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National Oceanic and Atmospheric Administration
**Estuarine Sanctuary
Program**

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Coastal Zone Management

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THE NATIONAL ESTUARINE SANCTUARY PROGRAM

The establishment of the Estuarine Sanctuary Program was a direct result of two major studies initiated in the late 1960's: the Commission on Marine Science, Engineering, and Resource's (the Stratton Commission's) final report, Our Nation and the Sea, and the Department of the Interior's National Estuarine Study. Both reports discuss the competing uses to which the estuarine areas of the United States are being subjected. The tone of the National Estuarine Study, in particular, was most indicative of the estuarine situation, presenting an awesome picture of the ongoing destruction of the United States estuary system. This study characterized the estuaries as being in jeopardy through deterioration and size reduction which are both occurring at an accelerating rate due to physical alteration and pollution.

Estuaries are among the most biologically productive regions of the Nation. It has been estimated that two-thirds of the commercial and sport fish landed in the United States are estuarine dependent during portions of their life cycles. Dr. Eugene Odum, of the University of Georgia, computed in 1971 that the economic value of the services an estuary performs free (e.g. wastewater treatment, food supply for finfish/shellfish, and storm protection) can be approximated at \$82,000 per acre. The estuarine complex is extremely fertile, producing microscopic plant and animal life that provides abundant nourishment for successively higher levels on the food chain. In fact, many of these fragile estuarine ecosystems present man with more food per acre than the best midwestern farmland.

¹Estuary is defined as "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 from land drainage. The term includes estuary-type areas of the Great Lakes." (CZMA§304(6))

The national concern for estuaries resulted in the Coastal Zone Management Act of 1972, which was amended in 1976. The estuarine sanctuary² program was designed to make fifty percent matching grants to coastal States for the purposes of acquiring, developing, or operating estuarine areas to be set aside "to serve as natural field laboratories in which to study and gather data on the natural and human processes occurring within the estuaries of the coastal zone."

The purposes of each sanctuary are:

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; and
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.

The basic goal is to preserve as much of each protected estuary's watershed as possible--thereby protecting the entire ecosystem within this sanctuary--so that both information can be gained which will aid in future management decisions concerning the coastal zone, and natural learning centers will be provided for

²Estuarine Sanctuary is defined as "a research area which may include any part or all of an estuary and any island, transitional area, and upland in, adjoining, or adjacent to such estuary, and which constitutes 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." (CZMA §304(7))

educational institutions and members of the public. Secondary benefits include: the preservation of habitats for estuarine dependent flora and fauna, including endangered species; and low intensity recreation, as long as that activity does not detract from the major purposes outlined above.

The sanctuaries are owned and operated by the individual States under the direction of the Estuarine Sanctuary Guidelines.³ These guidelines also include detailed descriptions of the eleven biogeographic regions into which the Nation's estuaries have been divided. To protect a representative sample, the goal of the national system will be to set up approximately twenty estuarine sanctuaries from these biogeographic regions and major subregions therein (see attached map).

The estuarine sanctuary process is administratively broken down into three phases: preacquisition, acquisition, and operations. The preacquisition grant may be used for land appraisals, refinement of boundaries, and for the development of management plans and/or programs for research and education. The acquisition grant is to cover the actual and related costs of land acquisition. Finally, operations grants are for those costs necessary for monitoring the sanctuary and protecting the health of its ecosystem, and for the establishment and maintenance of an educational program.

At the present time, there are five sanctuaries in operation, with two more scheduled for funding after October 1, 1978 (see attached map). Attachment A presents factual information about each sanctuary. However, because each sanctuary is unique, the following narrative is also presented.

³15 CFR Part 921 (39 Fed. Reg. 108, 6/4/74, and 42 Fed. Reg. 175, 9/9/77).

Part of the Coos Bay Estuary, South Slough, Oregon, was the first estuarine sanctuary funded under the program. It is managed by the South Slough Estuarine Sanctuary Management Commission, which was established through State of Oregon legislation. This commission is composed of several State agencies, local agencies, private sector representation, and a member of the State University system. This multi-disciplinary management commission for the 4200-acre sanctuary may become a prototype for the planners and operators of other ecosystems to be protected in the future. Oregon has hired a sanctuary manager and has received two operational grants for initiation of the research and education programs.

