

FINAL ENVIRONMENTAL IMPACT STATEMENT

NARRAGANSETT BAY ESTUARINE SANCTUARY

Proposed Estuarine Sanctuary Grant Award for a
Narragansett Bay Estuarine Sanctuary in the
State of Rhode Island



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Coastal Zone Management
and
STATE OF RHODE ISLAND
Department of Environmental Management

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UNITED STATES
DEPARTMENT OF COMMERCE

FINAL ENVIRONMENTAL IMPACT STATEMENT,

PROPOSED
ESTUARINE SANCTUARY GRANT AWARD
TO THE
STATE OF RHODE ISLAND
FOR
A NARRAGANSETT BAY ESTUARINE SANCTUARY,
NEWPORT COUNTY, RHODE ISLAND

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DESIGNATION: FINAL ENVIRONMENTAL IMPACT STATEMENT

TITLE: PROPOSED ESTUARINE SANCTUARY GRANT AWARD TO THE STATE OF
RHODE ISLAND FOR A NARRAGANSETT BAY ESTUARINE SANCTUARY,
NEWPORT, RHODE ISLAND

ABSTRACT: The State of Rhode Island has submitted an application for
a grant award from the Office of Coastal Zone Management
to establish an estuarine sanctuary in Narragansett Bay,
Rhode Island. The proposed sanctuary would consist of Hope
Island, Patience Island, and the northern end of Prudence
Island, and their surrounding waters for a total of 2,629 acres
of land and water.

Approval of this grant application would permit the
establishment of an estuarine sanctuary representing the
Virginian biogeographic region. The proposed sanctuary would
be used primarily for research and educational purposes,
especially to provide information useful for coastal zone
management decisionmaking. Recreational uses would be
allowed to the extent that they are compatible with the
proposed sanctuary's research and education programs.

Research and monitoring in and near the proposed sanctuary
would provide baseline information against which the impacts
of human activities elsewhere in Narragansett Bay and the
Virginian biogeographic region could be assessed.

APPLICANT: Rhode Island Department of Environmental Management

LEAD AGENCY: U. S. Department of Commerce
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SUMMARY

BACKGROUND

Section 315 of the Coastal Zone Management Act of 1972 (P.L. 92-583) established the Estuarine Sanctuary Program, which provides grants on a matching basis to States to acquire, develop, and operate estuarine areas to be set aside as natural field laboratories. These areas are to be used primarily for long-term scientific and educational programs that will provide information essential to coastal management decisionmaking.

Uses of estuarine sanctuaries are intended to serve objectives such as the following:

- To gain a more thorough understanding of ecological relationships within the estuarine environment;
- To make baseline ecological measurements;
- To serve as a natural control in order to monitor changes and assess the impacts of human stresses on the ecosystem;
- To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine ecosystems, their values and benefits to man and nature, and the problems confronting them; and
- To encourage multiple use of the estuarine sanctuaries to the extent that such usage is compatible with the primary sanctuary purposes of research and education.

To ensure that the Estuarine Sanctuary Program includes sites that adequately represent regional and ecological differences, the program regulations established a biogeographical classification scheme that reflects geographic, hydrographic, and biological characteristics. Eleven (11) biogeographic categories are defined in the program regulations. Subcategories of this basic system will be developed and utilized as appropriate to distinguish different subclasses of each category. It is anticipated that at least 22 sanctuaries will be needed to provide adequate representation of the various estuarine ecosystems occurring within the United States.

The Estuarine Sanctuary Program regulations, first published in 1974, were amended in 1977 to authorize three kinds of 50% matching grants: (1) an optional initial grant for such preliminary purposes as surveying, appraising, and assessing the lands to be acquired, and for developing management, research, and education plans; (2) grants for acquisition of the

real property within the sanctuary boundaries; and (5) operational grants for administration of the established sanctuary.

Rhode Island's Department of Environmental Management (DEM), on behalf of the State, submitted a grant application to the National Oceanic and Atmospheric Administration's (NOAA's) Office of Coastal Zone Management (OCZM) in January, 1980 to gather information directed toward establishment of an estuarine sanctuary consisting of Hope and Patience Islands, the northern end of Prudence Island, and their adjacent waters in Narragansett Bay, Rhode Island. The proposed sanctuary would be the first to represent a portion of the Virginian biogeographic region. The three island sites are among the largest remaining undisturbed areas in the Bay, and would be accessible to large numbers of people for research and educational purposes.

NOAA awarded a preacquisition grant of \$10,654, matched by an equivalent amount from the State, on March 10, 1980. This grant, which was increased to \$21,148 in July 1980, enabled DEM to proceed with development of a formal grant application which, if approved, would provide funds for the acquisition of lands for the sanctuary. Should the proposed sanctuary be established, Rhode Island would be eligible for \$50,000 annual grants (also matched) for sanctuary management and operations.

PROPOSED ACTION

The grant request to NOAA for \$436,000, matched by the State, would be used for the fee simple acquisition of 203 acres of uplands and wetlands on Patience Island from The Nature Conservancy, its present owner, and improvements at docks on Prudence and Patience Islands. The State already owns fee simple title to Hope Island and the northern end of Prudence Island, the other land areas proposed for inclusion within this estuarine sanctuary. The composition of real property within the proposed sanctuary is as follows:

<u>Identification</u>	<u>Size in Acres</u>
Patience (207 acres):	
-- The Nature Conservancy.....	203
-- Other private ownership.....	4
North Prudence (737 acres):	
-- State-owned.....	703
-- Private ownership.....	34
Hope Island (94 acres):	
-- State-owned.....	94
Adjoining State-Owned Waters to 18' Isobath.....	<u>1,591</u>
Total Land and Water Within Sanctuary:	2,629 acres

Rhode Island would not exercise its power of eminent domain (condemnation) to acquire Patience Island, but would instead negotiate a voluntary sale. The State would be willing to consider acquiring fee simple title or conservation easements to the privately owned lands on Patience or central and northern Prudence Islands, but only on a willing-seller basis.

MANAGEMENT

The proposed sanctuary would be managed by Rhode Island's Department of Environmental Management (DEM), the major landowner and manager for the lands and waters of Rhode Island. To assist in this task, DEM would, at a minimum, hire a full-time sanctuary manager, to be located on Prudence Island. Management policies proposed by DEM for the sanctuary would ensure its preservation and use in a manner consistent with the purposes and regulations of the Estuarine Sanctuary Program. The establishment of a Sanctuary Advisory Committee (SAC) is proposed to advise DEM in its administration of the proposed sanctuary. The SAC will be comprised of the following groups, organizations, or their representatives: the Town of Portsmouth, Rhode Island's Coastal Resources Management Council, research and educational institutions, residents of Prudence Island, Narragansett Bay resource users, conservation groups, Rhode Island Historical Preservation Commission, Department of Environmental Management, National Oceanic and Atmospheric Administration and the U. S. Coast Guard.

RESEARCH

The proposed sanctuary would provide excellent sites for estuarine research in Narragansett Bay. Research opportunities within the proposed sanctuary would generally fall into three categories: (1) research, analysis, and interpretation of the upland, intertidal, and benthic components of the Narragansett Bay estuary; (2) continuation of ongoing sampling and monitoring programs within the Bay; and (3) research on the impacts of pollutants on estuarine organisms. Prudence and Patience Islands lie near the transition zone between the comparatively polluted waters of the Upper Bay and the cleaner waters of the rest of the Bay, so that research and monitoring in and around the proposed sanctuary could provide valuable baseline information against which the impacts of human activities on estuarine habitat and dynamics throughout the Bay could be compared.

EDUCATION

The proposed sanctuary is well sited for educational programs. Centrally located in Narragansett Bay, the sanctuary islands are within easy ferry reach of Rhode Island's population centers. An estimated 600,000 people live within 10 miles of the three islands.

Patience and northern Prudence Islands contain a variety of estuarine habitats within a small area, while their flora and fauna can tolerate properly supervised educational uses without incurring significant environmental damage. Educational activities will be encouraged through an extensive interpretative program, including printed materials, guided and self-guided tours, and resident naturalists.

Hope Island, in contrast, is not suitable for intensive educational programs, because it contains one of the largest wading bird rookeries in the Northeast. The nesting species -- including several kinds of egret, heron, and ibis -- are sensitive to disruption from human activities, particularly during the March 15-July 31 nesting season. For this reason, access to Hope Island for uses other than ornithological research will be restricted during this period.

RECREATION

The primary purpose of the National Estuarine Sanctuary Program is to provide long-term protection for representative, undisturbed estuarine areas, so that they may be used for scientific and educational activities. The program regulations, though, encourage multiple use of sanctuaries to the extent that such other uses are compatible with the primary sanctuary purpose. The capacity of each sanctuary to accommodate multiple uses, and the permissible kinds and levels of such uses, are determined separately for each sanctuary, and may vary considerably according to the customary and historic uses of the sanctuary area. Low-intensity recreational activities -- such as fishing, shellfishing, hunting, boating, hiking, wildlife photography, etc.-- are generally considered compatible uses of sanctuary lands and waters.

Current uses of the proposed sanctuary lands and waters include hunting of deer, small game, and ducks; commercial and recreational shellfishing; and recreational fishing and boating. These uses would be permitted to continue as long as they remain at levels that do not threaten the integrity of the proposed sanctuary, or jeopardize use of the sanctuary for research or educational purposes. DEM will monitor activities within the sanctuary, and might in the future restrict, prohibit, or otherwise control uses, or levels of use, as needed to protect the sanctuary's natural resources, and research and education programs.

PART I: PURPOSE OF AND NEED FOR ACTION

In response to intense pressures on the coastal resources of the United States, Congress enacted the Coastal Zone Management Act (CZMA), which was signed into law on October 27, 1972, and amended in 1976. This Act authorized a Federal grant-in-aid and assistance program to be administered by the Secretary of Commerce, who in turn delegated this responsibility to the Office of Coastal Zone Management (OCZM) in the National Oceanic and Atmospheric Administration (NOAA).

The CZMA affirms a national interest in the effective protection and development of the Nation's coastal zone, and provides financial and technical assistance to coastal States (including those bordering on the Atlantic and Pacific Oceans, the Gulf of Mexico, and the Great Lakes) and U.S. territories to develop and implement State coastal zone management programs. The Act established a variety of grant-in-aid programs to such States for purposes of:

- developing coastal zone management programs (§ 305);
- implementing and administering coastal management programs that receive Federal approval (§ 306);
- avoiding or minimizing adverse environmental, social, and economic impacts resulting from coastal energy activities (§ 308);
- coordinating, studying, planning, and implementing interstate coastal management activities and programs (§ 309);
- conducting research, study, and training programs to provide scientific and technical support to State coastal zone management programs (§ 310); and
- acquiring land to establish estuarine sanctuaries, or to provide for shorefront access or island preservation (§ 315).

Section 315 of the Act authorizes an Estuarine Sanctuary Program to provide matching grants to States to acquire, develop, and operate natural estuarine areas as sanctuaries, so that scientists and students may be provided the opportunity to examine the ecological relationships within the areas over time. Section 315 provides a maximum of \$2 million in Federal funds, to be matched by an equivalent amount from the State, to acquire lands for each sanctuary. Regulations for implementation of the Estuarine Sanctuary Program were published in final form on June 4, 1974

[15 CFR Part 921, Federal Register 39 (108): 19922-19927], and amended on September 9, 1977 [15 CFR Part 921, Federal Register 42 (175): 45522-45523] (Appendix 1).

Estuarine sanctuaries have the dual purposes of (1) preserving relatively undisturbed areas so that a representative series of natural estuarine systems will always remain available for ecological research and education, and (2) ensuring the availability of natural areas for use as a control against which impacts of human activities in other areas can be assessed. These sanctuaries are to be used primarily for long-term scientific and educational purposes, especially to provide information useful to coastal zone management decision-making.

Research purposes may include:

- Gaining a more complete understanding of the natural ecological relationships within the various estuarine environments of the United States;
- Making baseline ecological measurements;
- Serving as a natural control against which changes in other estuaries can be measured, and aiding in evaluation of the impacts of human activities on estuarine ecosystems; and
- Providing a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their benefits to man and nature, and the problems confronting these ecosystems.

While the primary purposes of estuarine sanctuaries are scientific and educational, multiple use of estuarine sanctuaries by the general public will be encouraged to the extent that such usage is compatible with the primary sanctuary purposes. Such uses may generally include low-intensity recreation, such as boating, fishing, shellfishing, hunting, and wildlife photography or observation.

The Estuarine Sanctuary regulations envision that the Estuarine Sanctuary Program will ultimately represent the full variety of regional and ecological differences among the estuaries of the United States. The regulations state that "the purpose of the estuarine sanctuary program ... shall be accomplished by the establishment of a series of estuarine sanctuaries which will be designated so that at least one representative of each estuarine ecosystem will endure into the future for scientific and educational purposes" [15 CFR 921.3(a)]. As administered by OCZM, the Estuarine Sanctuary Program defined 11 different biogeographic regions based on geographic, hydrographic, and biological characteristics. Subcategories of this basic system will be established as appropriate to distinguish different subclasses of each biogeographic region. It is anticipated that at least 22 sanctuaries

will be needed to provide minimal representation for the Nation's estuarine ecosystems.

Since 1974, OCZM has awarded grants to establish seven estuarine sanctuaries. These include:

<u>Sanctuary</u>	<u>Biogeographic Classification</u>
South Slough Coos Bay, Oregon	Columbian
Duplin River Sapelo Island, Georgia	Carolinian
Waimanu Valley Island of Hawaii, Hawaii	Insular
Rookery Bay Collier County, Florida	West Indian
Old Woman Creek Erie County, Ohio	Great Lakes
Apalachicola River/Bay Franklin County, Florida	Louisianian
Elkhorn Slough Monterey County, California	Californian

The proposed action under consideration by OCZM is a grant application from the State of Rhode Island to acquire land for an estuarine sanctuary consisting of approximately 2,629 acres of land and water in Narragansett Bay. The application requests \$436,000 from NOAA, to be matched by an equivalent amount of State funds and privately donated lands, for the purchase of 203 acres of land on Patience Island and to improve docks on northern Prudence and Patience Islands.

The Narragansett Bay Estuarine Sanctuary, if established, would be the first in the Virginian biogeographic region. This region extends over 1,000 miles of Atlantic coastline from Cape Cod to Cape Hatteras, featuring lowland streams, coastal marshes and muddy bottoms with primarily temperate biota and some boreal representatives. The proposed sanctuary in Narragansett Bay would be representative of the Northeast subregion, centered around Long Island Sound.

The estuarine sanctuary proposal fits into a larger interest in Rhode Island among universities, citizen and conservation groups, and State and local officials to establish a Bay Islands Park utilizing the many islands in the Bay. A proposal, "The Bay Islands Park: A Marine Recreation Plan for the State of Rhode Island," was prepared for an Advisory Committee on Island Parks by the Coastal Resources Center, in association with the Departments of Natural Resources and Community Affairs, the Statewide Planning Program, and the University of Rhode Island. The preparation of this proposal was financed through a Planning Grant issued by the Bureau of Outdoor Recreation, U.S. Department of the Interior under applicable provisions of The Land and Water Conservation Fund Act of 1965 (P.L. 88-578) and by State funds. Rhode Island's goals in establishing this Park are (1) to protect some of the State's last remaining undeveloped island areas in Narragansett Bay, and (2) to provide opportunities for the public to enjoy and study these sites.

Until the Navy began cutting back its operations in 1973, only limited land resources for the park were available, and little had been or could be done to translate the proposal into a reality. Since then, however, much has been accomplished, and the concept of the Bay Islands Park has been developed and refined. The northern end of Prudence Island was acquired by The Nature Conservancy and later was purchased by the State, with matching funds from the Department of the Interior, to be used as a wildlife management area. As the U. S. Navy gave up its use of other island areas, these were made available to the State for use in the Bay Islands Park System. Thus Hope Island, after it was abandoned by the Navy, became a large rookery for certain species of heron and ibis. Patience Island had several different owners who saw the potential for development, but the potential was never realized. To preserve the island in its natural state, The Nature Conservancy purchased Patience Island in 1980 and agreed to sell the island to Rhode Island for use as an estuarine sanctuary.

Thus, these three islands--Patience, Hope, and the northern end of Prudence Island--were selected out of the Bay Islands Park system to be set aside as a National Estuarine Sanctuary because they are essentially undisturbed (or returning to their natural state as is the case with Hope), and because they were ideally suited for research and educational programs to study the effect of the bay processes on the island ecosystem within it.

On March 10, 1980, NOAA awarded a 50% matching grant of \$10,654 (later increased to \$21,148) which enabled the State to complete an environmental assessment of the islands, and to prepare management, research, and education plans for the sanctuary.

PART II: ALTERNATIVES (INCLUDING PROPOSED ACTION)

A. Preferred Alternative

The State of Rhode Island has submitted an application for a grant of \$436,000, to be matched by an equivalent amount of State funds and privately donated lands, for the acquisition of lands to establish an estuarine sanctuary in Narragansett Bay encompassing Hope and Patience Islands, the northern end of Prudence Island, and their surrounding waters (See Fig. 1), and to improve docking facilities on these islands. The proposed sanctuary would include 1,038 acres of land (of which 797 acres are now publicly owned), and 1,591 acres of adjoining waters (all owned by the State), and would be managed by Rhode Island's Department of Environmental Management.

1. Boundaries and Acquisition of Sanctuary Lands

The boundaries of an estuarine sanctuary "may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands, constituting to the extent feasible a natural unit" (15 CFR 921.2). The proposed sanctuary lies within Narragansett Bay, an estuary 111,360 acres in size, with a watershed covering 1,183,360 acres in Rhode Island, Massachusetts, and Connecticut. Since it is not possible to acquire the entire Narragansett Bay estuary and its watershed, Rhode Island has selected three islands in the Bay and their surrounding waters, which approximate a natural ecological unit (see Fig. 2).

