes*	R	Dense conifers, woods	C
Long-billed Marsh Wren	*Telmatodytes palustris*	R	Fresh-water marshes	U
Family Turdidae				
Robin	*Turdus migratorius*	R	Fields, residential	VC
Varied Thrush	*Ixoreus naevius*	R	Conifers, mixed woods	C
Hermit Thrush	*Hylocichla guttata*	R	Deciduous woods, conifers	C
Swainson's Thrush	*Hylocichla ustulata*	AR	Conifers, mixed woods	C

Name	Scientific Name	Seasonal Status	Preferred Habitat	Abundance
Family Sylviidae				
Golden-crowned Kinglet	Regulus satrapa	R	Conifers	C
Family Motacillidae				
Water Pipit	Anthus spinoletta	M	Fields, mudflats	C
Family Bombycillidae				
Cedar Waxwing	Bombycilla cedrorum	R	Open woods, urban	C
Family Sturnidae				
Starling	Sturnus vulgaris	R	Open fields, farms	VC
Family Thraupidae				
Western Tanager	Piranga ludoviciana	SR	Conifers, mixed woods	C
Family Fringillidae				
House Finch	Carpodacus mexicanus	R	Residential, farms	C
Pine Siskin	Spinus pinus	R	Conifors, mixed woods	C
American Goldfinch	Spinus tristis	R	Fields, farms	C
Rufous-sided Towhee	Pipilo erythrophthalmus	R	Brush	VC
Oregon Junco	Junco oreganus	R	Conifers, deciduous	VC
White-crowned Sparrow	Zonotrichia leucophrys	R	Willows, open brush	VC
Golden-crowned Sparrow	Zonotrichia atricapilla	WV	Weed patches, brush	VC
Fox Sparrow	Passerella iliaca	R	Brush	C
Song Sparrow	Melospiza melodia	R	Brush	VC

APPENDIX 4.

ASSESSMENT OF THE ECONOMIC IMPACT OF THE DESIGNATION OF SOUTH SLOUGH AS AN ESTUARINE SANCTUARY

APPENDIX 5.

WRITTEN COMMENTS RECEIVED BY THE

OFFICE OF COASTAL ZONE MANAGEMENT

APPENDIX 5. WRITTEN COMMENTS RECEIVED BY THE OFFICE OF COASTAL ZONE MANAGEMENT RESULTING FROM THE DRAFT ENVIRONMENTAL IMPACT STATEMENT, AND AGENCY DISPOSITION OR COMMENT, WHERE APPROPRIATE

1. Federal Agencies

The following Federal agencies submitted comments:

Environmental Protection Agency, Region X
Department of Agriculture, Soil Conservation Service
Department of Housing and Urban Development, Region X
Department of the Army, Corps of Engineers, Portland District

2. State Agencies

The following state agencies submitted comments:

Oregon Soil and Water Conservation Commission
Oregon Department of Environmental Quality
- Office of the Director
- Administrator, Program Development Division

Oregon Department of Geology and Mineral Industries
Oregon State Highway Division
Oregon State University, Sea Grant Administration

3. Other governmental agencies

Comments were received from the following other governmental agencies:

City of Coos Bay
Pacific Northwest River Basins Commission
Coos-Curry Council of Governments
Oregon State Clearinghouse

4. Other organizations and citizens

Comments were received from the following individuals and organizations:

National Audubon Society
National Wildlife Federation
American Association of University Women, Coos Bay Chapter
Oregon Environmental Council
Scott Paper Company, Northwest Operations
George C. and Marian Tracy, Charleston, Oregon
Environmental Defense Fund
Vancy Lawry, Charleston, Oregon

5. List of individuals appearing at the Public Hearing, June 3, 1974.

The following persons presented comments at the Public Hearing at the Coos Bay Library. A complete recording of these comments is on file at OCZM. The general nature of their comments is also indicated.

