2006-2011

South Slough National Estuarine Research Reserve

Management Plan Appendices

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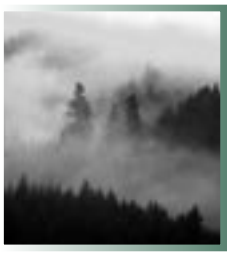
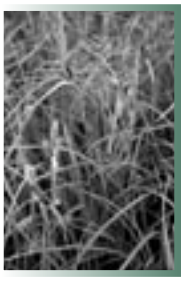
Management Plan 2006-2011





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Code of Federal Regulations

Title 15: Commerce and Foreign Trade
Part 921—National Estuarine Research Reserve System Regulations

SECTION CONTENTS

AUTHORITY:
Section 315 of the Coastal Zone Management Act, as amended (16 U.S.C. 1461).

Source: 58 FR 38215, July 15, 1993, unless otherwise noted.

Subpart A—General

§ 921.1 Mission, goals and general provisions.

(a) The mission of the National Estuarine Research Reserve Program is the establishment and management, through Federal-state cooperation, of a national system (National Estuarine Research Reserve System or System) of estuarine research reserves (National Estuarine Research Reserves or Reserves) representative of the various regions and estuarine types in the United States. National Estuarine Research Reserves are established to provide opportunities for long-term research, education, and interpretation.

(b) The goals of the Program are to:

(1) Ensure a stable environment for research through long-term protection of National Estuarine Research Reserve resources;

(2) Address coastal management issues identified as significant through coordinated estuarine research within the System;

(3) Enhance public awareness and understanding of estuarine areas and provide suitable opportunities for public education and interpretation;

(4) Promote Federal, state, public and private use of one or more Reserves within the System when such entities conduct estuarine research; and

(5) Conduct and coordinate estuarine research within the System, gathering and making available information necessary for improved understanding and management of estuarine areas.

(c) National Estuarine Research Reserves shall be open to the public to the extent permitted under state and Federal law. Multiple uses are allowed to the degree compatible with each Reserve's overall purpose as provided in the management plan (see §921.13) and consistent with paragraphs (a) and (b) of this section. Use levels are set by the state where the Reserve is located and analyzed in the management plan. The Reserve management plan shall describe the uses and establish priorities among these uses. The plan shall identify uses requiring a state permit, as well as areas where uses are encouraged or prohibited. Consistent with resource protection and research objectives, public access and use may be restricted to certain areas or components within a Reserve.

(d) Habitat manipulation for research purposes is allowed consistent with the following limitations. Manipulative research activities must be specified in the management plan, be consistent with the mission and goals of the program (see paragraphs (a) and (b) of this section) and the goals and objectives set forth in the Reserve's management plan, and be limited in nature and extent to the minimum manipulative activity necessary to accomplish the stated research objective. Manipulative research activities with a significant or long-term impact on Reserve resources require the prior approval of the state and the National Oceanic and Atmospheric Administration (NOAA).

Manipulative research activities which can reasonably be expected to have a significant adverse impact on the estuarine resources and habitat of a Reserve, such that the activities themselves or their resulting short- and long-term consequences compromise the representative character and integrity of a Reserve, are prohibited. Habitat manipulation for resource management purposes is prohibited except as specifically approved by NOAA as: (1) A restoration activity consistent with paragraph (e) of this section; or (2) an activity necessary for the protection of public health or the preservation of other sensitive resources which have been listed or are eligible for protection under relevant Federal or state authority (e.g., threatened/endangered species or significant historical or cultural resources) or if the manipulative activity is a long-term pre-existing use (i.e., has occurred prior to designation) occurring in a buffer area. If habitat manipulation is determined to be necessary for the protection of public health, the preservation of sensitive resources, or if the manipulation is a long-term pre-existing use in a buffer area, then these activities shall be specified in the Reserve management plan in accordance with §921.13(a)(10) and shall be limited to the reasonable alternative which has the least adverse and shortest term impact on the representative and ecological integrity of the Reserve.

(e) Under the Act an area may be designated as an estuarine Reserve only if the area is a representative estuarine ecosystem that is suitable for long-term research. Many estuarine areas have undergone some ecological change as a result of human activities (e.g., hydrological changes, intentional/unintentional species composition changes—introduced and exotic species). In those areas proposed or designated as National Estuarine Research Reserves, such changes may have diminished the representative character and integrity of the site. Although restoration of degraded areas is not a primary purpose of the System, such activities may be permitted to improve the representative character and integrity of a Reserve. Restoration activities must be carefully planned and approved by NOAA through the Reserve management plan. Historical research may be necessary to determine the "natural" representative state of an estuarine area (i.e., an estuarine ecosystem minimally affected by human activity or influence). Frequently, restoration of a degraded estuarine area will provide an excellent opportunity for management oriented research.

(f) NOAA may provide financial assistance to coastal states, not to exceed, per Reserve, 50 percent of all actual costs or $5 million whichever amount is less, to assist in the acquisition of land and waters, or interests therein. NOAA may provide financial assistance to coastal states not to exceed 70 percent of all actual costs for the management and operation of, the development and construction of facilities, and the conduct of educational or interpretive activities concerning Reserves (see subpart I). NOAA may provide financial assistance to any coastal state or public or private person, not to exceed 70 percent of all actual costs, to support research and monitoring within a Reserve. Notwithstanding any financial assistance limits established by this Part, when financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, such assistance may be used to pay 100 percent of all actual costs of activities carrier out with this assistance, as long as such funds are available. Predesignation, acquisition and development, operation and management, special research and monitoring, and special education and interpretation awards are available under the National Estuarine Reserve Program. Predesignation awards are for site selection/feasibility, draft management plan preparation and conduct of basic characterization studies. Acquisition and development awards are intended primarily for acquisition of interests in land, facility construction and to develop and/or upgrade research, monitoring and education programs. Operation and management awards provide funds to assist in implementing, operating and managing the administrative, and basic research, monitoring and education programs, outlined in the Reserve management plan. Special research and monitoring awards provide funds to conduct estuarine research and monitoring

projects with the System. Special educational and interpretive awards provide funds to conduct estuarine educational and interpretive projects within the System.

(g) Lands already in protected status managed by other Federal agencies, state or local governments, or private organizations may be included within National Estuarine Research Reserves only if the managing entity commits to long-term management consistent with paragraphs (d) and (e) of this section in the Reserve management plan. Federal lands already in protected status may not comprise a majority of the key land and water areas of a Reserve (see §921.11(c)(3)).

(h) To assist the states in carrying out the Program's goals in an effective manner, NOAA will coordinate a research and education information exchange throughout the National Estuarine Research Reserve System. As part of this role, NOAA will ensure that information and ideas from one Reserve are made available to others in the System. The network will enable Reserves to exchange information and research data with each other, with universities engaged in estuarine research, and with Federal, state, and local agencies. NOAA's objective is a system-wide program of research and monitoring capable of addressing the management issues that affect long-term productivity of our Nation's estuaries.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12540, MAR. 17, 1997; 63 FR 26717, MAY 14, 1998]

§ 921.2 Definitions.

(a) *Act* means the Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451 *et seq.*

(b) *Assistant Administrator* means the Assistant Administrator for Ocean Services and Coastal Zone Management or delegee.

(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 these regulations the term also includes Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Marianas Islands, the Trust Territories of the Pacific Islands, and American Samoa (see 16 U.S.C. 1453(4)).

(d) *State agency* means an instrumentality of a coastal state to whom the coastal state has delegated the authority and responsibility for the creation and/or management/operation of a National Estuarine Research Reserve. Factors indicative of this authority may include the power to receive and expend funds on behalf of the Reserve, acquire and sell or convey real and personal property interests, adopt rules for the protection of the Reserve, enforce rules applicable to the Reserve, or develop and implement research and education programs for the reserve. For the purposes of these regulations, the terms "coastal state" and "State agency" shall be synonymous.

(e) *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 also includes estuary-type areas with measurable freshwater influence and having unimpaired connections with the open sea, and estuary-type areas of the Great Lakes and their connecting waters (see 16 U.S.C. 1453(7)).

(f) *National Estuarine Research Reserve* means an area that is a representative estuarine ecosystem suitable for long-term research, which may include all of the key land and water portion of an estuary, and adjacent transitional areas and uplands constituting to the extent feasible a natural unit, and which is set aside as a natural field laboratory to provide long-term opportunities

for research, education, and interpretation on the ecological relationships within the area (see 16 U.S.C. 1453(8)) and meets the requirements of 16 U.S.C. 1461(b). This includes those areas designated as National Estuarine Sanctuaries or Reserves under section 315 of the Act prior to enactment of the Coastal Zone Act Reauthorization Amendments of 1990 and each area subsequently designated as a National Estuarine Research Reserve.

§ 921.3 National Estuarine Research Reserve System Biogeographic Classification Scheme and Estuarine Typologies.

(a) National Estuarine Research Reserves are chosen to reflect regional differences and to include a variety of ecosystem types. A biogeographic classification scheme based on regional variations in the nation's coastal zone has been developed. The biogeographic classification scheme is used to ensure that the National Estuarine Research Reserve System includes at least one site from each region. The estuarine typology system is utilized to ensure that sites in the System reflect the wide range of estuarine types within the United States.

(b) The biogeographic classification scheme, presented in appendix I, contains 29 regions. Figure 1 graphically depicts the biogeographic regions of the United States.

(c) The typology system is presented in appendix II.

§ 921.4 Relationship to other provisions of the Coastal Zone Management Act, and to the Marine Protection, Research and Sanctuaries Act.

(a) The National Estuarine Research Reserve System is intended to provide information to state agencies and other entities involved in addressing coastal management issues. Any coastal state, including those that do not have approved coastal management programs under section 306 of the Act, is eligible for an award under the National Estuarine Research Reserve Program (see §921.2(c)).

(b) For purposes of consistency review by states with a federally approved coastal management program, the designation of a National Estuarine Research Reserve is deemed to be a Federal activity, which, if directly affecting the state's coastal zone, must be undertaken in a manner consistent to the maximum extent practicable with the approved state coastal management program as provided by section 1456(c)(1) of the Act, and implementing regulations at 15 CFR part 930, subpart C. In accordance with section 1456(c)(1) of the Act and the applicable regulations NOAA will be responsible for certifying that designation of the Reserve is consistent with the state's approved coastal management program. The state must concur with or object to the certification. It is recommended that the lead state agency for Reserve designation consult, at the earliest practicable time, with the appropriate state officials concerning the consistency of a proposed National Estuarine Research Reserve.

(c) The National Estuarine Research Reserve Program will be administered in close coordination with the National Marine Sanctuary Program (Title III of the Marine Protection, Research and Sanctuaries Act, as amended, 16 U.S.C. 1431–1445), also administered by NOAA. Title III authorizes the Secretary of Commerce to designate discrete areas of the marine environment as National Marine Sanctuaries to protect or restore such areas for their conservation, recreational, ecological, historical, research, educational or esthetic values. National Marine Sanctuaries and Estuarine Research Reserves may not overlap, but may be adjacent.

Subpart B—Site Selection, Post Site Selection and Management Plan Development

§ 921.10 General.

(a) A coastal state may apply for Federal financial assistance for the purpose of site selection, preparation of documents specified in §921.13 (draft management plan (DMP) and environmental impact statement (EIS)), and the conduct of limited basic characterization studies. The total Federal share of this assistance may not exceed $100,000. Federal financial assistance for pre-acquisition activities under §921.11 and §921.12 is subject to the total $5 million for which each Reserve is eligible for land acquisition. Notwithstanding the above, when financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, such assistance may be used to pay 100 percent of all actual costs of activities carried out with this assistance, as long as such funds are available. In the case of a biogeographic region (see appendix I) shared by two or more coastal states, each state is eligible for Federal financial assistance to establish a separate National Estuarine Research Reserve within their respective portion of the shared biogeographic region. Each separate National Estuarine Research Reserve is eligible for the full complement of funding. Financial assistance application procedures are specified in subpart I.

(b) In developing a Reserve program, a state may choose to develop a multiple-site Reserve reflecting a diversity of habitats in a single biogeographic region. A multiple-site Reserve allows the state to develop complementary research and educational programs within the individual components of its multi-site Reserve. Multiple-site Reserves are treated as one Reserve in terms of financial assistance and development of an overall management framework and plan. Each individual site of a proposed multiple-site Reserve shall be evaluated both separately under §921.11(c) and collectively as part of the site selection process. A coastal state may propose to establish a multiple-site Reserve at the time of the initial site selection, or at any point in the development or operation of the Reserve. If the state decides to develop a multiple-site National Estuarine Research Reserve after the initial acquisition and development award is made for a single site, the proposal is subject to the requirements set forth in §921.33(b). However, a state may not propose to add one or more sites to an already designated Reserve if the operation and management of such Reserve has been found deficient and uncorrected or the research conducted is not consistent with the Estuarine Research Guidelines referenced in §921.51. In addition, Federal funds for the acquisition of a multiple-site Reserve remain limited to $5,000,000 (see §921.20). The funding for operation of a multiple-site Reserve is limited to the maximum allowed for any one Reserve per year (see §921.32(c)) and pre-acquisition funds are limited to $100,000 per Reserve. Notwithstanding the above, when financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, such assistance may be used to pay 100 percent of all actual costs of activities carrier out with this assistance, as long as such funds are available.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 63 FR 26717, MAY 14, 1998]

§ 921.11 Site selection and feasibility.

(a) A coastal state may use Federal funds to establish and implement a site selection process which is approved by NOAA.

(b) In addition to the requirements set forth in subpart I, a request for Federal funds for site selection must contain the following programmatic information:

(1) A description of the proposed site selection process and how it will be implemented in conformance with the biogeographic classification scheme and typology (§921.3);

(2) An identification of the site selection agency and the potential management agency; and

(3) A description of how public participation will be incorporated into the process (see §921.11(d)).

(c) As part of the site selection process, the state and NOAA shall evaluate and select the final site(s). NOAA has final authority in approving such sites. Site selection shall be guided by the following principles:

(1) The site's contribution to the biogeographical and typological balance of the National Estuarine Research Reserve System. NOAA will give priority consideration to proposals to establish Reserves in biogeographic regions or subregions or incorporating types that are not represented in the system. (see the biogeographic classification scheme and typology set forth in §921.3 and appendices I and II);

(2) The site's ecological characteristics, including its biological productivity, diversity of flora and fauna, and capacity to attract a broad range of research and educational interests. The proposed site must be a representative estuarine ecosystem and should, to the maximum extent possible, be an estuarine ecosystem minimally affected by human activity or influence (see §921.1(e)).

(3) Assurance that the site's boundaries encompass an adequate portion of the key land and water areas of the natural system to approximate an ecological unit and to ensure effective conservation. Boundary size will vary greatly depending on the nature of the ecosystem. Reserve boundaries must encompass the area within which adequate control has or will be established by the managing entity over human activities occurring within the Reserve. Generally, Reserve boundaries will encompass two areas: Key land and water areas (or "core area") and a buffer zone. Key land and water areas and a buffer zone will likely require significantly different levels of control (see §921.13(a)(7)). The term "key land and water areas" refers to that core area within the Reserve that is so vital to the functioning of the estuarine ecosystem that it must be under a level of control sufficient to ensure the long-term viability of the Reserve for research on natural processes. Key land and water areas, which comprise the core area, are those ecological units of a natural estuarine system which preserve, for research purposes, a full range of significant physical, chemical and biological factors contributing to the diversity of fauna, flora and natural processes occurring within the estuary. The determination of which land and water areas are "key" to a particular Reserve must be based on specific scientific knowledge of the area. A basic principle to follow when deciding upon key land and water areas is that they should encompass resources representative of the total ecosystem, and which if compromised could endanger the research objectives of the Reserve. The term *buffer zone* refers to an area adjacent to or surrounding key land and water areas and essential to their integrity. Buffer zones protect the core area and provide additional protection for estuarine-dependent species, including those that are rare or endangered. When determined appropriate by the state and approved by NOAA, the buffer zone may also include an area necessary for facilities required for research and interpretation. Additionally, buffer zones should be established sufficient to accommodate a shift of the core area as a result of biological, ecological or geomorphological change which reasonably could be expected to occur. National Estuarine Research Reserves may include existing Federal or state lands already in a protected status where mutual benefit can be enhanced. However, NOAA will not approve a site for potential National Estuarine Research Reserve status that is dependent primarily

upon the inclusion of currently protected Federal lands in order to meet the requirements for Reserve status (such as key land and water areas). Such lands generally will be included within a Reserve to serve as a buffer or for other ancillary purposes; and may be included, subject to NOAA approval, as a limited portion of the core area;

(4) The site's suitability for long-term estuarine research, including ecological factors and proximity to existing research facilities and educational institutions;

(5) The site's compatibility with existing and potential land and water uses in contiguous areas as well as approved coastal and estuarine management plans; and

(6) The site's importance to education and interpretive efforts, consistent with the need for continued protection of the natural system.

(d) Early in the site selection process the state must seek the views of affected landowners, local governments, other state and Federal agencies and other parties who are interested in the area(s) being considered for selection as a potential National Estuarine Research Reserve. After the local government(s) and affected landowner(s) have been contacted, at least one public meeting shall be held in the vicinity of the proposed site. Notice of such a meeting, including the time, place, and relevant subject matter, shall be announced by the state through the area's principal newspaper at least 15 days prior to the date of the meeting and by NOAA in the Federal Register.

(e) A state request for NOAA approval of a proposed site (or sites in the case of a multi-site Reserve) must contain a description of the proposed site(s) in relationship to each of the site selection principals (§921.11(c)) and the following information:

(1) An analysis of the proposed site(s) based on the biogeographical scheme/typology discussed in §921.3 and set forth in appendices I and II;

(2) A description of the proposed site(s) and its (their) major resources, including location, proposed boundaries, and adjacent land uses. Maps are required;

(3) A description of the public participation process used by the state to solicit the views of interested parties, a summary of comments, and, if interstate issues are involved, documentation that the Governor(s) of the other affected state(s) has been contacted. Copies of all correspondence, including contact letters to all affected landowners must be appended;

(4) A list of all sites considered and a brief statement of the reasons why a site was not preferred; and

(5) A nomination of the proposed site(s) for designation as a National Estuarine Research Reserve by the Governor of the coastal state in which the state is located.

(f) A state proposing to reactivate an inactive site, previously approved by NOAA for development as an Estuarine Sanctuary or Reserve, may apply for those funds remaining, if any, provided for site selection and feasibility (§921.11a)) to determine the feasibility of reactivation. This feasibility study must comply with the requirements set forth in §921.11 (c) through (e).

§ 921.12 Post site selection.

(a) At the time of the coastal state's request for NOAA approval of a proposed site, the state may submit a request for funds to develop the draft management plan and for preparation of the EIS. At this time, the state may also submit a request for the remainder of the predesignation funds to perform a limited basic characterization of the physical, chemical and biological characteristics of the site approved by NOAA necessary for providing EIS information to NOAA. The state's request

for these post site selection funds must be accompanied by the information specified in subpart I and, for draft management plan development and EIS information collection, the following programmatic information:

(1) A draft management plan outline (see §921.13(a) below); and

(2) An outline of a draft memorandum of understanding (MOU) between the state and NOAA detailing the Federal-state role in Reserve management during the initial period of Federal funding and expressing the state's long-term commitment to operate and manage the Reserve.

(b) The state is eligible to use the funds referenced in §921.12(a) after the proposed site is approved by NOAA under the terms of §921.11.

§ 921.13 Management plan and environmental impact statement development.

(a) After NOAA approves the state's proposed site and application for funds submitted pursuant to §921.12, the state may begin draft management plan development and the collection of information necessary for the preparation by NOAA of an EIS. The state shall develop a draft management plan, including an MOU. The plan shall set out in detail:

(1) Reserve goals and objectives, management issues, and strategies or actions for meeting the goals and objectives;

(2) An administrative plan including staff roles in administration, research, education/interpretation, and surveillance and enforcement;

(3) A research plan, including a monitoring design;

(4) An education/interpretive plan;

(5) A plan for public access to the Reserve;

(6) A construction plan, including a proposed construction schedule, general descriptions of proposed developments and general cost estimates. Information should be provided for proposed minor construction projects in sufficient detail to allow these projects to begin in the initial phase of acquisition and development. A categorical exclusion, environmental assessment, or EIS may be required prior to construction;

(7)(i) An acquisition plan identifying the ecologically key land and water areas of the Reserve, ranking these areas according to their relative importance, and including a strategy for establishing adequate long-term state control over these areas sufficient to provide protection for Reserve resources to ensure a stable environment for research. This plan must include an identification of ownership within the proposed Reserve boundaries, including land already in the public domain; the method(s) of acquisition which the state proposes to use—acquisition (including less-than-fee simple options) to establish adequate long-term state control; an estimate of the fair market value of any property interest—which is proposed for acquisition; a schedule estimating the time required to complete the process of establishing adequate state control of the proposed research reserve; and a discussion of any anticipated problems. In selecting a preferred method(s) for establishing adequate state control over areas within the proposed boundaries of the Reserve, the state shall perform the following steps for each parcel determined to be part of the key land and water areas (control over which is necessary to protect the integrity of the Reserve for research purposes), and for those parcels required for research and interpretive support facilities or buffer purposes:

(A) Determine, with appropriate justification, the minimum level of control(s) required [e.g., management agreement, regulation, less-than-fee simple property interest (e.g.,

conservation easement), fee simple property acquisition, or a combination of these approaches]. This does not preclude the future necessity of increasing the level of state control;

(B) Identify the level of existing state control(s);

(C) Identify the level of additional state control(s), if any, necessary to meet the minimum requirements identified in paragraph (a)(7)(i)(A) of this section;

(D) Examine all reasonable alternatives for attaining the level of control identified in paragraph (a)(7)(i)(C) of this section, and perform a cost analysis of each; and

(E) Rank, in order of cost, the methods (including acquisition) identified in paragraph (a)(7)(i)(D) of this section.