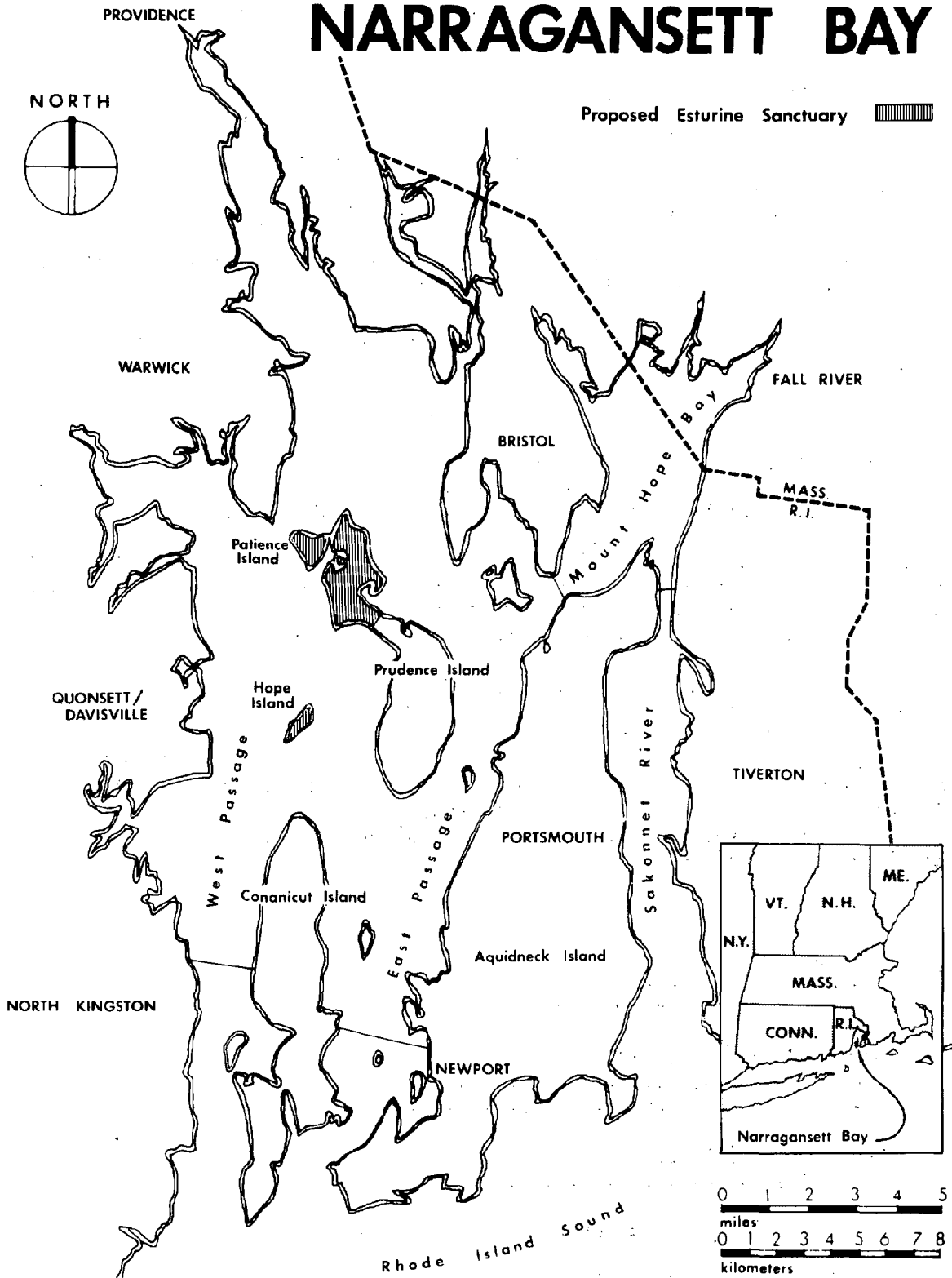
The grant request to NOAA for \$436,000, matched by the State, would be used for the fee simple acquisition of 203 acres of uplands and wetlands on Patience Island from The Nature Conservancy, its present owner, and improvement of docks on North Prudence and Patience Islands. The State already owns fee simple title to Hope Island and the northern end of Prudence Island, the other land areas proposed for inclusion within this estuarine sanctuary. The composition of real property within the proposed sanctuary is as follows:

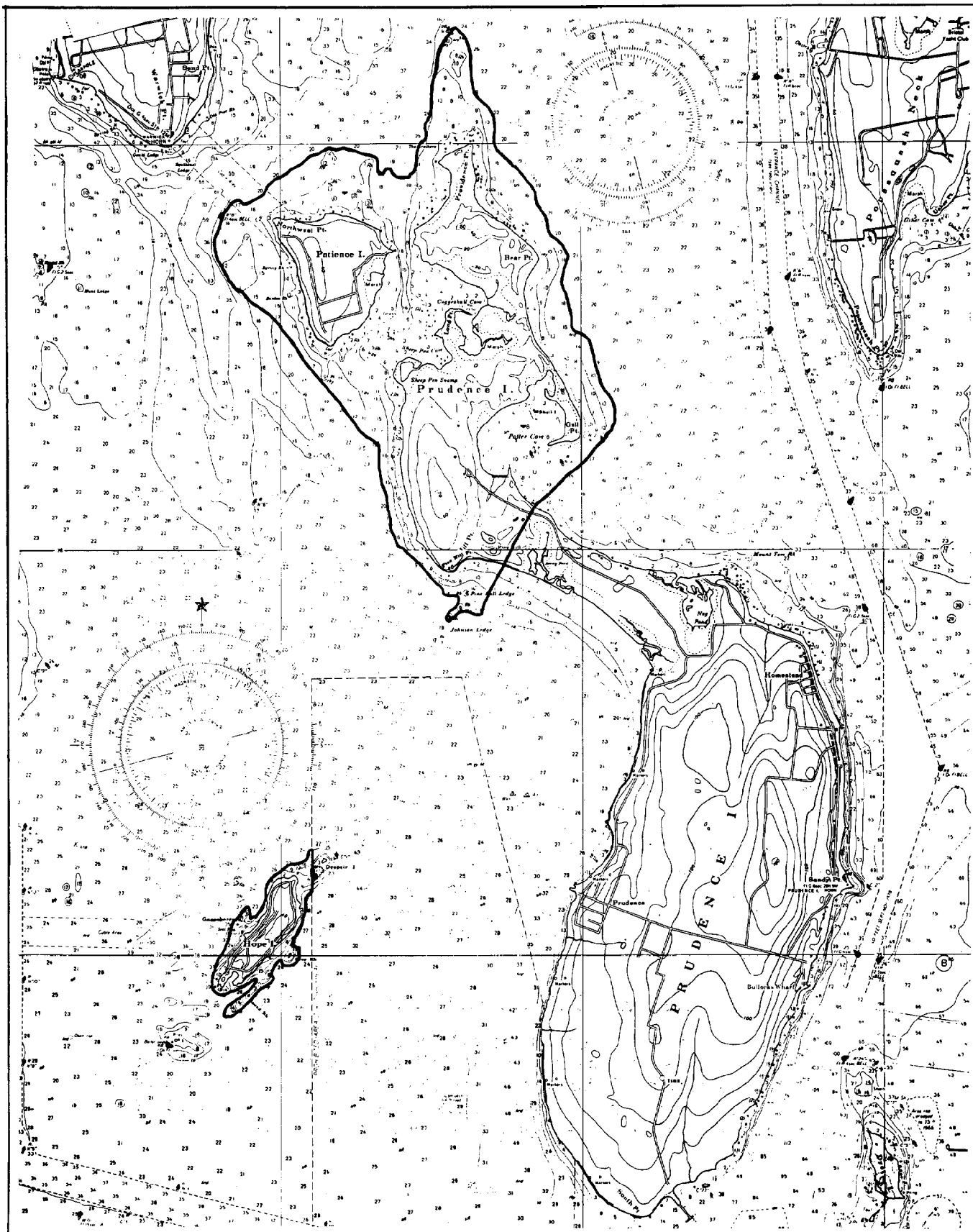
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Hope Island (94 acres)	
-- State-owned.....	94
Adjoining State-owned waters to 18' isobath.....	<u>1,591</u>
Total Land and Water Within the Sanctuary.....	2,629 acres

FIGURE 1

REGIONAL SETTING

NARRAGANSETT BAY





Acquisition would be performed in accordance with Federal regulations for real estate acquisition, including an independent appraisal and the offer of Fair Market Value. Acquisition would be through negotiation only, and Rhode Island would not use its power of eminent domain (condemnation). Some lands within and adjacent to the proposed sanctuary would remain in private hands. The State would be willing to obtain fee simple title or conservation easements to some or all of these lands, depending on future funding, but only through willing-seller negotiations.

2. Management

The State is acquiring islands or parcels on islands in Narragansett Bay for a number of different purposes, including recreation, wildlife management, and conservation and protection of environmentally unique and irreplaceable lands. Although management of the various islands within the Bay Islands Park system differs according to the objective of acquisition, the present management objectives are compatible with the objectives of managing the sanctuary for its long-term use for research and education within an estuarine system.

Although these islands--Hope, Patience, and northern Prudence--are considered within the Bay Islands Park, they will be considered as a separate entity in terms of their use as a National Estuarine Sanctuary. The specific management policies for the uplands and wetlands (not the water body itself) will be based on the primary objective of managing the lands to maintain their ecosystem, in order to assure the long-term protection of natural processes and resources for research and education. Uses that would alter the nature of the ecosystem will not be allowed on these lands.

Ownership and management decision authority will be retained by the Rhode Island Department of Environmental Management (DEM) using existing State laws and policies to regulate fishing, shellfishing, hunting, boating, and other current uses of the land and water areas within the sanctuary boundaries. Changes in management policies and regulations that affect the sanctuary will be reviewed by the Sanctuary Advisory Committee (discussed later), which may provide advisory comments on policies and program, but will have no regulatory authority over these lands and waters.

a. General and Specific Management Requirements

DEM would monitor all activities within the sanctuary. If any use or level of use threatens the sanctuary, DEM would take appropriate steps to eliminate the potential conflict. In addition, DEM intends to prohibit some activities altogether. Bringing pets and radios or other electronic devices into the sanctuary are examples of prohibited activities.

Narragansett Bay in general, and the Patience and Prudence Island areas in particular, are heavily used for recreational fishing, boating, and shellfishing during the summer months. Recreational boating within the proposed boundaries of the sanctuary is so popular that the waters of Potter Cove, on the eastern side of northern Prudence Island, are classified as SB waters during the summer months. Rhode Island's water quality classifications are, in descending order, SA, SB, and SC (See Appendix III).

Establishment of this proposed sanctuary could attract recreational boaters to the sanctuary waters in even larger numbers. Should recreational boating in Potter Cove or anywhere else within the boundaries of the proposed sanctuary be found to cause, or threaten to cause, significant adverse environmental impacts on the sanctuary resources, DEM would restrict, prohibit, or otherwise control recreational boating within the sanctuary to whatever extent is necessary to protect water quality within the sanctuary.

Recreational and commercial shellfishing is another popular use of the waters around Patience and Prudence Islands. Dredging for shellfish within or near the waters of the proposed sanctuary is already prohibited by Rhode Island law. Individuals must use tongs or rakes, with a commercial limit of 12 bushels per day, and a recreational limit of 0.5 bushels per day. In Narragansett Bay, there are 300 full-time and 1,600 part-time shellfishers, who in 1978 harvested 2 million pounds of quahogs valued at \$4.3 million. Approximately 200 shellfishers work within the area of the sanctuary. Continued shellfishing within the sanctuary waters, if continued at the present level, should not interfere with the research and education programs.

Recreational hunting takes place on all three islands. On Patience and northern Prudence Islands, there is a bow-hunting season for deer from November 1 to January 31. Thirty deer were taken on northern Prudence during the past season. Patience and Prudence also have a small game season in February, and rabbits are hunted on Hope Island from October through January. Duck hunting takes place in November on Patience, Prudence, and the waters between the two islands. Duck hunting is restricted to within 10 feet above mean high water level.

Hunting will be allowed to continue if it is compatible with the primary sanctuary purposes. For deer, hunting is actually desirable to prevent overpopulation and its associated malnutrition, disease, and habitat degradation from excessive foraging. Habitat manipulation to "improve" sites for game species, however, is incompatible with the purposes of the sanctuary. Proposals for such actions would have to be approved by the Rhode Island Department of Environmental Management, in consultation with OCZM. It is anticipated that potential conflicts can be identified and resolved by DEM before any actions take place that would reduce the sanctuary's value for research and education.

Northern Prudence Island

Existing uses on and around Prudence Island that would continue are hunting, commercial and recreational shellfishing, and recreational fishing and boating. New activities that would be introduced as part of the park and sanctuary programs would be interpretative activities, nature trails and research programs. Any recreational activity that harms the natural environment or interferes with research activities will be restricted or prohibited.

Patience Island

Patience Island contains a variety of habitats (e.g. salt marsh, upland forest, and open fields), and would make an excellent outdoor environmental education center. Groups and individuals may be permitted to camp overnight under careful supervision by DEM personnel to allow them the chance to study the island's ecology over a more extended period of time than would be possible during day trips. Only minimal facilities would be needed to accommodate such activity. Patience Island would also be available for scientific research. Camping would be restricted or prohibited if DEM determines that it inhibits research or degrades the environment.

Hope Island

Hope Island has become one of the most important rookeries for wading birds in the Northeast, and would be managed under stricter controls than any of the other sanctuary sites. Guided interpretative tours may be offered during the late summer and early fall if they do not interfere with research activities or damage the environment. The island would be closed to visitors--except for qualified scientists with the approval of DEM--during the nesting season, which runs from March 15 through July 31. No camping would be permitted on Hope Island.

b. Public and Private Access

The proposed sanctuary is located on islands with no bridge connection to the mainland. DEM can thus control access to the sanctuary through control of boat access to the islands, directly with respect to the ferry system serving the island sites, and indirectly with respect to privately owned boats wishing to moor or beach on the sanctuary islands.

Public Access

The public transportation system will be designed to take advantage of the ferry system that serves the southern end of Prudence Island. The only service which is now scheduled is the Block Island Ferry, which will stop twice a day at South Prudence on its round trip from Providence to Newport to Block Island.

Transportation to the sanctuary sites would be developed only after a careful study of the ecosystems on the three islands and an assessment of the number of people who can be accommodated on the islands without damaging the natural processes that exist there. Visitors to the sanctuary would be taken there by boat as the primary means of access. Because of the objections of Prudence Island residents, the proposal to use a bus to connect north and south Prudence has been dropped. A small van (8-10 people) would be available on the south end of Prudence to take small groups of people on an ad hoc basis to north Prudence, but this would be restricted to an "as needed" basis.

Public transportation to Patience and Hope Islands would be provided by boat on a demand basis and not by a regularly scheduled ferry.

Private Access

Narragansett Bay supports heavy recreational boating use during summer months, and some of the proposed sanctuary areas--especially Potter Cove on northern Prudence Island, and the waters between Patience and Prudence Islands--are customary mooring sites where boats anchor to spend several hours. When northern Prudence and Patience Islands were in private ownership, small numbers of people beached their boats and hiked or camped on the islands. With these islands in public ownership, it is safe to assume that larger numbers of people may want to beach their boats, or have docking facilities provided so that they can more easily come ashore. Rhode Island's policy with regard to private boats in the proposed sanctuary would be as follows:

- the docks at Patience and northern Prudence Islands would be repaired so that small craft can dock, but only to let passengers off; docking for more than ten minutes would not be permitted;

- Small boats may be beached on Patience and northern Prudence Islands where not prohibited. DEM may restrict or prohibit boats from certain areas such as the salt marshes on northern Prudence (because of their fragility), or the beach on Patience (because of potential conflicts with swimmers); and

- DEM will monitor private boat use within the sanctuary waters, and if it is determined that private boat activities are damaging the sanctuary resources, or interfering with other uses, such as swimming, DEM may restrict boating activity by limiting boat use, mooring, or beaching to certain areas, and prohibiting it in other areas.

c. Administration of the Sanctuary

The Rhode Island Department of Environmental Management (DEM), the State's natural resource management agency, would manage the proposed sanctuary. Specifically, the Assistant Director for Operations would have general oversight and responsibility for the sanctuary and its programs.

To assist in this task, DEM will, at a minimum, hire a full-time Sanctuary Manager, to be located on Prudence Island. The duties of the Sanctuary Manager, who will be trained as a natural resource manager/planner, will include:

- 1) Administration of the sanctuary, including preparing required State and Federal grant applications, proposals, budget, and reports, and maintaining necessary records.
- 2) Working with the staff of the Sanctuary Advisory Committee.
- 3) Representing the Sanctuary Advisory Committee in public meetings.
- 4) Advising and coordinating with units of government, both within DEM and other agencies, on particular issues, questions, and projects that impact on the sanctuary, at their request.
- 5) Seeking and coordinating special studies and research activities within or related to the sanctuary, and interpreting and applying research results to produce benefits to the Rhode Island coastal management program.
- 6) Developing and giving general oversight to an educational program for the sanctuary.

The Sanctuary Manager will be hired by and held accountable to the DEM Assistant Director for Operations.

Other personnel will be employed and trained within the appropriate divisions of DEM to assist in the administration of the sanctuary, including giving interpretative tours and enforcing restrictions on prohibited activities within the sanctuary.

Sanctuary Advisory Committee

To achieve effective coordination and cooperation among the public and private groups participating in the sanctuary program, a Sanctuary Advisory Committee (SAC) would be created to assist and advise DEM and the Sanctuary Manager. The SAC would include representatives of the scientific research and educational communities, DEM, the Coastal Resources Management Council, the State Historic Preservation Commission, the Town of Portsmouth, Prudence Island residents, private user groups such as the Rhode Island Boating Council, commercial shellfishermen or others, conservation organizations and Federal agencies, including NOAA and the U. S. Coast Guard.

SAC functions would include:

-- Advising DEM and the Sanctuary Manager on sanctuary administration. In this role, the SAC would assist DEM in developing guidelines for sanctuary management, as well as job qualifications for the sanctuary manager.

-- Reviewing proposals for research or educational activities within sanctuary lands and waters, and making appropriate recommendations to DEM.

-- Recommending special studies for archeological, cultural, or other purposes.

-- Providing for communication and cooperation among all sanctuary users.

The final composition of the Sanctuary Advisory Committee and any appropriate subcommittees, will be determined before the acquisition grant would be awarded.

d. Education and Research Programs in the Sanctuary

Education

The proposed sanctuary sites are well suited for educational programs, not only because Patience and Prudence Islands are capable of supporting such activities without significant harm, but also because of the proximity of Rhode Island's population centers to the sanctuary islands. Downtown Providence is only 12 miles from the northern end of Prudence Island. The center of Warwick (Rhode Island's second-largest city) is 5 miles from Patience Island. More than 600,000 people live within 10 miles of the sanctuary islands, offering a unique opportunity to provide sanctuary education programs for the public. With only a short ferry and bus ride, urban residents, school children, and families can enter an area with no development, clean water, pristine salt marshes, and unusual wildlife including a large deer herd and one of the Northeast's largest wading bird rookeries. The north end of Prudence Island in particular provides the opportunity to visit a number of different habitat types within a small area.

The proposed sanctuary would emphasize creation of an extensive interpretative program, including printed materials, guided and self-guided tours, resident naturalists, and guided boat trips. Both group and individual activities would be provided. (The completed education plan can be obtained by contacting DEM.)

Research

The Patience and Prudence Island areas offer a unique opportunity for research into the dynamics of the Narragansett Bay estuary. Several factors influence the research potential of the proposed sanctuary sites:

-- The City of Providence and the rivers entering the Bay at Providence contribute significant pollution to the Bay.

-- At present, the dividing line between SA and SB waters lies north of Prudence Island. The waters around Prudence Island--particularly in and around Potter Cove--experience changing pollution levels depending on weather and season.

-- The Prudence Island area is a major shellfish area, and extensive commercial and recreational quahogging takes place in its surrounding waters. An experimental, private oyster "farm" has been started on central Prudence Island. Lobstering takes place around Hope Island.

-- The University of Rhode Island has conducted extensive research in the area on pollution levels and their impacts on shellfish, and is constructing a computer model of the Upper Bay.

-- The U.S. Environmental Protection Agency has funded several studies of water quality and marine life in the Upper Bay.

Major research opportunities in this proposed sanctuary would generally fall in three categories: (1) research, analysis, and interpretation of the upland, intertidal, and benthic components of the Narragansett Bay estuary, (2) continuation of existing monitoring and sampling programs (described below), and (3) research to analyze the impact of various pollutants and pollution levels on estuarine life.

Existing Monitoring

1. Biannual finfish trawl survey: DEM's Division of Fish and Wildlife sets up random stations throughout the Bay twice each year to take fish counts, and to measure characteristics such as length, weight, and sex.

2. Lobster catch data collection: The Division of Fish and Wildlife collects information on the number of lobsters caught, the number of traps used, the number of hours spent trawling, and when and where the lobsters are caught, on a monthly basis. Very few lobsters are caught within the waters of the proposed sanctuary, since most of the sanctuary lies beyond the northern extent of lobster summer migration up the Bay.

3. Quahog sampling: Quahogs are currently taken and sampled for heavy metals and coliform count twice each month by the Health Department.

4. Paralytic shellfish poisoning sampling: Blue mussels and soft-shell clams from stations at the mouth of the Bay are sampled twice a month and tested by the Health Department for paralytic poisoning, a seasonal phenomenon associated with the occurrence of "red tides". If dangerous levels are found at the mouth of the Bay, tests are then made at stations progressively farther up the Bay to determine the extent of the poisoning.

5. Coliform testing: The Division of Fish and Wildlife tests Upper Bay water samples 35-40 times per year for total and fecal coliform bacteria, primarily to help determine whether the conditional area of the Upper Bay should be closed to shellfishing (see Fig. 7).

New Research

All of the land areas within the proposed sanctuary are essentially undisturbed, and almost all of the water areas are classified SA year-round. Thus, establishment of this proposed sanctuary would ensure the preservation of these lands, and, to a lesser extent, their surrounding waters, for future terrestrial, intertidal, and benthic research on a variety of estuarine topics. There are, however, several potential sources of pollution outside the proposed boundaries of the sanctuary--including sewage and heavy metals from the urban areas around the Bay, and tankers and tank barges which pass within 1.5 miles of the eastern side of Prudence Island--that could jeopardize sanctuary waters in the future.

Because the proposed sanctuary lies near the transition zone between the polluted waters of the Upper Bay and the relatively clean waters of the rest of the Bay, research and monitoring in and around the sanctuary could provide valuable baseline information against which the impacts of human activities throughout the Narragansett Bay estuary could be assessed. Such research and monitoring could have broad applicability to similar estuaries elsewhere in the Virginian biogeographic region, such as Chesapeake Bay. (The completed research plan can be obtained by contacting DEM.)