The 6150-acre Duplin River, Georgia, Sanctuary is only one part of the much larger protected ecosystem of Sapelo Island, Georgia, the whole of which is preserved by one State and two Federal agencies: these latter being the Office of Coastal Zone Management, and the Heritage, Conservation, and Recreation Service. The island also contains a University of Georgia marine institute and a community of approximately three hundred black people whose ancestors have lived on the island for over two hundred years. Adjacent to Sapelo Island is Blackbeard Island, which is a Fish and Wildlife Refuge.

Waimanu, Hawaii, is a 5900-acre, mountain-enclosed stream valley which drains into the Pacific Ocean. This area is extremely isolated and pristine. In fact, land access is gained only by a strenuous six to eight hour hike. Adjacent to Waimanu Valley is an almost identical valley: Waipio. Waipio has a limited amount of development, mostly small taro (poi) farms. But, in the future, these two estuaries could provide a "natural experiment" to examine the effects of farming and habitation versus the baseline area.

Old Woman Creek, Ohio, is relatively small--637 acres--but ecologically extremely valuable. The sanctuary area is one of the few relatively natural estuaries remaining on the heavily populated shores of Lake Erie. As such, it is extremely valuable as a control, or baseline area, for measuring the success of coastal land and water management efforts for the Great Lakes biogeographic region. Since it is near urban centers, the educational aspects of estuaries will be heavily emphasized.

Rookery Bay, Florida, is not only unique for its contributions to estuarine research, but also for its management structure. Management of the area is by the Florida Department of Fish and Game, the Collier County Conservancy, and the National Audubon Society. This joint management structure was created when the two private organizations granted a dollar-per-year, 99-year lease of the land to the State. OCZM and State funds will add additional key acreage to the core area. The Rookery Bay Marine Laboratory will continue to develop scientific data which will aid decisionmakers in coastal resource use decisions.

Two States have received preacquisition funding for FY 79 estuarine sanctuaries: Elkhorn Slough, California, and Apalachicola Bay/River, Florida.

For more information concerning these individual sanctuaries or the National Estuarine Sanctuary Program in general, contact the appropriate State coastal zone management agency or the Federal

Office of Coastal Zone Management

Estuarine Sanctuary Coordinator

3300 Whitehaven Street, N.W.

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Washington, D.C. 20235

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The following is a status report and information regarding the sanctuaries which have been established as of September 31, 1978 (FY 78).

Sapelo Island, Georgia

Location: McIntosh County, Georgia
Size: 6,150 acres
Biogeographic Region: Carolinian
OCZM Grant Award: \$1,500,000
Initial Grant Date: FY 75
Management Grant: \$50,000 (FY 78)
Acquisition Status: Designated
Managed by: Dept. of Natural Resources
Manager: C. V. Waters, DNR Fish and Game,
Sapelo Island Ga. 31327

South Slough Oregon

Location: Coos Bay, Coos County, Oregon
Size: 4,200 acres
Biogeographic Region: Columbian
OCZM Grant Award: \$1,750,000
Initial Grant Date: FY 74
Acquisition Status: 82% complete
Management Grant: FY 77, FY 78
Managed by: Div. of State Lands
Manager: Delane Munson
South Slough Estuarine Sanctuary
c/o Oregon Institute of Marine Biology
Charleston, Oregon 97420

Waimanu, Hawaii

Location: Island/County of Hawaii
Size: 5,900 acres (347 to be purchases)
Biogeographic Region: Insular
OCZM Grant Award: \$270,000
Initial Grant Date: FY 76, Supplement FY 78
Acquisition Status: Land negotiations begun in late 1978
Management Grant: Not scheduled at this time
Managed by: Division of Land and Natural Resources
Contact: Mike Munekiyo
Dept of Planning and Economic Dev.
P.O. Box 2359
Honolulu, Hawaii 96804

Old Woman Creek, Ohio

Location: Erie County, Ohio
Size: 637 acres
Biogeographic Region: Great Lakes
OCZM Grant Award: \$898,925
Initial Grant Date: September 1977, Supplement for Opns FY 78
Acquisition Status: Land underway. Approximately 25%
Purchased or under option.
Management Grant: Incl. with land acquisition grant
Managed by Dept. of Natural Resources
Contact: Dick Mosely
Ohio Dept of Natural Resources
Fountain Square
Columbus, Ohio 43224

Rookery Bay, Florida

Location: Collier County, Florida
Size: 8,500 acres
Biogeographic Region: West Indian
OCZM Grant Award: \$1,500,000
Initial Grant Date: September 1977
Acquisition Status: Sanctuary is 76% complete. Land negotiations
on remainder started October 1978.
Management Grant: FY 78
Managed by: Florida Fish and Game, Audubon Society, and
Collier County Conservancy
Contact: Bernie Yokel
Rookery Bay Marine Station
Box 684
Naples, Florida 33940

The following States have received preacquisition grants in FY 78.