(ii) An assessment of the relative cost-effectiveness of control alternatives shall include a reasonable estimate of both short-term costs (e.g., acquisition of property interests, regulatory program development including associated enforcement costs, negotiation, adjudication, etc.) and long-term costs (e.g., monitoring, enforcement, adjudication, management and coordination). In selecting a preferred method(s) for establishing adequate state control over each parcel examined under the process described above, the state shall give priority consideration to the least costly method(s) of attaining the minimum level of long-term control required. Generally, with the possible exception of buffer areas required for support facilities, the level of control(s) required for buffer areas will be considerably less than that required for key land and water areas. This acquisition plan, after receiving the approval of NOAA, shall serve as a guide for negotiations with landowners. A final boundary for the reserve shall be delineated as a part of the final management plan;

(8) A resource protection plan detailing applicable authorities, including allowable uses, uses requiring a permit and permit requirements, any restrictions on use of the research reserve, and a strategy for research reserve surveillance and enforcement of such use restrictions, including appropriate government enforcement agencies;

(9) If applicable, a restoration plan describing those portions of the site that may require habitat modification to restore natural conditions;

(10) If applicable, a resource manipulation plan, describing those portions of the Reserve buffer in which long-term pre-existing (prior to designation) manipulation for reasons not related to research or restoration is occurring. The plan shall explain in detail the nature of such activities, shall justify why such manipulation should be permitted to continue within the reserve buffer; and shall describe possible effects of this manipulation on key land and water areas and their resources;

(11) A proposed memorandum of understanding (MOU) between the state and NOAA regarding the Federal-state relationship during the establishment and development of the National Estuarine Research Reserve, and expressing a long-term commitment by the state to maintain and manage the Reserve in accordance with section 315 of the Act, 16 U.S.C. 1461, and applicable regulations. In conjunction with the MOU, and where possible under state law, the state will consider taking appropriate administrative or legislative action to ensure the long-term protection and operation of the National Estuarine Research Reserve. If other MOUs are necessary (such as with a Federal agency, another state agency or private organization), drafts of such MOUs must be included in the plan. All necessary MOUs shall be signed prior to Reserve designation; and

(12) If the state has a federally approved coastal management program, a certification that the National Estuarine Research Reserve is consistent to the maximum extent practicable with that program. See §§921.4(b) and 921.30(b).

(b) Regarding the preparation of an EIS under the National Environmental Policy Act on a National Estuarine Research Reserve proposal, the state and NOAA shall collect all necessary information concerning the socioeconomic and environmental impacts associated with implementing the draft management plan and feasible alternatives to the plan. Based on this information, the state will draft and provide NOAA with a preliminary EIS.

(c) Early in the development of the draft management plan and the draft EIS, the state and NOAA shall hold a scoping meeting (pursuant to NEPA) in the area or areas most affected to solicit public and government comments on the significant issues related to the proposed action. NOAA will publish a notice of the meeting in the Federal Register at least 15 days prior to the meeting. The state shall be responsible for publishing a similar notice in the local media.

(d) NOAA will publish a Federal Register notice of intent to prepare a draft EIS. After the draft EIS is prepared and filed with the Environmental Protection Agency (EPA), a Notice of Availability of the draft EIS will appear in the Federal Register. Not less than 30 days after publication of the notice, NOAA will hold at least one public hearing in the area or areas most affected by the proposed national estuarine research reserve. The hearing will be held no sooner than 15 days after appropriate notice of the meeting has been given in the principal news media by the state and in the Federal Register by NOAA. After a 45-day comment period, a final EIS will be prepared by the state and NOAA.

Subpart C—Acquisition, Development and Preparation of the Final Management Plan

§ 921.20 General.

The acquisition and development period is separated into two major phases. After NOAA approval of the site, draft management plan and draft MOU, and completion of the final EIS, a coastal state is eligible for an initial acquisition and development award(s). In this initial phase, the state should work to meet the criteria required for formal research reserve designation; e.g., establishing adequate state control over the key land and water areas as specified in the draft management plan and preparing the final management plan. These requirements are specified in §921.30. Minor construction in accordance with the draft management plan may also be conducted during this initial phase. The initial acquisition and development phase is expected to last no longer than three years. If necessary, a longer time period may be negotiated between the state and NOAA. After Reserve designation, a state is eligible for a supplemental acquisition and development award(s) in accordance with §921.31. In this post-designation acquisition and development phase, funds may be used in accordance with the final management plan to construct research and educational facilities, complete any remaining land acquisition, for program development, and for restorative activities identified in the final management plan. In any case, the amount of Federal financial assistance provided to a coastal state with respect to the acquisition of lands and waters, or interests therein, for any one National Estuarine Research Reserve may not exceed an amount equal to 50 percent of the costs of the lands, waters, and interests therein or $5,000,000, whichever amount is less, except when the financial assistance is provided from amounts recovered as a result of damage to natural

resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of all actual costs of activities carrier out with this assistance, as long as such funds are available.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12540, MAR. 17, 1997; 63 FR 26717, MAY 14, 1998]

§ 921.21 Initial acquisition and development awards.

(a) Assistance is provided to aid the recipient prior to designation in:

(1) Acquiring a fee simple or less-than-fee simple real property interest in land and water areas to be included in the Reserve boundaries (see §921.13(a)(7); §921.30(d));

(2) Minor construction, as provided in paragraphs (b) and (c) of this section;

(3) Preparing the final management plan; and

(4) Initial management costs, e.g., for implementing the NOAA approved draft management plan, hiring a Reserve manager and other staff as necessary and for other management-related activities. Application procedures are specified in subpart I.

(b) The expenditure of Federal and state funds on major construction activities is not allowed during the initial acquisition and development phase. The preparation of architectural and engineering plans, including specifications, for any proposed construction, or for proposed restorative activities, is permitted. In addition, minor construction activities, consistent with paragraph (c) of this section also are allowed. The NOAA-approved draft management plan must, however, include a construction plan and a public access plan before any award funds can be spent on construction activities.

(c) Only minor construction activities that aid in implementing portions of the management plan (such as boat ramps and nature trails) are permitted during the initial acquisition and development phase. No more than five (5) percent of the initial acquisition and development award may be expended on such activities. NOAA must make a specific determination, based on the final EIS, that the construction activity will not be detrimental to the environment.

(d) Except as specifically provided in paragraphs (a) through (c) of this section, construction projects, to be funded in whole or in part under an acquisition and development award(s), may not be initiated until the Reserve receives formal designation (see §921.30). This requirement has been adopted to ensure that substantial progress in establishing adequate state control over key land and water areas has been made and that a final management plan is completed before major sums are spent on construction. Once substantial progress in establishing adequate state control/acquisition has been made, as defined by the state in the management plan, other activities guided by the final management plan may begin with NOAA's approval.

(e) For any real property acquired in whole or part with Federal funds for the Reserve, the state shall execute suitable title documents to include substantially the following provisions, or otherwise append the following provisions in a manner acceptable under applicable state law to the official land record(s):

(1) Title to the property conveyed by this deed shall vest in the [recipient of the award granted pursuant to section 315 of the Act, 16 U.S.C. 1461 or other NOAA approved state agency] subject to the condition that the designation of the [name of National Estuarine Reserve] is not withdrawn and the property remains part of the federally designated [name of National Estuarine Research Reserve]; and

(2) In the event that the property is no longer included as part of the Reserve, or if the designation of the Reserve of which it is part is withdrawn, then NOAA or its successor agency, after full and reasonable consultation with the State, may exercise the following rights regarding the disposition of the property:

(i) The recipient may retain title after paying the Federal Government an amount computed by applying the Federal percentage of participation in the cost of the original project to the current fair market value of the property;

(ii) If the recipient does not elect to retain title, the Federal Government may either direct the recipient to sell the property and pay the Federal Government an amount computed by applying the Federal percentage of participation in the cost of the original project to the proceeds from the sale (after deducting actual and reasonable selling and repair or renovation expenses, if any, from the sale proceeds), or direct the recipient to transfer title to the Federal Government. If directed to transfer title to the Federal Government, the recipient shall be entitled to compensation computed by applying the recipient's percentage of participation in the cost of the original project to the current fair market value of the property; and

(iii) Fair market value of the property must be determined by an independent appraiser and certified by a responsible official of the state, as provided by Department of Commerce regulations at 15 CFR part 24, and Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally assisted programs at 15 CFR part 11.

(f) Upon instruction by NOAA, provisions analogous to those of §921.21(e) shall be included in the documentation underlying less-then-fee-simple interests acquired in whole or part with Federal funds.

(g) Federal funds or non-Federal matching share funds shall not be spent to acquire a real property interest in which the state will own the land concurrently with another entity unless the property interest has been identified as a part of an acquisition strategy pursuant to §921.13(7) which has been approved by NOAA prior to the effective date of these regulations.

(h) Prior to submitting the final management plan to NOAA for review and approval, the state shall hold a public meeting to receive comment on the plan in the area affected by the estuarine research reserve. NOAA will publish a notice of the meeting in the Federal Register at least 15 days prior to the public meeting. The state shall be responsible for having a similar notice published in the local newspaper(s).

Subpart D—Reserve Designation and Subsequent Operation

§ 921.30 Designation of National Estuarine Research Reserves.

(a) The Under Secretary may designate an area proposed for designation by the Governor of the state in which it is located, as a National Estuarine Research Reserve if the Under Secretary finds:

(1) The area is a representative estuarine ecosystem that is suitable for long-term research and contributes to the biogeographical and typological balance of the System;

(2) Key land and water areas of the proposed Reserve, as identified in the management plan, are under adequate state control sufficient to provide long-term protection for reserve resources to ensure a stable environment for research;

(3) Designation of the area as a Reserve will serve to enhance public awareness and

understanding of estuarine areas, and provide suitable opportunities for public education and interpretation;

(4) A final management plan has been approved by NOAA;

(5) An MOU has been signed between the state and NOAA ensuring a long-term commitment by the state to the effective operation and implementation of the area as a National Estuarine Research Reserve;

(6) All MOUs necessary for reserve management (*i.e.,* with relevant Federal, state, and local agencies and/or private organizations) have been signed; and

(7) The coastal state in which the area is located has complied with the requirements of subpart B.

(b) NOAA will determine whether the designation of a National Estuarine Research Reserve in a state with a federally approved coastal zone management program directly affects the coastal zone. If the designation is found to directly affect the coastal zone, NOAA will make a consistency determination pursuant to §307(c)(1) of the Act, 16 U.S.C. 1456, and 15 CFR part 930, subpart C. See §921.4(b). The results of this consistency determination will be published in the Federal Register when the notice of designation is published. See §921.30(c).

(c) NOAA will publish the notice of designation of a National Estuarine Research Reserve in the Federal Register. The state shall be responsible for having a similar notice published in the local media.

(d) The term *state control* in §921.30(a)(3) does not necessarily require that key land and water areas be owned by the state in fee simple. Acquisition of less-than-fee simple interests e.g., conservation easements) and utilization of existing state regulatory measures are encouraged where the state can demonstrate that these interests and measures assure adequate long-term state control consistent with the purposes of the research reserve (see also §§921.13(a)(7); 921.21(g)). Should the state later elect to purchase an interest in such lands using NOAA funds, adequate justification as to the need for such acquisition must be provided to NOAA.

§ 921.31 Supplemental acquisition and development awards.

After National Estuarine Research Reserve designation, and as specified in the approved management plan, a coastal state may request a supplemental acquisition and/or development award(s) for acquiring additional property interests identified in the management plan as necessary to strengthen protection of key land and water areas and to enhance long-term protection of the area for research and education, for facility and exhibit construction, for restorative activities identified in the approved management plan, for administrative purposes related to acquisition and/or facility construction and to develop and/or upgrade research, monitoring and education/ interpretive programs. Federal financial assistance provided to a National Estuarine Research Reserve for supplemental development costs directly associated with facility construction (i.e., major construction activities) may not exceed 70 percent of the total project cost, except when the financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of the costs. NOAA must make a specific determination that the construction activity will not be detrimental to the environment. Acquisition awards for the acquisition of lands or waters, or interests therein, for any one reserve may not exceed an amount equal to 50 percent of the costs of the lands, waters, and interests therein of $5,000,000, whichever amount is less, except when the financial assistance is provided from amounts recovered as result of damage to natural resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of all actual costs of activities

carrier out with this assistance, as long as such funds are available. In the case of a biogeographic region (see appendix I) shared by two or more states, each state is eligible independently for Federal financial assistance to establish a separate National Estuarine Research Reserve within their respective portion of the shared biogeographic region. Application procedures are specified in subpart I. Land acquisition must follow the procedures specified in §§921.13(a)(7), 921.21(e) and (f) and 921.81.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12540, MAR. 17, 1997; 63 FR 26717, MAY 14, 1998]

§ 921.32 Operation and management: Implementation of the management plan.

(a) After the Reserve is formally designated, a coastal state is eligible to receive Federal funds to assist the state in the operation and management of the Reserve including the management of research, monitoring, education, and interpretive programs. The purpose of this Federally funded operation and management phase is to implement the approved final management plan and to take the necessary steps to ensure the continued effective operation of the Reserve.

(b) State operation and management of the Reserves shall be consistent with the mission, and shall further the goals of the National Estuarine Research Reserve program (see §921.1).

(c) Federal funds are available for the operation and management of the Reserve. Federal funds provided pursuant to this section may not exceed 70 percent of the total cost of operating and managing the Reserve for any one year, except when the financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of the costs. In the case of a biogeographic region (see Appendix I) shared by two or more states, each state is eligible for Federal financial assistance to establish a separate Reserve within their respective portion of the shared biogeographic region (see §921.10).

(d) Operation and management funds are subject to the following limitations:

(1) Eligible coastal state agencies may apply for up to the maximum share available per Reserve for that fiscal year. Share amounts will be announced annually by letter from the Sanctuary and Reserves Division to all participating states. This letter will be provided as soon as practicable following approval of the Federal budget for that fiscal year.

(2) No more than ten percent of the total amount (state and Federal shares) of each operation and management award may be used for construction-type activities.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12541, MAR. 17, 1997]

§ 921.33 Boundary changes, amendments to the management plan, and addition of multiple-site components.

(a) Changes in the boundary of a Reserve and major changes to the final management plan, including state laws or regulations promulgated specifically for the Reserve, may be made only after written approval by NOAA. NOAA may require public notice, including notice in the Federal Register and an opportunity for public comment before approving a boundary or management plan change. Changes in the boundary of a Reserve involving the acquisition of properties not listed in the management plan or final EIS require public notice and the opportunity for comment; in certain cases, a categorical exclusion, an environmental assessment and possibly an environmental impact statement may be required. NOAA will place a notice in the Federal Register of any proposed

changes in Reserve boundaries or proposed major changes to the final management plan. The state shall be responsible for publishing an equivalent notice in the local media. See also requirements of §§921.4(b) and 921.13(a)(11).

(b) As discussed in §921.10(b), a state may choose to develop a multiple-site National Estuarine Research Reserve after the initial acquisition and development award for a single site has been made. NOAA will publish notice of the proposed new site including an invitation for comments from the public in the Federal Register. The state shall be responsible for publishing an equivalent notice in the local newspaper(s). An EIS, if required, shall be prepared in accordance with section §921.13 and shall include an administrative framework for the multiple-site Reserve and a description of the complementary research and educational programs within the Reserve. If NOAA determines, based on the scope of the project and the issues associated with the additional site(s), that an environmental assessment is sufficient to establish a multiple-site Reserve, then the state shall develop a revised management plan which, concerning the additional component, incorporates each of the elements described in §921.13(a). The revised management plan shall address goals and objectives for all components of the multi-site Reserve and the additional component's relationship to the original site(s).

(c) The state shall revise the management plan for a Reserve at least every five years, or more often if necessary. Management plan revisions are subject to (a) above.

(d) NOAA will approve boundary changes, amendments to management plans, or the addition of multiple-site components, by notice in the Federal Register. If necessary NOAA will revise the designation document (findings) for the site.

Subpart E—Ongoing Oversight, Performance Evaluation and Withdrawal of Designation

§ 921.40 Ongoing oversight and evaluations of designated National Estuarine Research Reserves.

(a) The Sanctuaries and Reserve Division shall conduct, in accordance with section 312 of the Act and procedures set forth in 15 CFR part 928, ongoing oversight and evaluations of Reserves. Interim sanctions may be imposed in accordance with regulations promulgated under 15 CFR part 928.

(b) The Assistant Administrator may consider the following indicators of non-adherence in determining whether to invoke interim sanctions:

(1) Inadequate implementation of required staff roles in administration, research, education/interpretation, and surveillance and enforcement. Indicators of inadequate implementation could include: No Reserve Manager, or no staff or insufficient staff to carry out the required functions.

(2) Inadequate implementation of the required research plan, including the monitoring design. Indicators of inadequate implementation could include: Not carrying out research or monitoring that is required by the plan, or carrying out research or monitoring that is inconsistent with the plan.

(3) Inadequate implementation of the required education/interpretation plan. Indicators of inadequate implementation could include: Not carrying out education or interpretation that is required by the plan, or carrying out education/interpretation that is inconsistent with the plan.

(4) Inadequate implementation of public access to the Reserve. Indicators of inadequate implementation of public access could include: Not providing necessary access, giving full consideration to the need to keep some areas off limits to the public in order to protect fragile resources.

(5) Inadequate implementation of facility development plan. Indicators of inadequate implementation could include: Not taking action to propose and budget for necessary facilities, or not undertaking necessary construction in a timely manner when funds are available.

(6) Inadequate implementation of acquisition plan. Indicators of inadequate implementation could include: Not pursuing an aggressive acquisition program with all available funds for that purpose, not requesting promptly additional funds when necessary, and evidence that adequate long-term state control has not been established over some core or buffer areas, thus jeopardizing the ability to protect the Reserve site and resources from off-site impacts.

(7) Inadequate implementation of Reserve protection plan. Indicators of inadequate implementation could include: Evidence of non-compliance with Reserve restrictions, insufficient surveillance and enforcement to assure that restrictions on use of the Reserve are adhered to, or evidence that Reserve resources are being damaged or destroyed as a result of the above.

(8) Failure to carry out the terms of the signed Memorandum of Understanding (MOU) between the state and NOAA, which establishes a long-term state commitment to maintain and manage the Reserve in accordance with section 315 of the Act. Indicators of failure could include: State action to allow incompatible uses of state-controlled lands or waters in the Reserve, failure of the state to bear its fair share of costs associated with long-term operation and management of the Reserve, or failure to initiate timely updates of the MOU when necessary.

§ 921.41 Withdrawal of designation.

The Assistant Administrator may withdraw designation of an estuarine area as a National Estuarine Research Reserve pursuant to and in accordance with the procedures of section 312 and 315 of the Act and regulations promulgated thereunder.

Subpart F—Special Research Projects

§ 921.50 General.

(a) To stimulate high quality research within designated National Estuarine Research Reserves, NOAA may provide financial support for research projects which are consistent with the Estuarine Research Guidelines referenced in §921.51. Research awards may be awarded under this subpart to only those designated Reserves with approved final management plans. Although research may be conducted within the immediate watershed of the Reserve, the majority of research activities of any single research project funded under this subpart may be conducted within Reserve boundaries. Funds provided under this subpart are primarily used to support management-related research projects that will enhance scientific understanding of the Reserve ecosystem, provide information needed by Reserve management and coastal management decision-makers, and improve public awareness and understanding of estuarine ecosystems and estuarine management issues. Special research projects may be oriented to specific Reserves; however, research projects that would benefit more than one Reserve in the National Estuarine Reserve Research System are encouraged.

(b) Funds provided under this subpart are available on a competitive basis to any coastal state or qualified public or private person. A notice of available funds will be published in the Federal Register. Special research project funds are provided in addition to any other funds available to a coastal state under the Act. Federal funds provided under this subpart may not exceed 70 percent of the total cost of the project, consistent with §921.81(e)(4) ("allowable costs"), except when the financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of the costs.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12541, MAR. 17, 1997]

§ 921.51 Estuarine research guidelines.

(a) Research within the National Estuarine Research Reserve System shall be conducted in a manner consistent with Estuarine Research Guidelines developed by NOAA.

(b) A summary of the Estuarine Research Guidelines is published in the Federal Register as a part of the notice of available funds discussed in §921.50(c).

(c) The Estuarine Research Guidelines are reviewed annually by NOAA. This review will include an opportunity for comment by the estuarine research community.

§ 921.52 Promotion and coordination of estuarine research.

(a) NOAA will promote and coordinate the use of the National Estuarine Research Reserve System for research purposes.

(b) NOAA will, in conducting or supporting estuarine research other than that authorized under section 315 of the Act, give priority consideration to research that make use of the National Estuarine Research Reserve System.

(c) NOAA will consult with other Federal and state agencies to promote use of one or more research reserves within the National Estuarine Research Reserve System when such agencies conduct estuarine research.

Subpart G—Special Monitoring Projects

§ 921.60 General.

(a) To provide a systematic basis for developing a high quality estuarine resource and ecosystem information base for National Estuarine Research Reserves and, as a result, for the System, NOAA may provide financial support for basic monitoring programs as part of operations and management under §921.32. Monitoring funds are used to support three major phases of a monitoring program:

(1) Studies necessary to collect data for a comprehensive site description/characterization;

(2) Development of a site profile; and

(3) Formulation and implementation of a monitoring program.

(b) Additional monitoring funds may be available on a competitive basis to the state agency responsible for Reserve management or a qualified public or private person or entity. However, if

the applicant is other than the managing entity of a Reserve that applicant must submit as a part of the application a letter from the Reserve manager indicating formal support of the application by the managing entity of the Reserve. Funds provided under this subpart for special monitoring projects are provided in addition to any other funds available to a coastal state under the Act. Federal funds provided under this subpart may not exceed 70 percent of the total cost of the project, consistent with §921.81(e)(4) ("allowable costs"), except when the financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of the costs.

(c) Monitoring projects funded under this subpart must focus on the resources within the boundaries of the Reserve and must be consistent with the applicable sections of the Estuarine Research Guidelines referenced in §921.51. Portions of the project may occur within the immediate watershed of the Reserve beyond the site boundaries. However, the monitoring proposal must demonstrate why this is necessary for the success of the project.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12541, MAR. 17, 1997]

Subpart H—Special Interpretation and Education Projects

§ 921.70 General.

(a) To stimulate the development of innovative or creative interpretive and educational projects and materials to enhance public awareness and understanding of estuarine areas, NOAA may fund special interpretive and educational projects in addition to those activities provided for in operations and management under §921.32. Special interpretive and educational awards may be awarded under this subpart to only those designated Reserves with approved final management plans.

(b) Funds provided under this subpart may be available on a competitive basis to any state agency. However, if the applicant is other than the managing entity of a Reserve, that applicant must submit as a part of the application a letter from the Reserve manager indicating formal support of the application by the managing entity of the Reserve. These funds are provided in addition to any other funds available to a coastal state under the Act. Federal funds provided under this subpart may not exceed 70 percent of the total cost of the project, consistent with §921.81(e)(4) ("allowable costs"), except when the financial assistance is provided from amounts recovered as a result of damage to natural resources located in the coastal zone, in which case the assistance may be used to pay 100 percent of the costs.

(c) Applicants for education/interpretive projects that NOAA determines benefit the entire National Estuarine Research Reserve System may receive Federal assistance of up to 100% of project costs.

[58 FR 38215, JULY 15, 1993, AS AMENDED AT 62 FR 12541, MAR. 17, 1997]

Subpart I—General Financial Assistance Provisions

§ 921.80 Application information.

(a) Only a coastal state may apply for Federal financial assistance awards for pre-acquisition, acquisition and development, operation and management, and special education and interpretation projects under subpart H. Any coastal state or public or private person may apply for Federal

financial assistance awards for special estuarine research or monitoring projects under subpart G. The announcement of opportunities to conduct research in the System appears on an annual basis in the Federal Register. If a state is participating in the national Coastal Zone Management Program, the applicant for an award under section 315 of the Act shall notify the state coastal management agency regarding the application.