B. Alternatives Considered

1. Funding

Rhode Island considered several sources of State and Federal funding for the creation of a preserve including Hope and Patience Islands and the north end of Prudence Island. The State purchased the north end of Prudence Island in 1978, using Land and Water Conservation Fund monies matched from the State's Recreation Area Development Fund. Land and Water Conservation Fund monies were also considered for purchase of Patience Island.

State revenues from hunting and fishing licenses would be used for the State share of the cost of purchasing Patience Island.

Estuarine Sanctuary Program funds were selected for three reasons:

-- Land and Water Conservation Fund monies are not available this fiscal year, and may not be available next fiscal year;

-- The Estuarine Sanctuary Program includes five years of management funds, which would be useful to the proper management of the proposed sanctuary in the first years after its establishment.

-- The Estuarine Sanctuary Program would attract national attention to the area, and thus enhance the research, education, and recreation opportunities in the Bay.

Within Rhode Island, hunting and fishing license receipts were selected as a match for the proposed sanctuary grant rather than Recreation Area Development Fund monies, because of the high wildlife values of the islands, and also because Recreation Area Development Fund monies are committed to development projects elsewhere in the State.

2. Site Selection

In developing an estuarine sanctuary proposal, and in OCZM's initial review, a variety of sites were considered for potential sanctuary designation. Because the sanctuaries are to be State-owned and managed, OCZM cannot, on its own initiative, propose or designate an area as a sanctuary. OCZM is dependent upon the State's identifying potential sanctuary sites and formally applying for funding.

There are no National Estuarine Sanctuaries along the entire Atlantic coast north of Georgia, none representing any of the sub-regions of the Virginian region, extending from Cape Cod to Cape Hatteras, and none in the Arcadian region, stretching from Cape Cod to Canada. In 1978/1979, two States in the Northeast sub-region of the Virginian Region, Rhode Island and New York, initiated internally a process of identifying areas within their States to propose for an estuarine sanctuary. In New York, the Peconic/Flanders Bays area at the eastern end of Long Island was finally selected in January 1980. However, because of internal problems that developed early in the year, the project was dropped by New York and their proposal was withdrawn in April 1980.

Rhode Island's proposal of the Narragansett Bay Estuarine Sanctuary, if approved, would provide the first and only estuarine sanctuary so far in the Virginian region. For this reason, it will be especially beneficial to research institutions, universities, and coastal agencies in Rhode Island, as well as Federal environmental agencies such as the Environmental Protection Agency, National Marine Fisheries Service, and the Office of Coastal Zone Management.

Site Selection with Rhode Island

Selection of the Prudence/Patience/Hope area as an Estuarine Sanctuary candidate was the result of a lengthy site selection process in Rhode Island.

The northern end of Prudence Island and Patience Island were designated as part of the proposed Bay Islands Park system after extensive public discussion, including public hearings and input from a special citizens' committee. The process included adoption of the Patience/Prudence acquisitions as part of the State's Comprehensive Outdoor Recreation

Plan (SCORP), an element of the State Guide Plan. Inclusion of the Bay Islands Park proposal in the State Comprehensive Outdoor Recreation Plan was approved by the State Planning Council after public hearings. The SCORP envisions Patience and the north end of Prudence Islands as conservation and wildlife management sites with low-intensity public use. Official State policy thus designates these two sites as areas to be set aside for conservation and wildlife management purposes, although estuarine sanctuary designation was not specifically considered when Rhode Island's SCORP was adopted.

When OCZM's Sanctuary Programs Office informed the Chairman of Rhode Island's Coastal Resources Management Council (CRMC) that funds might be available for an estuarine sanctuary in the Northeast States, the Coastal Resources Center at the University of Rhode Island (CRC), in cooperation with DEM, initiated a review of possible sites.

At first, CRC believed that one of Rhode Island's coastal ponds or tidal rivers might be the most appropriate estuarine sanctuary candidate in the State. All such areas were identified and evaluated. Four of the most promising sites were then reviewed by CRC and DEM staff, including biologists from the Division of Fish and Wildlife. Although all four sites offered unique benefits to research and education, and one potentially was available to be protected "en toto," each of the four sites (listed below) was found to have significant drawbacks.

1) Quicksand Pond in Little Compton: this is the most pristine site, and an outstanding example of a coastal pond with a natural breachway. Most of the shore of the pond is undeveloped. However, there were strong local objections, the purchase price would be very high, research possibilities are limited because of the site's distance from institutions, and even without sanctuary status the site is likely to remain in its comparatively undeveloped state as a result of the pattern of landholdings surrounding it.

2) Palmer River: this estuary was considered a good candidate, except that 85% of its watershed, including the most undeveloped portion, lies in Massachusetts, thereby complicating the initiation and successful execution of the project. Moreover, parts of the estuary are heavily developed.

3) Pettaquamscutt River: this tidal river in the Towns of Narragansett and North Kingstown has many interesting features, including unusual upper basins, and is surrounded by large undeveloped tracts of land. However, the character of much of the river is such that research here would have limited applicability to other areas, and the central portion of the riverway is heavily developed with small summer cottages on both shores, making control or acquisition of the area difficult or impossible.

4) Potter's Cove: this is a cove off Point Judith in South Kingstown (entirely separate from the Potter Cove occurring on northern Prudence Island) with potential as shellfish habitat, and with an upper cove that is almost fresh water. However, much of the shoreline is intensely developed, and the remainder is in small ownerships, so that acquisition would be difficult.

After further analysis by representatives of CRC, DEM, OCZM, and the Coastal Resources Management Council, the Prudence/Patience/Hope sites emerged as potential candidates. Meetings were held to pursue the concept, which drew the support of the Governor. Thereafter, the northern end of Prudence Island, Patience Island, and Hope Island were nominated, for the following reasons:

1. The sites are essentially undisturbed, and contain a wide range of terrestrial and estuarine flora and fauna. The salt marshes on Prudence and Patience Islands are some of the most extensive and pristine wetlands remaining in Rhode Island.

2. Located just south of the present shellfish closure line for the Bay, the area has the potential for significant research into Bay dynamics and pollution problems. Such research could easily be tied into ongoing research and monitoring elsewhere in the Bay, and could have broad applicability elsewhere in the Northeast.

3. The islands are located in the center of Rhode Island's populated areas, thus offering numerous opportunities for educational activities.

4. No present or planned uses in the sanctuary area are in conflict with the purposes of the Estuarine Sanctuary Program. Fishing, shellfishing, and hunting are generally compatible uses, and establishment of an estuarine sanctuary here would help to preserve the living resources of the area.

Public information meetings on the idea of a sanctuary were held in Providence and Portsmouth in March 1980. A public hearing on the proposed estuarine sanctuary on northern Prudence, Patience, and Hope Islands was held on June 25, 1980. Comments at the hearing and in subsequent letters were overwhelmingly in favor of the proposal.

3. Boundaries

a. Water Boundaries

The proposed sanctuary lies within the Narragansett Bay estuary, and includes islands in the middle of the Bay together with their surrounding waters. Since the entire estuary cannot be included within the sanctuary, any water boundaries will be of necessity less than all-inclusive.

The proposed water boundary is the 18' isobath. This line was chosen for several reasons:

- it is a relatively easy water boundary to identify. Nautical charts indicate waters less than 18' feet deep in white, areas deeper than 18' in blue. Four permanent buoys lie on the 18' isobath around the sanctuary.

-- the 18' isobath includes Potter Cove, Coggeshall Cove, and the waters between Prudence and Patience Islands. Since these areas are popular recreational boating sites in the summer, inclusion of these water areas within the sanctuary is desirable so that restrictions can be imposed if necessary.

b. Land Boundaries

Two alternative land boundary configurations considered by Rhode Island were the inclusion of southern and central Prudence Island, and the exclusion of Hope Island.

1) Southern and Central Prudence Island

The southern end of Prudence Island consists of 624 acres, all owned by the State. Rhode Island considered including some or all of the southern end of Prudence Island within the proposed sanctuary, but chose not to for two reasons: (1) the site was extensively developed by the Navy, its former owner, far more than the other island sites, and to such an extent that it does not meet the 'essentially undisturbed' criterion, and (2) southern Prudence will be the main center for the Bay Islands Park system, and will support facilities and activities incompatible with the primary purpose of the sanctuary.

Central Prudence Island consists of 2,129 acres, all privately owned. Much of the eastern shore in this central portion has extensive residential development, and the central Prudence lands are held by about 400 separate owners. For these reasons, Rhode Island chose not to pursue the inclusion of central Prudence Island within the proposed sanctuary. If individual owners approach the State and offer to sell fee simple title or conservation easements, Rhode Island would be willing to consider such acquisitions. These would be undertaken only on an owner-initiated, voluntary basis.

2) Hope Island

Rhode Island originally did not include Hope Island in the sanctuary because of its distance from Patience and Prudence. However, DEM decided to add Hope Island because of the additional protection sanctuary status might provide, particularly for the extremely important wading bird rookery on the island.

4. No Action

Under this alternative, Patience would not be acquired, and Patience, northern Prudence, and Hope Islands would not be designated as an estuarine sanctuary. Northern Prudence and Hope Islands would still be part of the Bay Islands Park system and, as such, would still be protected. However, sanctuary designation and the provision of management funds would help establish a better management structure, strengthen the educational and interpretative programs offered to the public, encourage additional scientific research in the Bay, and provide national recognition for the area.

Patience Island was recently purchased by The Nature Conservancy (TNC) with the expectation that Rhode Island would purchase it from them for inclusion in the proposed estuarine sanctuary. If the sanctuary is not established, and the State does not receive funds to purchase Patience Island, TNC could retain ownership and manage it for research and education purposes, or explore other forms of public ownership, through such agencies as the U.S. Fish and Wildlife Service, or sell it to a private party. TNC ownership would restrict State or Federal funds for operations, and could result in limited access or educational programs due to lack of funds.

Without an estuarine sanctuary in the Narragansett Bay, as this proposal recommends, there would be no estuarine sanctuary in the Virginian biogeographic region and none to represent the Northeast sub-region, thus closing off the benefits derived from information generated from a sanctuary in this area.

PART III: ENVIRONMENTAL CONSEQUENCES

A. Environmental Consequences of the Proposed Action

1. General Impacts

The overall impact of establishing Rhode Island's proposed estuarine sanctuary would be environmentally beneficial. The proposed sanctuary would require minimal development or physical alteration of the existing natural environment. It would not significantly affect current uses or activities in or near the proposed sanctuary area.

The most direct environmental benefit of this action would be the long-term preservation of three islands and their resources for scientific, educational, and recreational purposes. As a base for research and education, the sanctuary should increase our understanding of estuarine ecosystems, and provide an important link to the Rhode Island coastal zone management program. The proposed sanctuary, which has been chosen as a representative estuary of the northeast sub-region of the Virginian biogeographic region, also would provide basic knowledge necessary for a more complete understanding of estuarine processes in protected shores along the Northeastern Atlantic coast.

The proposed educational program would increase public knowledge and awareness of estuarine ecosystems, their benefits, and their sensitivities, and would therefore contribute to increased public understanding of and support for coastal zone management activities within Rhode Island.

Potential adverse environmental impacts locally resulting from the establishment of this proposed estuarine sanctuary are those associated with the increased number of persons expected to visit the islands for scientific, educational, and recreational purposes. These minimal adverse impacts would potentially include soil compaction, local habitat degradation for fish and wildlife uses, destruction of habitat from construction and trail maintenance activities, disturbance of sensitive nesting bird species, and the human community on central Prudence, litter, water pollution from recreational boats anchored or operating near the islands, etc. These impacts would probably occur regardless of the estuarine sanctuary, assuming Patience Island would be in public or Nature Conservancy ownership.

On a broader scale, the removal of Patience Island from private ownership will result in loss of taxable property to the Town of Portsmouth. Also, other areas that were considered as potential sites for an estuarine sanctuary will not be eligible for acquisition funds.

2. Local Impacts

a. Natural Environment

1) Fish and Wildlife Habitat

A variety of fish and wildlife species--both resident and migratory--use the proposed sanctuary lands and waters for food, shelter, nesting, and nursery areas. Establishment of this sanctuary would ensure long-term protection of the three island ecosystems, thereby preserving valuable fish and wildlife habitat.

Increased visitor use of the sanctuary for educational and recreational purposes, though, could adversely affect the sanctuary's value as fish and wildlife habitat. Hiking, boating, and other recreational activities could be expected to result in greater noise, litter, soil compaction, water pollution, and other forms of habitat degradation. To keep such adverse impacts within tolerable levels, Rhode Island intends to control the location and levels of human activities within the proposed sanctuary. Hope Island, for example, whose wading bird rookery is the most sensitive and vulnerable area within the sanctuary, will be closed to all visitors during the March 15-July 31 nesting season. Moreover, certain areas on Patience and northern Prudence Islands could receive special protection to maintain habitat for deer and other wildlife, as well as places where research could be conducted undisturbed.

2) Soils and Vegetation

Adverse impacts on soils within the proposed sanctuary can be minimized if proper precautions are taken. Trail construction and improvement would be undertaken only on suitable, well-drained soils that can tolerate increased compaction. Boardwalks may be constructed over some wetland areas, which would allow a visitor to experience the wetland, while minimizing detrimental effects.

Vegetation would not be significantly affected by establishment of the sanctuary. Maintenance and, where necessary, rerouting of existing trails would reduce the impact on vegetation. New trails would be laid out to avoid fragile vegetative areas altogether.

3) Water Quality

Establishment of this sanctuary would relieve the potential impact of water pollution that might otherwise occur due to onshore development within the proposed sanctuary. On the other hand, increased recreational boating within sanctuary waters may lead to increased pollution from sewage, motor oils, and litter. The waters of Potter Cove on the eastern side of North Prudence Island are already classified as SB during summer months as a precautionary measure because of heavy recreational boating usage. Rhode Island will use existing laws and regulations as needed to restrict, or otherwise control recreational boating to protect the sanctuary land and water environment.

b. Human Environment

1) Residents of Prudence and Patience Islands

There are about 50 year-round residents on central Prudence Island, and about 1,000 during the summer. None of these residents would be displaced as a result of this proposed action. Rhode Island's Department of Environmental Management is working with the island residents to minimize the adverse impacts of the sanctuary upon them. This would be achieved primarily by providing public access to the sanctuary primarily by small boats that would have DEM staff immediately available to supervise and guide groups and instruct all visitors not to disturb private property on the islands. Visitors would be discouraged from using the Prudence Island Ferry by providing no transportation from Middle Prudence Island to the sanctuary.

2) Town of Portsmouth

Acquisition of 203 acres on Patience Island would result in the loss of potential tax revenue to the Town of Portsmouth, which in 1978 amounted to \$3,728. This economic loss would probably be more than offset by the new jobs and commercial activities associated with the ferry landing in Portsmouth to serve the Bay Islands Park system and the estuarine sanctuary.

Other impacts on the Town of Portsmouth would be a severe strain on the services provided to residents on Prudence, including police and fire protection, water supply, waste disposal, and other unforeseen services such as emergency health care and removal from the islands. DEM and the Town of Portsmouth will have a formal understanding of how those services will be provided and by whom before the acquisition grant is awarded.

3. State and Federal Impacts

Establishment of the sanctuary would preserve for Rhode Islanders and others from southeastern New England a natural area to enjoy and use for recreational and educational purposes. This would be particularly beneficial for the residents of the urban areas around Narragansett Bay.

Acquisition and management of the proposed sanctuary would have relatively minor short-term financial impacts on the Federal government and the State of Rhode Island. The State will be responsible for funding the long-term operation of the sanctuary. These expenditures are expected to be offset by the acquisition of improved scientific and technical knowledge, which could be applied to the management of estuarine resources here and elsewhere. The sanctuary would also protect wetlands, in accordance with Executive Order 11990, the Protection of Wetlands, and the State Coastal Resources Management Plan.

B. Unavoidable Adverse Environmental or Socioeconomic Effects

There are no unavoidable adverse environmental effects associated with this proposed action. Unavoidable adverse economic effects would include the loss of tax revenue (approximately \$3,728) to the Town of Portsmouth through the public acquisition of Patience Island. However, some or all of this lost tax revenue would be offset by new spending in the Town of Portsmouth by sanctuary visitors and management personnel. In addition, establishment of this proposed sanctuary could result in minor disruptions to the residents of central Prudence Island from the van carrying visitors to the sanctuary site on northern Prudence Island. Efforts would be made to minimize such disruptions.

C. Relationship Between Local, Short-Term Uses of the Environment, and the Maintenance and Enhancement of Long-Term Productivity

The purpose of the proposed action is to preserve Hope, Patience, and northern Prudence Islands in perpetuity for research and educational purposes, and to guarantee long-term productivity, to the benefit of numerous fish and wildlife species. Regulated harvest of natural resources would be permitted to continue, but no short-term or exploitative uses would be permitted to take place at the expense of long-term productivity or public utilization. Moreover, the commercial shellfishery is a product of the natural environment, so that establishment of this proposed sanctuary--by precluding development that might otherwise take place on these sites--should also contribute to the maintenance of long-term economic productivity within Narragansett Bay.

Research conducted within the sanctuary, and the increased public awareness of coastal and estuarine processes resulting from educational use of the sanctuary, should enhance Rhode Island's ability to resolve conflicts, mitigate adverse impacts, and otherwise maintain the long-term productivity of its coastal resources as prescribed in Rhode Island's Coastal Resources Management Plan.

D. Irreversible or Irretrievable Commitments of Resources

Within the proposed sanctuary, there are no resources that would be irreversibly or irretrievably lost, since the intent of this proposed action is to protect, enhance, and manage these resources.

E. Possible Conflicts Between the Proposed Action and the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls for the Area Concerned.

No conflicts are anticipated between this proposed action and the objectives of Federal, regional, State, or local land use plans, policies, and controls for the area concerned.

1. Federal and Regional Plans

The New England River Basins Commission prepared in 1975 a Southeastern New England (SENE) Study, a 'level B' water and related land resources study under the provisions of the Federal Water Resources Planning Act of 1965. The main purpose of the SENE study was to recommend public and private actions that would secure for the people of the region the full range of benefits resulting from balanced use and conservation of the region's water and related land resources. The SENE study recommended that Rhode Island give "highest priority" to establishment of the Bay Islands Park system, including Prudence, Patience, and Hope Islands.

Federal assistance is being considered for a major facility at Quonset/Davisville for refurbishing and constructing heavy equipment for rigs for OCS oil and gas exploration in the Baltimore Canyon. Quonset is directly west of the sanctuary and heavy ships will pass within a mile of Hope Island. However, no sanctuary regulations will interfere with the passage of ships on either side of the islands or with the maintenance of navigation buoys or enforcement by the U. S. Coast Guard. Estuarine sanctuary management policies only apply to land and water within the sanctuary boundaries and they will not conflict with current and future uses of the Quonset/Davisville site as an onshore OCS support site.

2. State Plans

Three State plans apply to Patience Island, Hope Island, and the northern end of Prudence Island. They are the Bay Islands Park system, the Rhode Island State Guide Plan, and the Rhode Island Coastal Resources Management Plan.

The purposes, policies, and objectives of the proposed estuarine sanctuary would be entirely consistent with the purposes of the Bay Islands Park system.

The Rhode Island State Guide Plan directs State policies and actions. Two relevant elements of the Guide Plan are: the State land use policies and plan, and the State Comprehensive Outdoor Recreation Plan (SCORP). The 1990 Land Use Plan calls for the use of the sanctuary for conservation and recreation purposes. Section 09-01-02 of the SCORP calls for the creation of a Bay Islands Park system as a high priority. This recommendation includes conservation use of the three island sites.

Rhode Island's Coastal Resources Management Plan, which has been adopted by the State's Coastal Resources Management Council, and approved by NOAA's Office of Coastal Zone Management, guides and regulates uses and activities in the coastal zone. Section 470 calls for the establishment of a Bay Islands Park system, including the three islands proposed to be included within the estuarine sanctuary, as well as protection of wetlands.

3. Local Plans

A comprehensive plan for the Town of Portsmouth is currently being prepared by the Town Planning Board of Portsmouth with the assistance of the Rhode Island Department of Community Affairs. A draft of the plan calls for conservation and recreational use of Patience Island and the northern end of Prudence Island. The Town has not yet formally adopted the plan.