Vic Adams, North Bend, Oregon, Coos Head Timber Company - generally opposed
Alice Layport, Coos Bay, Oregon, American Association of University Women - generally favorable
Ken Margolis, Portland, Oregon, Nature Conservancy - generally favorable
H. L. Dixon, Coos Bay, Oregon, Northwest Steelheaders - generally favorable
Roy Johnson, Coos Bay, Oregon, District 5 Citizens Advisory Committee - generally favorable
Judy Dixon, Coos Bay, Oregon - generally favorable
Larry Qualman, Coos Bay, Oregon - generally opposed
Mitzie Loftus, Coos Bay, Oregon - generally favorable
Lilah Chambers, Coos Bay, Oregon - generally favorable
Mr. Mosher, Coos Bay, Oregon - generally favorable
Mrs. Mosher, Coos Bay, Oregon - generally favorable
Wiley Smith - generally opposed
Nora Terwilliger - Charleston, Oregon, generally favorable
Robert Terwilliger - Charleston, Oregon, generally favorable
Howard Hall, Coos Bay, Oregon - generally favorable
Richard Chambers, Coos Bay, Oregon - generally favorable
Paul Rudy, Charleston, Oregon - generally favorable
LaVerne Crabtree, League of Women Voters - generally favorable
Terry Kay - generally favorable
Nathan Douthit, Portland, Oregon, Oregon Environmental Council - generally favorable
Valerie Taylor, North Bend, Oregon - generally favorable
Theodore Ellingson, North Bend, Oregon - neutral with recommendations
Pat Dugan, Coos-Curry Council of Governments - qualified approval
Marguerite Watkins, Coos Bay, Oregon, League of Women Voters - generally favorable
Wallace Baldinger, Oregon Shores Conservation Coalition - generally favorable
David Zupan, North Bend, Oregon - generally favorable
Ben Faulkner, Coos Bay, Oregon, - generally favorable
Pete Wilson, Portland, Oregon - generally favorable
Mr. and Mrs. Everett Oxford, Coos Bay, Oregon - generally favorable
Mary Leitshuh, Charleston, Oregon - generally favorable
Ellen McMahon, Charleston, Oregon - generally favorable
Anne Montgomery, Coos Bay, Oregon - generally favorable
Dick Mitchener, Eugene, Oregon - generally favorable
Brent Hicks, Charleston, Oregon - generally favorable
Peter S. Stenhouse, Coos Bay, Oregon - generally favorable
Ed Stevenson, Coquille, Oregon - generally favorable
Ianto Evans, Ruthin, Wales - generally favorable
Susan Anderson - generally favorable
Bob Bailey - generally favorable

Forest Hale, Coquille, Oregon - generally opposed
Jim Hanna, Bandon, Oregon - generally favorable
Peter Toll, Bandon, Oregon - generally favorable
Ken Lewis, Coos Bay, Oregon - generally opposed

REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO ATTN OF: 10EI - M/S 325

June 5, 1974

Mr. Edward T. LaRoe
Office of Coastal Environment
National Oceanic and Atmospheric
Administration
Rockville, Maryland 20852

Dear Mr. LaRoe:

We have completed review of your draft environmental impact statement, "Estuarine Sanctuary Grant Award for South Slough, Coss Bay, Oregon."

We foresee no adverse environmental impacts in our jurisdictional areas.

Our comments on this draft statement have been classified LO-1, LO (Lack of Objections) 1 (Adequate Information). The classification and the date of EPA's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our review on proposed Federal actions under Section 309 of the Clean Air Act.

Thank you for the opportunity to comment on this draft environmental impact statement.

Sincerely,

Hurlon C. Ray

Hurlon C. Ray
Assistant Regional Administrator
for Management

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
ARCADE PLAZA BUILDING, 1321 SECOND AVENUE
SEATTLE, WASHINGTON 98101

May 30, 1974

REGION X

Office of Community Planning
and Management

IN REPLY REFER TO:
MS 307

Mr. Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs
U.S. Department of Commerce
Washington, D.C. 20230

Dear Mr. Galler:

Subject: Draft Environmental Impact Statement, Proposed Sanctuary Grant Award for South Slough, Coos Bay, Oregon

We have reviewed the draft submitted with your May 3, 1974 letter to Mr. Richard H. Broun.

The proposed action is a grant award to the State of Oregon to acquire, develop, and operate an estuarine sanctuary in Coos County, Oregon pursuant to Public Law 92-533.

We note that the Coos-Curry Council of Governments as well as the State clearinghouse and other state agencies are being given the opportunity to comment. Our concern would be that this action is consistent with the comprehensive plans being prepared by local planning agencies such as Coos-Curry Council of Governments and the State planning agencies. Thus, if the grant proposal is acceptable to them, we find no objection to your proposed action.

Thanks for the opportunity to comment.

Sincerely,

John R. Merrill
Assistant Regional Administrator
for Community Planning and Management

cc: CEQ (5)
Dawson
Miller
Safranski

Disposition of Comments from the Department of Housing and Urban Development, Region X

The responses of the State Clearinghouse and the Coos-Curry Council of Governments are included.

DEPARTMENT OF
ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5301

McCALL
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KRC

May 7, 1974

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MAY 13 1974

INFORMATION - JW
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JP

Robert Knecht, Director
Office of Coastal Environment
NOAA
Rockville, Maryland 20852

Dear Bob:

I want you to know of the strong support which this Department gives to a proposal before your office for designation and acquisition of an estuarine sanctuary for a portion of South Slough, Coos County, Oregon. I've had the opportunity to follow this potential designation for a period to time, to hear a detailed presentation by the OCCDC, and following a discussion period, to lend our endorsement.

Best wishes.