(b) An original and two copies of the formal application must be submitted at least 120 working days prior to the proposed beginning of the project to the following address: Sanctuaries and Reserves Division Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration, 1825 Connecticut Avenue, NW., suite 714, Washington, DC 20235. Application for Federal Assistance Standard Form 424 (Non-construction Program) constitutes the formal application for site selection, post-site selection, operation and management, research, and education and interpretive awards. The Application for Federal Financial Assistance Standard Form 424 (Construction Program) constitutes the formal application for land acquisition and development awards. The application must be accompanied by the information required in subpart B (predesignation), subpart C and §921.31 (acquisition and development), and §921.32 (operation and management) as applicable. Applications for development awards for construction projects, or restorative activities involving construction, must include a preliminary engineering report, a detailed construction plan, a site plan, a budget and categorical exclusion check list or environmental assessment. All applications must contain back up data for budget estimates (Federal and non-Federal shares), and evidence that the application complies with the Executive Order 12372, "Intergovernmental Review of Federal Programs." In addition, applications for acquisition and development awards must contain:

(1) State Historic Preservation Office comments;

(2) Written approval from NOAA of the draft management plan for initial acquisition and development award(s); and

(3) A preliminary engineering report for construction activities.

§ 921.81 Allowable costs.

(a) Allowable costs will be determined in accordance with applicable OMB Circulars and guidance for Federal financial assistance, the financial assistant agreement, these regulations, and other Department of Commerce and NOAA directives. The term "costs" applies to both the Federal and non-Federal shares.

(b) Costs claimed as charges to the award must be reasonable, beneficial and necessary for the proper and efficient administration of the financial assistance award and must be incurred during the award period.

(c) Costs must not be allocable to or included as a cost of any other Federally-financed program in either the current or a prior award period.

(d) General guidelines for the non-Federal share are contained in Department of Commerce Regulations at 15 CFR part 24 and OMB Circular A–110. Copies of Circular A–110 can be obtained from the Sanctuaries and Reserves Division; 1825 Connecticut Avenue, NW., suite 714; Washington, DC 20235. The following may be used in satisfying the matching requirement:

(1) *Site selection and post site selection awards.* Cash and in-kind contributions (value of goods and services directly benefiting and specifically identifiable to this part of the project) are allowable. Land may not be used as match.

(2) *Acquisition and development awards.* Cash and in-kind contributions are allowable. In general, the fair market value of lands to be included within the Reserve boundaries and acquired pursuant to the Act, with other than Federal funds, may be used as match. However, the fair market value of real property allowable as match is limited to the fair market value of a real property interest equivalent to, or required to attain, the level of control over such land(s) identified by the state and approved by the Federal Government as that necessary for the protection and management of the National Estuarine Research Reserve. Appraisals must be performed according to Federal appraisal standards as detailed in Department of Commerce regulations at 15 CFR part 24 and the Uniform Relocation Assistance and Real Property Acquisition for Federal land Federally assisted programs in 15 CFR part 11. The fair market value of privately donated land, at the time of donation, as established by an independent appraiser and certified by a responsible official of the state, pursuant to 15 CFR part 11, may also be used as match. Land, including submerged lands already in the state's possession, may be used as match to establish a National Estuarine Research Reserve. The value of match for these state lands will be calculated by determining the value of the benefits foregone by the state, in the use of the land, as a result of new restrictions that may be imposed by Reserve designation. The appraisal of the benefits foregone must be made by an independent appraiser in accordance with Federal appraisal standards pursuant to 15 CFR part 24 and 15 CFR part 11. A state may initially use as match land valued at greater than the Federal share of the acquisition and development award. The value in excess of the amount required as match for the initial award may be used to match subsequent supplemental acquisition and development awards for the National Estuarine Research Reserve (see also §921.20). Costs related to land acquisition, such as appraisals, legal fees and surveys, may also be used as match.

(3) *Operation and management awards.* Generally, cash and in-kind contributions (directly benefiting and specifically identifiable to operations and management), except land, are allowable.

(4) *Research, monitoring, education and interpretive awards.* Cash and in-kind contributions (directly benefiting and specifically identifiable to the scope of work), except land, are allowable.

§ 921.82 Amendments to financial assistance awards.

Actions requiring an amendment to the financial assistance award, such as a request for additional Federal funds, revisions of the approved project budget or original scope of work, or extension of the performance period must be submitted to NOAA on Standard Form 424 and approved in writing.

Acadian

1. Northern of Maine (Eastport to the Sheepscot River.)

2. Southern Gulf of Maine (Sheepscot River to Cape Cod.)

Virginian

3. Southern New England (Cape Cod to Sandy Hook.)

4. Middle Atlantic (Sandy Hook to Cape Hatteras.)

5. Chesapeake Bay.

Carolinian

6. North Carolinas (Cape Hatteras to Santee River.)

7. South Atlantic (Santee River to St. John's River.)

8. East Florida (St. John's River to Cape Canaveral.)

West Indian

9. Caribbean (Cape Canaveral to Ft. Jefferson and south.)

10. West Florida (Ft. Jefferson to Cedar Key.)

Louisianian

11. Panhandle Coast (Cedar Key to Mobile Bay.)

12. Mississippi Delta (Mobile Bay to Galveston.)

13. Western Gulf (Galveston to Mexican border.)

Californian

14. Southern California (Mexican border to Point Conception.)

15. Central California (Point Conception to Cape Mendocino.)

16. San Francisco Bay.

Columbian

17. Lower Columbia (Cape Mendocino to the Columbia River.)

18. Washington Coast (Columbia River to Vancouver Island.)

19. Puget Sound.

Great Lakes

20. Lake Superior (including St. Mary's River.)

21. Lakes Michigan and Huron (including Straits of Mackinac, St. Clair River, and Lake St. Clair.)

22. Lake Erie (including Detroit River and Niagara Falls.)

23. Lake Ontario (including St. Lawrence River.)

Fjord

24. Southern Alaska (Prince of Wales Island to Cook Inlet.)

25. Aleutian Island (Cook Inlet Bristol Bay.)

Sub-Arctic

26. Northern Alaska (Bristol Bay to Demarcation Point.)

Insular

27. Hawaiian Islands.

28. Western Pacific Island.

29. Eastern Pacific Island.

Appendix II to Part 921— Typology of National Estuarine Research Reserves

This typology system reflects significant differences in estuarine characteristics that are not necessarily related to regional location. The purpose of this type of classification is to maximize ecosystem variety in the selection of national estuarine reserves. Priority will be given to important ecosystem types as yet unrepresented in the reserve system. It should be noted that any one site may represent several ecosystem types or physical characteristics.

Class I—Ecosystem Types

Group I—Shorelands

A. Maritime Forest-Woodland. That have developed under the influence of salt spray. It can be found on coastal uplands or recent features such as barrier islands and beaches, and may be divided into the following biomes:

1. Northern coniferous forest biome: This is an area of predominantly evergreens such as the sitka spruce (Picea), grand fir (Abies), and white cedar (Thuja), with poor development of the shrub and herb leyera, but high annual productivity and pronounced seasonal periodicity.

2. Moist temperate (Mesothermal) coniferous forest biome: Found along the west coast of North America from California to Alaska, this area is dominated by conifers, has relatively small seasonal range, high humidity with rainfall ranging from 30 to 150 inches, and a well-developed understory of vegetation with an abundance of mosses and other moisture-tolerant plants.

3. Temperate deciduous forest biome: This biome is characterized by abundant, evenly distributed rainfall, moderate temperatures which exhibit a distinct seasonal pattern, well-developed soil biota and herb and shrub layers, and numerous plants which produce pulpy fruits and nuts. A distinct subdivision of this biome is the pine edible forest of the southeastern coastal plain, in which only a small portion of the area is occupied by climax vegetation, although it has large areas covered by edaphic climax pines.

4. Broad-leaved evergreen subtropical forest biome: The main characteristic of this biome is high moisture with less pronounced differences between winter and summer. Examples are the hammocks of Florida and the live oak forests of the Gulf and South Atlantic coasts. Floral dominants include pines, magnolias, bays, hollies, wild tamarine, strangler fig, gumbo limbo, and palms.

B. Coast shrublands. This is a transitional area between the coastal grasslands and woodlands and is characterized by woody species with multiple stems and a few centimeters to several meters above the ground developing under the influence of salt spray and occasional sand burial. This includes thickets, scrub, scrub savanna, heathlands, and coastal chaparral. There is a great variety of shrubland vegetation exhibiting regional specificity:

1. Northern areas: Characterized by Hudsonia, various erinaceous species, and thickets of Myricu, prunus, and Rosa.

2. Southeast areas: Floral dominants include Myrica, Baccharis, and Iles.

3. Western areas: Adenostoma, arcotyphylos, and eucalyptus are the dominant floral species.

C. Coastal grasslands. This area, which possesses sand dunes and coastal flats, has low rainfall (10 to 30 inches per year) and large amounts of humus in the soil. Ecological succession is slow, resulting in the presence of a number of seral stages of community development. Dominant vegetation includes mid-grasses (5 to 8 feet tall), such as Spartina, and trees such as willow (Salix sp.), cherry (Prunus sp.), and cottonwood (Pupulus deltoides.) This area is divided into four regions with the following typical strand vegetation:

1. Arctic/Boreal: Elymus;

2. Northeast/West: Ammophla;

3. Southeast Gulf: Uniola; and

4. Mid-Atlantic/Gulf: Spartina patens.

D. Coastal tundra. This ecosystem, which is found along the Arctic and Boreal coasts of North America, is characterized by low temperatures, a short growing season, and some permafrost, producing a low, treeless mat community made up of mosses, lichens, heath, shrubs, grasses, sedges, rushes, and herbaceous and dwarf woody plants. Common species include arctic/alpine plants such as Empetrum nigrum and Betula nana, the lichens Cetraria and Cladonia, and herbaceous plants such as Potentilla tridentata and Rubus chamaemorus. Common species on the coastal beach ridges of the high arctic desert include Bryas intergrifolia and Saxifrage oppositifolia. This area can be divided into two main subdivisions:

1. Low tundra: Characterized by a thick, spongy mat of living and undecayed vegetation, often with water and dotted with ponds when not frozen; and

2. High Tundra: A bare area except for a scanty growth of lichens and grasses, with underlaying ice wedges forming raised polygonal areas.

E. Coastal cliffs. This ecosystem is an important nesting site for many sea and shore birds. It consists of communities of herbaceous, graminoid, or low woody plants (shrubs, heath, etc.) on the top or along rocky faces exposed to salt spray. There is a diversity of plant species including mosses, lichens, liverworts, and "higher" plant representatives.

Group II—Transition Areas

A. Coastal marshes. These are wetland areas dominated by grasses *(Poacea)*, sedges *(Cyperaceae)*, rushes *(Juncaceae)*, cattails *(Typhaceae)*, and other graminoid species and is subject to periodic flooding by either salt or freshwater. This ecosystem may be subdivided into: (a) Tidal, which is periodically flooded by either salt or brackish water; (b) nontidal (freshwater); or (c) tidal freshwater. These are essential habitats for many important estuarine species of fish and invertebrates as well as shorebirds and waterfowl and serve important roles in shore stabilization, flood control, water purification, and nutrient transport and storage.

B. Coastal swamps. These are wet lowland areas that support mosses and shrubs together with large trees such as cypress or gum.

C. Coastal mangroves. This ecosystem experiences regular flooding on either a daily, monthly, or seasonal basis, has low wave action, and is dominated by a variety of salt-tolerant trees, such as the red mangrove *(Rhizophora mangle),* black mangrove *(Avicennia Nitida)*, and the white mangrove *(Laguncularia*

racemosa.) It is also an important habitat for large populations of fish, invertebrates, and birds. This type of ecosystem can be found from central Florida to extreme south Texas to the islands of the Western Pacific.

D. Intertidal beaches. This ecosystem has a distinct biota of microscopic animals, bacteria, and unicellular algae along with macroscopic crustaceans, mollusks, and worms with a detritus-based nutrient cycle. This area also includes the driftline communities found at high tide levels on the beach. The dominant organisms in this ecosystem include crustaceans such as the mole crab *(Emerita)*, amphipods *(Gammeridae)*, ghost crabs *(Ocypode)*, and bivalve mollusks such as the coquina *(Donax)* and surf clams *(Spisula and Mactra.)*

E. Intertidal mud and sand flats. These areas are composed of unconsolidated, high organic content sediments that function as a short-term storage area for nutrients and organic carbons. Macrophytes are nearly absent in this ecosystem, although it may be heavily colonized by benthic diatoms, dinoflaggellates, filamentous blue-green and green algae, and chaemosynthetic purple sulfur bacteria. This system may support a considerable population of gastropods, bivalves, and polychaetes, and may serve as a feeding area for a variety of fish and wading birds. In sand, the dominant fauna include the wedge shell Donax, the scallop Pecten, tellin shells Tellina, the heart urchin Echinocardium, the lug worm Arenicola, sand dollar Dendraster, and the sea pansy Renilla. In mud, faunal dominants adapted to low oxygen levels include the terebellid Amphitrite, the boring clam Playdon, the deep sea scallop Placopecten, the Quahog Mercenaria, the echiurid worm Urechis, the mud snail Nassarius, and the sea cucumber Thyone.

F. Intertidal algal beds. These are hard substrates along the marine edge that are dominated by macroscopic algae, usually thalloid, but also filamentous or unicellular in growth form. This also includes the rocky coast tidepools that fall within the intertidal zone. Dominant fauna of these areas are barnacles, mussels, periwinkles, anemones, and chitons. Three regions are apparent:

1. Northern latitude rocky shores: It is in this region that the community structure is best developed. The dominant algal species include Chondrus at the low tide level, Fucus and Ascophylium at the mid-tidal level, and Laminaria and other kelp like algae just beyond the intertidal, although they can be exposed at extremely low tides or found in very deep tidepools.

2. Southern latitudes: The communities in this region are reduced in comparison to those of the northern latitudes and possesses algae consisting mostly of single-celled or filamentour green, blue-green, and red algae, and small thalloid brown algae.

3. Tropical and subtropical latitudes: The intertidal in this region is very reduced and contains numerous calcareous algae such as Porolithon and Lithothamnion, as well and green algae with calcareous particles such as Halimeda, and numerous other green, red, and brown algae.

Group III—Submerged Bottoms

A. Subtidal hard bottoms. This system is characterized by a consolidated layer of solid rock or large pieces of rock (neither of biotic origin) and is found in association with geomorphological features such as submarine canyons and fjords and is usually covered with assemblages of sponges, sea fans, bivalves, hard corals, tunicates, and other attached organisms. A significant feature of estuaries in many parts of the world is the oyster reef, a type of subtidal hard bottom. Composed of assemblages of organisms (usually bivalves), it is usually found near an estuary's mouth in a zone of moderate wave action, salt content, and turbidity. If light levels are sufficient, a covering of microscopic and attached macroscopic algae, such as keep, may also be found.

B. Subtidal soft bottoms. Major characteristics of this ecosystem are an unconsolidated layer of fine particles of silt, sand, clay, and gravel, high hydrogen sulfide levels, and anaerobic conditions often existing below the surface. Macrophytes are either sparse or absent, although a layer of benthic microalgae may be present if light levels are sufficient. The faunal community is dominated by a diverse population of deposit feeders including polychaetes, bivalves, and burrowing crustaceans.

C. Subtidal plants. This system is found in relatively shallow water (less than 8 to 10 meters) below mean low tide. It is an area of extremely high primary production that provides food and refuge for a diversity of faunal groups, especially juvenile and adult fish, and in some regions, manatees and sea turtles. Along the North Atlantic and Pacific coasts, the seagrass Zostera marina predominates. In the South Atlantic and Gulf coast areas, Thalassia and Diplanthera predominate. The grasses in both areas support a number of epiphytic organisms.

Class II—Physical Characteristics

Group I—Geologic

A. Basin type. Coastal water basins occur in a variety of shapes, sizes, depths, and appearances. The eight basic types discussed below will cover most of the cases:

1. Exposed coast: Solid rock formations or heavy sand deposits characterize exposed ocean shore fronts, which are subject to the full force of ocean storms. The sand beaches are very resilient, although the dunes lying just behind the beaches are fragile and easily damaged. The dunes serve as a sand storage area making them chief stabilizers of the ocean shorefront.

2. Sheltered coast: Sand or coral barriers, built up by natural forces, provide sheltered areas inside a bar or reef where the ecosystem takes on many characteristics of confined waters-abundant marine grasses, shellfish, and juvenile fish. Water movement is reduced, with the consequent effects pollution being more severe in this area than in exposed coastal areas.

3. Bay: Bays are larger confined bodies of water that are open to the sea and receive strong tidal flow. When stratification is pronounced the flushing action is augmented by river discharge. Bays vary in size and in type of shorefront.

4. Embayment: A confined coastal water body with narrow, restricted inlets and with a significant freshwater inflow can be classified as an embayment. These areas have more restricted inlets than bays, are usually smaller and shallower, have low tidal action, and are subject to sedimentation.

5. Tidal river: The lower reach of a coastal river is referred to as a tidal river. The coastal water segment extends from the sea or estuary into which the river discharges to a point as far upstream as there is significant salt content in the water, forming a salt front. A combination of tidal action and freshwater outflow makes tidal rivers well-flushed. The tidal river basin may be a simple channel or a complex of tributaries, small associated embayments, marshfronts, tidal flats, and a variety of others.

6. Lagoon: Lagoons are confined coastal bodies of water with restricted inlets to the sea and without significant freshwater inflow. Water circulation is limited, resulting in a poorly flushed, relatively stagnant body of water. Sedimentation is rapid with a great potential for basin shoaling. Shores are often gently sloping and marshy.

7. Perched coastal wetlands: Unique to Pacific islands, this wetland type found above sea level in volcanic crater remnants forms as a result of poor drainage characteristics of the crater rather than from sedimentation. Floral assemblages exhibit distinct zonation while the faunal constituents may include freshwater, brackish, and/or marine species. Example: Aunu's Island, American Samoa.

8. Anchialine systems: These small coastal exposures of brackish water form in lava depressions or elevated fossil reefs have only a subsurface connection in the ocean, but show tidal fluctuations. Differing from true estuaries in having no surface continuity with streams or ocean, this system is characterized by a distinct biotic community dominated by benthis algae such as Rhizoclonium, the mineral encrusting Schiuzothrix, and the vascular plant Ruppia maritima. Characteristic fauna which exhibit a high degree of endemicity, include the mollusks Theosoxus neglectus and Tcariosus. Although found throughout the world, the high islands of the Pacific are the only areas within the U.S. where this system can be found.

B. Basin structure. Estuary basins may result from the drowning of a river valley (coastal plains estuary), the drowning of a glacial valley (fjord), the occurrence of an offshore barrier (bar-bounded estuary), some tectonic process (tectonic estuary), or volcanic activity (volcanic estuary).

1. Coastal plains estuary: Where a drowned valley consists mainly of a single channel, the form of the basin is fairly regular forming a simple coastal plains estuary. When a channel is flooded with numerous tributaries an irregular estuary results. Many estuaries of the eastern United States are of this type.

2. Fjord: Estuaries that form in elongated steep headlands that alternate with deep U-shaped valleys resulting from glacial scouring are called fjords. They generally possess rocky floors or very thin veneers of sediment, with deposition generally being restricted to the head where the main river enters. Compared to total fjord volume river discharge is small. But many fjords have restricted tidal ranges at their mouths due to sills, or upreaching sections of the bottom which limit free movement of water, often making river flow large with respect to the tidal prism. The deepest portions are in the upstream reaches, where maximum depths can range from 800m to 1200m while sill depths usually range from 40m to 150m.

3. Bar-bounded estuary: These result from the development of an offshore barrier such as a beach strand, a line of barrier islands, reef formations a line of moraine debris, or the subsiding remnants of a deltaic lobe. The basin is often partially exposed at low tide and is enclosed by a chain of offshore bars of barrier islands broken at intervals by inlets. These bars may be either deposited offshore or may be coastal dunes that have become isolated by recent seal level rises.

4. Tectonic estuary: These are coastal indentures that have formed through tectonic processes such as slippage along a fault line (San Francisco Bay), folding or movement of the earth's bedrock often with a large inflow of freshwater.

5. Volcanic estuary: These coastal bodies of open water, a result of volcanic processes are depressions or craters that have direct and/or subsurface connections with the ocean and may or may not have surface continuity with streams. These formations are unique to island areas of volcanic origin.

C. Inlet type. Inlets in various forms are an integral part of the estuarine environment as they regulate to a certain extent, the velocity and magnitude of tidal exchange, the degree of mixing, and volume of discharge to the sea.

1. Unrestricted: An estuary with a wide unrestricted inlet typically has slow currents, no significant turbulence, and receives the full effect of ocean waves and local disturbances which serve to

modify the shoreline. These estuaries are partially mixed, as the open mouth permits the incursion of marine waters to considerable distances upstream, depending on the tidal amplitude and stream gradient.

2. Restricted: Restrictions of estuaries can exist in many forms: Bars, barrier islands, spits, sills, and more. Restricted inlets result in decreased circulation, more pronounced longitudinal and vertical salinity gradients, and more rapid sedimentation. However, if the estuary mouth is restricted by depositional features or land closures, the incoming tide may be held back until it suddenly breaks forth into the basin as a tidal wave, or bore. Such currents exert profound effects on the nature of the subtrate, turbidity, and biota of the estuary.

3. Permanent: Permanent inlets are usually opposite the mouths of major rivers and permit river water to flow into the sea.

4. Temporary (Intermittent): Temporary inlets are formed by storms and frequently shift position, depending on tidal flow, the depth of the sea, and sound waters, the frequency of storms, and the amount of littoral transport.

D. Bottom composition. The bottom composition of estuaries attests to the vigorous, rapid, and complex sedimentation processes characteristic of most coastal regions with low relief. Sediments are derived through the hydrologic processes of erosion, transport, and deposition carried on by the sea and the stream.

1. Sand: Near estuary mouths, where the predominating forces of the sea build spits or other depositional features, the shore and substrates of the estuary are sandy. The bottom sediments in this area are usually coarse, with a graduation toward finer particles in the head region and other zones of reduced flow, fine silty sands are deposited. Sand deposition occurs only in wider or deeper regions where velocity is reduced.

2. Mud: At the base level of a stream near its mouth, the bottom is typically composed of loose muds, silts, and organic detritus as a result of erosion and transport from the upper stream reaches and organic decomposition. Just inside the estuary entrance, the bottom contains considerable quantities of sand and mud, which support a rich fauna. Mud flats, commonly built up in estuarine basins, are composed of loose, coarse, and fine mud and sand, often dividing the original channel.