PART IV: AFFECTED ENVIRONMENT

A. Natural Environment

1. Narragansett Bay

Narragansett Bay extends twenty-five miles north from Rhode Island Sound. Providence, the State's largest city, lies at its head. The Bay is as much as twelve miles wide, and is divided by Conanicut and Aquidneck Islands into three main channels. The proposed estuarine sanctuary includes all or part of three islands--Prudence, Patience, and Hope, situated in the geographic center of the Bay 12 miles south of Providence--and their surrounding waters. Approximate coordinates are 41°33'30" North, 71°22'37" East.

a. Geology

During much of the last Ice Age, Narragansett Bay was an upland valley with rivers flowing toward a sea whose shore lay off what is now Block Island. As the glaciers moved southward, they covered the land with ice as much as a mile thick, scouring and scraping the land to create the gentle contours characteristic of the Rhode Island landscape. As the glaciers retreated, they deposited vast quantities of boulders, sand, and sediments in the Bay area.

The Bay islands are artifacts of this glacial action. The rocky crags and headlands of Hope Island were laid bare by glacial scouring. The land masses of Prudence and Patience Islands were deposited as moraines by the retreating glaciers. These islands are composed primarily of glacial till--a poorly sorted mixture of boulders, pebbles, gravel, sand, and clay. The till varies considerably in thickness, and frequently contains layers of clay hardpan that form nearly impermeable barriers to water penetration. Much rainfall is consequently lost to surface runoff, with little retained as ground water. Freshwater reserves are therefore limited on the islands, and residential wells frequently run dry during the summer months. Water supply problems are compounded by a scarcity of surface impoundments, such as ponds or wetlands. Little runoff is captured to percolate into the soil; most is lost to the Bay.

Topsoils on the Bay islands are rarely more than three feet deep, and vary considerably in composition. They have been formed by the weathering of glacial deposits, and by accumulation of organic matter from a vegetative cover of mixed hardwood and coniferous forest. Except over scattered bedrock outcrops, bearing strengths are generally poor to fair, while stability ranges from poor to reasonable. (Reference - "The Bay Islands Park: A Marine Recreation Plan for the State of Rhode Island.")

b. Hydrology and Climate

Narragansett Bay is a partially mixed estuary covering 451 km.² (174 miles²), with a drainage basin of 4,790 km.² (1,849 miles²) in Rhode Island and Massachusetts. The Bay consists of a series of drowned river valleys, and contains 387 km. (240 miles) of shoreline. Average depth is 7.5 m. (24.6 ft.) in the West Passage and 15.2 m. (49.9 ft.) in the East Passage. The Bay sediments are primarily silts or clays in the Upper Bay, and fine sands toward the mouth.

The flow of fresh water into the Bay varies seasonally, with an average input of 36 m.³ second. Rainfall amounts to about one meter/year, and river discharge usually peaks in March and April. The small freshwater input and large tidal volume result in a well-mixed water column and small salinity gradients through the Bay. Salinities range from about 22 parts per thousand (ppt) in the Providence River to 32 ppt at the mouth of the Bay.

Tides are semi-diurnal, and vary in height from 1.1 m. (3.6 ft.) at the Bay mouth to 1.4 m. (4.6 ft.) in the Upper Bay. The favorable cross section/length ratio of the Narragansett basin ensures reasonably good flushing rates in the Bay. Water temperatures range from 0.5° C to 24° C. During extreme conditions, the temperature of surface waters in the Bay can vary by as much as 10° C.

The climate of Narragansett Bay is influenced by these air masses: continental polar air from the subarctic, maritime tropical air from the Gulf of Mexico and maritime air from the Atlantic Ocean. Continental polar and maritime tropical airs exert the strongest influence because air flow is generally from the west. Mean air temperatures range between a July high of 68° to 71° F and a February low of 27° to 32° F. It has been estimated that Narragansett Bay lowers the summer mean maximum temperature in Providence by as much as 4° F, and exerts a similar moderating influence in the winter.

c. Biology

Narragansett Bay is a phytoplankton-based ecosystem whose waters teem with coastal and marine life. Salt marshes provide abundant food and shelter for the adults and young of many species of finfish and shellfish.

Major finfish species in the Bay include bluefish, striped bass, winter flounder, and tautog. In 1976, there were estimated to be about 1.8 million pounds of striped bass and about 0.6 million pounds of bluefish in the Bay. No estimates have been made for winter flounder or tautog. The Upper Bay and Mount Hope Bay are also important spawning areas for menhaden, whose population in the Bay exhibits marked cyclical variations.

The Bay bottom supports mussels, lobsters, and crabs, but by far the most important shellfish is the quahog, or hard-shell clam. Quahogs are abundant throughout the Bay, but the heaviest concentrations occur in the West Passage, Greenwich Bay, the Upper Bay, and the edges of the Providence River. Quahogs spawn from mid-June to mid-August, and feed on phytoplankton filtered from the water. Quahog biomass in the Bay is estimated at 37 million pounds.

Narragansett Bay is situated on the Atlantic Flyway for migrating birds, so that its native bird population is swelled each spring and fall by migratory species--including three kinds of hawks, warblers, and others--travelling between winter and summer habitat. Waterfowl congregate in coastal marshes around the Bay, where they winter or rest and feed before continuing south. The annual bird migrations are paralleled by annual migrations of the monarch butterfly.

2. The Island Sites

a. Northern Prudence Island

The terrain of northern Prudence Island has a low profile, with slopes of 3-15 percent and a maximum elevation of 70 feet (Fig. 3). The soils are gravelly, sandy, and silty loams. Isolated hummocks and a long north-south ridge of unconsolidated glacial material are among the island's notable land features, as well as extensive salt marshes. Aside from the marshes, the remaining shoreline consists of pebble beach, with a small sand beach on the western shore near Pine Hill Point.

Several hundred acres of pristine salt marsh occur in Sheep Pen Cove, Potter Cove, and Coggeshall Cove. These marshes serve as spawning areas for large populations of finfish and shellfish. Quahogs and menhaden are taken commercially offshore, with the annual value of the quahog catch estimated at \$2 million. The area also supports recreational quahogging and sport fisheries for bluefish, striped bass, sea trout, and tautog.

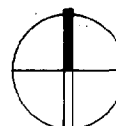
The salt marshes provide nesting habitat for clapper rail, seaside sparrow, and sharp-tailed sparrow, species limited to this habitat type. In addition, non-resident and migratory bird species--including snowy egret, great egret, black-crowned night heron, little blue heron, least tern, and various waterfowl species--feed in the marshes.

Northern Prudence uplands are covered with dense shrub growth of bayberry, highbush blueberry, and shadbush interspersed with red cedar, red maple, sapling oaks, and pitchpine. Deciduous forest, primarily mixed oak, is slowly replacing the shrub in some areas. These vegetated areas support large populations of small game species, including ring-necked pheasant, cottontail rabbit, grey squirrel, and red fox, as well a portion of the densest population of white-tailed deer in New England. The deer herd on the entire island is estimated at 400 animals.

FIGURE 3

PRUDENCE ISLAND

NORTH



Patience Island

Coggeshall Cove

Sheep Pen Cove

Potter Cove

Blount's oyster farm

Homestead

Sandy Point

LEGEND

18 ft. Depth Mark

Sandy Beaches

Wetlands - fresh

Wetlands - salt

Heritage Foundation Tract

Proposed Sanctuary - water

Proposed Sanctuary - land

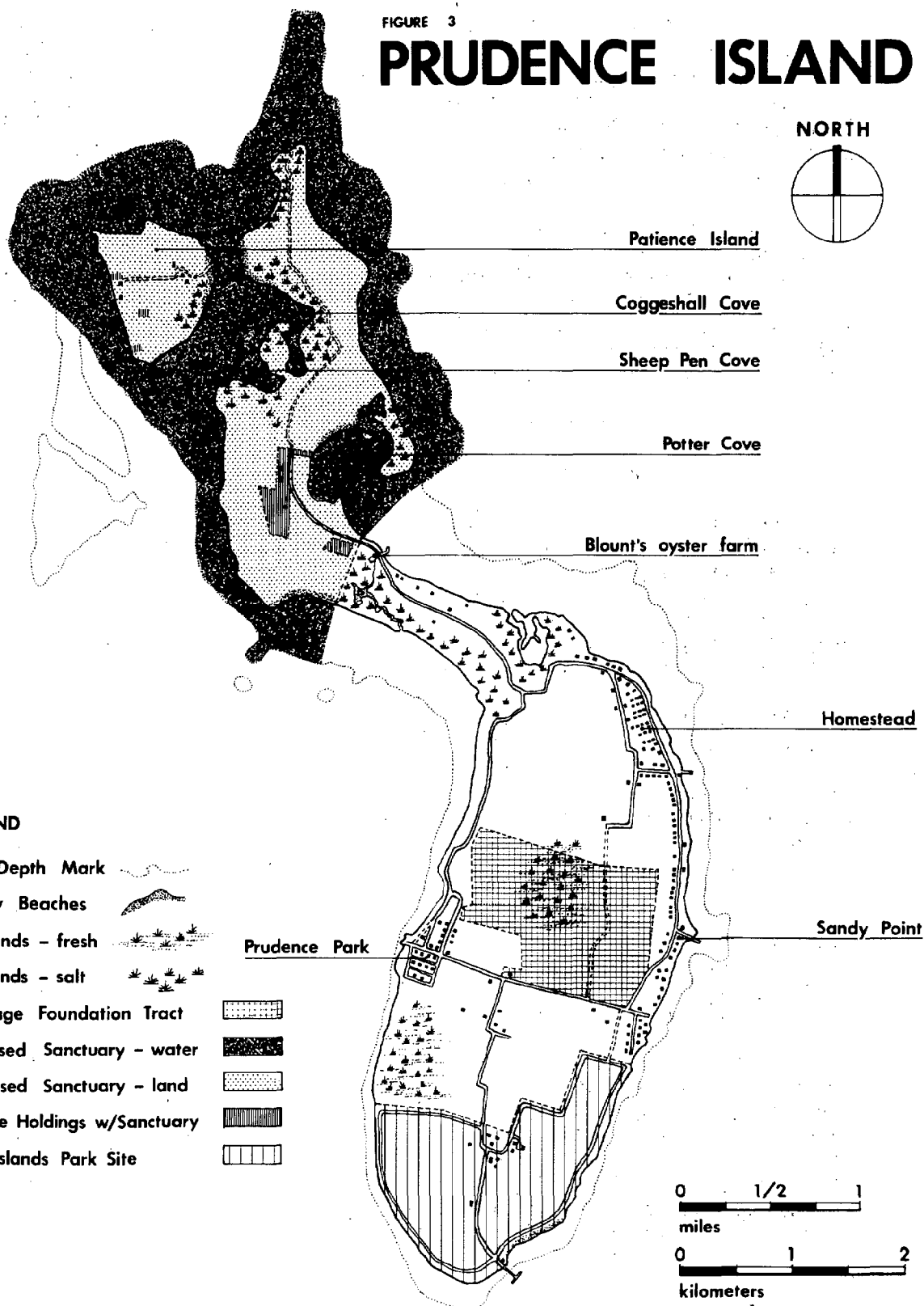
Private Holdings w/Sanctuary

Bay Islands Park Site

Prudence Park

0 1/2 1
miles

0 1 2
kilometers



b. Patience Island

Patience Island, 207 acres in size, lies to the west of northern Prudence (Fig. 4). At their closest point, the two islands are 900 feet apart. Patience has gentle topographic contours with a maximum elevation of 50 feet. The shoreline is primarily pebble beach, with a small sand beach and adjacent salt marsh on the eastern side of the island. This salt marsh contains the seablite (suada maritima)--a plant species found only in salt marshes--which has been found in only three other Rhode Island locations.

The soils on Patience Island are silty loams with good drainage. Upland vegetation includes dense concentrations of tall shrubs interspersed with red cedar in the overstory. Dominant shrubs include bayberry, highbush blueberry, shadbush, poison ivy, and European bittersweet. Deciduous forest is gradually replacing the shrub habitat in some parts of the island.

The uplands support populations of red fox, cottontail rabbit, and ring-necked pheasant. Cove areas along the coastline are used extensively as feeding areas by migrant and wintering waterfowl species. Common loon and horned grebe occur frequently, as do greater scaup, canvasback, great comorant, black duck, and scoters.

c. Hope Island

Hope Island, 92 acres in size, is located 3 miles south of Patience Island and 1.5 miles west of Prudence Island (Fig. 5). Rhode Island acquired Hope Island in 1975 when it was abandoned as surplus property by the Navy, which had used it as an ammunition depot during World War II. The bunkers, perimeter road, and telephone poles on the island are remnants of this use.

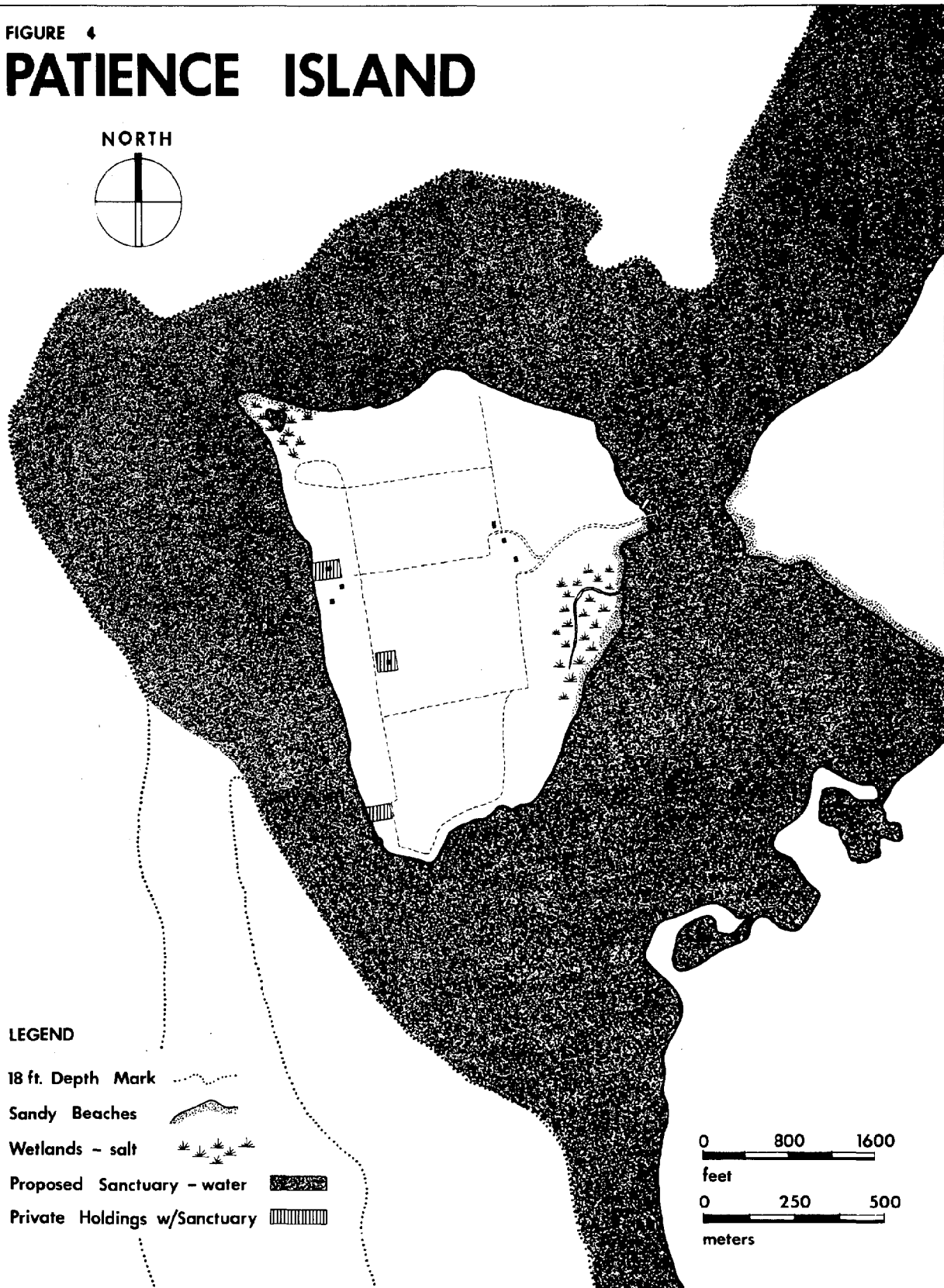
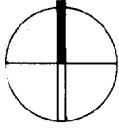
Hope's topography is very irregular, with numerous low hills, ledges, and rock outcrops. Maximum elevation is 60 feet. The shoreline is generally steep and rocky. Two small freshwater wetlands exist in depressions in the north central and south central portions of the island.

Vegetation on Hope Island consists of grasses, sedges and low shrubs of bayberry, rose, and poison ivy. The center of the island contains tall shrubs and sapling trees, including red cedar, staghorn sumac, shadbush, and black cherry. The dense vegetation on Hope Island is utilized by small game species, especially cottontail rabbit. The island is also valuable as a stopover point for migrating birds, including many kinds of warblers, vireos, and sparrows.

FIGURE 4

PATIENCE ISLAND

NORTH



LEGEND

18 ft. Depth Mark



Sandy Beaches



Wetlands - salt



Proposed Sanctuary - water



Private Holdings w/Sanctuary



0 800 1600

feet

0 250 500

meters

FIGURE 5

HOPE ISLAND

LEGEND

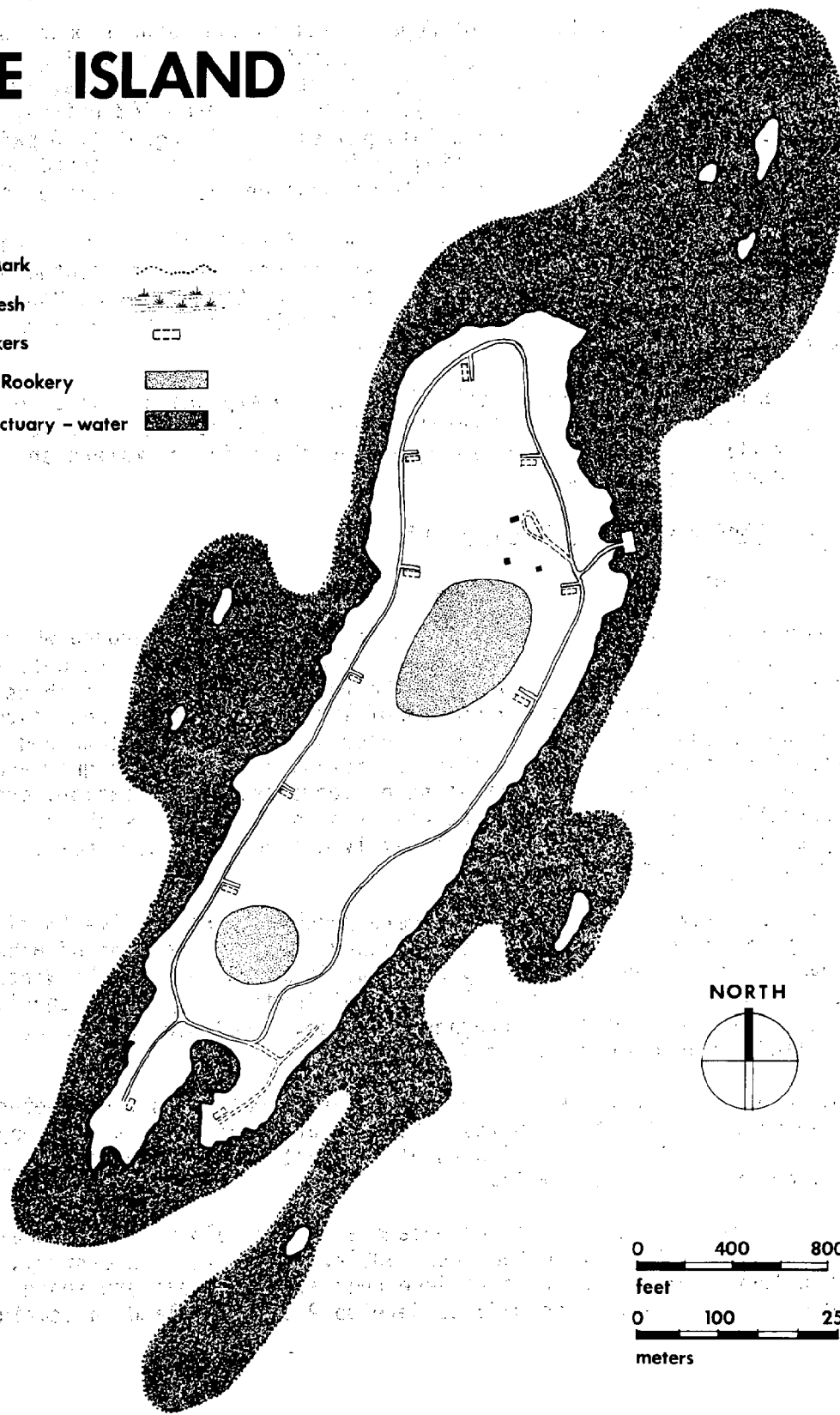
18 ft. Depth Mark

Wetlands - fresh

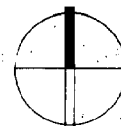
Concrete Bunkers

Wading Bird Rookery

Proposed Sanctuary - water



NORTH



0 400 800

feet

0 100 250

meters

The most important feature of Hope Island is the large rookery of wading birds, one of the most significant nesting areas for wading birds on the East Coast. There are currently an estimated 1,000 pairs, including black-crowned night heron (382 pairs), little blue heron (43 pairs), great egret (6 pairs), snowy egret (318 pairs), cattle egret (120 pairs), and glossy ibis (140 pairs). Herring gulls and great black-backed gulls also nest on Hope Island, and common terns nest on exposed rocks offshore.