Cordially,

KESSLER R. CANNON
Director

KRC:cm

SOIL AND WATER CONSERVATION COMMISSION

217 AGRICULTURE BUILDING • SALEM, OREGON • 97310 • Phone 378-3810

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EMBERS
BY GOVERNOR
ARTZ, Chairman
d
SON, Vice Chairman
AMSON, Lakeview
CHRISTENSEN, McMinnville
HEFFERNAN, Medford
CCLESCU, Richland
UBBERT, Sutherlin

SORY MEMBERS
EY, Corvallis, Head
ent of Soil Science, OSU
Corvallis
Extension Service
ER, Portland
onservationist
DA

CTOR
SVALBERG

May 16, 1974

Mr. Robert Kenecht, Director
Office of Coastal Environment
N.O.A.A.
Rockville, MD 20852

Dear Mr. Kenecht:

The Oregon State Soil and Water Conservation Commission endorses the application of the Oregon Department of Land Conservation and Development for an estuarine sanctuary acquisition grant for a portion of South Slough, Coos County, Oregon.

The Coos Soil and Water Conservation District has been quite concerned about the threat of development of this unique area. Coos County has endeavored to prevent development by zoning regulations, but this is always subject to changing political pressures. A more permanent means of preserving one of the least disturbed estuarine areas in Oregon would be highly desirable.

Sincerely,

Bud F. A. Svalberg
Director

BFAS:rj

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

IM McCALL
GOVERNOR

SS CANNON
Director

May 10, 1974

Mr. Sidney R. Galler
Deputy Assistant Secretary for
Environmental Affairs
United States Department of Commerce
Washington, D.C. 20230

Dear Mr. Galler:

This is in response to your letter of May 3, 1974, and the attached draft environmental impact statement for a proposed estuarine sanctuary in South Slough, Coos Bay, Oregon.

This Department recognizes the value of having such a sanctuary, and endorses the proposal to give South Slough a sanctuary status. The draft environmental impact statement appears to adequately describe South Slough characteristics as we know them.

Cordially,

WILLIAM H. CARTER
Director

Glen D. Carter

Glen D. Carter, Administrator
Program Development Division

GDC:rjs

OREGON STATE
HIGHWAY DIVISION

HIGHWAY BUILDING • SALEM, OREGON • 97310

A McCALL
OVERNOR

L KLABOE
ator of Highways

JUN 13 1974

June 5, 1974

Mr. Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs
U. S. Department of Commerce
Washington, DC 20230

JUN 14

-TL

Dear Sir:

We have reviewed the draft EIS for the proposed Estuarine Sanctuary to be located at South Slough, Coos Bay, Oregon.

This project will have no adverse effects on the State Highway Division or its operations.

Very truly yours,

George N. Hopkins
Program Development Engineer

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ADMINISTRATIVE OFFICE

1069 STATE OFFICE BLDG. • PORTLAND, OREGON • 97201 • Ph. (503) 229-5580

M McCALL
GOVERNOR

May 17, 1974

Mr. Sidney R. Galler
Deputy Assistant Director for
Environmental Affairs
Assistant Secretary for Science
and Technology
U. S. Department of Commerce
Washington, D. C. 20230

Dear Mr. Galler:

We have reviewed the draft environmental impact statement entitled "Proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon" prepared by the Office of Coastal Environment of the National Oceanic and Atmospheric Administration.

Conformity of the sactuary boundaries or related land-use boundaries with the natural boundaries is absolutely essential. We are pleased that this concept was integrated into the proposal. Sedimentation and pollution arising from possible future modifications of the slopes overlooking the estuary could easily destroy many of the natural systems operating in the estuary.

Possibly appropriate land-use controls on the surrounding slopes would be sufficient to protect the estuary from degradation. It is doubtful, however, that any action other than inclusion of the entire area into the sanctuary would be sufficient to protect and maintain the various wildlife systems. We conclude, therefore, that the boundary lines of the proposed sanctuary are realistic and recommend that they be accepted.

Sincerely,

John D. Beaulieu
Environmental Geologist

JDB:bj

Sea Grant Administration
Oregon State University
Corvallis, Oregon 97331 (503) 754-2714

JUN 6 1974

May 29, 1974

6/6/74

Sidney R. Galler
Deputy Assistant Secretary
Environmental Affairs
U.S. Dept. of Commerce
Washington, D.C. 20230

Dear Mr. Galler:

This letter responds to yours of May 3rd requesting comments on the environmental impact statement for the National Oceanic and Atmospheric Administration's proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon.

We very much support the proposed designation and urge that plans proceed for acquiring South Slough as a sanctuary. We believe that time is of the essence. I have worked with the Oregon Conservation and Development Commission as a designated member of the estuarine sanctuary committee for the last several months. I believe that our committee, in which I represented the Sea Grant College of Oregon State University, carefully evaluated all potential sites. South Slough is Oregon's prime candidate.

I was pleased to see that oyster farming, as practiced in South Slough, will be permitted to continue since this is compatible use of natural resources and will provide opportunities for research. Although I agree on a ban of power boats and motorized vehicles, it should be recognized that oyster farming may require some use of power boats. I support the concept that fishing and hunting should be permitted, including clam digging.

The Oregon State Sea Grant College Program will be pleased to participate in any appropriate way in furthering the management program development for the South Slough Sanctuary.