3. Rock: Rocks usually occur in areas where the stream runs rapidly over a steep gradient with its coarse materials being derived from the higher elevations where the stream slope is greater. The larger fragments are usually found in shallow areas near the stream mouth.

4. Oyster shell: Throughout a major portion of the world, the oyster reef is one of the most significant features of estuaries, usually being found near the mouth of the estuary in a zone of moderate wave action, salt content, and turbidity. It is often a major factor in modifying estuarine current systems and sedimentation, and may occur as an elongated island or peninsula oriented across the main current, or may develop parallel to the direction of the current.

Group II—Hydrographic

A. Circulation. Circulation patterns are the result of combined influences of freshwater inflow, tidal action, wind and oceanic forces, and serve many functions: Nutrient transport, plankton dispersal, ecosystem flushing, salinity control, water mixing, and more.

1. Stratified: This is typical of estuaries with a strong freshwater influx and is commonly found in bays formed from “drowned” river valleys, fjords, and other deep basins. There is a net movement of

freshwater outward at the top layer and saltwater at the bottom layer, resulting in a net outward transport of surface organisms and net inward transport of bottom organisms.

2. Non-stratified: Estuaries of this type are found where water movement is sluggish and flushing rate is low, although there may be sufficient circulation to provide the basis for a high carrying capacity. This is common to shallow embayments and bays lacking a good supply of freshwater from land drainage.

3. Lagoonal: An estuary of this type is characterized by low rates of water movement resulting from a lack of significant freshwater influx and a lack of strong tidal exchange because of the typically narrow inlet connecting the lagoon to the sea. Circulation whose major driving force is wind, is the major limiting factor in biological productivity within lagoons.

B. Tides. This is the most important ecological factor in an estuary as it affects water exchange and its vertical range determines the extent of tidal flats which may be exposed and submerged with each tidal cycle. Tidal action against the volume of river water discharged into an estuary results in a complex system whose properties vary according to estuary structure as well as the magnitude of river flow and tidal range. Tides are usually described in terms of the cycle and their relative heights. In the United States, tide height is reckoned on the basis of average low tide, which is referred to as datum. The tides, although complex, fall into three main categories:

1. Diurnal: This refers to a daily change in water level that can be observed along the shoreline. There is one high tide and one low tide per day.

2. Semidiurnal: This refers to a twice daily rise and fall in water that can be observed along the shoreline.

3. Wind/Storm tides: This refers to fluctuations in water elevation to wind and storm events, where influence of lunar tides is less.

C. Freshwater. According to nearly all the definitions advanced, it is inherent that all estuaries need freshwater, which is drained from the land and measurably dilutes seawater to create a brackish condition. Freshwater enters an estuary as runoff from the land either from a surface and/or subsurface source.

1. Surface water: This is water flowing over the ground in the form of streams. Local variation in runoff is dependent upon the nature of the soil (porosity and solubility), degree of surface slope, vegetational type and development, local climatic conditions, and volume and intensity of precipitation.

2. Subsurface water: This refers to the precipitation that has been absorbed by the soil and stored below the surface. The distribution of subsurface water depends on local climate, topography, and the porosity and permeability of the underlying soils and rocks. There are two main subtypes of surface water:

    a. Vadose water: This is water in the soil above the water table. Its volume with respect to the soil is subject to considerable fluctuation.

    b. Groundwater: This is water contained in the rocks below the water table, is usually of more uniform volume than vadose water, and generally follows the topographic relief of the land being high hills and sloping into valleys.

Group III—Chemical

A. Salinity. This reflects a complex mixture of salts, the most abundant being sodium chloride, and is a very critical factor in the distribution and maintenance of many estuarine organisms. Based on salinity, there are two basic estuarine types and eight different salinity zones (expressed in parts per thousand-ppt.)

1. Positive estuary: This is an estuary in which the freshwater influx is sufficient to maintain mixing, resulting in a pattern of increasing salinity toward the estuary mouth. It is characterized by low oxygen concentration in the deeper waters and considerable organic content in bottom sediments.
2. Negative estuary: This is found in particularly arid regions, where estuary evaporation may exceed freshwater inflow, resulting in increased salinity in the upper part of the basin, especially if the estuary mouth is restricted so that tidal flow is inhibited. These are typically very salty (hyperhaline), moderately oxygenated at depth, and possess bottom sediments that are poor in organic content.
3. Salinity zones (expressed in ppt):
    a. Hyperhaline—greater than 40 ppt.
    b. Euhaline—40 ppt to 30 ppt.
    c. Mixhaline—30 ppt to 0.5 ppt.
        (1) Mixoeuhaline—greater than 30 ppt but less than the adjacent euhaline sea.
        (2) Polyhaline—30 ppt to 18 ppt.
        (3) Mesohaline—18 ppt to 5 ppt.
        (4) Oligohaline—5 ppt to 0.5 ppt.
    d. Limnetic: Less than 0.5 ppt.

B. pH Regime: This is indicative of the mineral richness of estuarine waters and falls into three main categories:

1. Acid: Waters with a pH of less than 5.5.
2. Circumneutral: A condition where the pH ranges from 5.5 to 7.4.
3. Alkaline: Waters with a pH greater than 7.4.

LAST UPDATED: FEBRUARY 18, 2004

http://www.access.gpo.gov/nara/cfr/cfr-table-search.html

Biogeographic Classification and Typology of National Estuarine Areas

The coastlines of the United States and its territories have been divided into the following areas based on their biologic and geographic characteristics:

Acadian
1. Northern Gulf of Maine (Eastport to Sheepscot River)
2. Southern Gulf of Maine (Sheepscot River to Cape Cod)

Virginian
3. Southern New England (Cape Cod to Sandy Hook)
4. Middle Atlantic (Sandy Hook to Cape Hatteras)
5. Chesapeake Bay

Carolinian
6. Northern Carolinas (Cape Hatteras to Santee River)
7. South Atlantic (Santee River to St. Johns River)
8. East Florida (St. Johns River to Cape Canaveral)

West Indian
9. Caribbean (Cape Canaveral to Ft. Jefferson and south)
10. West Florida (Ft. Jefferson to Cedar Key)

Louisianan
11. Panhandle Coast (Cedar Key to Mobile Bay)
12. Mississippi Delta (Mobile Bay to Galveston)
13. Western Gulf (Galveston to Mexican border)

Californian
14. Southern California (Mexican border to Pt. Conception)
15. Central California (Pt. Conception to Cape Mendocino)
16. San Francisco Bay

Columbian
17. Lower Columbian (Cape Mendocino to Columbia River)
18. Washington Coast (Columbia R. to Vancouver Island)
19. Puget Sound

Great Lakes

20. Lake Superior, including St. Marys River
21. Lakes Michigan and Huron, including Straits of Mackinac, St. Clair River, and Lake St. Clair
22. Lake Erie, including Detroit River and Niagara Falls
23. Lake Ontario, including St. Lawrence River

Fjord

24. Southern Alaska (Prince of Wales Island to Cook Inlet)
25. Aleutian Islands (Cook Inlet to Bristol Bay)

Sub-Arctic

26. Northern Alaska (Bristol Bay to Demarcation Point)

Insular

27. Hawaiian Islands
28. Western Pacific Islands
29. Eastern Pacific Islands

Oregon Revised Statutes (2005 Edition)

SOUTH SLOUGH ESTUARY

ORS 273.553 – SSNERR; agreement between Oregon and the federal government

(1) It is the policy of the State of Oregon to maintain the South Slough of Coos Bay, from Valino Island southward, inclusive, as a national estuarine research reserve, acquired as the South Slough Estuary Sanctuary pursuant to chapter 415, Oregon Laws 1975, as the first estuarine sanctuary in the United States to be created under Section 312 of the Coastal Zone Management Act of 1972 (P.L. 92-583) and re-designated as the South Slough National Estuarine Research Reserve by federal law (P.L. 99-272). The management policy for the reserve is to:

(a) Maintain the integrity of the estuary;

(b) Protect the estuary from uses and activities, both within and beyond its boundaries, that may alter or affect the ecosystem and its natural dynamic processes; and

(c) Preserve the area for long-term scientific and educational uses.

(2) Responsibility for completing purchase of the South Slough National Estuarine Research Reserve is vested with the Department of State Lands. The department acts for the State of Oregon in any transaction respecting the purchase of acreage for the reserve on or after October 4, 1977.

(3) Except as necessary to achieve the policy set forth in subsection (1) of this section and any standards established in the Coastal Zone Management Act of 1972 (P.L. 92-583) or any rules, regulations or agreements adopted pursuant thereto, the reserve is open to the public. However, to protect the estuarine ecosystems, public use of the reserve may be limited and controlled by the South Slough National Estuarine Research Reserve Management Commission in consultation with any technical management team established pursuant to an agreement between the State of Oregon and the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration of the United States Department of Commerce. The commission shall adopt rules to carry out the intent of this subsection.

(4) The South Slough National Estuarine Research Reserve Management Commission shall administer the reserve, subject to any agreement respecting the reserve between the State of Oregon and the federal Office of Ocean and Coastal Resource Management.

(5) The agency that acquired title to the reserve shall cause title to be cleared in the name of the State of Oregon.

O.R.S. 273.554 – SSNERR Management Commission; powers, membership, procedures, expenses

(1) For the purpose of providing for the administration of the South Slough National Estuarine Research Reserve in a manner consistent with the provisions of ORS 273.553, there is created the South Slough National Estuarine Research Reserve Management Commission. The commission shall have the authority, in accordance with the policies formulated by the State Land Board, to:

(a) Conduct the day-to-day operation and management of the South Slough National Estuarine Research Reserve with the administrative support of the Department of State Lands;

(b) Appoint a manager and other staff necessary to carry out this section; and

(c) Apply for, receive and expend moneys from the federal government and from this state or any agency thereof for the purpose of carrying out this section.

(2) In accordance with applicable provisions of ORS chapter 183, the commission may adopt rules necessary to:

(a) Carry out the commission's responsibilities pursuant to ORS 273.553; and

(b) Implement a system of fees to recover the costs of carrying out the management established in ORS 273.553, including fees for use of facilities at the reserve, fees for research activities conducted at the reserve, visitor activities fees and parking fees.

(3) The commission shall consist of nine members appointed by the Governor as follows:

(a) A representative of common schools in the area of the reserve;

(b) One authorized representative of the Coos County Board of Commissioners;

(c) One authorized representative of the governing body of the Port of Coos Bay;

(d) The Director of the Department of State Lands or a designee thereof;

(e) One authorized representative of the federal Office of Ocean and Coastal Resource Management;

(f) Two representatives with an interest in marine science, one from the University of Oregon Institute of Marine Biology at Charleston and one from Oregon State University;

(g) One member selected from the general public at large; and

(h) One representative of Oregon Indian Tribes appointed after consultation with the Commission on
Indian Services.

(4) The members appointed by the Governor under subsection (3)(a), (f) ,(g) and (h) of this section shall serve for terms of four years and members appointed under subsection (3)(b) and (c) of this section shall serve for terms of two years. The Director of the Department of State Lands or the designee of the director, if appointed in place of the director, shall serve as the permanent chairperson of the commission. The commission shall select one of its members as vice chairperson. The chairperson and vice chairperson shall have duties and powers necessary for the performance of the functions of such offices as the commission determines. The vice chairperson shall act as the chairperson of the commission in the absence of the chairperson. The vice chairperson shall serve for a term of one year, subject to reelection by the commission.

(5) Each member of the commission shall have one vote, except that the member who is the authorized representative of the federal Office of Ocean and Coastal Resource Management shall

be a nonvoting member. A majority of the commission constitutes a quorum for the transaction of business.

(6) Members of the commission are not entitled to compensation, but in the discretion of the State Land Board may be reimbursed for actual and necessary travel and other expenses incurred by them in the performance of their official duties, subject to laws regulating travel and other expenses of state officers and employees.

O.R.S. 273.555 [Formerly 273.210; 1967 c.421 para.16; renumbered 273.085]

O.R.S. 273.556 – Management Account

(1) The South Slough National Estuarine Research Reserve Management Account is established within the Common School Fund. Except for moneys otherwise designated by statute, all moneys received by the South Slough National Estuarine Research Reserve Management Commission shall be paid into the State Treasury and credited to the account. All moneys in the account are appropriated continuously and shall be used by the commission for the purpose of carrying out ORS. Interest on moneys in the account shall be credited to the Common School Fund.

(2) The commission shall keep a record of all moneys deposited in the account. The record shall indicate by separate cumulative accounts the source from which the moneys are derived and the individual activity or program against which each withdrawal is charged.

(3) On the effective date of this 2005 Act, the South Slough National Estuarine Research Reserve Management Commission shall transfer all moneys contained in the South Slough National Estuarine Research Reserve Management Account established within the General Fund to the South Slough National Estuarine Research Reserve Management Account established within the Common School Fund.

O.R.S. 273.557 – Appeal to State Land Board

(1) Jurisdiction for review of actions and proposed actions of the commission which are claimed to be in violation of any provision of ORS 273.553 or 273.554 is conferred upon the State Land Board. Proceedings for review of such actions may be instituted by filing a request for review with the State Land Board.

(2) The request for review by the State Land Board need only state the action or proposed action of the commission in question and the particular provisions of ORS 273.553 or 273.554 which are violated thereby. Copies of the request for review shall be served by registered or certified mail upon the commission.

(3) The State Land Board may affirm, reverse or modify the action under review and make such other disposition of the matter as it deems necessary to carry out the provisions of ORS 273.553 or 273.554. The State Land Board shall make its decision within 60 days after the date on which the request for review was filed.

O.R.S. 273.558 – Penalties; enforcement; injunctive relief

(1) Violation of a rule adopted under ORS 273.553 (3) is a Class D violation for each day of violation.

Oregon Administrative Rules contains rules filed through November 15, 2004

Department of State Lands
South Slough National Estuarine Reserve

DIVISION 1 - Procedural Rules

142-001-0000

Notice of Proposed Rule

Prior to the adoption, amendment, repeal of any rule, the South Slough National Estuarine Research Reserve Management Commission shall give notice of the proposed adoption, amendment, or repeal:

(1) In the Secretary of State's Bulletin referred to in ORS 183.360 at least fifteen (15) days prior to the effective date.

(2) By mailing a copy of the Notice to persons on the Commission's mailing list established pursuant to ORS 183.335(6).

(3) By submitting a copy of the Notice to all of the newspapers published in Coos County, Oregon.

(4) By mailing a copy of the Notice to the Department of Fish and Wildlife, the Department of Environmental Quality, the State Forestry Department, and the Coos County Board of Commissioners.

Stat. Auth.: ORS 183 & ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 1-1978, f. & ef. 11-2-78; SSNER 1-1998, f. & cert. ef. 7-15-98

142-001-0005

Model Rules of Procedure

Pursuant to ORS 183.341, the Division of State Lands and the State Land Board adopt the Attorney General's Model Rules of Procedure under the Administrative Procedures Act as amended October 3, 2001.

[ED. NOTE: The full text of the Attorney General's Model Rules of Procedure is available from the office of the Attorney General or the Division of State Lands, South Slough National Estuarine Reserve.]

Stat. Auth.: ORS 183 & ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1978, f. & ef. 12-1-78; SSES 1-1980, f. & ef. 12-23-80; SSES 1-1982, f. & ef. 2-25-82; SSES 1-1984, f. & ef. 3-30-84; SSNER 1-1998, f. & cert. ef. 7-15-98; SSNER 1-2002, f. & cert. ef. 7-12-02

The Oregon Administrative Rules contain OARs filed through November 15, 2004

Department of State Lands
South Slough National Estuarine Reserve

DIVISION 5 - Research and Education Activities

142-005-0005

Notification of Research

Any person(s) planning to conduct research within the South Slough National Estuarine Research Reserve must submit a description of their proposed research no later than 30 days prior to the onset of the research project with their request for permission to conduct research. Written permission must be obtained from the Manager of SSNERR before initiating any research. The researcher(s) must also agree to submit a report of their findings to South Slough National Estuarine Research Reserve, no later than 6 months after the completion of field work.

Stat. Auth.: ORS 183 & ORS 273
Stats. Implemented: ORS 273
Hist.: SSNER 1-1998, f. & cert. ef. 7-15-98

142-005-0010

Temporary Structures

Temporary structures for research or educational purposes are permitted for the duration of the project.

Stat. Auth.: ORS 183 & ORS 273
Stats. Implemented: ORS 273
Hist.: SSNER 1-1998, f. & cert. ef. 7-15-98

The Oregon Administrative Rules contain OARs filed through November 15, 2004

Department of State Lands
South Slough National Estuarine Reserve

DIVISION 10 - Public Uses of the South Slough National Estuarine Research Reserve

142-010-0005

Purpose

These rules are designed to complement the primary management objectives and the primary scientific objectives of the South Slough National Estuarine Research Reserve by regulating public use of the Reserve. The primary management objective of the Reserve is to maintain the integrity of the estuary; to protect it from both internal and external sources of stress which may alter or affect the nature of the ecosystem and to preserve the area for long-term scientific and educational uses. All publicly owned areas of the Reserve are available to scientists, students and the general public on a basis desirable and permissible for coordinated research and educational uses and for other compatible uses to the extent they do not interfere with the primary management and scientific objectives. These rules are adopted in accordance with plans and policies defined in the South Slough National Estuarine Research Reserve Management Plan; Oregon Revised Statutes (ORS 273 .533 et seq.); the federal Grant-in-Aid (fi04-4-158-12001, as amended); and Section 315 of the Coastal Zone Management Act of 1972 as amended.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0010

Definitions

As used in these rules, unless the context provides otherwise:

(1) "Advisory Group" means the group of local interested persons and persons with special expertise in fields relating to the Reserve appointed by the Commission to advise the Commission.

(2) "Commercial" refers to an activity undertaken for economic gain, as opposed to an activity for personal use or enjoyment.

(3) "Commission" means the Management Commission of the South Slough National Estuarine Research Reserve created by ORS 273 .554.

(4) "Manager" means the Manager of the South Slough National Estuarine Research Reserve appointed by the Commission.

(5) "Public Use" means any use of the Reserve which is not a part of a formal Reserve educational or scientific program.

(6) "Recreational" refers to an activity undertaken for personal enjoyment as opposed to economic gain.

(7) "Reserve" means Sanctuary as defined in the Coastal Zone Management Act of 1972 which is the lands, within the boundary of the South Slough National Estuarine Research Reserve under the jurisdiction of the Commission, in which the State of Oregon has legal interest, including, but not limited to fee ownership, conservation easement, and/or life estate. ORS 273 .553(1) states, "...the South Slough Estuary Sanctuary pursuant to chapter 415, Oregon Laws 1975, as the first estuarine sanctuary in the United States...," and the 1986 reauthorization of the Coastal Zone Management Act changed the name from Estuarine "Sanctuary" to National Estuarine Research Reserve. South Slough Estuarine Sanctuary is doing business as the South Slough National Estuarine Research Reserve for the purpose of day to day business.

(8) "Forest Greenery" means plant material used for decorative purposes.

(9) "OCZM grant" means the original NOAA Grant-in-Aid financial award.

(10) "Stewardship" means activities conducted to maintain and restore the integrity and natural dynamic processes of an estuarine ecosystem.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0015

Permitted Activities

Subject to action by the Commission taken under rules 142-010-0025 and 142-010-0030, the following noncommercial uses of the Reserve are permitted without special restrictions. State and federal regulations will govern these activities where applicable:

(1) Canoeing and row boating;

(2) Aesthetic appreciation;

(3) Recreational fishing;

(4) Hiking;

(5) Wildlife observation.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0020

Restricted Activities

The following public, noncommercial uses of the Reserve are permitted with restrictions, subject to action taken by the Commission under rules 142-010-0025, 142-010-0030 and other appropriate governmental agency regulations:

(1) Picking of forest greenery for personal use is permitted only upon written approval by the Manager. The amount gathered should be no more than 10 pounds per day unless otherwise stated in the permit.

(2) Overnight use of the Reserve is allowed only with written permission of the Manager.

(3) Chemical fertilizers, herbicides, or pesticides will be used within the Reserve only if necessary to assure sound management of the ecosystem. Any allowed application of such chemicals shall be approved in writing by the Commission, after consultation with the Advisory Group, in accordance with best management practices so as to prevent direct application or discharge to the estuary waters. It is the intent of the Commission to preferentially utilize nonchemical management techniques of pest control. Chemicals will be utilized for pest or weed control only after it has been determined that the nature and integrity of the ecosystem is endangered.

(4) Digging for artifacts is not permitted except as pursuant to ORS 273 .705 et seq. and with the written permission of the Commission.

(5) Open fires are allowed only upon approval of the Reserve Manager.

(6) Hunting is allowed only during authorized waterfowl and game hunting seasons, subject to Department of Fish and Wildlife regulations, except in specific areas where the Commission may prohibit hunting for the protection of the health, safety, and welfare of the public. Areas closed to hunting will be posted.

(7) Hunting and Observation Blinds are allowed within the boundaries of the Reserve, but a blind must be taken down and removed from the Reserve at the end of each day.

(8) Motorized boating is permitted except in special protection zones: areas excepted for public health, safety, and welfare, educational uses, and scientific research. Motorized boating will be at reduced speed that will limit the wake to less than a one foot wave height in order to prevent disturbance to the tidelands and wildlife habitats.

(9) Construction of boat launch and tie-up facilities is permitted only as necessary for health, safety, research, or education.

(10) Oyster culture is limited to the 100 acres as provided in the OCZM grant. The Commission shall recommend appropriate action on each oyster culture application or changes to existing plats within the Reserve to the Department of Agriculture.

(11) Tree removal from Reserve lands may occur only with the approval of the Commission, after consultation with the Advisory Group, and only for the following reasons:

(a) Salvage of windthrow, dead, and dying trees;

(b) High risk to invasion of forest insects and diseases;

(c) Hazards to visiting public and scientists;

(d) Experimental and scientific projects;

(e) To maintain adequate clear space for existing powerline corridors;

(f) Thinning to maintain a healthy forest stand.

(12) Firewood cutting for personal use requires a permit from the Reserve Manager.

(13) Pets are permitted only if on a leash or under the direct control of the owner.

(14) Recreational mineral gathering requires a permit from the Manager.

(15) Horseback riding is permitted except in designated areas and not within any water course. Information about designated areas may be obtained at Reserve Headquarters.

(16) Picnicking is permitted except in designated areas.

(17) Recreational mushroom gathering, up to a maximum of one gallon per day, is permitted except in designated areas.

(18) Recreational berry picking is permitted except in designated areas.

(19) Recreational bait gathering is permitted except in designated areas subject to Oregon Department of Fish and Wildlife regulations.

(20) Recreational clamming is permitted except in designated areas.

(21) No dredging, filling or altering the natural environment except upon the approval of the proposed activities by the Commission.

(22) Motorized off-road vehicles are prohibited except on designated county-maintained roads or driveways approved by the Commission.

(23) Construction of roads is not allowed except by special permit issued by the Commission.