Ospreys, which are not now found on Hope Island, are starting to reestablish themselves in the estuaries and coastal areas of southern New England. In the future, ospreys may establish nesting sites on Hope Island. To encourage this, Rhode Island may leave standing some of the telephone poles installed on Hope Island by the Navy.

Wintering harbor seals occasionally use the exposed offshore rocks as haulout and resting sites. Soft-shell clams, lobster, bluefish, striped bass, flounder, sea trout, and tautog are abundant in the waters and bottoms around Hope Island.

B. Human Uses of Narragansett Bay

1. History

Narragansett Bay has long provided the central theme around which much of the history and culture of Rhode Island is woven. Long before its first western visitor, Giovanni de Verrazzano, anchored his ships in Newport Harbor during the early spring of 1524, native Americans lived, hunted, and fished along its shores. Throughout the seventeenth and eighteenth centuries, as Roger Williams' colony of dissidents grew and prospered, the Bay remained a lifeline of commerce, communication, and transportation. All the early settlements huddled along its shores. The colony's political and cultural life revolved around the port towns of Newport and Providence.

The majority of the Bay islands were purchased from native Americans at a very early point in the state's history. Major purchases of Hope, Fox, Dyer, and Prudence Islands by Roger Williams, Governor John Winthrop of Massachusetts, and Governor Caleb Carr of Rhode Island were negotiated with Chief Canonicus of the Narragansett tribe. Prudence, Patience, and Hope Islands were named by Roger Williams.

Most of the islands were cleared and farmed well into the nineteenth and even early twentieth centuries. Conanicut, Aquidneck, and Prudence Islands supported thriving agricultural communities. Archaeologically significant traces still remain.

The middle of Prudence Island became a summer colony for the wealthy of Providence and Bristol in the late 1800's. Early in this century, a summer colony of more modest homes developed along its eastern shore. Although proposals have been made to develop Patience Island, a combination

of factors--its poor access, poor soils, and lack of water--has kept it undeveloped except for the two summer homes it now has. The northern end of Prudence Island has remained undeveloped for the same reasons, but also because the land has been owned by a succession of people who wished to maintain it in its essentially undisturbed state. Hope Island is unsuitable for residential development.

2. Socioeconomic Characteristics

Although the smaller islands of Narragansett Bay have remained undeveloped, the shoreline has sustained intensive development, which began with the older cities and has since expanded outward. Industry and trade clustered around the Bay and its tributaries following the growth of population in these areas and the concurrent growth of pools of skilled labor. About 700,000 people currently live in Rhode Island and Massachusetts communities bordering the Bay (554,000 in Rhode Island, and 146,000 in Massachusetts). In Rhode Island, these towns and cities comprise about 60 percent of the entire State population. All of these communities are located within 15 miles of the proposed sanctuary. The two largest cities--Providence, R.I., and Fall River, Mass.--are both located 12 miles from the island sites.

a. Rhode Island

Narragansett Bay's strategic location and excellent harbors led to its early use as a base for U.S. Navy operations. The Navy was formerly the largest single employer in Rhode Island, and produced the highest level of dollar output directly attributable to the Bay. Following the closure of major Navy bases in the Bay during 1974-77, Rhode Island's population fell from 950,000 in 1970 to 935,000 in 1978. Total State population is now stable, but considerable growth is occurring in some parts of the State as people continue to move out of the older cities. Since World War II, cities such as Central Falls, Newport, Providence, Pawtucket, and Woonsocket have lost population, while towns such as Coventry, Cumberland, East Greenwich, Middletown, Narragansett, North Kingstown, Portsmouth, Smithfield, and South Kingstown have gained in population and new development.

Per capita income in Rhode Island has been growing more slowly than in the Nation as a whole. In 1975, Rhode Island's per capita income (\$5,709) was 97.4 percent of the nationwide per-capita income (\$5,861), placing Rhode Island twenty-sixth among the fifty States.

Unemployment in Rhode Island reached a peak of 11.1 percent in 1975 due to the closing of the Naval bases and the nationwide recession of 1974-75. Though Rhode Island's unemployment rate remains higher than the national average, the gap is narrowing. In 1978, Rhode Island's unemployment rate stood at 6.7 percent, compared with a national average of 6.0 percent.

b. Portsmouth

The proposed estuarine sanctuary is located within the Town of Portsmouth. The town economy, heavily dependent on a nearby Naval base, suffered severely when the base closed in 1974. Since then, Portsmouth has diversified its economic base. While the total number of jobs in Portsmouth remained almost unchanged from 1970 to 1975, it increased by 25 percent between 1975 and 1977. Major employers include firms devoted to electronics, boat building, wire manufacturing, and regional distribution of lumber products.

3. Current Uses of Narragansett Bay

The lands around Narragansett Bay are used for intensive residential, industrial, and commercial development, including the urban areas of Warwick, Providence, Bristol, Fall River, and Tiverton. The former Navy base at Quonset/Davisville (3 miles west of northern Prudence and Patience Islands, and 1.5 miles from Hope Island) is being redeveloped as a major industrial area. It houses the main support base for outer continental shelf oil and gas exploration in the Mid and North Atlantic areas. The existing airport at Quonset/Davisville is being expanded, and its flight path passes directly over Hope Island.

Narragansett Bay itself supports extensive commercial shipping, sport and commercial fishing, and recreational boating.

a. Commercial Shipping

Passages between the islands of Narragansett Bay are sufficiently deep to permit the navigation of large ships. Channel dredging is necessary only at the mouth of the Providence and Taunton Rivers. Major ports in Narragansett Bay are Providence and East Providence at the head of the Bay, and Fall River and Tiverton in Mount Hope Bay. The value of the imports passing through the Bay in 1975 was more than \$1 billion, with petroleum products the major import. The principal shipping channel to these four ports passes 1.5 miles to the east of North Prudence Island.

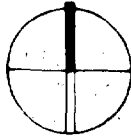
b. Commercial and Sport Fishing

The Bay supports a rich sport fishery. The main sportfish catches are striped bass, bluefish, winter flounder, and tautog. With the exception of two commercial menhaden seining vessels, there is no commercial finfishing in the vicinity of the proposed sanctuary. Limited commercial trawling takes place in the Bay to the south of the proposed sanctuary (See Fig. 6).

FIGURE 6

NARRAGANSETT BAY FISHERY & SHELLFISHERY RESTRICTIONS

NORTH



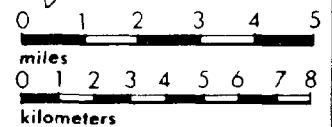
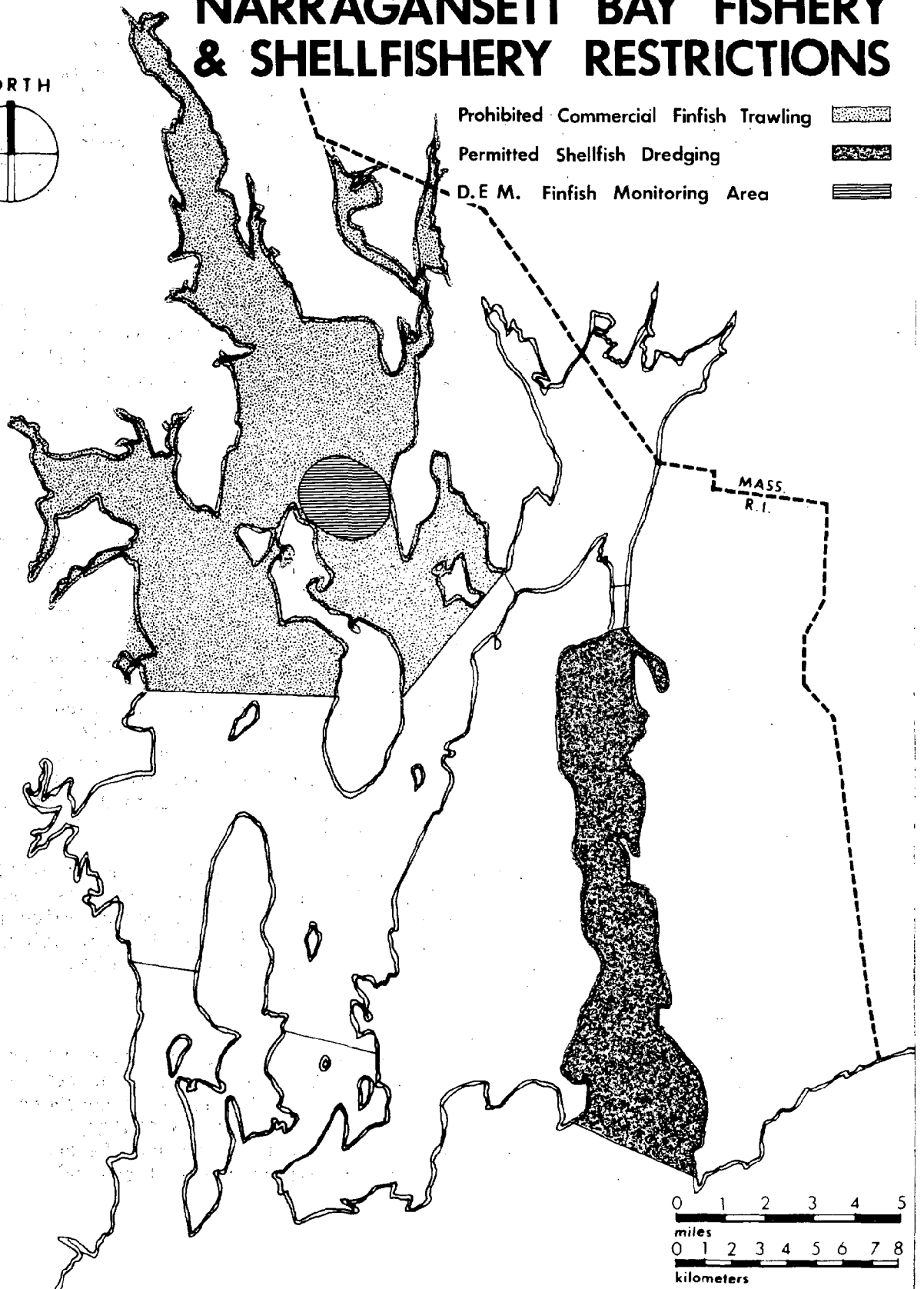
Prohibited Commercial Finfish Trawling



Permitted Shellfish Dredging



D.E.M. Finfish Monitoring Area



By far the most important commercial fishery in the Bay is for quahogs, or hard-shell clams. The Upper Bay contains some of the most productive quahog beds in the Bay. Total catch in 1978 was 2 million pounds, valued at \$4.3 million. There are currently 300 full-time and 1,600 part-time quahoggers working the Bay. This fishery has been affected by water quality problems in the Upper Bay, which have resulted in permanent or conditional closure of significant portions of the potential shellfishing area.

c. Recreational Boating

There are about 28,000 recreational boats registered in Rhode Island in 1980, many of which are used in the Bay, as well as numerous boats from adjoining states. There are 50 private and 49 public boating facilities in Narragansett Bay or its tributaries. Recreational boating use is heavy in all parts of the Bay, while Newport, at the mouth of the Bay, is a center for international boating events such as the America's Cup races and the Newport-Bermuda race.

4. Water Quality

Water quality in most of Narragansett Bay is excellent, with 92 percent of the Bay classified as SA (highest) or SB (second highest). The main exception is the Upper Bay, whose waters are polluted by inadequately treated sewage from Providence, and combined sewer overflows from Providence, Pawtucket, and Central Falls during storms. Waters from the Providence River south to Gaspee Point are classified as SC, while the waters south from there to a line drawn connecting Rocky Point and Rumstick Point are classified as SB. North of this line, the Bay is permanently closed to shellfishing; south of this line to a line connecting Warwick Point, Providence Point on the northern tip of Prudence Island and Popasquash Point, the waters are conditionally open for shellfishing, except that this conditional area is closed whenever rainfall of more than 0.5 inches occurs during any 24-hour period (See Fig. 7).

Thus, the proposed estuarine sanctuary is just south of the transitional water quality zone in Narragansett Bay. The waters to the east, west, and south are classified SA (except Potter Cove on northern Prudence, which is classified SB during the summer because of pollution from the recreational boats anchoring there), while those to the north are classified SB.

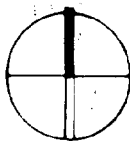
5. Land Use

Of Prudence Island's 3,490 acres, about 1,327 acres on the northern and southern ends of the island are owned by the State, while the remaining 2,163 acres are in private ownership. Within the 737 acres on northern Prudence Island proposed for inclusion in the estuarine sanctuary, there are two privately owned parcels, amounting to 34 acres. Several hundred private homes are located along the eastern shore of central

FIGURE 7

NARRAGANSETT BAY SHELLFISH CLOSURE AREAS

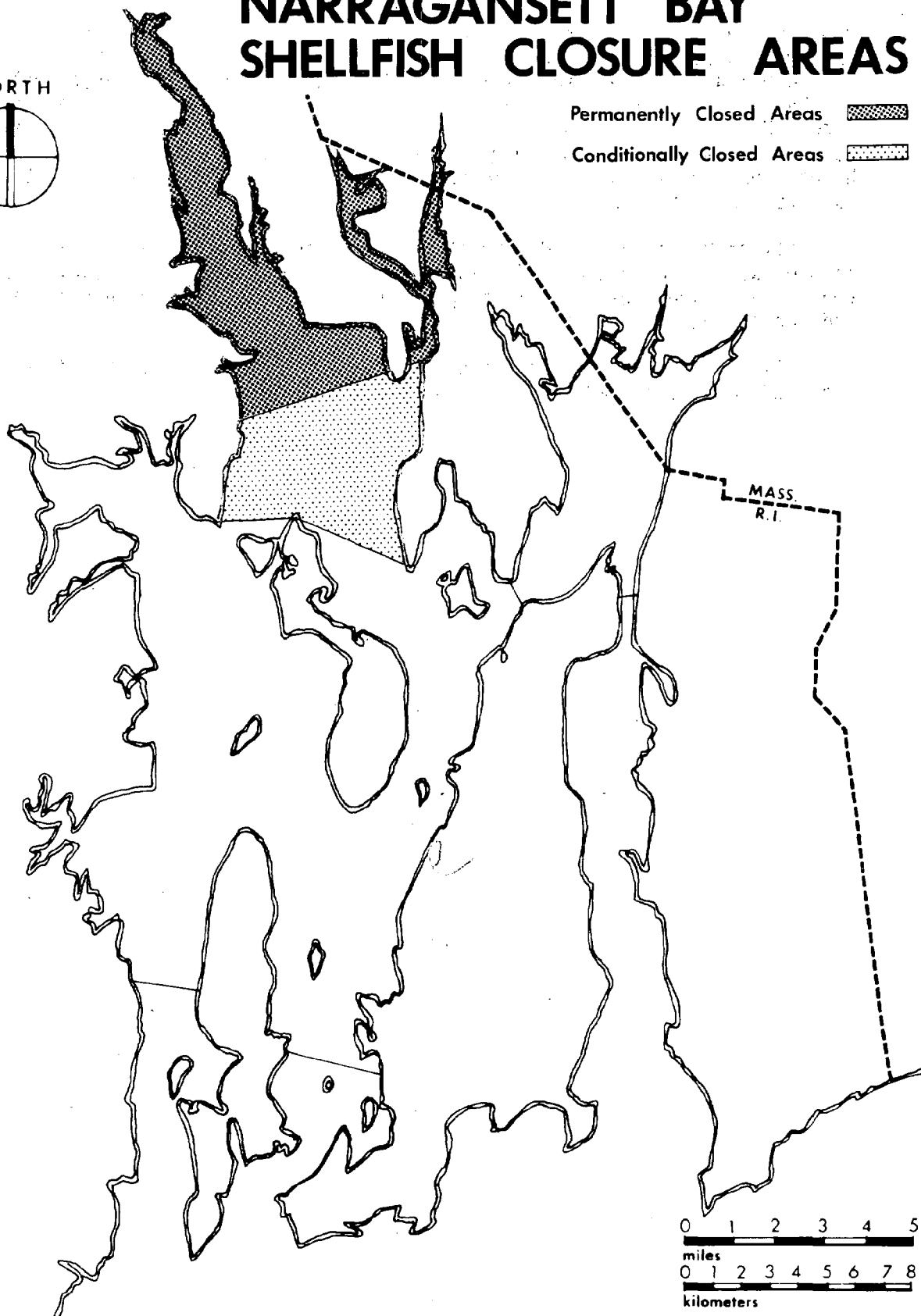
NORTH



Permanently Closed Areas



Conditionally Closed Areas



Prudence, while the interior of the island is generally divided into larger parcels of 100-300 acres. One 300-acre parcel is owned by the Heritage Foundation of Rhode Island, and protected for use and enjoyment by the general public. Hunting is not permitted on the Heritage Foundation land. Prudence has a year-round population of about 50, while the summer population is about 1,000. Many people have winterized their summer homes, and now use them on weekends throughout the year, or rent them to hunters during the hunting season.

All of Patience Island, except for 2 houses and 4 surrounding acres, is proposed to be purchased for inclusion in the estuarine sanctuary. The two private owners will continue to use their homes primarily in the summer and during the hunting seasons.

All of Hope Island is owned by the State, and the entire island is proposed to be included in the estuarine sanctuary.

PART V: LIST OF PREPARERS

Franklin D. Christhilf - U. S. Department of Commerce

Mr. Christhilf holds both the B.E. and M.L.A. degrees and has an extensive background in administration, particularly in the area of public policy. His background includes working as a professional engineer, as well as surveyor, and eight years experience as a member of a standing committee of the Arlington County Planning Commission, Arlington, Virginia.

Primary responsibility in the preparation of this FEIS included overall direction, organization, and preparation of the report for publication. Mr. Christhilf had assistance from Mr. James W. MacFarland, Estuarine Sanctuary Program Manager, Ms. Gloria D. Thompson, Program Support Assistant, Ms. Christina Terpak and Mr. Gerard Milne, Summer Interns, all with the Estuarine Sanctuary Program Office, in preparing responses to comments received on the DEIS.

Trevor Q. O'Neill - U.S. Department of Commerce

Mr. O'Neill has a B.A. in Earth Sciences, and was an environmental analyst with the Estuarine Sanctuary Program Office. Mr. O'Neill has worked on coastal energy and planning projects for the New England River Basins Commission, the Governor's Office of Planning and Research in California, the Resources Agency of California, and the California Coastal Commission. In 1975, Mr. O'Neill prepared Draft and Final Environmental Impact Statements for the Sapelo Island Estuarine Sanctuary in Georgia.

Mr. O'Neill prepared the Affected Environment section and other parts of this document on the basis of materials provided by the State of Rhode Island, with the assistance of James W. MacFarland, Frank D. Christhilf, Richard S. Weinstein and Gloria D. Thompson of the Estuarine Sanctuary Program Office.

Judith S. Benedict - Rhode Island Department of Environmental Management

Ms. Benedict has a B.A. in History and a Masters degree in City Planning. She is a planner with the Rhode Island Department of Environmental Management, and is currently preparing the management plan for the Bay Islands Park. Ms. Benedict has worked as a planner for the City of Ithaca, New York, and the Heritage Conservation and Recreation Service in Washington, D.C., and on coastal management issues for the national office of the League of Women Voters in Washington, D. C.