Very truly yours,

William Q. Wick, Director
Sea Grant College Program

mac

cc: Dr. E.T. Laroe
Donna Hepp

PACIFIC NORTHWEST RIVER BASINS COMMISSION

1 Columbia River
Vancouver, Washington 98660

P. O. Box 908

Telephone
(206) 694-2581
(503) 285-0467

OFFICE OF THE CHAIRMAN

May 15, 1974

MAY 30 1974

Mr. Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs
United States Department of Commerce
The Assistant Secretary for Science and Technology
Washington, D. C. 20230

Dear Mr. Galler:

This is in response to your letter of May 3, 1974, to Mr. Ray E. Holmes. Mr. Holmes has retired and Mr. E. J. Gullidge now is Planning Director for the Commission.

We have reviewed the draft of environmental impact statement relating to the proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon. Detailed comments are marked on the attached copy of the draft statement. General comments are as follows:

1. The Columbia-North Pacific (C-NP) framework plan, adopted by the Commission and approved by the Water Resources Council, identified Oregon estuaries as areas requiring additional early study. Such study was recommended, to cover items such as water quality parameters; hydrologic-hydraulic data; the needs of fish, wildlife, recreation, and other uses; and unique scenic and esthetic values. It also was pointed out that there is a need for plans to insure that estuarine resources "continue to perform their natural functions in maintaining ecological balance and yet provide esthetic, recreational, and economic benefits." The existence of an estuarine sanctuary, as proposed, would facilitate both the needed initial studies and the long-term monitoring and comparison of conditions in the sanctuary with those in estuaries without such protection.

2. Sanctuary limits, as shown on Figures 1 and 2, would be considerably less than the 26-square-mile watershed tributary to the sanctuary, and even smaller by comparison with the area tributary to all of South Slough. Those tributary areas are the key to the quality of fresh water entering South Slough. Further, the tidal interchange may well be such that any change in water quality down-slough from (north of) the Sanctuary could affect water quality in the Sanctuary. Thus, the omission of mention of any controls on land use in the South Slough watershed down-slough from the Sanctuary may be an indication of a potential long-term problem. Similarly, but much more specifically, the statement, on page 2 and elsewhere, that

land use outside the sanctuary may (emphasis supplied) be controlled appears to pose a long-term and potentially severe problem; the answer to that problem might take the form of immediate restrictive zoning and/or some type of binding commitment that such zoning would be instituted when needed and continued as long as the Sanctuary exists.

3. The summary at top of page 9 might well be expanded to reflect the probable favorable environmental impact of preserving an area for educational, research, and monitoring purposes.

Overall, I believe the statement is adequate and informative. Consistent with the Commission's position, as established in the C-NP plan already discussed, I hope the grant can be made and the sanctuary plan implemented, with special consideration to water quality aspects as mentioned herein.

Sincerely,

Donel J. Lane
Chairman

DJL:nr
Enclosure: (Marked-up copy through page 16)

Disposition of Comments from the Pacific Northwest River Basins Commission

1. The discussion of controls on land use and potential water degradation outside of the sanctuary boundaries has been expanded (pp. 6 and 20).

2. The summary, now on page 17, has been appropriately modified.

EXECUTIVE DEPARTMENT

LOCAL GOVERNMENT RELATIONS DIVISION

240 COTTAGE STREET S.E. • • • • SALEM, OREGON 97310

MAY 21 1974

PORTLAND

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tor

May 17,1974

Mr. Arnold Cogan, Director
Land Conservation and Development
Commission
Boise Cascade Building
1600 S.W. Fourth, Suite 660
Portland, Oregon 97201

Dear Arnold:

Subject: L.C.D.C. Estuarine Sanctuary Proposal
PNRS #7404 2 680

This is to notify you that the State Clearinghouse has completed the review of your proposal.

No significant conflict with the plans, policies or programs of state government have been identified, and your proposal is endorsed as presented.

A copy of this letter should accompany your application to the Federal agency per Executive Order 02-270-20. Comments of the appropriate local Clearinghouse must also be included and addressed.

Sincerely,

Robert K. Logan
Administrator

RKL:Rt

OREGON COASTAL CONSERVATION AND DEVELOPMENT COMMISSION

JR TERNYIK, CHAIRMAN
BRENNAN, VICE CHAIRMAN
RT YOUNKER, SECRETARY-TREASURER
IS F. ROSS, EXECUTIVE DIRECTOR

P.O. Box N
Florence, Oregon 97439

Phone (503) 997-6248

June 12, 1974

Robert Knecht
Office of Coastal Zone Management
National Oceanic and Atmospheric
Administration
Rockville, Maryland 20852

JUN 18 1974

Dear Bob:

In accordance with State of Oregon Executive Order 02-270-20 which states that all requests for federal monies be submitted for State Review, we have submitted the Estuarine Sanctuary Proposal to the State Clearinghouse for review processing. A copy of the state's signoff, as completed by the State Clearinghouse, is enclosed for your information.

If you have any questions concerning this matter, please do not hesitate to contact this office.