(24) No deliberate introduction of a non-native species (or subspecies) within the Research Reserve's administrative boundaries without the prior approval of the Commission

(25) Trapping within the Reserve's administrative boundaries is prohibited, except for research or management purposes, and then only with the approval of the Manager.

(26) New or increased commercial activities which are not existing as of the creation of the Reserve in June 1974 must be approved by the Commission.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0021

Prohibited Activities

The following uses of the Reserve are prohibited activities as determined by the Commission, by authority of ORS 273 .553(3):

(1) Commercial bait gathering;

(2) Commercial timber harvest;

(3) Commercial mineral removal;

(4) Discharge of firearms for pleasure shooting or for target practice;

(5) Picking of forest greenery and cascara bark gathering for commercial purposes.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0025

Public Health, Safety, and Welfare

The Manager is authorized to take actions necessary for maintaining public health, safety, and welfare. The Manager's actions under such authority shall be consistent with the primary objectives of the Reserve.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0030

Temporary Closure

Any activity may be suspended or any area closed if necessary for the conduct of appropriate scientific research, stewardship and educational activities. Such closure will occur only after consultation with the Advisory Group, and with approval of the Commission. If, based on the scientific data and knowledge acquired and on scientific judgment, uses are found to have a detrimental or adverse impact, actual or potential, on the ecosystem or resources thereof, appropriate agencies of the State of Oregon shall take immediate action to control such uses so as to remove or negate their impacts and restore the system to its natural state as it was prior to such activities.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0035

Roads and Trails

Roads and trails other than those authorized by the Commission will be closed. No roads or trails will be constructed without approval of the Commission. Access to Reserve lands shall be on authorized roads and trails only, and not through private property unless the state has acquired an easement.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0040

Leases and Rentals

Any fee for a lease or rental approved by the Commission for any use of the Reserve lands or buildings shall be at fair market value.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0045

Short-Term Use of Facilities

Overnight use of buildings and facilities is permitted upon approval by the Manager. Employee housing can be provided in a manner consistent with applicable policy governing use of state owned property by state employees (ORS 182.425 and 182.435).

Stat. Auth.: ORS 273

Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 1-1985, f. & ef. 7-24-85; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0050

Violation of Rules

Violation of these rules is punishable, upon conviction, by a fine of not more than $100 for each day of violation, as set forth in ORS 273 .558. The Commission may appropriately appeal for injunctive relief and pursue civil remedies which require the rehabilitation or restoration of Reserve lands damaged in violation of these rules.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0055

Review of Rules

ORS 273 .557 provides for State Land Board review of Commission rules. Individuals or organizations concerned about possible improper use or restriction of use of the Reserve may petition the State Land Board or the Office of Coastal Zone Management for review of the management program.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

142-010-0060

Amendment of Rules

These rules are subject to amendment by the Commission in accordance with the Attorney General's Model Rules of Administrative Procedure. Amended rules must be consistent with the policies of the Reserve Management Plan.

Stat. Auth.: ORS 273
Stats. Implemented: ORS 273
Hist.: SSES 2-1980, f. & ef. 12-23-80; SSES 2-1982, f. & ef. 3-2-82; SSNER 1-1998, f. & cert. ef. 7-15-98

Partnerships

South Slough NERR has entered into several partnerships at the local, regional, and national level that support joint projects and efforts. The following partners have been and will continue to be important to the mission of the Reserve:

- AmeriCorps (National Civilian Community Corps; Northwest Service Academy)
- Charleston Merchants Association
- City of Bandon
- City of Coos Bay
- City of North Bend
- Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians
- Coos Bay School District
- Coos County
- Coos Regional Trails Partnership
- Coos Watershed Association
- Coquille Indian Tribe
- Ducks Unlimited
- Friends of South Slough
- Menasha Foundation
- National Estuarine Research Reserve Association
- National Oceanic and Atmospheric Administration
- Northwest Aquatic and Marine Educators
- Northwest Youth Corps
- Oregon Coastal Environments Awareness Network
- Oregon Department of Agriculture
- Oregon Department of Environmental Quality
- Oregon Department of Fish and Wildlife
- Oregon Department of Forestry
- Oregon Department of Land Conservation and Development
- Oregon Department of Parks and Recreation
- Oregon International Port of Coos Bay
- Oregon State University
- Oregon State University Sea Grant
- Oregon Watershed Enhancement Board
- Oregon Wetlands Joint Venture

- Oregon Youth Conservation Corps
- Plum Creek Foundation
- Shoreline Education for Awareness
- South Coast Basket Weavers
- South Coast Business Enhancement Corporation
- Southwestern Oregon Community College
- SWOYA Boys and Girls Club
- Tillamook Bay National Estuary Program
- Trust for Public Lands
- University of Oregon/Oregon Institute of Marine Biology
- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Coast Guard
- U.S. Department of Agriculture
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- University of Washington
- Weyerhaeuser Corporation

Memorandum of Understanding Between Oregon Coastal Environments Awareness Network and Oregon Department of State Lands

South Slough National Estuarine Research Reserve Regarding the Coastal Environments Learning Network

I. BACKGROUND

Oregon Coastal Environments Awareness Network (OCEAN) is a non-profit organization that was formed in 1992 by a group of individuals representing industry, business, state and federal agencies, educators, and conservation organizations. OCEAN's goal is to promote awareness and understanding of the natural and cultural resources of Oregon's south coast and their management for both residents and visitors.

Since 1992, OCEAN has developed a clear mission statement, filed for incorporation, adopted bylaws, developed a seasonal Calendar of Events, implemented a membership and fee structure, and provided consultation services for a number of natural and cultural resource projects and programs in the area. Monthly meetings have served as an open forum for networking between constituents.

OCEAN also developed a five-year strategic plan. The plan provides a basis for coordinating a diversity of partners, programs, and projects important to a cross section of businesses, organizations, agencies and the public. The five major areas of focus identified in the plan, are: **networking, consultation, projects, training, and organizational development.** The plan is intended to provide guidance and direction to OCEAN while maintaining enough flexibility to take advantage of new opportunities, new partners, and new projects.

OCEAN's Coastal Environments Learning Network project (CELN) is the primary subject of this agreement.

According to the CELN Mission Statement:

> The Coastal Environments Learning Network is dedicated to providing quality educational opportunities and outdoor experiences for residents and visitors to Oregon's south coast. It accomplishes this through a partnership of agencies, businesses, educators and individuals tied by a common interest in and reliance on the natural and cultural resources of the area, and by working together to explain and describe the natural processes, the land uses and management, and stewardship principles and practices.

The key objectives of this mission are:

1. To convey and promote an understanding and appreciation of how the coastal environment has, and continues to, influence and shape the plant, animal and human communities of the region and inspire sound, information based public stewardship attitudes and behaviors;

2. To contribute meaningfully to economic health of the area by providing new opportunities for institutional and citizen involvement in the Network's programs as well as other opportunities

to experience and learn about the south coast's exciting natural, scenic, recreational and cultural heritage.

The partnerships that comprise the CELN will facilitate the establishment of an integrated suite of coastal environment education programs and field trip experiences. The CELN, through published inventories of on-site facilities and of ongoing educational programs, and through formal cooperative agreements with participating site management agencies, will help ensure that logistics, coordination, and thematic consistency are provided to students, teachers, and tourists visiting the coast.

II. PURPOSE

This memorandum of Understanding (MOU) provides a framework for cooperation in planning, facilitating, and promoting programs and activities relating to the Coastal Environments Learning Network. The MOU will also specify the roles and responsibilities of cooperating parties. Such a cooperative arrangement will enhance educational opportunities, increase public participation, and provide coordination for regional planning. This MOU will strengthen the efforts of business and industry, public agencies, private organizations, and individuals to carry out OCEAN's mission and facilitate implementation of OCEAN's Coastal Environments Learning Network. It will also provide cooperating parties with the ability to take full advantage of other opportunities resulting from partnership with OCEAN as they arise.

III. AUTHORITY

This MOU is made and entered into by and among OCEAN and Oregon Division of State Lands: South Slough National Estuarine Research Reserve hereafter referred to as SSNERR.

OCEAN: A non-profit tax-exempt organization was incorporated in May of 1994. The organizational bylaws and five-year strategic plan provide the framework to enter into agreements with other interested parties.

IV. INTRODUCTION

The signatories to this agreement have responsibilities or interests in enhancing opportunities for all members of the public to learn about natural and cultural resources of the south coast, and to participate in educational activities and program. The parties agree that increased effort should be made to identify and publicize natural and cultural activities and programs; cooperate in developing programs and facilities; coordinate interpretive efforts; and provide a forum for information exchange.

In summary, it is the mutual belief of the signatories that implementation of the MOU will:

- Increase awareness, understanding, knowledge, and appreciation of resource management issues;
- Implement initiatives that are beyond the scope of individual participating partners;
- Promote coordination of activities;
- Promote long-term economic stability that is based in the resources of the area.

NOW, THEREFORE, in consideration of the above premises the parties agree as follows:

V. OCEAN SHALL:

1. Serve as a forum for exchange of ideas and information among diverse partners within the CELN.
2. Continue to work with SSNERR and other CELN partners in developing and conducting educational programs and other activities that are in keeping with the CELN Mission and Objectives.
3. Provide and/or support natural and cultural resource interpretation and education expertise to the public when appropriate.
4. Provide and/or support natural and cultural resource training opportunities for CELN partners when appropriate.
5. Assist in evaluating and monitoring the progress of ongoing CELN programs.
6. Assist CELN partners in public promotion of CELN and its programs
7. Continue to coordinate efforts to secure funding and other support for the CELN.
8. Support CELN partners in fund-raising initiatives that are consistent with OCEAN's mission and the mission of the CELN.

VI. SSNERR SHALL:

1. Collaborate with other CELN partners to realize CELN's Mission and Key Objectives as presented above.
2. Participate in planning, development and implementation of agreed upon CELN programs and projects in accordance with SSNERR policy
3. Designate a representative who will attend CELN program planning and development meetings and, when appropriate and necessary, OCEAN Board meetings. It is understood that at times the representative will be working with other collaborating Network partners in coordinating and integrating CELN programs and other activities.
4. Designate one or more locales, under SSNERR jurisdiction, as participating Network site(s) in the CELN.
5. Continue to maintain and, if deemed appropriate and feasible by the managing Organization, to improve the facilities, accessibility, and educational programming previously delineated in inventories of those CELN sites under SSNERR management.
6. Enter into program or project-specific agreements, or other appropriate agreements, where needed to accomplish agreed upon work.
7. Acknowledge OCEAN and other participating partners in media releases, at events, and in printed matter associated with cooperative programs and projects.
8. Support CELN partners in fund-raising initiatives that are consistent with SSNERR policy and with the mission of the CELN.

VII. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND AMONG THE SAID PARTIES THAT:

1. This agreement in no way restricts the cooperating parties from participating with other public and private agencies, organizations, and individuals; or from accepting contributions and gifts for the development, administration, and cooperation for similar activities.

2. Nothing in this agreement shall be construed as obligating SSNERR to expend funds, provide resources, contract for, or otherwise commit to the future payment of money, except wherein provided by separate agreement as per this MOU.

3. This agreement may be revised as necessary by mutual consent of both parties and by the issuance of a written amendment signed and dated by both parties.

4. Either party may terminate participation under this agreement by providing 60 days written notice. Unless terminated by written notice from either party, this agreement will remain intact for a period of five years but may be extended by cooperating parties.

VIII. SIGNATURES AND EFFECTIVE DATE:

In Witness Thereof, the parties hereto have executed this agreement as of the last written date below.

OREGON DIVISION OF STATE LANDS

SOUTH SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE

_____

Title:

_____

Date

OREGON COASTAL ENVIRONMENTS AWARENESS NETWORK (OCEAN)

_____

Title:

_____

Date

January 15, 1997

OCEAN Board of Directors
P.O. Box 1771
Coos Bay, Oregon 97420

On behalf of the South Slough Management Commission, I would like to offer the following letter of commitment concerning the participation of the South Slough National Estuarine Research Reserve (SSNERR) as a partner in the efforts of the OCEAN organization. The South Slough Management Commission recognizes that OCEAN is a partnership organization and relies on the participation and contributions of members to successfully advance initiatives beyond the scope of participating individuals and agencies. Through the course of this letter, we would like to articulate the nature of South Slough's commitment to the process OCEAN's membership is undertaking.

It is our understanding that members of the South Slough Reserve staff have participated in OCEAN since its inception, and that many elements of OCEAN's mission are closely aligned with those of the Reserve. In particular, the statement to:

"Increase awareness, understanding, knowledge, and appreciation of resource management issues…" (OCEAN, Five Year Business Plan) is well matched to the South Slough NERR Education program mission to:

"Increase awareness, understanding, and appreciation of estuarine systems and estuarine stewardship by facilitating access to information about estuarine systems, and by providing opportunities for personal experiences with them."

The broad and varied nature of OCEAN membership, both geographically and organizationally, has benefited South Slough in achieving a bio-regional scope to its program offerings. Furthermore, collaborative initiatives such as the Coastal Environments Learning Center and Network may be realized because of the existence of an organization such as OCEAN.

Because of these joint interests, South Slough staff has assisted OCEAN with project development and execution, activity coordination, fund-raising, in-kind contributions of equipment, personnel and technical expertise as well as providing membership dues.

The South Slough Commission would like to pledge a continued commitment in the aforementioned areas for the purposes of furthering the goals of the Reserve where they coincide with those of OCEAN. In particular, we would like to designate Reserve Manager, Mike Graybill as the primary representative to the OCEAN board with the continued participation of Education Program Coordinator Tom Gaskill in the projects and activities of OCEAN.

As the Coastal Environments Learning Center and Network concept continues to grow and develop, we would like to see the continued participation of OCEAN in the next phases. Additionally, I would like to see the continued recognition of South Slough Reserve as an active participant in OCEAN's projects and program offerings.

In closing, we would like to reiterate the South Slough Commission's support for the goals and mission of OCEAN and congratulate OCEAN on its accomplishments to date.

Sincerely,

Paul Cleary
Oregon Division of State Lands, Director
South Slough Management Commission, Chair

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South Slough NERR Stewardship Units

Natural Aquatic (NA) Management Unit

Description

The NA unit consists of all tidally submerged and submersible lands excluding the aquatic areas below the privately-owned uplands within the sanctuary (Figure 12). The NA unit consists of approximately 600 acres of lands between the sanctuary north boundary and the sanctuary south boundary across Winchester Creek. The east-west extent of this unit is determined by the heads of tide in Day, Elliot, Talbot and John B. Creeks in the east arm of South Slough; and in the south by the heads of tide in Cox Canyon, Theodore Johnson and Wasson Creeks.

General Characteristics

Access. The only boat access to the estuary from public roads within the sanctuary is at the county bridge on Hinch Road during mid to high tides by skiff or canoe and by canoe only at low tides. Motor boat access is from South Slough outside of the north boundary of the sanctuary. Motor boat access to land portions of the sanctuary is limited to Valino Island and the end of Long Island Point at low tide levels, and the rest of the shorelands at high tide level.

Past and Present Uses.. From 1850 to about 1940 the slough provided the only transportation link to the rest of Coos Bay for the people of South Slough. All goods and travelers were either barged, floated or piloted on the slough. The slough was dredged along the length of the west arm to facilitate log rafting. Traditional uses have also included fishing, hunting and some clamming. Tidal wetlands have been diked to provide domestic animal pasturage although only two areas remain functionally diked today. The Indian use of the South Slough was apparently considerable in pre-historic times. Recent use of the slough has been mainly for recreational uses, at least in the sanctuary area.

Structures. Most of the functional structures in this unit are located in the Winchester Creek area. These structures include dikes with tide gates, a county bridge with pilings and retaining walls, and remnants of log raft tiedown pilings. One major dike system is located in the Elliot Creek area in the east arm of South Slough. A portion of mudflat and the creek draining into it has been diked and open to tidal flushing only through a culvert in the dike. All other dikes are well breached and the areas behind them recovering or apparently recovered from the Biking activity. There are no docks present in this unit.

Special Values

The NA unit gives one the feeling of being with nature; in fact, one initial acquisition criteria was that the sanctuary should constitute a visual unit, and the acquisition of property to date has been true to that ideal . The configuration of the landforms shaping the estuary gives visitors the impression of

protection due to the limited viewing distances. At high tides, the estuary appears to be a lake while at low tide the estuary appears as mainly mudflats with a very small amount of water confined to shallow channels. The predominant bottom sediment type is coarse to fine mud with a very small amount of sandy substrate around Valino Island. The water appears dirty due to suspended clays and silts, and the high content of living (plankton) and non-living organic materials suspended in the water. The productivity of the estuary is high as evidenced in part by the production of macroalgae and eelgrass. All major saltmarshes in South Slough are located within the boundaries of the sanctuary, adding to the primary productivity of the macroalgae and eelgrass. Secondary productivity is high due to the extensive beds of mud shrimp, ghost shrimp and clams, especially soft shell and bentnosed clams.

Of particular note is the presence of approximately 100 acres of commercial oyster cultures. While a continuation of an historical activity, the presence of commercial oyster culture raises important questions in light of sanctuary goals. These questions are related to several factors: 1) oyster beds alter water flow in their immediate vicinity; 2) they potentially restrict public boat navigation at certain tide levels; 3) oyster species native to the Coos Bay Estuary are no longer found, the commercial species have been introduced; and 4) oyster beds may constitute a major biological influence in terms of their filterfeeding activity. Oyster plat lease certificates have addressed some of these issues, such as marking of plat locations, providing navigation channels, and keeping plat sections free of oysters for research purposes.

Oyster culture activity does provide a somewhat unique opportunity for scientific research in the SSNES, with a potential for controlled experiments designed to quantify the relationships between oyster culturing and estuarine systems.

Unit Management Plan

Phase I: Present to June 1985. A mudflat study station will be constructed in the vicinity of the Estuary Study Trail to permit students participating in the Estuary Study Program to take samples and other measurements of the mud and waters of the slough (see Section VI.C). Non-motorized boating will continue to be encouraged as a means of sanctuary water access and to make the estuary available for research.

During this period, scientific programs will be initiated to: 1) determine the present conditions and values of all diked sanctuary property and the Elliot Creek diked area; 2) collect information pertinent to an assessment of oyster culture influences in sanctuary waters; and 3) determine existing environmental baseline conditions and recommend appropriate monitoring programs.

Phase II: July 1985 to June 1989. Depending on the results of the the Phase I studies, corrective action may be instituted to return diked areas to full tidal influence. Such action, if taken, will be guided by specific management goals. Treatment areas will continue to be studied during this phase to determine how closely management goals are achieved and the final set of management, wildlife or habitat values achieved by the actions taken.

Oyster culture influences on the environmental quality and natural values of the NA unit will be assessed in order to satisfy the goals of the federal Grant-in-Aid and appropriate state statutes. Monitoring and research programs will be established as recommended in the environmental baseline report.

Phase III: July 1989 - Beyond. The general goal of NA unit management is to meet the broad goals of the National Estuarine Sanctuary Program, i.e., to utilize the South Slough estuary for research, education and low-intensity recreational purposes. At the minimum, future management of this unit will be to protect and preserve the estuary for long-term scientific and educational use. Long-term research and monitoring designed to increase our knowledge of estuaries will be a key part of future NA unit management.

Sanctuary(S) Management Unit

Description

This management unit is the basic sanctuary area exclusive of estuarine tidal and subtidal areas (Figure 12). Tidal and subtidal areas have been identified separately as the Natural Aquatic (NA) unit to conform with the County Comprehensive Plan since both the sanctuary and county management classification systems are parallel . The basic sanctuary uplands area may therefore be described as all sanctuary property not identified as being under Limited Development (LD), Special Protection (SP), Natural Aquatic (NA) or Private Ownership (PO). Unit S is bounded on the north by the northern sanctuary boundary, on the east by the eastern sanctuary boundary, on the south by private property and management unit LD 1, and on the west by Seven Devils Road. Unit S is presently composed of about 4,327 acres or about 95% of the SSNES area.

General Characteristics

Access. Unit S, until 1983, was separated into two areas (east and west with no state-owned land connecting them. The 511.17 acres of property previously owned by Moore-Oregon, which split the sanctuary in two parts, has since been acquired by the Oregon State Land Board (see Figure 8). After necessary timber values have been determined, Tier III sanctuary lands along the east side of the sanctuary will be traded for this property. The present east boundary of the sanctuary will then be redrawn to place the State Land Board property outside of the sanctuary. In return, the Moore-Oregon property will complete the blocking of the sanctuary lands into one contiguous unit.

All public access to Unit S lands is from publicly dedicated roads. On the west, paved Seven Devils Road and graveled Hinch Road, both county publicly dedicated roads, provide access. Hinch Road crosses the South Slough and a few hundred feet east of the county bridge terminates as a maintained road, but continues another 1/4 mile or so as an old, rutted, unmaintained road into the base of Long Island Point (at the site of a former schoolhouse). From there an old logging road provides hiking access toward the north onto Long Island Point and toward the east and northeast by a second series of old logging roads. All unmaintained roads are for foot traffic only except vehicular traffic for management purposes. Access onto unmaintained roads will be physically limited by barriers or gates, and signs placed to notify the public of non-motor vehicle access areas. On Unit S lands on the east side of the South Slough, visitor access is by hiking or on horseback and a signed trail system is being developed as proposed in the education section of this plan. Use of this trail is at the visitor's risk because hunting and other recreational uses are permitted along the eastside trail . The northern areas of Unit S lands are accessible by boat at all tidal heights and the southern areas by canoe at all tidal heights. A recently improved logging road which loops across the sanctuary boundary has been constructed by a private logging company (Figure 10, access points E and F). This road will

continue to be available for motorized vehicle use because it is a maintained road. Access by the public, however, will be at the discretion of adjacent property owners since no public access across sanctuary lands will be available.

Past and Present Uses. The past uses of these lands are those historical uses found in any coastal area of Oregon. Logging, homesteading and agricultural activities have all occurred on these lands in the past. At the time of sanctuary formation a variety of recreational pursuits and logging were major activities. Another major activity was the picking of plant materials for sale to wholesale suppliers of botanicals for florist shops. Called "brush picking", this activity remains a major commercial industry in the Pacific Northwest. The materials picked include fern fronds, cedar boughs and the leaves and branches of other species. A second major activity concerning the gathering of botanicals is the harvesting of cascara tree bark, for the extraction of a natural laxative for the pharmaceutical industry.

Structures. There are no buildings on Unit S lands. Structures associated with the eastside access trail will be kept simple and to a minimum to reduce future maintenance costs. Directional signage will be provided for public convenience and safety and informational materials near the end of Hinch Road will also be provided.