Ms. Benedict prepared most of the material for this document, with the assistance of Mr. Robert L. Bendick, Assistant Director for Administration, Mr. Victor A. Bell, Environmental Planner, and Mr. Donald Leighton, Landscape Architect, of Rhode Island's Department of Environmental Management; Mr. Richard Enser of the Rhode Island Heritage Program, Mr. Stephen Olsen of the University of Rhode Island's Coastal Resources Center, and Mr. Prentiss Stout of the URI Sea Grant Marine Advisory Service.

PART VI: LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS RECEIVING COPIES

Federal Agencies

Department of Army, Corps of Engineers
 Department of Commerce
 NOAA/Environmental Data and Information Service
 NOAA/National Marine Fisheries Service
 Department of Energy
 Department of Housing & Urban Development
 Department of the Interior
 Department of Transportation
 U.S. Coast Guard
 Environmental Protection Agency, Region I
 General Services Administration

Congressional

Honorable E. P. Beard
 Honorable John H. Chafee
 Honorable F. J. St. Germain
 Honorable Claiborne Pell
 Honorable Gardner Seveney

State Agencies

Portsmouth Town Council
 Prudence Improvement Association
 Prudence Island Police Department
 Prudence Park Homeowners Association
 State of Rhode Island & Providence Plantations, Department of Administration,
 Statewide Planning Program
 State of Rhode Island & Providence Plantations, Department of Environmental
 Management--Assistant Director for Operations, Division of Boating Safety,
 Division of Coastal Resources, Division of Enforcement, Division of Fish
 and Wildlife, Division of Parks and Recreation, Division of Planning
 and Development, Fish and Wildlife, and Water Quality
 State of Rhode Island & Providence Plantations, Executive Chambers
 State of Rhode Island & Providence Plantations, Historical Preservation
 Commission
 Town of Abington, Massachusetts
 Town of Portsmouth - Solicitor

Industrial Groups

Atlantic Richfield Company

State Interest Groups

Audubon Society of Rhode Island
 Coalition of Coastal Communities
 Conservation Law Foundation
 Rhode Island Lobsterman Association
 Rhode Island's Fisherman's Association
 Rhode Island Shellfisherman's Association, Inc.
 Save The Bay, Inc.

Residents

John Antaya	Stephen B. Leslie
Charlotte and Daniel Barrett	Dorothy Little
Beverley and Rick Bowen	Judith Little
Robert Curry	Jennifer Lowe
Donald D. Deignan	Kenneth Lowe
Margaret and Louis DePapa	T. W. Lyons, Jr.
Judith DiPrete	Marjorie Nuttall
Leonard DiPrete	Eric and Charlotte Olson
Mary Drew	Grafton and Audrey Rice
Marcy Dunbar	Linda Rice
Barbara Ellsworth	David and Mary Sargent
Sumner Ellsworth	Woody Sargent
Farnham Family	Captain and Mrs. Manuel Sausa
Cecilia and Daniel Finn	Andrew Scott
Mrs. Archie Friswell	Albert and Lillian Sims
Jean and Don Friswell	James T. Starke
Sandy Fyfe	Frederick and Margaret Stevenson
Mark Goldberg	Sandy Stevenson
Wallace E. Guertin	Grace Scott
Marie Hawkes	D. David Walker
Margaret and Robert Heile	Constance William
Paul Hoxsie	Dudley A. Williams
Albert Huftalen	George Williams
Richard E. Jenness	Carol K. Willin
Geraldine and Martin Johnson	Barbara and Charles Worcester
Ruth E. Just	Cynthia M. Worcester
Jannett C. Korchinsky	John Zompa
Mary and Douglas Lawrence	

Newspapers

Newport Daily News (David Corr)
 Providence Journal (Katherine Gregg)
 The Fall River Herald News (Curt Brown)

PART VII: APPENDICES

- I. Estuarine Sanctuary Program Guidelines
- II. Bay Island Park System
- III. Rhode Island Water Quality Standards
- IV. Educational Programs for the Proposed Estuarine Sanctuary
- V. Responses to Comments Received on the Narragansett Bay Draft Environmental Impact Statement

APPENDIX I

Estuarine Sanctuary Guidelines, 1974 and 1977

necessary to the objectives of the grant project. As used herein the terms "cost," and "grant project" pertain to both the Federal grant and the matching share. The allowability of cost will be determined in accordance with the provisions of FMC 74-4: Cost Principles applicable to Grants and Contracts with State and Local Governments, and with the guidance contained in section 920.42(b)(3).

(f) The Form SF-424, Application for Federal Assistance (Non-Construction Programs), constitutes the formal application and must be submitted 60 days prior to the desired grant beginning date. The application must be accompanied by evidence of compliance with A-95 requirements including the resolution of any problems raised by the proposed project. The Associate Administrator will not accept application substantially deficient in adherence to A-95 requirements.

(g) In Part IV, Program Narrative of the Form SF-424, the applicant should respond to the following requirements:

(1) Set forth a work program describing the activities to be undertaken during the grant period. This work program shall include:

(i) A precise description of each major task to be undertaken to resolve section 306 deficiencies, and a specific timetable for remedying these deficiencies;

(ii) A precise description of implementation activities for approved management components, including a demonstration that these implementation funds will not be applied outside the approved coastal management boundaries;

(iii) A precise description of any other tasks necessary for and allowable under subsection 305(d);

(iv) For each task, identify any "Other Entities," as defined in the "Manual," that will be allocated responsibility for carrying out all or portions of the task, and indicate the estimated cost of the subcontract for each allocation. Identify, if any, that portion of the task that will be carried out under contract with consultants and indicate the estimated cost of such contract(s); and

Title 15—Commerce and Foreign Trade

(v) For each task, indicate the estimated total cost. Also, indicate the estimated total months of effort, if any, allocated to the task from the applicant's staff.

(2) The sum of all task costs in the above paragraph should equal the total estimated grant project cost.

(3) Using two categories, Professional and Clerical, indicate the total number of personnel in each category on the applicant's staff that will be assigned to the grant project. Also indicate the number assigned full time and the number assigned less than full time in the two categories. Additionally, indicate the number of new positions created in the two categories as a result of the grant project.

PART 921—ESTUARINE SANCTUARY GUIDELINES

Subpart A—General

Sec.

921.1 Policy and objectives.

921.2 Definitions.

921.3 Objectives and Implementation of the program.

921.4 Biogeographic classification.

921.5 Multiple use.

921.6 Relationship to other provisions of the Act and to marine sanctuaries.

Subpart B—Application for Grants

921.10 General.

921.11 Application for initial acquisition, development and operation grants.

921.12 Application for subsequent development and operation grants.

921.13 Federally owned lands.

921.14 Application time schedule and procedure.

Subpart C—Selection Criteria

921.20 Criteria for selection.

921.21 Public participation.

Subpart D—Operation

921.30 General.

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

921.32 Program review.

Authority: Sec. 312, Pub. L. 92-583, as amended; 86 Stat. 1280 (16 USC 1461).

Source: 39 FR 19924, June 4, 1974, unless otherwise noted.

Chapter IX—National Oceanic, Atmospheric Adm.

§ 921.3 Objectives and Implementation of the program.

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

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

(2) To make baseline ecological measurements.

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

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

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

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

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

Subpart A—General

§ 921.1 Policy and Objectives.

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

§ 921.2 Definitions.

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

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

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

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

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

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

§ 921.4 Biogeographic classification.

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

1. *Arcadian*. Northeast Atlantic coast south to Cape Cod, glaciated shoreline subject to winter icing; well developed algal flora; boreal biota.
2. *Virginian*. Middle Atlantic coast from Cape Cod to Cape Hatteras; lowland streams, coastal marshes and muddy bottoms; characteristics transitional between 1 and 3; biota primarily temperate with some boreal representatives.
3. *Carolinian*. South Atlantic coast, from Cape Hatteras to Cape Kennedy; extensive marshes and swamps; waters turbid and productive; biota temperate with seasonal tropical elements.
4. *West Indian*. South Florida coast from Cape Kennedy to Cedar Key, and Caribbean Islands; shoreland low-lying limestone; cal-

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careous sands, marls and coral reefs; coastal marshes and mangroves; tropical biota.

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

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

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

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

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

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

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

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

§ 921.5 Multiple use.

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

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zone management and resource use and may on occasion be necessary.

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

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

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

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

occasion may establish marine sanctuaries to complement the designation by States of estuarine sanctuaries, where this may be mutually beneficial.

Subpart B—Application for Grants

§ 921.10 General.

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

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

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

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

(c) Development and operation costs may include the administrative expenses necessary to monitor the sanctuary, to ensure its continued viability

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and to protect the integrity of the ecosystem. Research will not normally be funded by Section 312 grants. It is anticipated that other sources of Federal, State and private funds will be available for research in estuarine sanctuaries.

(d) Initial applications should contain the following information:

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

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

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

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

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

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

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

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

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

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

(10) List of protected sites, either within the estuarine sanctuaries pro-

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gram or within other Federal, State or private programs, which are located in the same regional or biogeographic classification.

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

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

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

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

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

§ 921.12 Application for subsequent development and operation grants.

(a) Although the initial grant application for creation of an estuarine sanctuary should include initial development and operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional development and operation costs. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary

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and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 312 grants.

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

(1) Identification of the boundary.

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

(3) Detailed budget.

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

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

§ 921.13 Federally owned lands.

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

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

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

§ 921.14 Application time schedule and procedure.

(a) Effective January 1, 1975, the review and selection of estuarine sanctuary applications will be conducted on a twice yearly basis. All applica-

tions received between January 1 and June 30 of any year will be considered together beginning July 1 of that year; applications received between July 1 and December 31 will be considered together beginning January 1 of the following year.

(b) All applications received during any application period will be subject to simultaneous review and consideration. At the end of each application period, a suitable number of applications, based on the level of funding available, will be selected for further review and processing. Unless sufficiently distinguished as major subcategories, no more than one application from each biogeographic category will be selected for final processing during each review period. Normally, the applications selected will be processed and the grants awarded within 6 months from the end of the application period, that is before the next review period begins. Applications which are not selected for processing may be resubmitted for consideration during the next review period.

(c) At least ninety (90) days prior to submission of an application under this section, an applicant state must notify in writing the OCSM, appropriate state and regional A-95 clearinghouses, and other states within the same biogeographic category (see Table 1) of its intention to file an application for an estuarine sanctuary grant. Such notification should include at least the identification of the state agency applying for the grant; the geographic location of the proposed sanctuary and its boundaries; proposed objectives of the sanctuary, including intended research uses; estimated cost of sanctuary; and estimated date for submission of application. Copies of the A-95 notifications to the state and regional clearinghouse would be considered sufficient and desirable notification to OCSM and to the other states.

TABLE 1—LIST OF STATES BY BIOGEOGRAPHIC CLASSIFICATION

1. Acadian—Maine, New Hampshire, Massachusetts.
2. Virginian—Massachusetts, Rhode Island, Connecticut, New York, New Jersey.

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Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Puerto Rico, West Indian—Florida, Mississippi, Alabama, Louisiana—Florida, Mississippi, Alabama, California—California, Oregon, Washington, Sub-Arctic—Alaska, Insular—Hawaii, Guam, American Samoa, Great Lakes—Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, New York.

(d) The Director of OCZM may, upon the finding of extenuating circumstances relating to applications for assistance, waive appropriate administrative requirements contained herein.

[39 FR 45214, Dec. 31, 1974]

Subpart C—Selection Criteria

§ 921.20 Criteria for selection.

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

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

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

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

(d) Cost. Although the Act limits the Federal share of the cost for each sanctuary to \$2,000,000, it is anticipated

ed that in practice the average grant will be substantially less than this.

(e) Enhancement of non-competitive uses.

(f) Proximity and access to existing research facilities.

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

(h) Conflict with existing or potential competing uses.

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

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

§ 921.21 Public participation.

Public participation will be an essential factor in the selection of estuarine sanctuaries. In addition to the participation during the application development process (§ 921.11(e)), public participation will be ensured at the Federal level by the NEPA process and by public hearings where desirable subsequent to NEPA. Such public hearings shall be held by the Office of Coastal Zone Management in the area to be affected by the proposed sanctuary no sooner than 30 days after it issues a draft environmental impact statement on the sanctuary proposal. It will be the responsibility of the Office of Coastal Zone Management, with the assistance of the applicant State, to issue adequate public notice of its intention to hold a public hearing. Such public notice shall be distributed widely, especially in the area of the proposed sanctuary; affected property owners and those agencies, organizations or individuals with an identified interest in the area or estuarine sanc-

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tuary program shall be notified of the public hearing. The public notice shall contain the name, address and phone number of the appropriate Federal and State officials to contact for additional information about the proposal.

Subpart D—Operation

§ 921.30 General.

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

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

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

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

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

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

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

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

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

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

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

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

§ 921.32 Program review.

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

PART 922—MARINE SANCTUARIES

Subpart A—General

Sec.

922.1 Policy and objectives.

922.2 Programmatic objectives.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric
Administration

[15 CFR Part 921]

ESTUARINE SANCTUARY GUIDELINES

Policies and Procedures for Selection

Acquisition and Management

AGENCY: National Oceanic and Atmos-
pheric Administration, Department of
Commerce.

ACTION: Proposed rule.

SUMMARY: This proposed rule will allow the National Oceanic and Atmospheric Administration to make a preliminary acquisition grant to a State to undertake a fair market value appraisal, and to develop a uniform relocation act plan, a detailed management plan and a research framework for a proposed estuarine sanctuary, developed pursuant to Section 315 of the Coastal Zone Management Act of 1972, as amended.

DATE: Comments must be received on or before October 1, 1977.

FOR FURTHER INFORMATION CON-
TACT:

Robert R. Kifer, Physical Scientist,
Policy and Programs Development Of-
fice, Office of Coastal Zone Manage-
ment, 3300 Whitehaven Parkway, Page
One Building, Washington, D.C. 20235
(202-634-4241).

SUPPLEMENTARY INFORMATION:
On June 4, 1974, The National Oceanic and Atmospheric Administration (NOAA) published 15 CFR Part 921 entitled, "Estuarine Sanctuary Guidelines" pursuant to then section 312 of the Coastal Zone Management Act of 1972, as amended, for the purpose of establishing policy and procedures for the selection, acquisition, and management of estuarine sanctuaries.

Under new subsection 315(1) of the Act, the Secretary of Commerce is authorized to make available to coastal States grants of up to 50 per centum of the cost of acquisition, development, and operation of estuarine sanctuaries. In general, subsection 315(1) provides that grants may be awarded to States on a matching basis to acquire, develop, and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time ecological relationships within the area. The purpose of these guidelines is to implement this program.

As a result of two years of program implementation, the regulations are proposed to be modified to specifically authorize the granting of acquisition money to States in two stages:

(i) An initial grant for such preliminary purposes, as surveying and assessing the land to be acquired, and the development of management procedures and research programs; and

(ii) A second grant for the actual acquisition of the land. The Federal share of the sum of the two grants shall not

exceed 50 percent of the acquisition costs involved. Any State receiving an initial grant shall be obligated to repay it, if, due to any fault of the State, the sanctuary is not established.

As a result of this new grant procedure, much more information relating to costs, values, management procedures, and research programs will be available at the time of the publication of a draft environmental impact statement. Proposals made public to date in the form of an Environmental Impact Statement (EIS) have been criticized for lack of specificity in these areas. By making a small preliminary acquisition grant to a State, the estuarine sanctuary proposal can be more fully developed and the public can become more aware of the costs and the exact nature of the long-term management.

In response to State questions about estuarine sanctuary research, the proposed regulations provide that such research can be funded if it can be shown to be related to program administration.

NOAA has reviewed these proposed regulations pursuant to the National Environmental Policy Act of 1969 and has determined that promulgation of these regulations will have no significant impact on the environment.

Compliance with Executive Order 11821. The economic and inflationary impact of these proposed regulations has been evaluated in accordance with OMB Circular A-107 and it has been determined that no major inflationary impact will result.

Dated: August 26, 1977.

T. P. GLEITER,
Assistant Administrator
for Administration.

It is proposed to amend 15 CFR Part 921 as follows:

(1) By revising the table of contents and authority citation to read as follows:

Subpart A—General	
Sec.	
921.1	Policy and objectives.
921.2	Definitions.
921.3	Objectives and implementation of the program.
921.4	Biogeographic classification.
921.5	Multiple use.
921.6	Relationship to other provisions of the Act and to marine sanctuaries.
Subpart B—Application for Grants	
921.10	General.
921.11	Application for preliminary acquisition grants.
921.12	Application for land acquisition grants.
921.13	Application for operational grants.
921.14	Federally-owned lands.
Subpart C—Selection Criteria	
921.20	Criteria for selection.
921.21	Public participation.
Subpart D—Operation	
921.30	General.
921.31	Changes in the sanctuary boundary, management policy, or research program.
921.32	Program review.

AUTHORITY: Sec. 315(1), Coastal Zone Management Act of 1972, as amended (90 Stat. 1030, (16 U.S.C. 1461) Pub. L. 94-370).

(2) By revising Subpart B—Application for Grants—as follows:

Subpart B—Application for Grants

§ 921.10 General.

Section 315 authorizes Federal grants to coastal States so that the States may establish sanctuaries according to regulations promulgated by the Secretary. Coastal States may file applications for grants with the Associate Administrator for Coastal Zone Management (OCZM), Office of Coastal Zone Management, Page 1, 3300 Whitehaven Parkway NW, Washington, D.C. 20235. That agency which has been certified to the Office of Coastal Zone Management as the entity responsible for administration of the State coastal zone management program may either submit an application directly, or must endorse and approve applications submitted by other agencies within the State.

§ 921.11 Application for preliminary acquisition grants.

(a) A grant may be awarded on a matching basis to cover costs necessary to preliminary actual acquisition of land. As match to the Federal grant, a State may use money, the cost of necessary services, the value of foregone revenue, and/or the value of land either already in its possession or acquired by the State specifically for use in the sanctuary. If the land to be used as match already is in the State's possession and is in a protected status, the State may use such land as match only to the extent of any revenue from the land foregone by the State in order to include it in the sanctuary. Application for a preliminary acquisition grant shall be made on form SF 424 application for Federal assistance (non-construction programs).

(b) A preliminary acquisition grant may be made for the defrayal of the cost of:

(1) An appraisal of the land, or of the value of any foregone use of the land, to be used in the sanctuary;

(2) The development of a Uniform Relocation Assistance and Real Property Acquisition Policies Act plan;

(3) The development of a sanctuary management plan;

(4) The development of a research and educational program; and/or,

(5) Such other activity of a preliminary nature as may be approved in writing by OCZM. Any grant made pursuant to this subsection shall be refunded by the State to whatever extent it has spent in relation to land not acquired for the sanctuary, and if OCZM requests such refund.

(c) The application should contain:

(1) Evidence that the State has conducted a scientific evaluation of its estuaries and selected one of those most representative.

(2) Description of the proposed sanctuary including location, proposed boundaries, and size. A map(s) should be included, as well as an aerial photograph if available.

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

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

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

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

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

(8) The manner in which the State solicited the views of interested parties.

(9) In addition to the standard A-95 review procedures, the grant application should be sent to the State Historic Preservation Office for comment to insure compliance with section 106 of the National Preservation Act of 1966.

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

§ 921.12 Application for land acquisition grants.

(a) Acquisition grants will be made to acquire land and facilities for estuarine sanctuaries that have been thoroughly described in a preliminary acquisition grant application, or where equivalent information is available. Application for an acquisition grant shall be made on SF 424 application for Federal assistance (construction program).

In general, lands acquired pursuant to this subsection are legitimate costs and their fair market value, developed according to Federal appraisal standards, may be included as match. The value of lands donated to the State and cash donations may also be used as match. If the State already owns land which is to be used in the sanctuary, the value of any use of the land foregone by the State in order to include such land in the sanctuary, capitalized over the next 20 years, may be used by the State as match. The value of lands purchased by a State within the boundaries of proposed sanctuaries while an application for a preliminary acquisition grant or land acquisition grant is being considered may also be used as match.

(b) An acquisition application should contain the following information:

(1) Description of any changes in proposed sanctuary from that presented in the preliminary acquisition grant application. If such an application has not been made, then, information equivalent to that required in such a grant application should be provided.