Sincerely,

James F. Ross
Executive Director

JFR:WKY:wy

Enclosure

National Wildlife Federation

16TH ST., N.W., WASHINGTON, D.C. 20036 Phone: 202-483-1550

June 6, 1974

Mr. Edward T. LaRoe
Office of Coastal Environment
National Oceanic and Atmospheric
Administration
U.S. Department of Commerce
11400 Rockville Pike
Rockville, Maryland 20852

6/11/74

Dear Mr. LaRoe:

We have received and reviewed the draft environmental impact statement concerning NOAA's proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon. The National Wildlife Federation supports the efforts of both federal and state governments to protect valuable estuarine areas for research and conservation purposes. In the interest of full NEPA compliance and in order to promote maximum sanctuary protection, however, we urge NOAA to consider the following:

1. There should be a detailed discussion in the EIS of (a) the nature and intensity of existing recreational and other uses of the proposed sanctuary area; (b) the nature and intensity of recreational and other uses proposed to be allowed within the contemplated sanctuary; (c) the likely environmental impact of this level of use; and (d) the nature of the controls and mitigation steps that will be instituted to minimize this impact. We regard an analysis of these factors to be especially necessary in view of the directive of § 921.5 of NOAA's Estuarine Sanctuary Guidelines (39 Fed. Reg. 19921, 19925, June 4, 1974) that "[t]he capacity of a given sanctuary to accommodate additional uses, and the kinds and intensity of such use, will be determined on a case by case basis."

2. The EIS should discuss in detail the environmental impact of the development activities expected to be stimulated by the proposed sanctuary in the areas surrounding it. Possible means of minimizing anticipated adverse environmental impacts should also be discussed and considered.

3. The EIS should discuss the alternatives of limiting sanctuary use to research purposes only or to research and oyster harvesting only.

We hope you will give serious consideration to these recommendations.

Very truly yours,

Kenneth S. Kamlet

Kenneth S. Kamlet
Counsel

KSK/b

Disposition of comments from the National Wildlife Federation

1. To the extent that they can be quantified, existing recreational and other uses are addressed (pp. 7-10). The discussion of management policies and their impacts has been expanded (pp. 2-7 and 21-24).

2. No development activities are anticipated. Insofar as the proposed action would cause no construction, clearing or destruction of resources, and is primarily designed to provide the long-term protection of an environmental unit, no adverse impacts associated with such activities is forseen.

3. The discussion of alternative management policies has been expanded (pp. 21-24).

Office of Coastal Environment
National Oceanic and Atmospheric Administration
Rockville, Maryland 20852

In line with AAUW's policy of supporting measures that provide control of environmental pollution, conservation and wise utilization of our resources as well as comprehensive and coordinated planning for the orderly development of the total environment, the thirty member board representing one hundred members voted unanimously to support "A Proposal for an Estuarine Sanctuary Grant" for the South Slough of Coos Bay, Oregon.

Our reasons for supporting this proposal are based on the following facts. South Slough is a last frontier. At present the water quality is high because, though near the ocean, the main current flowing to the ocean bypasses this area, and South Slough possesses a separate watershed creating inaccessability and pure water. It is one of the few areas with little upland development and still in large ownership tracts, thus easy to accuire. If this area is allowed further division and commercial exploitation the cost of salvation would be prohibitive. Now is the time to act on this proposal.

The creation of a sanctuary would protect the timber more than development would. If the area were sub-divided, timber loss would occur to a greater extent, as well as the slough filling with soil washed from the hillsides.

At present the proposed area is on the tax rolls as one-tenth of one per cent of county taxes. Some taxes will be removed from the rolls, but if the area is not preserved as a sanctuary, the cost to the public in providing sewers, water, services such as postal, fire and police protection as well as schools will be far more than the tax loss. At present these services are eight to ten miles away, and a great deal of tax money will have to be spent to develop the area.

More than half of the taxes on this area go to District 9, and development in this area would add a new school, more buses,

teachers and upkeep as the closest elementary school is five miles from the area and already filled to capacity. The upper grades are even further (20 miles) and would require even more extensive transportation. These necessary outlays would more than offset the loss of school taxes now.

We agree with the goals of a management team for continuity, stability and freedom from political overtones. The management team suggested in the study consisting of a representative from the Oregon Fish Commission, Wildlife Commission, DEQ, Division of State Lands, Department of Forestry, Natural Areas Committee, U of O Institute of Marine Biology, Coos County forester, NOAA Office of Coastal Environment would be in line with our thinking. However we would suggest that members be subject to approval by NOAA as they are putting up half of the money. We also feel that the Coos County representative should be the County Forester or a similarily qualified and non-political person.

We agree that the revised boundaries would be less expensive to legally define and would better protect the area. Since county zoning has not been enacted, there are no safeguards available to South Slough, and we feel this proposal is the only assured method of protection for this unique area.