Special Values

The outstanding characteristic of this unit is the feeling of being with nature. This is due to the lack of any development except the old logging roads, now mostly overgrown. Many of the tributaries support large populations of beaver and good runs of coho salmon and cutthroat trout. The upland habitats support large bird populations and provide cover for deer, elk, bear and other mammals. Small lakes and wetlands dot the drainages along the east side. The forests have all been clear cut within the past 20 to 30 years so that the vegetational patterns are a mosaic of successionary stages ranging from areas replanted at commercial densities with Douglas fir in 1977 to areas of mixed fir, cedar and hemlock forests resulting from unplanted clear cutting about 40 years ago.

Unit Management Plan

Phase I: Present to June 1985. Unit S management actions have concentrated on reducing consumptive uses of the area since acquisition of this property. All domestic animal grazing has been stopped. Efforts have been made to physically block old roads at the sanctuary boundary to permit the natural revegetation of old roadbeds. Plantings and anti-erosion structures have been placed in some areas as resources permitted. Future actions are intended to simply permit this unit to proceed at a natural rate of recovery from past human impacts. Some accessibility will be provided but kept to a minimum in order to maintain the area in as natural and untrammelled a condition as possible. This will be accomplished by:

- Revegetation or constructing anti-erosion devices on old roadbeds where erosion is occurring
- Construction of a main equestrian and hiking trail
- Maintenance of signage for providing the public with directional and user information

Research will be initiated to assess rates of biological recovery from past human impacts and to further define the ecological values of Unit S 1 ands.

Phase II: July 1985 to June 1989. Information will be available 'on visitor use of the equestrian and hiking trails and from biological recovery and ecological value studies. With this information, improve-

ments will be made to the trail system and actions to enhance the recovery of selected Unit S areas can begin. The specific details of these actions will require the gathering of information during the first phase.

Phase III: July 1989 - Beyond. The primary management strategy for Unit S land is to provide naturally evolving conditions for the purposes of supporting research, _education and low-intensity recreational activities. No developments, other than the trails mentioned above, are projected for Unit S lands.

Special Protection 1(SP1) Management Unit

Description

Valino Island constitutes SP1 (Figure 12). This management unit is one of two that have been identified as portions of the primary sanctuary area having special management needs or special characteristics. Valino Island is located immediately south of the north boundary of the sanctuary. It is about 23 acres in area and so constitutes about one half of one percent of the sanctuary as presently formed.

General Characteristics

Access. Access is by boat at all tidal heights. Visitor use of this area is at their own risk and on a strictly nonconsumptive and day use only basis.

Past Uses. There is no indication that Valino Island had particular significance to the Indians of this area. The European settlers used the island rather extensively, mainly as a result of water transportation on the slough since the settlement of the region. At one time, a saloon called the Jolly Pig was located on the island. Other uses have included homesteading and, most recently, growing flower bulbs for resale by a local florist. The island has been logged. Camping and duck hunting from its shores have also occurred.

Structures. No structures exist on the island.

Special Values

From the water the casual visitor perceives Valino Island as merely an extension of the eastern shore. The knowledgeable visitor and the sanctuary staff view Valino Island as a particularly significant part of the sanctuary because it is the only island in the Coos Bay Estuary vegetated by forest species typical of the region. From the management perspective, Valino Island is a consolidated dune landform as are the adjacent shorelands, both east, northeast, west, southwest and northwest of it. These landforms apparently account for the sandy benthic estuarine habitats in this portion of South Slough. The rapid erosion along the west side is apparently creating a deposited benthic sand habitat, a habitat of limited availability in the sanctuary. Unique to the island, and indeed unique to most of the country, is a group of mature, healthy American Chestnut trees. This species, native to eastern North America, once formed vast eastern forests, but very few living and even fewer healthy trees remain since the introduction of a tree blight to which it had no resistance.

Unit Management Plan

Phase I: Present to June 1985. No action has been or is expected to be taken in this unit except to make it available for research. Efforts already initiated will continue to determine the rates of erosion of this landform, and if possible, the fate of the eroded materials. The eroded bluffs located in the portion of Unit S to the southwest of the island will also be investigated at the same time. During this information gathering phase, the only management actions anticipated will be to leave trees and other vegetative material in place that may have toppled onto the beach from the bluffs. This may provide some protection from further erosi-on.

Phase II: July 1985 to June 1989. During this period, management actions based on the knowledge gained in the first phase may be initiated. The nature and extent of these actions remain to be determined.

Phase III: July 1989 - Beyond. The management intent for this unit is to protect the resource to the extent possible commensurate with leaving its relationship with adjacent areas essentially unchanged. The most likely long-term management for this unit is to keep all use of the property to the lowest possible level and let the landform stabilize unimpeded by further environmental impact to it.

Special Protection 2 (SP2) Management Unit

Description

SP2 consists of the end of the peninsula known as Long Island Point (Figure 12). It is bounded on the west, north and east by the South Slough and on the south by portions of management unit S. SP2 is approximately 117 acres, or about 2.7 percent of the sanctuary as presently constituted.

General Characteristics

Access. Public access is presently available by boat at all tide heights. Since completion of the acquisition of the Land Board property, as explained for management unit S, hiking access along old logging roads is available. Due to the nature of the topography of the area few special provisions will be needed to make this area available for foot traffic.

Past Uses. All past uses of this unit have been either logging or very ow-intensity recreation.

Structures. No structures presently exist in the unit. Special Values

The northernmost tip of the peninsula forming Long Island Point is extremely narrow and therefore in a delicate balance between stability and erosion. The narrow tip is forested with mature trees that constitute the largest contiguous stand of mature trees in the sanctuary. The broad southern portion of this unit has been clearcut within the past eight years. The special protection of this unit will help assure that the dominant landform feature responsible for creating the sanctuary estuarine areas as they exist today will be given appropriate protection.

Unit Management Plan

Phase I: Present to June 1985. No action has been taken or is expected to be taken in this unit except to make it available for research. Visitor use of this unit is at their own risk and on a strictly noncon-sumptive and day use only basis.

Phase II: July 1985 to June 1989. Same as for Phase I.

Phase III: July 1989 - Beyond. The management intent for this unit is to protect the resource to the extent possible.

Limited Development 1 (LD1) Management Unit

Description

This unit is bounded on the north by Hinch Road, on the east by Winchester Creek and private property, on the south and west by the sanctuary boundary (Figure 12). LD1 consists of 400 acres and is about 9.3 percent of the sanctuary as presently constituted.

General Characteristics

Access. Primary access to the unit is by paved county road, Seven Devils Road, and a gravelled county road, Hinch Road. Access onto the site is by a former farm road not publicly dedicated. Boat access into the unit is provided by Winchester Creek during high tides. Two hiking access trails have been constructed on this site as described in a following section.

Past Uses. Past uses of this unit include homesteads and agricultural activities associated with the homesteads. Logging of the forested lands has also occurred at various times in the past. Agricultural uses have included clearing of the bottomlands for crops such as potatoes and for growing grass for hay and grazing purposes. The wetlands of the area have also been grazed as recently as 1977. Hunting and fishing activities were engaged in by past property owners, but not by the general public due to the homesteads and domestic animals present. All of the South Slough' has been a traditional use area for local Indian tribes. An historical burial site is located in the unit. Prehistoric sites may also be present.

Structures. LD1 contained all developed structures purchased by the sanctuary. Initially, these structures included three houses, two barns and a number of fences and sheds. Most of the farm structures were in an unsafe condition and two of the homes had septic systems badly in need of repair. Since being acquired, all fences and unsafe structures have been removed. At the present time the unit supports two houses; one is a split level home used as an office, tool storage area, interpretive center and overnight housing facility. The other is a circa 1906 two-story home presently empty and partially remodeled to repair age-damaged portions. The two-story house has no septic system. Outbuildings remaining are a recently constructed barn with cement floor, an old but usable shed used for storage and a pump house and storage tank supplying water to the office. All other buildings have been removed. A series of crude but usable farm bridges span the three creeks in the unit. Two visitor access trails have been developed using these bridges. One, Winchester Creek trail, is about 2,800 feet long in a loop configuration providing access to a wet meadow (or surge marsh) typical of upper slough areas. This trail also consists of a number of specially constructed foot bridges over wet areas. The second trail is an upland trail about 3/4 mile long. It accesses a tributary creek to the tidal portion of South Slough and a cleared valley. Old farm bridges are used on this trail system. All utility lines into the upper portion of South Slough pass through this unit. In addition to the sanctuary, three private properties are serviced by Coos-Currey Electric Coop lines passing through the unit. All lines are above ground.

Special Values

A primary characteristic of this unit is the open space provided by the cleared lands and the wetlands adjacent to Winchester Creek. The former impression of farmlands has been greatly reduced by the removal of buildings, fences and the associated farming activities. These open lands are the only open space areas in the sanctuary accessible from public roads. The open space also provides grazing areas for deer and elk herds. White-tailed kites and other raptors, and bobcats hunt the old fields for the rodents typical of tall grasslands. The forested valley slopes stabilize the steep hillsides and provide transition habitat. The unit characteristics are a direct result of past human activities. From the sanctuary viewpoint, the site provides opportunities for visitors to view wildlife due to the open space and the grasslands present. The broad, level valley floors provide a terrain easily developed into trail systems usable by all but wheelchair-bound visitors and even handicapped trails could be developed here. Al though the habitats one typically associates with estuaries are not obvious in this unit, Winchester Creek is tidally influenced throughout this area and the tributary and upland habitats present are typical of upper sloughs. The structures present provide the basis for on-site administrative facilities as explained above.

A demonstration salmon egg hatch box and interpretive sign are located near Wasson Creek. This display was constructed by the Oregon Department of Fish and Wildlife and the Northwest Steelheaders angling club.

Unit Management Plan

Phase I: Present to June 1985. Since acquisition of the property, management of this site has consisted of developing on-site sanctuary program facilities for administration of the sanctuary and visitor interpretive and information facilities. Public access has been improved by developing an initial system of trails, and unsanitary and unsafe conditions have been remedied. The site has been made as secure as possible without having an on-site caretaker.

Administrative facilities now present include:

- An administrative office and reception area
- A visitor interpretive area
- A 10-person “auditorium”
- A meeting room/ dining hall A kitchen
- Two large bathrooms
- Two bedrooms usable overnight for a $2.50/person/night fee by education and research people, or as housing for sanctuary interns
- A small laboratory
- A two-car garage
- Storage areas for tools and equipment
- Parking for about 30 cars in the summer and about 10 cars during the winter
- A 0.9-mile long driveway with a security gate at the entrance locked after hours
- Appropriate information signage
- An office water system consisting of spring box, sub-surface holding tank of about 1,500 gallons, a chlorinator, a filtering system, a pressure tank, a pump and requisite piping. All parts of the system except spring box and holding tank are housed in small building

- A septic system consisting of a 1,000 gallon septic tank, a 150-gallon pump, a 2,000 square foot curtained drainfield and requisite piping
- Other improved major facilities in this unit include:
- A recently constructed barn with cement floor of about 1,185 square feet
- A two-story house built circa 1905 of about 690 square feet per floor

The Phase I work program will attempt to increase administrative efficiency, improve visitor access and site usability and complete the removal of any unsafe conditions still remaining. Increasing administrative efficiency will involve relocating the office and interpretive functions to Unit LD2.

Improving visitor access and site usability will be accomplished by: -Improving the present road to the office:

- Improving the present road to an existing parking area
- Improving all parking areas in the unit by grading and graveling where appropriate
- Improving all hiking trails
- Removal of unsafe conditions will include:
- Completing the cleanup of an old barn now in the process of being removed
- Completing the cleanup of the site of an old house recently burned down as a fire department training exercise

Phase II: July 1985 to June 1989. Phase II work will separate the on-site activities into two facilities, one devoted to making interpretive materials and the staff available to the public at a more convenient location adjacent to the Estuary Study Trail, and devoting the present administration building to maintenance storage facilities, science laboratory needs and overnight visitor use. This latter structure is located out of the way at the end of the gated entrance road. Research demand for the use of the sanctuary should be sufficient by this time to require the expansion of the research support facilities. This will be done by remodeling the 1905 two-story farmhouse into a research housing facility, including the establishment of an adequate water system and an adequate septic system.

Phase III: July 1989 - Beyond. Phase III work will remove the maintenance functions out of the split-level home previously used for maintenance and short-term overnight housing, and improving the overnight group use of the structure. This will involve:

- Improvement of a road to the new barn site which is suitable for development into a low-intensity use garage and storage building
- Remodeling of the overnight use facilities to improve the kitchen facilities, dining area and bathroom/shower facilities
- Improvement of the present septic drainfield as required
- Removal of the old shed presently used for maintenance and storage
- Construction of simple cabins or tent platforms to improve the overnight visiting group facilities
- Expansion of the science lab into the garage formerly used for storage and as a maintenance garage

Land management actions in this unit for all phases include maintaining the old fields free of noxious weeds such as Canadian thistle and Tansey ragwort by hand removal. Wetlands will be permitted to become reestablished but efforts will be mounted to keep portions of the valley floors clear of successionary reforestation stages *through* hand-removal of pioneer species. This management action

will be taken in this unit to maintain a diversity of habitats to serve as the raw material for controlled investigation of old field habitats and to support populations of native grazers and other species.

Limited Development 2 (LD2) Management Unit

Description

This unit is bounded on the north by a line 500 feet northward of any sanctuary-maintained roads or trails on the site and located on sanctuary property from Seven Devils Road to the mean high tide line, and bounded on the south by a line 500 feet southward of any sanctuarymaintained roads or trails and located on sanctuary property from private property along Seven Devils Road to the mean high tide line (see Figure 12). Unit LD2 consists of about 65 acres which is about 1.5 percent of the sanctuary as presently constituted. A series of vegetated spoil islands in the estuary adjacent to the uplands are included in this unit.

General Characteristics

Access. Primary access to the unit is by Seven Devils Road, with access onto the site by a system of old logging roads. The first approximately 3/4 mile of logging road was regraveled within the past five years and the latter 1 1/2 miles or so are in an abandoned condition. This latter portion is used as a foot access trail to an educational area called the Estuary Study Trail. None of the old roadbeds are publicly dedicated. Access to the unit by boat is along all portions adjacent to the estuary at high tides, and the northermost portion only by canoe at all tides.

Past Uses. Past uses of this unit include: homesteads; agricultural uses such as domestic animal grazing; forestry, including logging, log transportation by railway and dumping of the logs for rafting; and for recreational pursuits, particularly duck hunting. Most of this unit was logged leaving an approximately 500-foot forested buffer adjacent to the high tide line. The grazing was conducted on diked marshlands now subjected to normal tidal activity through the degradation of the dikes. No known historic or pre-historic Indian sites are present in this unit.

As noted for unit LD1, however, the whole of South Slough has a tradition of usage by the Indian tribes of the region.

Structures. The present primary developments in unit LD2 are the roads and associated parking areas.. All roads and parking have been developed utilizing existing logging roads or log landings. The only other developments are walking trails with their associated simple foot bridges and other environmental protection devices, a storage shed for storing the educational materials used by schools engaged in Estuary Study Program (ESP, see Section VI), two crude bathrooms with a composter unit, and remnants or artifacts of past historical uses of the site, such as pilings, which are used as the basis for portions of the ESP. The walking trails total about 2.5 miles in length. There are presently no utilities or developed water supplies on the site.

Special Values

The outstanding characteristics of this unit are its open nature due to recent clearcutting which permits a panoramic view of the slough and the whole Coos Bay/North Bend area, easy access to estuarine habitats typical of the South Slough, varied and scenic habitats through which the visitor

walks in getting to the estuary, the protected nature and hence safer accessibility the site provides, and the many interesting historical artifacts still in evidence that provide a solid on-site support basis for various educational activities. These values formed the basis of the decision to locate the future visitor center in this unit.

A stream enhancement demonstration project was recently completed in this unit.

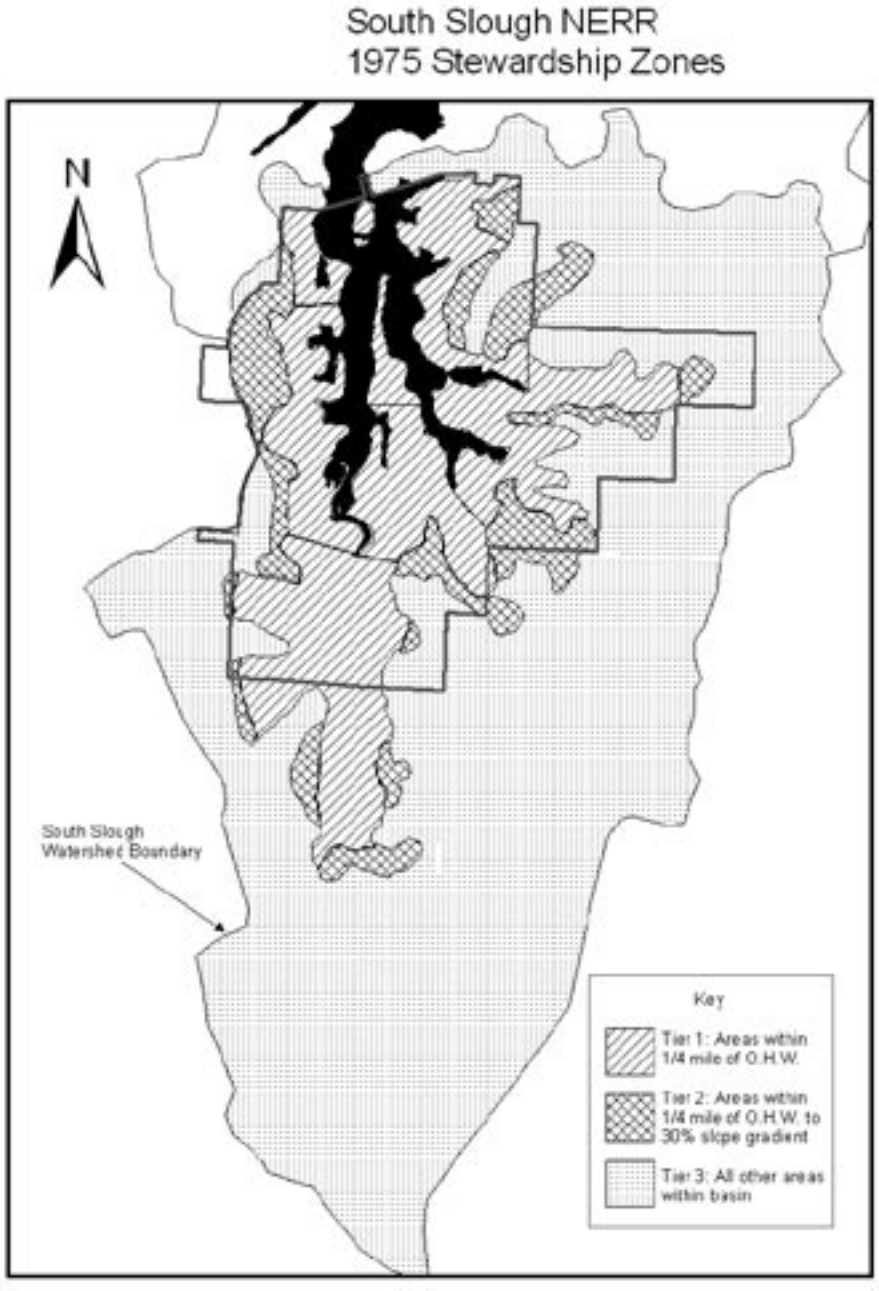
Unit Management Plan

Phase I: Present to June 1985. Since acquisition of this property, management of this site has consisted of utilizing available topographical and artifactual opportunities to develop general visitor and school access to the estuary. Phase I for this unit consists of continuing to improve the visitor use of this site by:

- Improvement of the Estuary Study Trail
- Construction of a mudflat study platform
- Construction of composting toilets on the Estuary Study Trial

Construction of the initial portion of a new visitor center including: construction of a small office/interpretive center building and restrooms; providing electrical power to the building site; construction of a drainfield on-site with the potential to accept the volumes expected from the future visitor center; construction of a caretaker house or trailer hookup tied into the on-site power and drainfield; and improvement of roads and parking required to handle the expected traffic volumes

The construction site chosen is close to a main road and has an excellent visual access to the Coos Bay/North Bend



Key

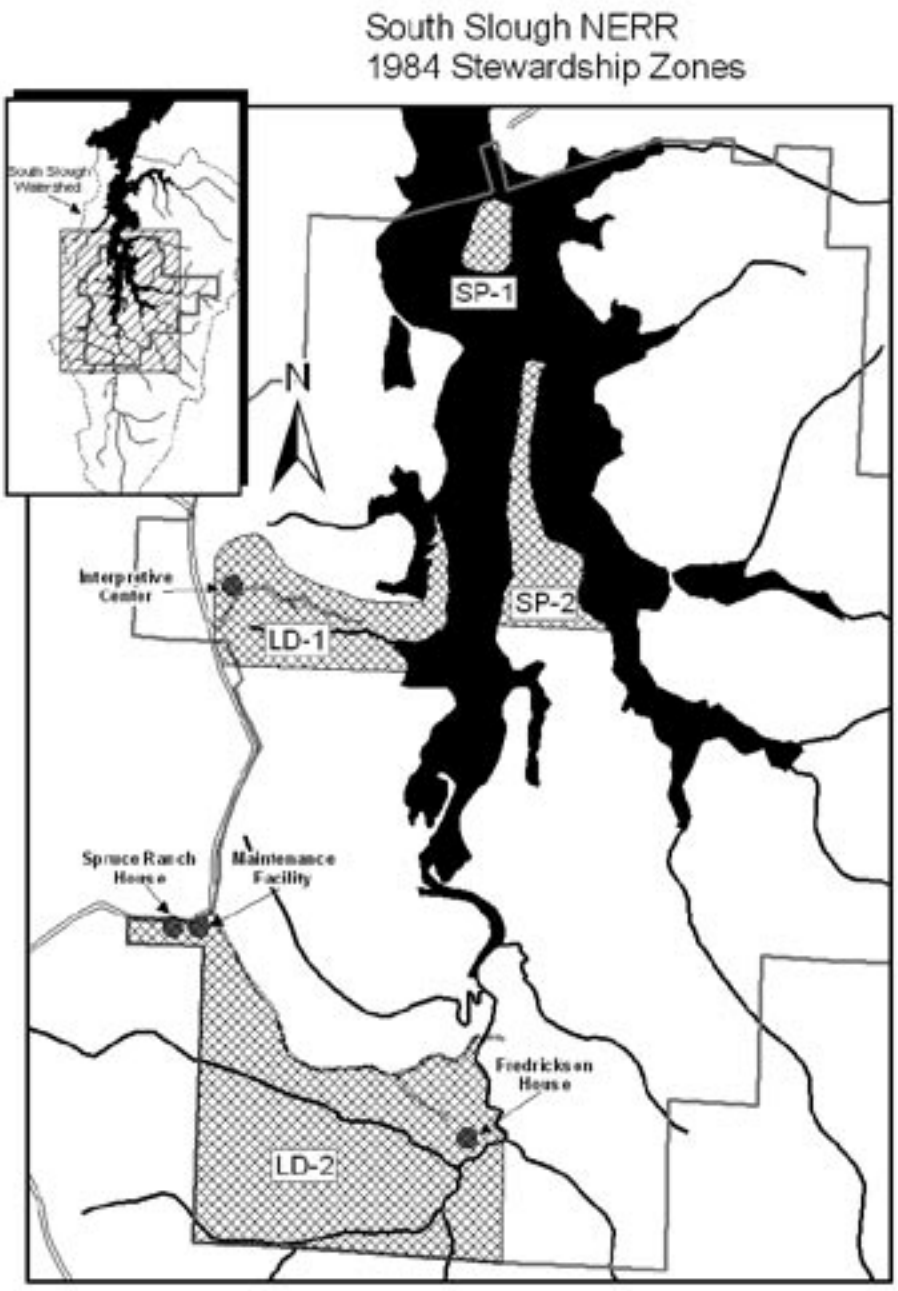
SP-1 Valino Island
Special Protection: Minmal access, exceptional qualities.