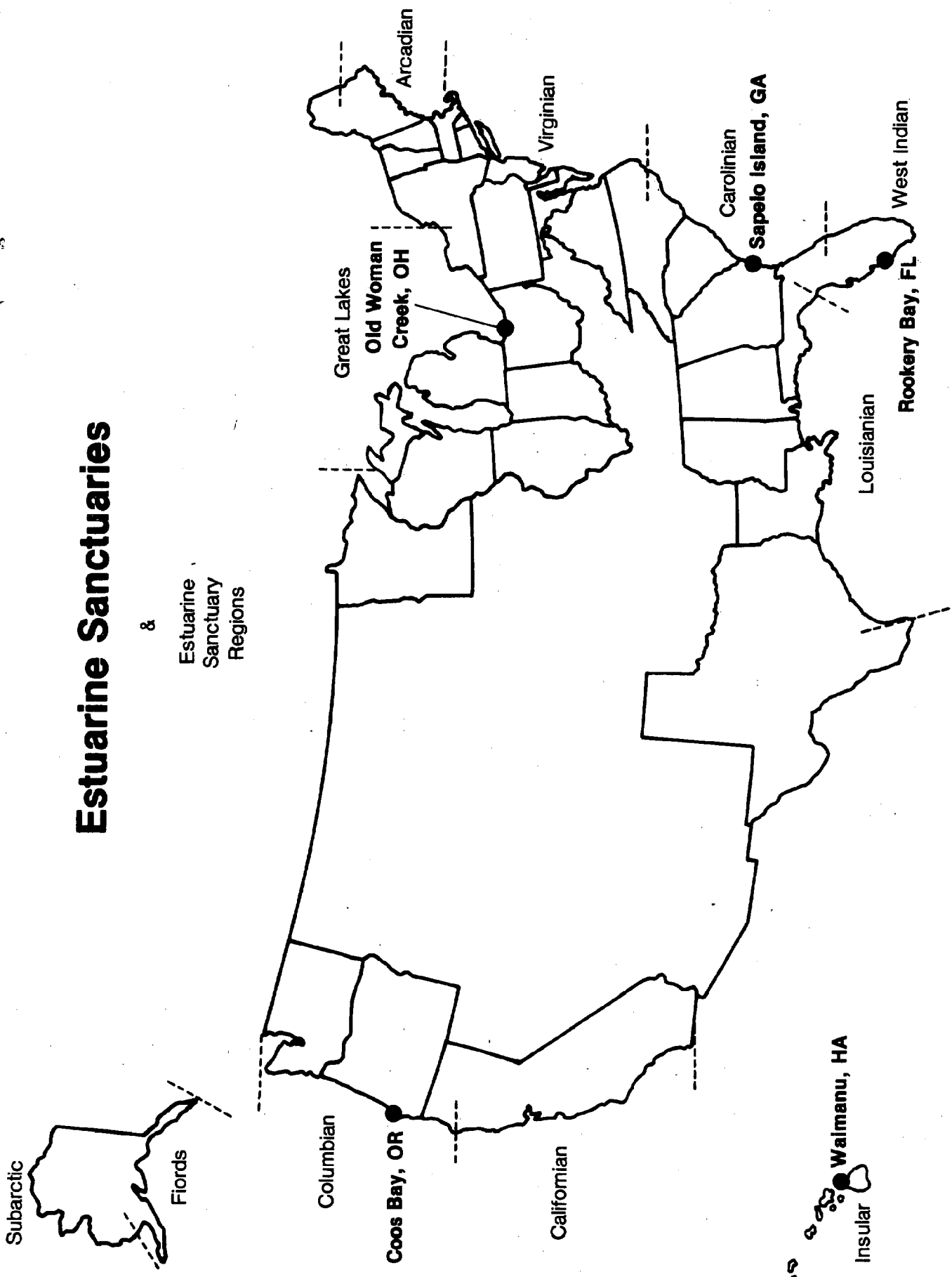
Apalachicola Bay/River, Florida

Location: Franklin County, Florida
Size: 180,000 acres
Biogeographic Region: Louisianian
Preacquisition Grant Award: May 1978

Elkhorn Slough, California

Location: Monterey County, California
Size: 2,000 acres
Biogeographic Region: Californian
Preacquisition Grant: August 1978

Estuarine Sanctuaries & Estuarine Sanctuary Regions





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