Coos Bay Chapter of the American Association
of University Women

OREGON ENVIRONMENTAL COUNCIL

2637 S.W. WATER AVENUE, PORTLAND, OREGON 97201 / PHONE: 503/222-1963

May 30, 1974

6/6/74

A.F.T.E.R., Tigard
ERICAN ASSOCIATION OF UNIVERSITY WOMEN, Portland
AMERICAN INSTITUTE OF ARCHITECTS The Portland Chapter
Southwestern Oregon Chapter
AMERICAN INSTITUTE OF PLANNERS Oregon Section
N SOCIETY OF LANDSCAPE ARCHITECTS Oregon Chapter
ANGLERS CLUB OF PORTLAND
IBON SOCIETY, Portland Central Oregon
AY AREA ENVIRONMENTAL COMMITTEE Coos Bay, Oregon
CHEMEKETANS, Salem, Oregon
ITIZENS FOR A CLEAN ENVIRONMENT Corvallis, Oregon
CLATSOP ENVIRONMENTAL COUNCIL
ECO-ALLIANCE, Corvallis
EUGENE FUTURE POWER COMMITTEE
EUGENE NATURAL HISTORY SOCIETY
ULTY WIVES OF CENTRAL COMMUNITY COLLEGE, Bend
IB CARROT-TOPPERS, Scappoose, Oregon
FRIENDS OF THE EARTH
IS OF SPRINGBROOK PARK, Lake Oswego
GARDEN CLUBS of Cedar Mill, Corvallis, Eastmoreland, Gervais, Nehalem Bay, cKenzie River, Scappoose, Portland, Villa, Illinois Valley, Fir Grove
F CLUB OF FIRST UNITARIAN CHURCH Portland
NIOR LEAGUE, Eugene, Portland
Ma IE FLYFISHERS, Eugene, Oregon
KENZIE GUARDIANS, Blue River, Oregon
MT. HOOD COMMUNITY COLLEGE OUTDOOR CLUB
NEWPORT FRIENDS OF THE EARTH
NORTHWEST ENVIRONMENTAL DEFENSE CENTER
ST STEELHEADERS COUNCIL OF TROUT ITED, Milwaukie, Tigard, Willamette Falls
OBSIDIANS, INC., Eugene, Oregon
OREGON CITIZENS FOR CLEAN AIR
UNCIL OF ROCK AND MINERAL CLUBS
ON GUIDES AND PACKERS, Vida, Oregon
OREGON LUNG ASSOCIATION
OREGON PARK & RECREATION SOCIETY Corvallis, Oregon
OREGON ROADSIDE COUNCIL
IN SHORES CONSERVATION COALITION O.S.P.I.R.G.
O.S.U. FIN AND ANTLER CLUB Corvallis Oregon
IED PARENTHOOD ASSOCIATION, INC Portland
PORTLAND RECYCLING TEAM, INC. P.U.P.E., Bend, Oregon
REED COLLEGE OUTING CLUB Portland, Oregon
ROGUE ECOLOGY COUNCIL Ashland, Oregon
SANTIAM ALPINE CLUB Salem, Oregon
SELLWOOD-MORELAND IMPROVEMENT LEAGUE, Portland
SIERRA CLUB Pacific Northwest Chapter
Mary's Peak, Corvallis
Rogue Valley, Ashland
Columbia Group, Portland
Mt. Jefferson, Salem
CIETY FOR OREGON AVIAN RESEARCH
ER BUTTE IMPROVEMENT ASSOCIATION Eugene, Oregon
STEAMBOATERS
IVAL CENTER U. of O., Eugene
TRAILS CLUB OF OREGON
ERN RIVER GUIDES ASSOCIATION, INC
WILLAMETTE LUNG ASSOCIATION
ETTE RIVER GREENWAY ASSOCIATION
OMEN'S INTERNATIONAL LEAGUE FOR PEACE AND FREEDOM, Portland
OMEN'S LAW FORUM, U. of O., Eugene

Mr. Sidney R. Galler
Deputy Assistant Secretary for
Environmental Affairs
United States Department of Commerce
Washington, D.C. 20230

Dear Mr. Galler:

We are very pleased with the Draft Environmental Impact Statement prepared for the proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon. We found three particulary commendable sections.

First, the importance of a permanently preserved, natural area as a control site for estuarine research cannot be overemphasized. It would give researchers the opportunity to study the effects of "man-introduced stresses" on a natural system, in both the immediate area and other similar ecosystems.

Second, the long-term benefits of such a natural study area offset any tax losses, particularly in this case, where the tax contribution of the land involved is 0.1% of the county revenue base.

Third, we support the recommendations for timber management in the proposed estuarine sanctuary, which limits timber harvests to the removal of dead or diseased trees.

In closing, we would like to commend Mr. LaRoe for preparing a clear, readable and concise Draft Environmental Impact Statement.

Sincerely yours,

Maggie Collins

Maggie Collins, Chairman

Greg Fritts

Greg Fritts, Staff Assistant

Land Use Committee

/mc

June 3, 1974

6/11/74 TL

Mr. James F. Ross, Executive Director
Oregon Coastal Conservation and
Development Commission
P. O. Box H
Florence, OR 97439

Dear Mr. Ross:

This letter is being provided in response to your letter of May 20, 1974 and the enclosed draft Environmental Impact Statement (EIS) entitled "Proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon." We request that this letter be included in the record of the hearing on this proposal. From your letter, we understand that the hearing is scheduled for June 3 in the Coos Bay Library Auditorium and conducted by the Federal Office of Coastal Zone Management. From Mr. Fred Hodge's May 30 telephone discussion with you, we understand that the hearing record is open until June 17, 1974.