SP-2 Long Island Point
Special Protection: Minmal access, exceptional qualities.

LD-1 Interpretive Center and Trails
Limited Development: Vehicular acess, site already disturbed.

LD-2 Intern Housing Area
Limited Development: Vehicular acess, site already disturbed.

All otherwise undesignated land area is classified as "Sanctuary"; all tidally submerged and submersible lands are classified as "Natural Aquatic." See Appendix H for descriptions of units and stewardship objectives



area and to South Slough. Associated with the center will be any new visitor access trails required to link the interpretive center with existing trails.

Phase II: July 1985 to June 1989. Visitor volumes are expected to have increased such that an expanded capacity to deal with the visiting public will be required. The construction plans for the interpretive center are phased to facilitate development as resources and need require.

Phase III: July 1989 - Beyond. Land management of this site will have eliminated unused portions of logging roads and continued to maintain visual pathways from the visitor center. Construction of an observation tower may be required if tree growth surpasses the ability to maintain visual pathways. Efforts will be made to maintain the areas accessed by the trails free of non-native species to the extent practical and with successionary stages resulting from natural revegetation of the site. This will provide one upland trail with a diversity of habitats due to natural succession and will be an example of a “non-managed” forest.

Core Recommendations of the South Slough NERR Cooperative Plan for Watershed Conservation

1. South Slough NERR staff should form an acquisition team that will assist the South Slough NERR Management Commission's implementation of the Conservation Plan. The team will coordinate with the South Slough NERR Management Commission members through special work sessions and work plans submitted at Management Commission meetings. The team should have the following composition:
   - Team Leader (South Slough NERR Manager as agent of Reserve's decision making body, the South Slough NERR Management Commission)
   - Acquisition Coordinator (State personnel funded through grant funds)
   - Natural Resource Specialists (South Slough NERR Stewardship Coordinator/South Slough NERR staff as needed)
   - Real Estate Negotiator (Existing state personnel as needed)
   - Legal Counsel (Existing state personnel as needed)

2. South Slough NERR acquisition properties should meet three general conservation goals:
   - Protect the integrity of the existing "investment" (lands within the current administrative boundary).
   - Enhance the Reserve's ability to more fully meet its research, stewardship and education objectives.
   - Address specific projects and opportunities (such as establishing a "working ranch" or partnering with local entities to promote sustainable economic development or ecotourism).

3. The South Slough NERR should allocate acquisition resources to seven areas (as amended by the WTRP Advisory Group, 2003):
   1) *Winchester Creek Watershed* (estimated to require 10% of resources)
   2) *Tributary watersheds that feed into the existing South Slough NERR* (estimated to require 30% of resources)
   3) *Other tributaries, ocean inputs, and shorelines north of the South Slough NERR* (estimated to require 25% of resources)

4) *Charleston,* potential establishment of administrative offices / interpretive facility. (estimated to require 15% of resources)

5) *Existing South Slough NERR ownership* (estimated to require 5% of resources)

6) *Coos Bay Estuary* (estimated to require 10% of resources)

7) *Biogeographic region opportunities* (partnerships with other public entities in the bioregion). (estimated to require 5% of resources)

4. South Slough NERR acquisition properties should include at least one of the following landscape characteristics (property selection criteria):

- Coastal cliffs, coastal shrubland, coastal grassland, intertidal beaches, subtidal hard bottoms
- Headwaters of South Slough drainages
- Tidal shorelands in the South Slough estuary
- Mineral/water rights for lands within the current reserve boundary
- Shoreline access points
- Coastal uplands (with or without timber)
- Developed shoreline environments
- Areas that ensure conservation of aesthetically and culturally important sites, views, and sounds
- Areas that contain biologically and archaeologically important resources
- A ranch or farm situated on a former tidal marsh
- Areas that include fish and shellfish habitat

5. The Chalmer Gustafson estate funds should be augmented with public and private habitat conservation funds for property acquisition to maximize the acquisition potential of the bequest. Gustafson estate funds will be used only for fee-simple purchases of South Slough watershed properties south of Valino Island (properties to be added to the Reserve). Grant funds will be used for both fee simple and less than fee simple purchases in any of the seven acquisition areas indicated on the attached diagram (properties to be added to or managed by the Reserve).

6. Acquisition will take place only with willing participants on a "willing buyer/willing seller" basis.

Memorandum of Agreement Between the National Oceanic and Atmospheric Administration and the Oregon Department of State Lands

Memorandum of Agreement Between
The National Oceanic and Atmospheric Administration
The Oregon Department of State Lands and
The South Slough National Estuarine Research Reserve Management Commission

Detailing the state-federal roles in the management of the
South Slough National Estuarine Research Reserve

This Memorandum of Agreement states the provisions for the cooperative management of South Slough National Estuarine Research Reserve in the state of Oregon, between the State of Oregon and the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management.

WHEREAS, the Oregon Legislature has determined that the waters and related coastal habitats of the state provide unique opportunities to study the natural and human processes occurring within the estuarine ecosystems of the state, to contribute to the science of estuarine ecosystem processes, to enhance environmental education opportunities, and to provide scientific information for effective coastal zone management in state of Oregon; and

WHEREAS, the State of Oregon has determined that the resources of the South Slough National Estuarine Research Reserve and the values they represent to the citizens of Oregon and the United States will benefit from the management of these resources as part of the National Estuarine Research Reserve System; and

WHEREAS, the National Oceanic and Atmospheric Administration (NOAA) has concurred with these findings and pursuant to its authority under section 315 of the Coastal Zone Management Act of 1972, as amended (CZMA, P.L. 92-583, 16 U.S.C. 1461) and in accordance with implementing regulations at 15 CFR 921.30 has designated the South Slough National Estuarine Research Reserve; and

WHEREAS, the Oregon Department of State Lands and the South Slough National Estuarine Research Reserve Management Commission were designated by the Oregon Legislative Assembly to be responsible for managing the South Slough National Estuarine Research Reserve and acknowledge the value of state-federal cooperation for the long-term management of the Reserve in a manner consistent with the purpose of their designation; and

WHEREAS, the management plan describes the goals, objectives, strategies/actions, administrative structure, and institutional arrangements for the Reserve, including this MOA and others;

NOW THEREFORE, in consideration of the mutual agreements herein, NOAA and State of Oregon agree to the following:

ARTICLE I: STATE-FEDERAL ROLES IN RESERVE MANAGEMENT

A. Role of Oregon in Reserve Management

The South Slough National Estuarine Research Reserve Management Commission and the Oregon Department of State Lands shall:

1. be responsible for compliance with all federal laws and regulations, and ensure that the South Slough National Estuarine Research Reserve management plan is consistent with the provisions of the CZMA and regulations;
2. ensure protection of the natural and cultural resources of the Reserve, and ensure enforcement of the provisions of state law, including rules and regulations of the Oregon coastal management program if applicable;
3. annually apply for, budget, and allocate funds received for Reserve operations, research and monitoring, education and stewardship; and as necessary, land acquisition and Reserve facility construction;
4. conduct and coordinate research and monitoring programs that encourage scientists from a variety of institutions to work together to understand the ecology of the Reserve ecosystem to improve coastal management;
5. conduct and maintain programs that disseminate research results via materials, activities, workshops, and conferences to resource users, state and local agencies, school systems, general public, and other interested parties;
6. provide staff and endeavor to secure state funding for the manager, education coordinator and research coordinator;
7. secure facilities and equipment required to implement the provisions within the Reserve management plan;
8. ensure adequate funding for facilities operation and maintenance;
9. maintain effective liaison with local, regional, state, and federal policy makers, regulators and the general public;
10. serve as principal negotiators in issues involving proposed boundary changes and/or amendments to the Reserve management plan;
11. respond to NOAA's requests for information, particularly cooperative agreement and grant progress reports and evaluation findings, including necessary actions and recommendations, made pursuant to Section 312 of the CZMA.

B. Federal Role in Reserve Management

NOAA's Office of Ocean and Coastal Resource Management shall:

1. serve to administer the provisions of the Sections 312 and 315 of the CZMA to ensure that each Reserve operates in accordance with goals of the Reserve system and the South Slough National Estuarine Research Reserve management plan;
2. review and process applications for financial assistance from the Oregon Department of State Lands, consistent with 15 CFR 921, for management and operation, and as appropriate, land acquisition and facility construction;
3. advise Oregon Department of State Lands and the South Slough Management Commission of existing and emerging national and regional issues that have bearing on the Reserve and Reserve system;

4. maintain an information exchange network among Reserves, including available research and monitoring data and educational materials developed within the Reserve system;
5. to the extent possible, facilitate NOAA resources and capabilities in support of Reserve goals and programs.

C. General Provisions

1. Nothing in this agreement or subsequent financial assistance awards shall obligate either party in the expenditure of funds, or for future payments of money, in excess of appropriations authorized by law.
2. Both parties agree to comply with all applicable federal and state laws regulating ethical conduct of public officers and employees.
3. Each party will comply with all applicable laws, regulations, and executive orders relative to Equal Employment Opportunity.
4. Upon termination of this agreement or any subsequent financial assistance awards to Oregon Department of State Lands, any equipment purchased for studies to further this agreement will be retained by the party that made the initial purchase.
5. A free exchange of research and assessment data between the parties is encouraged and is necessary to ensure success of cooperative studies.

D. Other Provisions

1. Nothing in this agreement diminishes the independent authority or coordination responsibility of either party in administering its respective statutory obligations. Nothing in this agreement is intended to conflict with current written directives or policies of either party. If the terms of this agreement are inconsistent with existing written directives or policies of either party entering this agreement, then those portions of the agreement which are determined to be inconsistent with such written directives and policies shall be invalid; but the remaining terms not affected by the inconsistency shall remain in full force and effect. At the first opportunity for revision of this agreement, all necessary changes shall be made by either an amendment to this agreement or by entering in a new superseding agreement, which ever is deemed expedient to the interested parties. Should disagreement arise on the interpretation of the provisions and/or amendments of this agreement that cannot be resolved by negotiations at the operating level of each party, the area(s) of disagreement shall be stated in writing by each party and promptly presented to a mutually approved mediator for non-binding mediation. If the parties cannot agree on the choice of a mediator or if the mediation does not resolve the dispute to the mutual approval of the parties, the parties are free to pursue any other legal remedies that are available.

ARTICLE II: REAL PROPERTY ACQUIRED FOR PURPOSE OF THE RESERVE

As well as agreeing to adhere to the rest of the provisions set forth at 15 CFR 921, the South Slough Management Commission and the Oregon Department of State Lands agree to the conditions set forth at 15 CFR 921.21 (e), which specify the legal documentation requirements concerning the use and disposition of real property acquired for Reserve purposes with federal funds under Section 315 of the CZMA.

ARTICLE III: PROGRAM EVALUATION

The Office of Ocean and Coastal Resource Management Division of NOAA will schedule periodic evaluations of Oregon's performance in meeting the terms of this agreement, financial assistance awards, and the Reserve management plan. Where findings of deficiency occur, NOAA may initiate action in accordance with the designation withdrawal procedures established by the CZMA and applicable regulations.

ARTICLE IV: EFFECTIVE DATE, REVIEW, AMENDMENT AND TERMINATION

A. This agreement is effective on the date of the last signature on this agreement and shall be in effect until terminated by either party.

B. This agreement will be reviewed periodically by both parties and may only be amended by the mutual written consent of both parties.

C. This agreement may be terminated by mutual consent of both parties, or by NOAA if NOAA withdraws designation of the Reserve within the Reserve system, pursuant to applicable provisions of the CZMA and its implementing regulations as described under 15 CFR 923 Subpart L. The agreement may be terminated by Oregon Department of State Lands with or without cause. Should this agreement be terminated, reimbursement of unexpended funds from financial assistance awards shall be determined on a pro rata basis according to the amount of work done by the parties at the time of termination. Additionally, reimbursement for land purchased and facilities constructed with NOAA funds shall be consistent with terms and special award conditions of financial assistance awards.

IN WITNESS THEREOF, the parties have caused this agreement to be executed.

_____	_____
Eldon Hout Director Office of Ocean and Coastal Resource Management National Ocean Service National Oceanic and Atmospheric Administration U.S. Department of Commerce	Ann Hanus Director, Department of State Lands Chair, SSNERR Mgmt Commission
_____	_____
Date	Date

Director Ann Hanus, Department of State Lands, signs a Memorandum of Understanding with the National Oceanic and Atmospheric Administration setting forth the terms of operation of the South Slough National Estuarine Research Reserve.

Bylaws of the South Slough National Estuarine Sanctuary Advisory Group

ARTICLE I
NAME

The name of this group shall be the South Slough National Estuarine Sanctuary Advisory Group, and shall be referred to as the Advisory Group.

ARTICLE II
GOAL

The goal of the Advisory Group is to advise the South Slough National Estuarine Sanctuary Management Commission with scientific/technical expertise. The Group will serve to objectively assess the impact of activities on the Sanctuary, recommend "actions to the Management Commission, and to help provide direction for the Sanctuary's programs. This group should evaluate and make recommendations on proposed scientific, educational, and recreational uses of the Sanctuary. Finally, the group will provide a communication link with other interested scientists, technical specialists, and members of the public.

SPECIFICALLY:

1. To advise the Commission as to how the Sanctuary program requirements can be fulfilled.
2. To advise the Commission on scientific, educational, and technical aspects of Sanctuary management questions.
3. To advise the Commission on research needs for the Sanctuary, potential funding sources, and public use aspects of Sanctuary management questions.
4. To assist in the development and implementation of the long-term monitoring program at the Sanctuary.

ARTICLE III

Number of Appointees: 12

Advisory Group Appointments:
Persons serving on this group shall be appointed by the Management Commission. The Advisory Group shall have the right to nominate candidates for Commission consideration, and further, shall have the right to indicate a preferred candidate from those names submitted.

Terms of Office:
The term of office of each member is two years, with approximately one half of the total membership expiring on each even numbered year and the other one half on each odd numbered year. All terms of office shall begin in October. There is no limit to the number of consecutive terms that may be served by the same person.

Filling Vacancies:
When vacancies are anticipated, new member's names should be solicited. The Advisory Group will recommend their appointment preferences to the Management Commission.

Failure to Attend Meetings:
If a member misses three consecutive regular meetings the Advisory Group can vote on termination.

Expense Reimbursement:
No member of the Advisory Group shall be reimbursed for any expenses occurring

in their official capacity as a member of this group.

ARTICLE IV
REPRESENTATION AND VOTING

Each Advisory Group member shall have one vote.

ARTICLE V
OFFICERS

Section I
The officers of the Advisory Group shall be a Chairperson, a Vice-Chairperson, and a Secretary. The officers shall perform the duties prescribed by these bylaws and by the parliamentary authority adopted by the group.

Section 2
The officers shall be elected to serve for one year or until their successors are elected. Their term of office shall begin at the July meeting. Officers may serve for an unlimited number of terms.

ARTICLE VI
MEETINGS

Section I
The regular meetings of the Advisory Group shall be held as needed and at least twice a year. The time and place of the meeting shall be given in writing at least ten days prior to the date of the meeting.

Section 2
Special meetings can be called by the Chairperson, or shall be called upon the written request of a quorum of the Advisory Group. The purpose of the meeting shall be stated in the call. Except in cases of emergency, at least 14 days notice shall be given.

Section 3
Seven voting members of the Advisory Group shall constitute a quorum. A simple majority of the quorum shall be necessary to act upon any question.

Section 4
The regular agenda is to be determined by the Chairperson with the assistance of Sanctuary staff and mailed out so that it is received prior to the regular meeting.

Section 5
Meeting notices will be prepared and given by the Advisory Group Secretary or the SSNES staff.

Section 6
The duties of the Chairperson are to preside over all regular and special meetings, to represent the Advisory Group at Management Commission meetings and elsewhere as necessary, and to see that all of the terms of the bylaws are enforced.

The duties of the vice-chairperson are to preside in the absence of the chairperson as they may be asked.

The duties of the secretary are to record the minutes of each meeting, compile and maintain any other records as may be required, see that the agendas and minutes of past meetings are made available to the Advisory Group membership, and serve in place of the chairperson and vice-chairperson should both of these officers be unable to assume their duties.

Should none of the officers be able to attend a meeting a temporary chairperson shall be chosen by the chairperson. The presiding officer shall be responsible for seeing that all records of a meeting are maintained in the absence of the secretary.

ARTICLE VII
SUB-COMMITTEES

Upon the approval of the Advisory Group the members may appoint special and/or permanent sub-committees.

ARTICLE VII I
PARLIAMENTARY AUTHORITY

The rules contained in the most recent edition of "Robert's Rules of Order", shall govern the Advisory Group actions wherever they are applicable and in which they are not inconsistent with these bylaws and any special rules or order the Advisory Group may adopt. However, the Advisory Group rules will supercede "Robert's Rules of Order."

ARTICLE IX
AMENDMENT OF BYLAWS

These bylaws can be amended at any regular meeting of the Advisory Group by a two thirds vote of the membership provided that the amendment has been submitted in writing to all members at least 30 days prior to the vote.

ARTICLE X
RATIFICATION

These bylaws and subsequent amendments shall be effective upon approval of a quorum of the Advisory Group.

Adopted by a quorum of the Advisory Group on September 30, 1985

Michael Graybill

Interagency Agreements Governing Operation of the Estuarine and Coastal Sciences Laboratory

Memoranda of Agreement

South Slough NERR operates the Estuarine and Coastal Science Laboratory (ECOS), located on the campus of the Oregon Institute of Marine Biology in Charleston. Two Memoranda of Agreement between the Department of State Lands, on behalf of South Slough NERR, and the University of Oregon, on behalf of OIMB, guide the use of offices and laboratory facilities and the sharing of other facilities between the South Slough NERR and the University of Oregon.

Interagency Master Agreement between The Oregon State Board of Higher Education on behalf of The University of Oregon for the Oregon Institute of Marine Biology and the Oregon Department of State Lands on behalf of The South Slough National Estuarine Research Reserve

RECITALS

1. This Master Agreement (hereinafter referred to as "agreement") is dated this ___ day of November 2005, and is between the Oregon Department of State Lands on behalf of the South Slough National Estuarine Research Reserve, an agency of the State of Oregon (hereinafter called SSNERR), and the Oregon State Board of Higher Education on behalf of the University of Oregon for the Oregon Institute of Marine Biology, an institution of the State of Oregon (hereinafter called OIMB).
2. Both SSNERR and OIMB are operated by the State of Oregon. The primary mission of both organizations is research and education. Both programs hold title to property on behalf of the State of Oregon and operate facilities in the rural coastal community of Charleston. This agreement has been developed and will be carried out in accordance with policies and budget authority of both organizations, the rules and laws of the State of Oregon, and the applicable policies of the Oregon Department of Administrative Services.

AGREEMENTS

1. Effective Date and Duration

This agreement shall be effective upon execution by both parties and shall terminate on September 30, 2010. Individual Task Orders will be sent to the Business Contact listed in Notices and Representatives and will become effective upon execution by both parties. This agreement may be extended by mutual agreement of OIMB and SSNERR in writing.

2. Intention

The intent of this agreement is to:

(a) Support the mutual interests of both organizations and to increase the efficiency and effectiveness of services provided by the State of Oregon; and

(b) Set out in general terms an agreement for cooperation between SSNERR and OIMB for new or on-going projects regarding:

1. The development of facilities;
2. The shared used of facilities;
3. The shared use of equipment; and
4. The administration of grants and finances,

4. (sic) Task Orders

(a) Any project requiring the transfer of funds between the signatory parties will be described in a Task Order. When used, a task order will be appended to this agreement. Any cooperative project outlined in this agreement that can be accomplished without the transfer of fund does not require a Task Order.

(b) Each project covered by a Task Order, or supplemental amendment to a Task Order, will incorporate the terms of this agreement, detail the scope of work, include a detailed budget, and identify the responsibilities of OIMB and SSNERR

FACILITIES

1. Facilities Development

(a) When it is practical to do so, the parties agree to cooperate to develop facilities that benefit both organizations and increase efficiency and effectiveness. Examples of the types of facilities included in this agreement include storage, office, laboratory, meeting, education, logistics and trails. This agreement also covers facilities that support the missions of OIMB and SSNERR that may not be specified in the list of examples provided above. This agreement authorizes the transfer of funds between OIMB and SSNERR, as specified in Task Orders, for the purposes of developing new, or improving existing facilities.

(b) The specific terms of ownership, design, construction, operation, and repair of each facility developed as a result of this agreement will be outlined in a separate facility–specific Task Order between the two parties named in this agreement.

2. Use of Facilities

(a) This agreement authorizes the transfer of funds between OIMB and SSNERR for the use of facilities as described in individual Task Orders.

(b) Both parties agree to share available space when possible to efficiently and effectively meet the needs of OIMB and SSNERR for maintenance, storage, accommodations, meetings, programs, and offices. Fees for use of certain facilities may be required in some cases. It shall be the responsibilities of the OIMB Director and the SSNERR manager to establish the availability of facilities and to determine if any fee will be required for the use of facilities.

(c) Facility uses under this agreement may include but need not be limited by this agreement are as follows:

1. Vessel, vehicle and trailer storage
2. Short- and long- term storage of laboratory and field equipment
3. Overnight Accommodations: Occasional arrangements for overnight accommodations at SSNERR or OIMB as available for researchers, educators and interns.

EQUIPMENT

1. Shared use of Equipment

(a) Both parties agree to share equipment, vehicles, vessels and other tangible resources as appropriate and available. The party that owns the equipment shall retain inventory control and shall have priority for use. Use by either party of equipment, vehicles or other tangible resources owned by the other party shall be by pre-arrangement on an "as available" basis.

(b) Use and replacement of supplies
Each party is responsible for the timely replacement of chemicals, fuel, and other supplies expended in the use of the equipment.