(2) Identification of ownership patterns, proportions of land already in the

public domain; fair market value appraisal and Uniform Relocation Act plan.

(3) Description of research programs, potential and committed research organizations or agencies, and benefits to the overall coastal zone management program.

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

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

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

(7) Discussion, including cost and feasibility of alternative methods for acquisition and protection of the area.

§ 921.13 Application for operation grants.

(a) Although an acquisition grant application for creation of an estuarine sanctuary should include initial operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional operational funds. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 315 grants.

(b) After the creation of an estuarine sanctuary established under this program, applications (Form SF 424) for Federal assistance (non-construction program), for such operational grants should include at least the following information:

(1) Identification of the boundary (map).

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

(3) Detailed budget.

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

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

§ 921.14 Federally-owned lands.

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

(b) Where such proposed use or control of Federally-owned lands would not

conflict with the Federal use of their lands, such cooperation and coordination is encouraged to the maximum extent feasible.

(c) Section 315 grants may not be awarded to Federally-owned lands; however, a similar status may be provided on a voluntary basis for Federally-owned lands under the provisions of the Federal Committee on Ecological Reserves program.

§ 921.20 [Amended]

(4) Subpart C—Selection Criteria—is amended by changing the first sentence in § 921.20 to read: "Applications for preliminary acquisition or land acquisition grants to establish estuarine sanctuaries will be reviewed and judged on criteria including:"

(5) Section 921.21 is revised, as follows:

§ 921.21 Public participation.

(a) Public participation in the selection of an estuarine sanctuary is required. In the selection process, the selecting entity (see § 921.10) shall seek the views of possibly affected landowners, local governments, and Federal agencies, and shall seek the views of possibly interested other parties and organizations. The latter would include, but need not be limited to, private citizens and business, social, and environmental organizations in the area of the site being considered for selection. This solicitation of views may be accomplished by whatever means the selecting entity deems appropriate, but shall include at least one public hearing in the area. Notice of such hearing shall include information as to the time, place, and subject matter, and shall be published in the principal area media. The hearing shall be held no sooner than 15 days following the publication of notice.

(b) The Office of Coastal Zone Management (OCZM) shall prepare draft and final environmental impact statements pertaining to the site finally selected for the estuarine sanctuary following public participation in the selection of that site, and shall distribute these as appropriate. OCZM may hold a public hearing in the area of such site at which both the draft environmental impact statement (DEIS) and the merits of the site selection may be addressed by those in attendance. OCZM shall hold such a hearing if: (1) In its view, the DEIS is controversial, or (2) if there appears to be a need for further informing the public with regard to either the DEIS or one or more aspects of the site selected, or (3) if such a hearing is requested in writing (to either the selecting entity or (CZM) by an affected or interested party, or (4) for other good cause. If held, such hearing shall be held no sooner than 30 days following the issuance of the DEIS and no sooner than 15 days after appropriate notice of such hearing has been given in the area by OCZM with the assistance of the selecting entity.

[FR Doc.77-26123 Filed 9-8-77;8:45 am]

APPENDIX II

Bay Island Park System

Although the idea of a Bay Islands Park has been discussed for more than a decade, the Park received its first official recognition with the appearance in 1976 of The Bay Islands Park: A Marine Recreation Plan for the State of Rhode Island, prepared by the University of Rhode Island's Coastal Resources Center and the Department of Environmental Management. This report created a conceptual framework for the Park's development, and recommended that the State acquire several key parcels. Since then, Rhode Island has acquired 624 acres on southern Prudence Island and 186 acres at Beavertail from the U.S. Department of the Interior's Heritage Conservation and Recreation Service, has purchased or received through donation more than 700 acres on northern Prudence Island, and hopes to purchase Patience Island later in 1980.

By the fall of 1980, then, Rhode Island will own 2,185 acres on six islands in Narragansett Bay. The sites, their acreage, and their current status are listed in the following chart:

<u>Site</u>	<u>Island Location</u>	<u>Acreage</u>	<u>Current Status</u>
Southern Prudence	Prudence Island	624	Park Planning
Northern Prudence	Prudence Island	728	Park Planning; Management Area
Patience	Patience Island	207	To Be Acquired
Hope	Hope Island	94	Park; Management Area
Fort Adams	Aquidneck Island	132	Master Plan Complete; Development Underway; Completion Date 1985
Brenton Point	Aquidneck Island	53	State Park
Fort Wetherill	Conanicut Island	51	State Park
Beavertail	Conanicut Island	186	Master Plan Complete; Development Underway; Completion Date 1985
Dutch	Dutch Island	110	Park Planning; Management Area

These nine sites vary considerably in both natural character and the cultural legacy reflecting past human use of each island. Development of the Park will emphasize and enhance that variety, so that within the Park people can experience a wide range of recreational and cultural opportunities: historic fortifications at Fort Adams, open ocean coastline at Brenton Point, Fort Wetherill and Beavertail, or the solitude and wildlife of northern Prudence, Patience, and Hope Islands.

Four of the sites -- Fort Adams, Fort Wetherill, Brenton Point, and Beavertail -- can be reached by car, and are already completed parks or under development. Public transportation will be provided to the other five sites, which can only be reached by boat. Current plans call for a ferry system that will link southern Prudence to Providence, Newport, North Kingstown, and Portsmouth. Transportation to Patience and Hope Islands will be provided from southern Prudence, and Dutch Island will be accessible from Jamestown (Fort Getty).

The chart on the following page indicates the activities proposed for each site. Solid black circles indicate activities which will be permitted at each site. Partially filled circles indicate activities for which decisions are pending. The absence of a circle signifies that the activity will not be permitted at that site. Southern Prudence, as the center for the Park and the proposed estuarine sanctuary, is expected to have the greatest number of visitors and the broadest range of activities. Northern Prudence, Patience, and Hope Islands, which would constitute the proposed estuarine sanctuary, will have fewer visitors, and the major activities will be interpretative education programs.

BAY ISLANDS PARK SITES

PROPOSED ACTIVITIES	South Prudence	North Prudence	Patience	Hope	Dutch	Gould	Beaver tail	Ft. Wetherill*	Ft. Adams*	Brenton Pt.*
Picnicking (Tables)	●	●			●		●	●	●	●
Tent Camping	●		●		●					
Group Camping	●		●							
Hostel	●									
Hiking	●	●	●		●		●	●	●	●
Birdwatching	●	●	●	●	●	●	●	●	●	●
Swimming	●	●	●						●	
Skin Diving					●		●	●		●
Scuba Diving					●		●	●		●
Bicycling	●						●			
Fishing	●	●	●		●		●	●	●	●
Boat Rental										
Open Space (Informal Field)	●		●						●	●
Env. Education	●	●		●	●		●		●	●
Historical Interpretation		●			●				●	
Scientific Research		●	●	●						
SUPPORT SERVICES										
Infor. Center	●	●			●		●		●	●
Restrooms	●	●	●		●		●	●	●	●
Trash Pickup	●						●	●	●	●
Communications	●									
Resident Caretaker	●	●			●				●	
Private Boat Access	●	●	●		●				●	
Camp Store	●								●	

*Existing Activities

APPENDIX III

Rhode Island Water Quality Standards

Rhode Island Water Quality Standards -- Sea Water

<u>Criterion</u>	<u>Class SA/SAm</u>	<u>Class SB</u>	<u>Class SC</u>
1. Dissolved oxygen	Not less than 6.0 mg/l at any time.	Not less than 5.0 mg/l at any time.	Not less than 5mg/l during at least 16 hours of any 24-hour period for less than 4 mg/l at any time.
2. Sludge deposits-solid refuse-floating solids-oils-grease-scum	None allowable	None allowable	None except that amount that may result from the discharge from a waste treatment facility providing appropriate treatment.
3. Color and turbidity	None in such concentrations that would impair any usages specifically assigned to this Class.	None in such concentrations that would impair any usages specifically assigned to this Class.	None in such concentrations that would impair any usages specifically assigned to this Class.
4. Coliform bacteria per 100 ml	Not to exceed a median MPN of 70 and not more than 10% of the samples shall ordinarily exceed an MPN of 230 for a 5-tube decimal dilution or 330 for a 3-tube decimal dilution.	Not to exceed a median value of 700 and not more than 2300 in more than 10% of the samples.	None in such concentrations that would impair any usages specifically assigned to this Class.
5. Fecal coliform bacteria/100 ml	A median of 15 per 100 ml in not more than 10% of the samples exceeding 50 per 100 ml.*	A median value of 50 per 100 ml and not more than 500 per 100 ml in 10% of the samples collected.*	

*Guide, pending further research.

Rhode Island Water Quality Standards -- Sea Water

Criterion

Class SA/SAm

Class SB

Class SC

6. Taste and odor

None allowable

None in such concentrations that would impair any usages specifically assigned to this Class and none that would cause taste and odor in edible fish or shellfish.

None in such concentrations that would impair any usages specifically assigned to this Class and none that would cause taste and odor in edible fish or shellfish.

7. pH

6.8 - 8.5

6.8 - 8.5

6.5 - 8.5

8. Temperature increase:

None except where the increase will not exceed the recommended limit on the most sensitive receiving water use and in no case exceed 83 degrees F or in any case raise the normal temperature more than 1.5 degrees F, 15 June through September and not more than 4 degrees F from October through 15 June. All measurements shall be made at the boundary of such mixing zones as is found to be reasonable by the Director.

9. Chemical constituents

None in concentrations or combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish or shellfish or their propagation, impair the palatability of same, or impair the waters for any other uses.

None in concentrations of combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish or shellfish or their propagation, or impair the water for any other usage assigned to this Class.

None in concentrations or combinations which would be harmful to human, animal or aquatic life or which would make the waters unsafe or unsuitable for fish or shellfish or their propagation, or impair the water for any other usage assigned to this Class.

APPENDIX IV

Educational Programs for the Proposed Estuarine Sanctuary

Educational Programs for the Proposed Estuarine Sanctuary
(Prepared by the State of Rhode Island)

Rhode Island students have a strong marine awareness, accomplished through the efforts of individual teachers, assisted by the Marine Education Specialist at the University of Rhode Island's Marine Advisory Service. Almost every school in Rhode Island has had at least one lecture sponsored by the Rhode Island Coastal Resources Management Council and managed by the Marine Advisory Service. During various workshops and field days, many Rhode Island teachers have been instructed on methods of incorporating the marine world into their teaching. A genuine interest is present, and in view of the growing number of inquiries from the Rhode Island educational community, we anticipate a continuing strong interest in the marine world.

Establishment of the proposed sanctuary would significantly increase public understanding of estuarine processes and the vital influence of Narragansett Bay on the Ocean State's residents. In the total view of education, few sites exist where the users can have actual field experiences. Field trips can be as valuable as classroom work, but are often foregone due to a lack of suitable sites, as well as teacher concerns about taking students on field trips. Some sites within the proposed estuarine sanctuary and Bay Islands Park system are admirably suited to field trips.

Historically, school field trips for younger students have had little standing within the educational process, so that as budgets become strained these are among the first "extras" to be deleted from the curriculum. Further deletions result from rising fuel costs and bus expenses. However, the proposed estuarine sanctuary and Bay Islands Park system can reverse this situation. Almost 60% of the State's 178,000 school-age children live within 15 miles of Providence. The proposed access to some of the island sites by ferry could cut travel costs significantly.

Uses of selected sites in the sanctuary and Park system would include traditional and innovative study programs. Traditional programs would include beach field trips, marsh studies, and intertidal biology. With marine studies already in place in Rhode Island schools, there is little doubt that the Park and sanctuary sites would be used. Innovative programs would include total immersion programs permitting students to spend longer periods of time on-site in study programs that would complement existing school programs. Other programs could include two-week summer programs offered at various island sites. Given the multi-disciplinary nature of marine studies, few traditional courses taught in today's school system are entirely without applicability to marine studies.

Narragansett Bay's marine environment has, and will continue to play, an important role in Rhode Island's historical perspective. The advent of the proposed sanctuary and Park system can add a new and exciting role to the Ocean State's educational goals. By using these sites, Rhode Island students can gain a better understanding of the role of water in the functioning of the State.

Year-round programs should be considered. Schools are traditionally closed during the warmer months. The climate of Rhode Island, though, does allow extension of a school study season well into December, and the season could be resumed in the middle of March. School-oriented sites could accommodate students from September until mid-December, and from mid-March until June. Summer programs should also be considered.

There are case studies in the Northeast to support such year-round educational programs. The joint effort between the Greater Providence YMCA and the University of Rhode Island's Marine Advisory Service, called SEASCOPE, is such a program. Starting in March 1980 at the YMCA's Camp Fuller on Point Judith Pond, this program will introduce Rhode Island students to the world of salt water. Project Oceanology at Avery Point in Groton, Connecticut also runs continuous marine programs throughout the year. Massachusetts, Maine and New Hampshire have similar programs.

With regard to curriculum development and availability, there is a vast array of materials. The Marine Awareness Center at the Bay Campus of the University of Rhode Island houses the largest collection of marine study materials in the United States.

If Rhode Island is truly to be the Ocean State, its students must learn and understand as much as they can about the marine environment. The proposed Estuarine Sanctuary and Bay Islands Park system can play a vital role in this important educational process.

APPENDIX V

RESPONSES TO COMMENTS RECEIVED ON THE NARRAGANSETT BAY
ESTUARINE SANCTUARY DRAFT ENVIRONMENTAL IMPACT STATEMENT

APPENDIX V

Responses to Comments Received on the Narragansett Bay Estuarine Sanctuary Draft Environmental Impact Statement

This section summarizes the written and verbal comments received on the Draft Environmental Impact Statement (DEIS) and provides OCZM's response to these comments. Generally, responses are made in one or more of the following ways:

- (1) Expansion, clarification, or revision of the DEIS,
- (2) General responses to comments raised by several reviewers, and
- (3) Specific responses to the individual comments made by each reviewer.

All written comments received on the DEIS will be published as a compendium and mailed to all persons who commented on the DEIS, or anyone else upon request.

The following are some of the most common issues raised by reviewers:

GENERAL COMMENTS AND RESPONSES

A. Concern over impact of the Bay Islands Park on the Estuarine Sanctuary.

The letters and public hearing comments from residents on Prudence Island consistently supported the establishment of an estuarine sanctuary (many wanted it to include the southern end of Prudence) and almost unanimously opposed the heavy use of the southern end of Prudence as a recreational park and the connection of the estuarine sanctuary to the Bay Islands Park system. It is feared that thousands of people will come to the southern end of the island and interfere with the privacy and safety of both the full-time and part-time residents on central Prudence Island, especially if they travel in large numbers through the island to the northern end.

Concern also was expressed by some of the residents as well as Federal and State agencies that the relationship of the estuarine sanctuary to the Bay Islands Park system would create a perception that the sanctuary was primarily for recreation and that heavy use as a recreation area would degrade the environment and interfere with research in the sanctuary. In other words, the purposes of the sanctuary are considered incompatible with the overall philosophy of the Bay Islands Park.

With respect to the use of the southern end of Prudence Island, as a park site, this area is entirely outside of the sanctuary boundaries and, therefore, is beyond the scope of this environmental impact statement. Any comments or concerns regarding the southern end of Prudence Island should be sent directly to the Assistant Director for Administration in the Department of Environmental Management (DEM). This also applies to such activities as fires, camping, transportation, and island services. (See B, C, and D below.)

On the basis of the comments regarding maintaining the integrity of the estuarine sanctuary ecosystem, DEM has agreed:

(1) to do an extensive inventory of the natural and cultural resources on the islands before deciding how many persons will be given public access to the islands and for what purposes they will be allowed to visit. This inventory will be undertaken as soon as possible after estuarine sanctuary establishment.

(2) to establish the estuarine sanctuary as an entity in itself, meaning that it will be given special management attention as a research and educational area with permitted recreational activities being monitored carefully to minimize any impact on the natural environment. To help insure this special management attention, the Sanctuary Manager will have direct access to the DEM Assistant Director for Operations. The State, within fiscal and management constraints, will make every possible effort to hire an estuarine sanctuary manager whose sole responsibility will be the estuarine sanctuary. This management arrangement, together with the local representative on the Sanctuary Advisory Committee should go a long way towards being responsive to the concerns expressed in the above comments.

B. DEM's proposal to install bus service between the southern and northern ends of Prudence Island.

Most of the residents on Prudence Island opposed DEM's proposal to establish a bus service to take visitors to the northern end of Prudence Island on a regular schedule. Reasons cited for opposing this idea included public use of private property ("driftways" are considered by some Island residents as "private"), noise and pollution from an otherwise clean and quiet residential community, fear of non-island residents invading private lots and doing damage, and degradation of the environment generally.

Concern was raised also about the whole subject of transporting many people to the island each day via bay ferry boats and the possibility that the island would be inundated with people.

Because of the concern of Prudence Island residents, the proposal to use a bus service to transport people from the south to the north end of Prudence has been dropped. The main transportation to northern Prudence, whether from the southern end of Prudence or from other ferry embarkation points in the Bay, will be by boats. Furthermore, no transportation will be given to people arriving on the Prudence Island Ferry, which docks at Middle Prudence Island, to either the north or south end of Prudence. A small van (8-10 people) would be available on the south end of Prudence to take small groups occasionally (on an ad hoc, not a regular schedule basis) to northern Prudence, but this type of transportation would be restricted to an "as needed" basis. In using the van, DEM will assure that no private rights or property are violated.

For the concerns regarding the impact of bringing thousands of people to the southern end of Prudence, see General Response A above. It should also be noted that a much smaller number of people will be allowed access to the sanctuary sites than will be accommodated at Southern Prudence.

C. Concern over allowing camping, open fires, and a hostel on Prudence Island

The overwhelming majority of Prudence Island residents were opposed to campfires and camping on Prudence Island, and many also expressed opposition to having a hostel on South Prudence.

The concern about camping and fires was primarily related to the very real danger that unattended fires could spread, especially in a high wind, and destroy life and property. The other major concern was over trespassers. Obviously, this is of concern to people who live on the island. Because of this valid concern the idea of having a few primitive campsites on North Prudence was dropped. No camping will be provided or allowed on North Prudence. Camping that has been done traditionally at Potter Cove will be restricted or prohibited. After a study and thorough evaluation of the impact on the environment, group camping for educational purposes, with continuous DEM approval and supervision may be allowed on Patience Island on a limited basis.

The concern about camping, fires, and a hostel on the southern end of Prudence Island must be addressed to the Assistant Director for Administration in DEM who has responsibility for planning the Bay Islands Park. (See General Response A above.)

D. Responsibility for Public Services to Sanctuary Visitors

The Town of Portsmouth and some of the residents of Portsmouth expressed concern over the added demand for services that the influx of people to the sanctuary and the park will require. Specifically mentioned was the possibility of need for medical and other emergency services for those using the sanctuary, additional fire and police protection (these services are extremely limited on the island), adequacy of water supply and water disposal.

Because of the restrictions that will now be imposed on the number of persons who travel to North Prudence (by boat and van) and the prohibition of fires and camping within the sanctuary on North Prudence, it is not likely that the sanctuary per se will place much of an additional strain on the services for which the Town of Portsmouth is responsible. However, there still will be some added cost for services, and DEM is able and willing to help. For example, if someone has to be taken off the island in an emergency, whether visitor or resident, DEM has vessels that can be used for this purpose. It will be necessary for DEM and the Town of Portsmouth to reach a formal agreement on how additional services required by the sanctuary will be handled. This understanding will be made formally before the acquisition grant is awarded.

With regard to the services required on the southern end of Prudence Island, this also will have to be determined by DEM and the Town of Portsmouth. However, this area is outside of the sanctuary boundaries and beyond the scope of this FEIS. (See General Response A above.)

Summary of Specific Comments and Responses

FEDERAL AGENCIES

Department of the Army, New England Division, Corps of Engineers Joseph L. Ignazio, Chief, Planning Division, (7/2/80)

Comment - Unclear as to sanctuary restrictions that may be imposed upon maintenance dredging of the Providence and Taunton River channels.

Response - Dredging activity in the Providence and Taunton River is outside the jurisdiction of the estuarine sanctuary. This information has been added in the FEIS.

Comment - The application of the policies in the Rhode Island Coastal Resources Management Plan to the proposed action should be discussed in more detail on page 28.

Response - Comment accepted and more discussion is provided in the FEIS.