Scott Paper Company, as owners of mineral rights in and adjacent to the proposed sanctuary, has taken special note of the following paragraph from Page 2 of the EIS:

> "Acquisition and designation of the area as an estuarine sanctuary would result in restrictions being placed on the use and future development of the area. Large-scale or significant alteration of the natural environment would be prohibited. Compatible levels of public recreation, fishing, hunting and limited oyster farming would be permitted, as may some existing low intensity farming and residential uses. However, expansion of these activities, in either area or intensity, or the introduction of new commercial activities, would not be permitted. The use of those lands outside of the proposed sanctuary boundaries but within the 26 square mile watershed which contributes to the sanctuary may also be controlled by the application of zoning ordinances."

Further, we have made special note of the following paragraph from your letter:

> "To reinforce what was stated earlier, South Slough is a vital recreational, educational, and research resource to the Coos Bay area, the entire coast, and the State of Oregon. As a landowner within the proposed sanctuary area, you can

have an important role in the future protection of South Slough. [illegible] to assure you that condemnation will not be used. [illegible] will be from through land purchase and [illegible] development rights." (emphasis provided.)

With the understanding that private property and development rights are to be purchased through purchase agreements, we have no objection to this proposal. We would expect that such purchase agreements would also reflect the value of development rights encompassed by the previously quoted statement from the EIS, repeated here in the interest of clarity:

> "The use of those lands outside of the proposed sanctuary boundaries but within the 20 square mile watershed which contributes to the sanctuary may also be controlled by the application of zoning ordinances."

We wish to thank you for advising us of this proposal.

Sincerely,

Robert I. Thiele
Vice President and General Manager

RIT/hc

cc: Mr. Edward T. LeBze
Office of Coastal Environment
National Oceanic and
Atmospheric Administration
Rockville, Maryland 20852

Disposition of Comments from Scott Paper Company

1. As the proposal and the environmental impact statements indicate, lands within the sanctuary or a sufficient interest in them to provide long-term protection to the natural system, will be acquired at fair market value. Lands outside of the sanctuary but within the watershed may be zoned according to standard local or state zoning practices, and would not involve monetary payments.

Box 5619
Charleston, Oregon
June 4, 1974

Office of Coastal Zone Management
National Oceanic and Atmospheric Adm.
U. S. Dept. of Commerce
Rockville, Maryland 20852

JUN 10 1974

SUBJECT: TESTIMONY RE. SOUTH SLOUGH SANCTUARY PROPOSAL, COOS COUNTY, OREGON

We are in the process of establishing a self-sustaining beef ranch on the 180 acres we own at the head of South Slough. This land was recommended as exclusive agriculture (Interim Agriculture-20) by the District 25 Steering Committee and was not included in the original Interim Natural Resource buffer strip around South Slough. However, we not only do not object to being included within the proposed sanctuary but we actually favor inclusion, at least in principle, because the aims of the proposal appear to be in harmony with our own goals which are to conserve as many as possible of the esthetic qualities of the land while bringing the land into a productive viable unit. The only potential personal conflict which we can see at this time may arise when we will be required to dike, at some time in the future, around some pasture now subject to seasonal salt water incursion in order to bring the forage production capacity up to a normal 1 animal unit per acre from the present 1 A.U. per 3½ acres. However, the protective value of such a dike, in regard to maintaining water quality, as well as the economic and health values will more than balance any damage which could be anticipated and we believe there should be no real conflict.

A potential public conflict may arise with the formulation of the management regulations for the sanctuary. I am aware, from bitter personal experience, that theoretically desirable programs can be distorted beyond recognition and can become very undesirable when the actual regulations are imposed. An arbitrary coercive force exercised in the name of science or conservation will be perceived on the receiving end as very little different from such a force exercised in the name of military necessity or political expediency. Thus, the acceptance of the sanctuary by the people of the area, in general, will be more influenced by the actual regulations than by the theoretical concept. And, as noted in the draft statement, "The interest, concern, and cooperation of an aroused public citizenry will be necessary for environmentally sound planning and management programs to succeed." Some attention appears to have been given to this area. The composition of the nine-member "technical management team" appears to be appropriate as does an "open management policy" and "continual assessment of uses." However, decisions based on supposed scientific expert conclusions can be arbitrary as any "closed" policy of regulation. Since the authority of any scientist exists only to the extent that his data and conclusions can be independently verified by others and since data are subject to different

interpretations at times, we recommend that all data pertaining to any proposed regulation or problem be made public before the decision is made and in sufficient time for individual verification or refutation. The Oregon laws pertaining to open meetings may cover part of our recommendation but we envision more of the demonstration of the scientific method in action. We might add that before we had to leave the hearing last night, we approved of the attempt to resolve, immediately, the conflicts of data presented in testimony. That process is part of the scientific method.