(c) Maintenance, repair, and replacement costs
Each party will contribute as appropriate to the maintenance, repair and replacement of equipment used. In some cases, this contribution may be in the form of a user fee as established in the policies or rules of the parties.

(d) Equipment uses under this agreement may include but need not be limited to:

1. Scientific lab and field equipment:
Parties agree to share general laboratory and field equipment including incubators, freezers,

microscopes, centrifuges, water samplers, nets, tools, trawls, etc., as available. Use of a specific piece of equipment must be requested and scheduled through the faculty or staff member responsible for that piece of equipment.

2. Boats, vehicles, and boating equipment:
   Parties agree to share boats, vehicles, and boating equipment as needed and as available, for purposes of supporting the operations, research or education missions of the respective organizations. The party that serves as the registered owner of the respective vehicles, boats or equipment shall have priority for use; use by the non-owner party shall be by pre-arrangement on an "as available" basis. Only authorized graduate students, staff, and faculty will be permitted to use OIMB and SSNERR vehicles or vessels.
3. A University of Oregon Driver Clearance Statement shall be obtained by all OIMB and SSNERR personnel who make use of OIMB vehicles. The use of SSNERR vehicles shall be limited to Authorized Drivers (as described by Oregon Administrative Rule 125-155-400). OIMB and SSNERR agree to abide by all state rules, guidelines, and policies governing the use of state vehicles, including provisions that prohibit the transportation of children and pets in state-owned vehicles. The specific terms of a vehicle use agreement will be developed in accordance with state motor pool and risk management polices and appended to this agreement.
3. *(sic)* Computer network and hardware.
   Parties agree to share certain computer hardware including large format printers, Geographic Information Systems and other information systems, as appropriate and available.

JOINT PROPOSAL DEVELOPMENT

Parties agree to cooperate on the development of proposals for funding joint and collaborative projects that benefit both parties. These may include but are not limited to proposals for research, student support, and facility development. Jointly developed proposals shall include both direct costs and Facilities and Administrative costs as outlined in item 1.(c) under the Administration and Finance section of this agreement (below).

ADMINISTRATION AND FINANCE

1. Coordination of Administration and Finances

(a) This agreement authorizes the transfer of funds between SSNERR and OIMB for activities and personnel. Each activity or transfer of personnel requiring the transfer of funds shall be set forth in a Task Order which shall be appended to this agreement.

(b) Personnel

1. Both parties agree to cooperate on the development of an administrative process to recruit, hire and pay interns, undergraduate students, graduate students, and other employees.
2. This agreement authorizes generally the transfer of funds between parties to support employees covered by this agreement.

(c) Consideration

Each Task Order will contain a budget stipulating the funds available for the Task and an initial budget. Costs listed in the initial budget will be used as the basis for determining the funds available but the performing party will have budget flexibility, unless specifically stated otherwise in the Task Order.

Facilities and Administrative costs will be incorporated into each Task Order at the usual rates in place at the time for each party, specific to the type of work being performed, subject to mutual negotiation.

2. Indemnification

To the extent allowed under Article XI, section 7 of the Oregon Constitution and the Oregon Tort Claims Act (ORS 30.260-30.300), both parties agree to indemnify and save harmless the other party against all claims, demands, liabilities, and judgments arising out of, related to, or in connection with any negligent act or omission and its employees in the performance of services provided under this agreement. Both parties agree to comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the work to be done under this agreement. Both parties agree to comply with all federal and state laws prohibiting discrimination on the basis of race, sex, national origin, religion, age, or disability. Failure or neglect on the part of either party to comply with any or all such laws, ordinances, rules, and regulations shall not relieve that party of these obligations nor of the requirements of this contract.

3. Independent Responsibility

Except as otherwise limited by Oregon law, ORS 30.260 through 30.300, and the Oregon Constitution, Article XI, Section 7, each party shall be responsible for its tortuous acts and those of its officers or employees arising out of, or in any way connected with the acts of each party under this agreement.

4. Self-Insurance Coverages

The parties understand that each is insured with respect to tort liability by the State of Oregon Insurance Fund, a statutory system of self-insurance established by ORS chapter 278, and subject to the Oregon Tort Claims Act (ORS 30.260 - 30.300). Each agency agrees to accept that coverage as adequate insurance of the other party with respect to personal injury and property damage.

5. Self-Insurance Loss Allocation

The agencies agree that any tort liability claim, suit or loss resulting from or arising out of the parties' performance of and activities under this contract shall be allocated, as between the state agencies, in accordance with law by the Risk Management Division of the Department of Administrative Services for purposes of their respective loss experiences and subsequent allocation of self-insurance assessments under ORS 278.435. Each party to this contract agrees to notify the Risk Management Division and the other agency in the event it receives notice or knowledge of any claims arising out of the performance of, or the agencies' activities under this contract.

6. Physical Damage

(a) Excepting ordinary wear and tear, each party agrees to be responsible for any physical damage to facilities, equipment, boats, and vehicles incurred while using, including any deductible, regardless of fault, subject to the terms and conditions of DAS Risk Management Division property policy 125-7-101.

(b) Necessary boat inventory and safety equipment will be the responsibility of each party prior to and upon return of a vessel. It is the user's responsibility to report routine maintenance requirements or problems of vessel or equipment to the owner.

7. Termination, Review, and Modification of this Agreement

(a) The OIMB Director and the SSNERR manager shall review this agreement annually.

(b) This agreement may be terminated by mutual consent of both parties, or by either party, upon 30 days notice in writing delivered by certified mail to the parties listed in "Notices and Representatives" below.

(c) If the parties terminate this agreement, the parties shall address specifically any Task Order in effect at the time of termination. Any Task Order not specifically addressed shall be terminated at the time this agreement is terminated and any non-expended and non-obligated funds allocated under the Task Order shall be returned to the appropriate agency.

8. Notices and Representatives

Notices and communications concerning the administration of this agreement and concerning the technical aspects of the projects and tasks to be performed under this agreement shall be sent to the Technical, Financial and Business Contacts shown below. Invoices for the SSNERR shall be sent to the SSNERR Financial Contact shown below. Invoices for the OIMB shall be sent to the OIMB Business Contact shown below.

FOR OIMB

Technical Contact
Craig Young, Director,

Oregon Institute of Marine Biology
PO Box 5389
63466 Boat Basin Road
Charleston OR 97420
Tel:(541) 888-2581
Fax: (541) 888-3250

Financial Contact
Joyce Croes
OIMB Lab Manager
PO Box 5389
63466 Boat Basin Road
Charleston, OR 97420
Tel. 541-888-2581 x 202
Fax 541-888-3250

Business Contact
Aedra Reynolds, Sponsored Project Administrator
Office of Research Services and Administration (ORSA)
5219 University of Oregon
Eugene OR 97403-5219
Tel: (541) 346-5131
Fax: (541) 346-5138

FOR SSNERR

Technical Contact
Michael Graybill, Manager
South Slough NERR
PO Box 5417
Charleston, OR 97420
Tel: (541) 888 5558 x 24
Fax (541 888-5559

Financial Contact
Jeannette Holman
Asst. Director for Administration and Finance
OR Department of State Lands
776 Summer St. NE
Salem, OR 97310
Tel (503) 378-3805-227
Fax (503) 378-4844

Merger Clause

THIS DOCUMENT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS AGREEMENT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE

AND FOR THE SPECIFIC PURPOSE GIVEN.

THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS AGREEMENT.

Effective Date
This agreement shall become effective on the date of the last signature.

SIGNATURES

OREGON DEPARTMENT OF STATE LANDS ON BEHALF OF THE SOUTH SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE

THE STATE OF OREGON ACTING BY AND THROUGH THE STATE BOARD OF HIGHER EDUCATION ON BEHALF OF THE UNIVERSITY OF OREGON FOR THE INSTITUTE OF MARINE BIOLOGY

_____
Ann Hanus

Date

DSL Director and Chair of the SSNERR Management Commission

_____
Lin Reilly

Date

Assistant Director for Contracting, Office of Research Services and Administration, University of Oregon

Agreement Between
South Slough National Estuarine Research Reserve
and
The State of Oregon
Acting by and Through The Oregon State Board of Higher Education
on behalf of
The University of Oregon

This agreement is dated this_____day of_____, 1993, by and between the South Slough National Estuarine Research Reserve, hereinafter called SSNERR, and the state of Oregon, acting by and through the Oregon State Board of Higher Education on behalf of the University of Oregon, hereinafter called the UNIVERSITY.

It is the desire of SSNERR to establish an understanding regarding the use of facilities at the Oregon Institute of Marine Biology by members of the staff at South Slough National Estuarine Research Reserve.

This agreement shall begin on August 15, 1993, and continue on a year-to-year basis unless a thirty (30) day termination notice is given by either party.

The monetary consideration shall be NONE.

SSNERR requests the following:

A. Laboratory Space

cubicle or office space as available for laboratory work, sorting, and identification; utilization of seatable space; occasional use of general laboratory equipment including incubator, refrigerator, freezer, microscopes, centrifuge, and darkroom.

B. Library Facilities

use of library facilities and loan rights to borrow materials for short-term use at South Slough Reserve.

C. Boat Storage

dry storage as available for South Slough Reserve's 17' Alumaweld Sea Dory, and occasional use as available of the Oregon Institute of Marine Biology dock within Charleston Harbor.

D. Dormitory Accommodations

occasional arrangements for dormitory accommodations as available for research and education interns engaged in projects based at South Slough Reserve.

E. Personnel Administration

occasional arrangements for hiring and payment of interns, undergraduate students, graduate students, and other employees based at the Oregon Institute of Marine Biology.

F. Research Coordination Committee

participation by members of the Oregon Institute of Marine Biology on an ad hoc committee to review priorities for research within South Slough National Estuarine Research Reserve.

SSNERR agrees to indemnify and save harmless UNIVERSITY against all claims, demands, liabilities, and judgments arising out of, related to, or in connection with any negligent act or omission of SSNERR and its employees, in the performance of services provided under this agreement.

SSNERR agrees to comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the work to be done under this agreement. SSNERR agrees to comply with all federal and state laws prohibiting discrimination on the basis of race, sex, national origin, religion, age, or disability. Failure or neglect on the part of SSNERR to comply with any or all such laws, ordinances, rules, and regulations shall not relieve SSNERR of these obligations nor of the requirements of this contract.

IN WITNESS WHEREOF, the parties hereto have caused their presence to be executed as of the date herein above first written.

This agreement shall not become effective until date of last signature.

MERGER CLAUSE THIS AGREEMENT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS AGREEMENT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS AGREEMENT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THE PARTIES, BY THE SIGNATURE BELOW OF THEIR. AUTHORIZED REPRESENTATIVES, ACKNOWLEDGE HAVING READ AND UNDERSTOOD THE AGREEMENT AND TO BE BOUND BY ITS TERMS AND CONDITIONS.

SOUTH SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE OREGON
STATE OF OREGON ACTING BY AND THROUGH THE STATE BOARD OF HIGHER EDUCATION ON BEHALF OF THE UNIVERSITY OF OREGON
By:

By:

Michael Graybill, Manager South Slough National Estuarine Research Reserve

Lynda Shapiro, Director University of Oregon Oregon Institute of Marine Biology

By:

By:

Gary Gustafson, Director Oregon Division of State Lands

Sherri McDowell University of Oregon Director of Business Affairs

Bylaws of the Friends of South Slough

BYLAWS OF FRIENDS OF SOUTH SLOUGH RESERVE, INC.
(Including Revisions adopted 26 February 2005)

ARTICLE I - NAME AND PURPOSE

Section 1.1: This organization is a nonprofit corporation composed of persons interested in the enhancement of the South Slough National Estuarine Research Reserve. The purposes of this organization are to provide cultural, historical, educational and interpretative services for the South Slough National Estuarine Research Reserve and to assist in developing the Reserve in accordance with its purposes. This organization may also engage any lawful activity for which corporations may be organized under ORS Chapter 61, which is entitled "Nonprofit Corporations". This organization shall be known as FRIENDS OF SOUTH SLOUGH RESERVE, INC.

ARTICLE II - MEMBERS

Section 2.1 Qualifications, Categories: The Corporation shall consist of one class of voting members. A member shall be a person who, or an organization which, supports the goals of the corporation, applies for membership, and pays an annual membership fee in an amount established by the board of directors. Membership categories shall be as follows: Senior, Student, Individual, Family, Life Member, Corporate, and Volunteer (awarded to volunteers who contribute more than 50 hours of service to FOSS the previous year). Membership fees shall be determined by the board of directors. The board of directors may change these categories of membership, and may determine the qualifications and benefits of each, by amendment to these bylaws.

Section 2.2 Annual Meeting: An annual meeting of the members and the board of directors shall be held during the months of January or February of each year within Coos County, Oregon. The date and place of the annual meeting shall be designated by the board of directors as prescribed by the Articles of Incorporation. Members to the board of directors shall be elected at the annual meeting; a report of financial status of the corporation shall be given by the treasurer; other matters of interest to the directors or members may also be discussed and considered. Notice of all meetings of the members shall be given to each member at the last address of record, by first class mail at least 7 days before the meeting, or by means other than first class mail at least 30 but not more than 60 days before the meeting. The notice shall include the date, time, place, and purposes of the meeting.

Section 2.3 Special Meetings: Special meetings of the members may be called by the president, or by the board of directors, or by twenty-five percent (25%) of the members entitled to vote at such meeting. The date, time and place of special meetings shall be determined by the board of directors.

Notice of special meetings, including an agenda of the items to be considered at such meetings, shall be personally delivered, sent by e-mail, or by any other means to each member at their address of corporate record not less than seven (7) days before the special meeting. The attendance of a member at any special meeting shall constitute a waiver of notice of such meeting.

Section 2.4 Voting: Each member, regardless of classification, shall be entitled to one vote. A member may vote in person or by written proxy. If the board of directors chooses, election of directors may be conducted by mail.

Section 2.5 Quorum: Those members present at any annual or special meeting of members constitute a quorum at the meeting. The vote of a majority of the members present or represented by proxy shall be necessary for the adoption of any matter voted upon by the members, unless a greater proportion is required by Oregon law.

ARTICLE III - BOARD OF DIRECTORS

Section 3.1: Duties: The business, property and affairs of this corporation shall be managed by a board of directors composed of neither less than four (4) nor more than eleven (11) persons. A current list of members serving on the board shall be available to the public and maintained by the board secretary. The board of directors shall have the power and authority to make rules and regulations for the guidance of officers and members of the corporation and for the transaction of the business of the corporation as necessary to carry out its purposes according to the authority granted nonprofit corporations under ORS 61.061.

Section 3.2 Election of Board: All members of the board of directors shall be elected at the annual membership meeting as set forth in the Articles of Incorporation and as described above.

Section 3.3 Vacancies: Any vacancy occurring in the board of directors **or** ~~and~~ any directorship to be filled by reason of an increase in the number of directors, shall be filled by the affirmative vote of a majority of the remaining directors. A director elected or appointed, as the case may be, to fill a vacancy shall serve the unexpired term of his or her predecessor until the election of board members at the next annual meeting.

Section 3.4 Quorum: A majority of the duly elected or appointed board members currently serving terms of office shall constitute a quorum for the transaction of business at any meeting of the board; but if less than a majority of the directors are present, the directors present may choose to gather information, but can take no other action but to adjourn the meeting. The act of majority of the directors present at a meeting at which a quorum is present shall be the act of the board of directors, unless the act of a greater number is required by law or by these bylaws.

Section 3.5 Meetings: The board shall regularly meet at least once a year at a date, time and place within Coos County, Oregon designated by the president and within thirty (30) days after the annual membership meeting. Special meetings of the board may be called by the president or at the request of the majority of the board, the date, time and place for which shall also be within Coos County, Oregon and designated by the president. Special meetings of the board may be held by telephone conference call, or the president may poll directors individually in person, via telephone or e-mail for guidance in handling routine matters, if all members of the board of directors are notified about such practice and if a majority of the board members agrees to such practice from time to time.

Section 3.6 Notice: Notice of any regular or special meeting of the board of directors shall be given at least seven (7) days prior thereto by written notice delivered personally**,** sent e-mail, or any other means to each director at his or her address as shown by the records of the corporation. If mailed, such notice shall be deemed to have been delivered when deposited in the United States mail in Coos County, Oregon, with postage thereon prepaid. A notice delivered by a personal phone call directed to a director not less than seven (7) nor more than twenty (20) days before a meeting shall be sufficient notice of any meeting even if written notice is not given. Any director may waive notice of any meeting. The attendance of a director at any meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting to the transaction of any business because he or she feels proper notice was not given or that the meeting was not lawfully convened.

Section 3.7: Role of the South Slough Manager: The manager of the South Slough National Estuarine Research Reserve shall serve as an ex officio member of the board of directors. The Manager shall be given notice of the meetings of the board on the same basis as the directors and shall be welcome to attend the meetings and to advise the board of directors on all matters relating to the South Slough National Estuarine Reserve.

Section 3.8: The initial board shall serve until the first annual membership meeting in 1990. At the first annual membership meeting in 1990 all board members shall be elected by the membership.

Section 3.9 Compensation: Directors as such shall receive no compensation for their services to the corporation, but the corporation may pay or reimburse directors for actual expenses incurred by them in connection with a meeting, or in carrying out the purposes of the corporation.

ARTICLE IV - OFFICERS

Section 4.1: The officers of the corporation shall be President, Vice President, Secretary**,** and Treasurer, and Historian-Archivist elected from the board of directors. All officers shall be elected annually by the board of directors at the first meeting of the board of directors following the annual meeting of the membership. Any officer can be removed by a majority vote of the board of directors. Any officer may be reelected but not for no more than three (3) consecutive terms in any one office. No person may hold more than one office at a time. Any vacancy occurring in any office by reason of removal, death, or resignation, may be filled by a majority vote of the board of directors.

Designated officers shall countersign deeds, documents, and checks as prescribed by the board of directors. In cases involving transactions in excess of $250 the signatures of two officers will be required on all of the above.

Section 4.2 President: The president shall be the chief executive officer of the corporation and shall preside at all meetings of the members and all meetings of the board of directors, and shall have the general supervision and control of the affairs of the corporation. The president shall also from time to time make reports of the affairs of the corporation to the board of directors and in all matters shall be responsible to the board of directors. The president shall have such other powers and duties as the board may direct.

Section 4.3 Vice President: The vice president shall possess the powers and may perform the duties of the president in the event the president is absent or unable to act; and the vice president shall perform such other duties as may from time to time be prescribed by the board of directors.

Section 4.4 Secretary: The secretary shall keep records and minutes of all meetings of the members and of the board of directors, shall keep records of the names, addresses, e-mail addresses of the board of directors and shall on request make such information available to the general membership, and shall perform such other duties as may be prescribed by the board of directors.-

Section 4.5 Treasurer: The Treasurer shall prepare and sign all checks, drafts or orders for the payment of money, notes or other evidences of indebtedness issued in the name of the corporation; shall have custody of all funds and securities of the corporation and shall deposit all monies of the corporation in such bank or depository as the board of directors designates; shall make a full and detailed report of the condition of the treasury of the corporation, showing all receipts and disbursements since the last previous statement and the balance remaining on hand. The secretary, treasurer and the president shall prepare the annual budget of the corporation for approval by the board of directors. The treasurer shall perform such other duties as may be prescribed by the board of directors**.**

Section 4.6 Historian-Archivist: The historian-archivist shall keep the names and addresses of record for the general membership; shall organize and keep on file all records of meetings, documents, receipts, printed materials, photographs, and accomplishments of the Friends of South Slough; shall identify and notify members whose membership is expiring; shall date stamp, and distribute mail to appropriate board members. The historian-archivist shall perform such other duties as prescribed by the board of directors.

ARTICLE V - SIGNATURE AUTHORITY, FUNDS, BOOKS AND RECORDS

Section 5.1 Contracts. The president**,** secretary**,** and treasurer shall sign deeds, promissory notes, mortgages, bonds, contracts, or other instruments which the board of directors has authorized to be executed, except in where the signing and execution thereof shall be expressly delegated by the board of directors or by statute to some other officer or agent of the corporation.

Section 5.2 Checks, Drafts: For transactions in excess of two hundred and fifty dollars ($250), all checks, drafts or orders for the payment of money, notes or other evidences of indebtedness issued in the name of the corporation shall be signed by the treasurer of the corporation and at least one other designated member of the board of directors.

Section 5.3 Deposits: All funds of the corporation shall be deposited in a timely fashion to the credit of the corporation in such banks, savings and loans, or other depositories as the board of directors may select.

Section 5.4 Gifts: The board of directors may accept on behalf of the corporation any contribution, gift, grant or bequest for the general purposes or for any special purpose of the corporation.

Section 5.5 Books and Records: The Corporation shall keep correct and complete books and records of accounts and shall keep minutes of the meetings of its members, board of directors and any committees having authority of the board. The treasurer shall be responsible for maintaining the books and records of accounts for the current year, and the secretary shall keep minutes of meetings for the same period. The Historian-archivist shall maintain books, records and minutes for all previous years. Copies of all such documents shall be maintained in the corporation's file at the South Slough Reserve visitor center, and may be inspected by any member, or the agent or attorney for any member for any proper purpose at any reasonable time.

Section 5.6 Accounting Year: The fiscal year of the corporation shall be the calendar year beginning January 1 and ending December 31 of each year.

ARTICLE VI - INDEMNIFICATION

Section 6.1: The corporation shall indemnify to the fullest extent permitted by the Oregon Nonprofit Corporation Law any person who has been made, or is threatened to be made, a party to an action, suit or proceeding, whether civil, criminal, administration, investigative, or otherwise (including an action, suit, or proceeding by or in the right of the corporation) by reason of the fact that the person is or was a director or officer of the corporation, or serves or served at the request of the corporation as a director or as an officer of another corporation, partnership, joint venture, trust or other enterprise. The right to and the amount of indemnification shall be determined in accordance with the provisions of the Oregon Nonprofit Corporation Law in effect at the time of the determination.

ARTICLE VII - AMENDMENTS

Section 7.1: These bylaws may be altered, amended or repealed and new bylaws may be adopted by a majority vote of the directors present at any regular meeting or at any special meeting of the directors. Amendments made by the board within any year will be presented for ratification by the membership at the annual meeting.

The undersigned officer of the corporation does hereby certify that the foregoing bylaws on this and the preceding six pages were duly adopted by the members as the bylaws of the corporation-on the 26th day of February2005, **and that they now constitute the bylaws of the corporation.**

Terry Huffman, President Date

State and County Land Use Regulation of South Slough NERR

In addition to state and Federal laws which apply specifically to the Reserve, all South Slough NERR land use is subject to general state and county land use regulations. This appendix provides Internet links to summaries of Oregon's land use laws as they apply to the Reserve, as contained in the Coos Bay Estuary Management Plan.

Land use regulations: *http://www.co.coos.or.us/planning/art4-5.pdf*

Land use planning policies: *http://www.co.coos.or.us/planning/appendix3.pdf*