We believe that the extended boundary of the sanctuary is logical although a high percentage of the protection required could be obtained with smaller limits. The acquisition of property seems to be desirable and the method of acquisition appears to be the most equitable. Our contact with the representatives of Nature Conservancy has been agreeable.

We have some question about the need for a full-time manager for an area that has survived this long with no manager and suggest that methods of obtaining part-time management be explored.

Respectfully submitted,

George A. Tracy Marian Tracy
George Tracy Marian Tracy

cc. to James F. Ross, Director
Oregon Coastal Conservation and Development Commission

Disposition of Comments by George C. and Marian Tracy

1. As indicated in the application and environmental impact statements, if the landowner so chooses, existing levels of agriculture and grazing may continue. The construction of dikes to enclose wetland areas would not be compatible with protection of the sanctuary ecosystem and would not be permitted. However, under existing state policy, the construction of new dikes would probably not be permitted anyway.

2. All records and reports pertaining to the proposed sanctuary would be a matter of public record. A provision for citizen initiated review of the management policies is provided (p. 7).

3. The duties of the Program Manager are outlined on p. 5, and would appear to require a full-time appointment.

ENVIRONMENTAL
DEFENSE
FUND

1525 18th STREET, NW, WASHINGTON, D.C. 20036/202 833-1435

June 14, 1974

Mr. Sidney R. Galler
Office of Environmental Affairs
U.S. Department of Commerce
National Oceanographic & Atmospheric
Administration
11400 Rockville Pike
Rockville, Maryland 20852

Re: Draft Impact Statement -- Proposed Estuarine Sanctuary Grant Award for South Slough, Coos Bay, Oregon

Dear Mr. Galler:

The Environmental Defense Fund appreciates the opportunity to participate in the planning and decision-making processes of the National Oceanographic and Atmospheric Administration. Our comments on the above-titled draft EIS follow.

In general, the draft impact statement prepared for Coos B , we feel, is evidence of careful environmental planning which NEPA intended should occur within administrative agencies. Particularly notable is the section on alternatives, an often neglected segment of agency impact statements. The manner in which proposed boundaries for the estuarine sanctuary were chosen, taking into consideration environmental, social, and economic factors, is also commendable.

In a more substantive vein, we feel that the prohibition of manipulative research and timber harvesting in the sanctuary is both justifiable and essential to the continued "sanctity" of the area. However, we question whether the use of motorboats should be permitted to continue, except for the purposes of management, limited research, and regulated oyster harvesting.

Our major concern is for the adequate protection of the environmental integrity of the sanctuary. The Coos Bay EIS, as the initial effort of NOAA in preparing statements for estuarine sanctuary grants, should contain more specific information with respect to the manner in which local zoning and the acquisition of various property interests will operate to protect the sanctuary and the areas contiguous to it. Is there any plan which

will be followed in an attempt to ensure that the interest acquired (e.g., development rights, easements, timber rights, remainders, leases, fee interests, etc.) will accord with the degree of protection needed for that particular parcel as its use may affect the integrity of the sanctuary?

One final item. The impact statement could discuss in more detail the relationship of tidal hydraulics to the water quality in the sanctuary. What measures will be taken to ensure that pollutants which may occur "downstream" will not be carried into the sanctuary by the flow of the tide? How likely is it that pollutants will be discharged into the slough outside the sanctuary?

Respectfully,

Edward P. Thompson, Jr.

cc: Dr. Edward T. LaRoe,
Office of Coastal Environment,
NOAA

Disposition of Comments from the Environmental Defense Fund

1. The role of zoning and other existing regulatory authorities is more clearly addressed (pp. 6 and 20).

2. As a condition of the grant award, where the title obtained is less than fee, the Office of Coastal Zone Management, NOAA, will review the title to ensure that the interest acquired will provide the desired degree of protection.

3. Because of the Oregon water non-degradation clause and the existing high level of water quality, it is highly improbable that pollutants will be discharged into the slough outside of the sanctuary.

P.O. Box 5347
Charleston, Ore. 97420
June 6, 1974

Oregon Coastal Conservation
and Development Commission
P.O. Box N
Florence, Ore. 97439

JUN 19 1974

TC

Dear people;

My name is Edwin Vance Lamy. I have a Bachelor of Science degree in biology from the University of Oregon and I am a graduate student in Botany at Oregon State University on occasion. I have been living on the very edge of South Slough for three years and I make my living as a fisherman and artist.

I am very familiar with South Slough as I have spent many, many days canoeing on its waters. I have been actively involved in

research on the Great Blue Heron population and do quite a lot of wildlife photography.

It is my belief that South Slough is a very unique water system. Its shores are relatively unspoiled by human habitation and there is the potential for the forests to grow back after repeated logging operations. It is an exceptional place to study wildlife, or simply to enjoy its property.

I hereby support the proposed research sanctuary, including all the surrounding watershed, and with absolutely no logging.

Sincerely yours —

Vance Lang

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