Comment - Field personnel should supervise research and education in the proposed sanctuary in the interest of preservation of species and their habitat.

Response - Supervision of research and education activities within the sanctuary will be provided by DEM.

Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service Terry L. Leitzell, Assistant Administrator, (7/21/80)

Comment - Establishment of an estuarine sanctuary in this area would have a positive effect on minimizing adverse impacts to resources of concern to NMFS: i.e., fisheries and associated habitats.

Response - Comment accepted.

Comment - The DEIS provides for a NOAA representative on the Sanctuary Advisory Committee (SAC). Our regional office has agreed to commit staff resources for NMFS representation on the SAC, but is concerned about adequately representing OCZM.

Response - NMFS and OCZM headquarters staff have agreed to work out an arrangement so that both NMFS and OCZM interests are adequately represented.

Department of Commerce, National Oceanic and Atmospheric Administration,
Environmental Data and Information Service

Richard M. Morse, (6/19/80)

Comment - Dynamic description of the Bay system for assessment purposes are somewhat lacking. There is no discussion of currents, circulation, flushing rates or wave characteristics.

Response - We believe that the description of the Bay system for FEIS purposes is sufficient. A more detailed description will be included in the research plan.

Department of Energy

R. D. Langenkamp, Deputy Assistant Secretary for Resource Development and Operations, Resource Applications (7/25/80)

Comment - The DEIS is inadequate in discussing relationships between the proposed sanctuary and existing and possible future uses of the former Navy Base at Quonset/Davisville. DEIS does not analyze the potential environmental impacts from such expanded onshore support operations. Specifically, the final impact analysis should indicate that the sanctuary management policies apply only to the sanctuary area and will not conflict with current and future use of the Quonset/Davisville site as an onshore OCS support site. DOE cannot support designation of the sanctuary until they can review a specific analysis of the relationships between the proposal and support site operations.

Response - It is difficult to examine the relationships between a proposed action, the Narragansett Bay Estuarine Sanctuary, and an unknown proposal such as facility expansion at Quonset/Davisville in the event commercial oil and gas resources are discovered. We are aware of the potential for expansion, since OCZM itself has funded, through the Coastal Energy Impact Fund, studies relating to the impact of such development in Narragansett Bay. Since the estuarine sanctuary will be managed under existing State law, it is felt the sanctuary itself will not have any adverse impact on the Quonset/Davisville site, or to future expansion at the site. However, it should be made clear that the sanctuary is managed according to State law and affected by certain Federal laws (i.e., Endangered Species Act, Clean Water Act). Any impacts arising from an expansion in the Quonset/Davisville area will be measured against such laws, not the estuarine sanctuary.

The following statement has been added to the FEIS, "Estuarine sanctuary management policies only apply to land and water within the sanctuary boundaries and they will not conflict with current and future uses of the Quonset/Davisville site as an onshore OCS support site." Again, it is important to recognize that there are no "Federal laws" that come into being within an estuarine sanctuary--it is Stateowned and managed under State law. Therefore, if there are concerns over impacts created by the expansion of the Quonset/Davisville site, they will be by State agencies (including the Department of Environmental Management) using existing statutes, or other Federal agencies using their statutes.

The Planning and Development Division within DEM is working closely with the Rhode Island Department of Economic Development on all proposed activities at the Quonset/Davisville site. DEM is part of the review process, which was established by a formal Memorandum of Understanding to review all aspects of expansion at Quonset/Davisville. DEM has indicated that it is difficult to envision any problems arising from estuarine sanctuary establishment relating to any of the proposals for the Quonset/Davisville area.

Department of Housing and Urban Development

Trudy McFall, Acting Director, Office of Planning and Program Coordination,
(6/12/80)

Comment - HUD concurs in the proposed sanctuary plan.

Response - Comment accepted.

Department of the Interior

James H. Rathlesberger, Special Assistant to the Assistant Secretary
(7/15/80)

Comment - We have reviewed the draft environmental impact statement for the proposed Narragansett Bay Estuarine Sanctuary (NBES), and we commend NOAA's efforts to develop policies to provide effective management of an estuarine sanctuary incorporating disjunct habitats and land masses.

Response - Comment accepted.

Comment - References to actual regulations and/or guidelines are rather vague, and it is unclear whether they should be statutory or advisory. The FEIS should discuss any regulations drafted or adopted for the Bay Islands Park system, and they should be referenced or included in the Appendix.

Response - Comment accepted. See General Response A. The FEIS discusses the effects of the Bay Islands Park regulations which are referenced in the Appendix.

Comment - The FEIS should have a discussion of handling NBES violations, assessing fines monitoring visitor traffic to Hope and Patience Islands to prevent congestion and overuse (no staff will be on duty on these islands), and possible user conflicts and visitor safety (e.g., is hunting explicitly prohibited in hiking areas)?

Response - See General Responses B and C. The FEIS discusses enforcement of violations, user conflicts, and safety.

Comment - Does the described ferry system exist and is it consistent with the State's Coastal Resources Management Plan? The FEIS should also discuss whether schedules will be adjusted to avoid congestion at the disembarking point at South Prudence.

Response - The ferry system is not in conflict with the State's Coastal Resources Management Plan. Schedules are discussed in the FEIS.

Comment - Since the park/sanctuary is located along scheduled ferry routes and may be a stopover as well as a final destination point, the FEIS should discuss the need for adequate parking areas, road development and traffic control.

Response - Automobiles will not be allowed on the island, except those owned by residents. Therefore, parking areas and traffic control are not required.

Comment - Existing docks at the sanctuary islands were noted on map figures in the DEIS, but were not discussed in the text. As proposed, access to the islands would occur via the ferries and would thus necessitate docking facilities capable of handling large boats. Are the existing structures adequate? Also, will the proposed route and docking procedures avoid areas considered critical? For example, we question the location of the dock area on Patience since it is apparently adjacent to the saltwater marsh containing one of the only three sites in Rhode Island where the seabird (*Sterna maritima*) occurs (DEIS, p. 32).

Response - Existing docking facilities are not adequate and will be improved before they are used to bring visitors to the islands. The dock on Patience will be used only for small boats and people will be guided by a pathway away from the saltmarsh mentioned in your comment.

Comment - The emphasis the proposal places on hunting seems somewhat irregular since the area is to be set aside essentially for research and public appreciation for portions of the estuary and its related ecosystems. Department of Commerce regulations allow for hunting, fishing and non-consumptive activities as long as these activities are secondary to the research and educational objectives for which the sanctuary would be established.

Response - Hunting has existed on the islands for a long time and is very controlled. For example, on North Prudence, deer hunting is by bow and arrow only, plus one week for paraplegics to hunt with firearms. The number of deer killed on North Prudence during the 1979-80 hunting season was 30. With no hunting, the deer herd would overpopulate and ruin the flora on the island.

Comment - Due to the geologic structure of the islands, island freshwater supplies are especially limited in summer, a period when peak visitation is anticipated. Since visitors must be provided with drinking water and hygiene facilities, water needs will increase. The FEIS should discuss how much additional capacity will be necessary and how it will be supplied.

Response - Comment accepted. See General Response D.

Comment - The premise that monitoring activities and research in NBES would provide baseline data for other areas is commendable. However, insufficient discussion is provided about mitigation for events occurring in surrounding areas, such as tanker traffic in the channel east of NBES or the industrial area to the west of NBES. These should be detailed in the FEIS.

Response - Comment accepted. Tanker traffic effects are mentioned in the FEIS and will be monitored by DEM.

Comment - According to the Estuarine Sanctuary Guidelines in Appendix I, the applicant should list protected sites in the same regional or biogeographic subregion (Subpart B921.11(d)). This list and a map depicting the boundaries of Virginian biogeographic classification should be included in the FEIS to allow some type of comparative analysis of the importance of the Narragansett Bay Estuarine Sanctuary.

Response - Comment accepted. This list is available from DEM upon request. Its inclusion in the FEIS was not felt to be relevant by this office.

Comment - The DEIS does not show how the proposed sanctuary is "truly representative" of the type of region being considered to "minimize the possibility of similar estuarine types being proposed for designation in the same region" (Subpart B921.11(e)). The Virginian classification encompasses all or portions of nine states and the potential for the identification of other representative areas would thus appear highly likely. Clarification of the selection and designation process in the FEIS, or appended, would add helpful decisionmaking information about the Estuarine Sanctuary Program.

Response - The discussion of the Virginian classification and the selection process both nationally and within the State has been expanded in the FEIS.

Comment - It appears that the proposed Sanctuary Advisory Committee (SAC) may be too unwieldy (15 or more people). We recommend consideration of the use of a set of contact persons from interested groups, etc., as an alternative.

Response - Comment accepted. An expanded discussion of the Sanctuary Advisory Committee appears in the FEIS.

Department of Transportation, U.S. Coast Guard

Commander S.L. Richmond, CZM Officer, First Coast Guard District,
Boston, Massachusetts, (7/3/80)

Comment - The Coast Guard presently maintains a system of aids to navigation including some within the proposed sanctuary. The Coast Guard must continue to perform maintenance on existing aids to navigation and may

from time to time in the future find it necessary to establish additional aids or disestablish some of the present aids. The Coast Guard relationship to the sanctuary in this area should be addressed.

Response - We do not foresee any problems with the Coast Guard's aids to navigation within the proposed sanctuary. Whatever understandings currently exist between the Coast Guard and the State of Rhode Island regarding navigation aids will continue without change within the sanctuary.

Comment - Requests that we review specifics outlined in Appendix I of their letter, Coast Guard District One OPLAN No. 1-FY, which specifies duties and authorities of the Coast Guard and advise them of any conflicts envisioned with the maintenance of these duties and responsibilities within the proposed sanctuary.

Response - OCZM has reviewed the specifics outlined in Appendix I. We do not envision any conflicts with the CG's duties and responsibilities within the proposed sanctuary.

Comment - The main commercial ship navigation channels to Providence and Davisville, Rhode Island, come within 1 1/4 miles of the proposed sanctuary. If any possible conflicts between the needs of the sanctuary and the use of these commercial channels is envisioned, it should be addressed.

Response - We do not foresee any conflicts between the needs of the sanctuary and the use of these commercial channels, which is stated in the FEIS.

Comment - The Coast Guard should be represented on the Sanctuary Advisory Committee.

Response - Comment accepted.

Environmental Protection Agency, Region I

Wallace E. Stickney, P.E., Director, Environmental and Economic Impact Office,
Boston, Massachusetts, (7/10/80)

Comment - Rates DEIS as Lack of Objections, Insufficient Information, LO-2.

Response - Comment accepted. The information base has been substantially enlarged in the FEIS.

Comment - The ability of the Narragansett Bay sanctuary to represent a national control against which changes in other estuaries can be measured, and to aid in evaluating the impacts of human activities on the estuarine systems is questionable, especially in light of the extensive multiple-use and public recreation benefits which are anticipated.

Response - We believe the Narragansett Bay sanctuary offers a controlled area with ample opportunity to conduct research that will provide information against which other areas in the bay can be measured when human activities have caused degradation of the estuary. Multiple use will be controlled whenever it interferes with this research activity.

Comment - The proposed sanctuary is in a heavily impacted estuary, subject to industrial and domestic wastes, commercial and recreational vessel traffic, and periodic spills of hazardous and harmful chemicals. EPA believes the proposed land acquisitions are inadequate to preclude continuation of these impacts, and the sanctuary will continue to be subject to these effects. Alternative estuaries which can be acquired in toto, water, shorelines, and watershed should be evaluated even if they are much smaller than Narragansett Bay.

Response - We agree that Narragansett Bay is a heavily used estuary, subject to the impacts described in the comments. Yet, the area encompassed by the sanctuary has been amazingly spared from these impacts. Preserving these islands as a sanctuary will assist in National, State, and local efforts to protect them from degradation and provide a control point in the middle of all of the bay to begin looking at some of the problems that were mentioned. The amount of land acquisition is limited by the financial resources (Federal and State) and the availability of willing sellers. The discussion on alternative sites within the State has been expanded in the FEIS.

Comment - A comparison to other alternative estuarine sanctuaries within the biogeographic classification region should be contained in the FEIS. Concerned whether the proposed sanctuary is the best representative of the Virginian biogeographic classification. DEIS lacks comparison to Virginian estuaries in other eight states within this classification.

Response - The process of selecting a representative site for a National Estuarine Sanctuary is complicated. Within a biogeographic region as extensive as the Virginian region, extending over 1,000 miles of coastline with a wide diversity of estuaries significantly different from each other, there is no one estuary that "best" represents the region. We use a system of subcategories and look for estuaries that can represent at least a portion of the region. The selection of a site also depends upon State participation, which in turn requires States to contribute 50% of the Federal grant as a match. This is an additional factor in the site selection process. Other estuarine sanctuary sites will be established within the Virginian region.

Comment - EIS should address various subcategories of the Virginian biogeographic classification. EIS should also explain which subcategory(ies) the proposed sanctuary represent(s), and again compare this example to other estuaries within the biogeographic region.

Response - A description of which subcategory the Narragansett Bay Estuarine Sanctuary represents has been included in the FEIS. The others are: outer banks type estuaries and freshwater dominated estuaries like the Chesapeake Bay.

Comment - If any representatives of the Virginian biogeographic classification have been submitted in the past, or during the same six-month application period, these alternative estuarine sanctuaries should be mentioned.

Response - Rhode Island was the first State to propose a site for an estuarine sanctuary within the Virginian biogeographic region. The only other site proposed for the Virginian region was the Peconic/Flanders Bay area of New York. This proposal was withdrawn by New York in April 1980. This is mentioned in the FEIS.

Comment - FEIS should evaluate types and levels of permitted recreational activities (determined separately for each site) based on an assessment of its ability to support such uses without undue environmental damage or degradation.

Response - Comment accepted. Information on the levels of recreational activities permitted has been expanded in the FEIS.

Comment - The FEIS should outline the intended research uses to assure that proper restrictions and prohibitions are established to protect and maintain the estuarine ecosystem. A listing of potential research organizations or agencies, and benefits to the overall CZM program would add support to the need for a Narragansett Bay Estuarine Sanctuary.

Response - Comment accepted. The initial research program, as envisioned by DEM, has been added in the FEIS, which includes the benefits to the overall CZM program. A refined research program will be developed after sanctuary establishment.

Comment - The FEIS should evaluate the effect on the future environment of the proposed sanctuary without the implementation of the proposed action.

Response - Comment accepted. The "No Action" alternative has been added in the FEIS.

General Services Administration

James G. Whitlock, Assistant Commissioner, Office of Space Management,
(7/3/80)

Comment - Neither the Public Buildings Service nor the Federal Property Resources Service of GSA have any substantive comments to make regarding this proposal.

Response - Comment accepted.

STATE AND LOCAL GOVERNMENTS

Portsmouth Town Council

Carol Zinno, President, Portsmouth, Rhode Island (6/18/80)
(Letter to W. Edward Wood, Director, DEM)

Comment - In general, favors the proposed estuarine sanctuary for the northern end of Prudence Island.

Response - Comment accepted.

Comment - Opposed to overnight camping and potential fire hazards on South Prudence and opposed to bussing of people from the southern end to the northern end of Prudence Island.

Response - See General Responses A, B, C, and D.

Comment - Concerned with the possibility of need for medical and other emergency services for those using the sanctuary. Portsmouth cannot be expected to provide additional services to the island.

Response - Comment accepted. DEM would be responsible for providing these services.

Comment - No means of insuring that overnight campers would be limited to the use of "park" grounds only; concerned about threat to private property from trespassers and rodents.

Response - The DEM field personnel will be responsible for those persons using the sanctuary. No camping will be permitted on the north end of Prudence. Visitors will be informed and boundaries posted to avoid all private property on the island.

Comment - Bus service from the southern end to the northern end of the island is unacceptable.

Response - See General Response B.

Comment - Hostel on the southern end of Prudence Island is incomprehensible and unacceptable.

Response - See General Response A.

Portsmouth Town Council

Carol Zinno, President, Portsmouth, Rhode Island, (7/3/80)

Comment - Given the small number of permanent residents on Prudence Island, it is difficult for the town of Portsmouth to justify additional Town services upon the island. Accordingly, the Bay Islands Park System

must be self-sufficient in fire policy protection and must include adequate safeguards that existing Town services located upon the island will not be overutilized.

Response - Comment accepted; see General Response D.

Prudence Improvement Association

William Bacon, Jr., President, Prudence Island, Rhode Island (7/10/80)

Comment - Prudence Improvement Association is strongly opposed to overnight camping on southern Prudence Island, bussing of people to northern Prudence Island, and the establishment of a "hostel." It is requested that DEM delete the proposed overnight camping, bussing, and "hostel" from any plans for the Prudence Island portion of the Bay Islands Park System now being considered.

Response - See General Responses A and B.

Prudence Park Homeowner's Association

Robert Parady, President, Prudence, Rhode Island, (6/30/80)

Comment - A multiple use should not interfere with, diminish, or prevent the primary purpose of the estuarine sanctuary, which is the long-term protection of the area for scientific and educational use. The DEM's plan to transport visitors by van to the north end of the island and by boat to other sanctuary sites is clearly contrary to the primary purpose of the sanctuaries program. It is a "multiple use" which would be environmentally damaging to the areas of the island now in their natural state. Additionally, this broad recreational use of the proposed sanctuary will interfere with the ecosystem and diminish the "field laboratory" concept of the program.

Response - See General Responses A and B.

Comment - The Association supports the establishment of the estuarine sanctuary provided: 1) the sanctuary is used only for research and to provide educational benefits; 2) Public access is limited to existing modes of public transportation; 3) Public use is strictly confined to maintain the area in a natural state for scientific and educational use; 4) DEM provides adequate fire and public safety protection; 5) Overnight camping is prohibited; and 6) Substantial improvements are made in DEM's proposed management of the sanctuary area.

Unless these conditions are met, the Association opposes the present proposal offered by DEM.

Response - See General Responses A, B, C, and D.

State of Rhode Island and Providence Plantations, Executive Chambers
Bruce Vild, Assistant OCS Coordinator, (6/20/80)

Comment - Possible interference with OCS support activities should be addressed more fully to prevent confusion and misunderstanding. A statement should be included that no impacts upon OCS operations are anticipated from sanctuary designation, or if impacts may occur, an explanation should be made as to what they are and how they might be mitigated.

Response - The estuarine sanctuary should not have any impacts on OCS support activities at the Quonset/Davisville base. Such a statement appears in the FEIS.

State of Rhode Island and Providence Plantations, Historical Preservation Commission

Eric Hertfelder, Deputy State Historic Preservation Officer, (6/18/80)

Comment - Project strongly supported for its potential to conserve both natural and cultural resources.

Response - Comment accepted.

Comment - The DEIS fails to address the impact of the sanctuary upon archaeological resources. We recommend the following changes/additions:

1. The statement on human uses of Narragansett Bay (p. 34) should begin with prehistoric populations, not with colonial settlement, and should assess the potential for significant archaeological sites being present in the sanctuary area.
2. The potential adverse effect of the sanctuary upon archaeological sites (many of the impacts described on p. 23 are destructive to archaeological sites) should be assessed and measures to avoid or mitigate the adverse impacts should be devised.
3. It is possible that multiple uses of the sanctuary will adversely affect archaeological resources unless the research projects, hunting, fishing, etc., are carefully monitored under guidelines established to protect archaeological resources. For this reason, we recommend that the State Historic Preservation Office review and comment on all proposals for use, and sit on the Sanctuary Advisory Committee.
4. In the list of organizations consulted, the Rhode Island Historical Preservation Commission should be listed as a State agency.

Response

1. Information on prehistoric population has been added to the FEIS.
2. Archaeological studies on the northern end of Prudence, sponsored by DEM, have already begun and will continue to assess the value of potential archaeological sites so as to avoid adverse or irreversible impacts.
3. All uses of the sanctuary will be monitored, within the means of DEM, to protect significant archaeological resources. The State Historic Preservation Office will be represented on the Sanctuary Advisory Committee.
4. Comment accepted; change has been made in the FEIS.

State of Rhode Island and Providence Plantations, Department of Administration, Statewide Planning Program

Daniel W. Varin, Chief, Statewide Planning, (6/3/80)

Comment - Strongly supports the designation of North Prudence, Hope and Patience Islands and surrounding waters as an estuarine sanctuary.

Response - Comment accepted.

Comment - Further study needed for proposed bus shuttle service between the north and south ends of Prudence Island.

Response - See General Response B.

State of Rhode Island and Providence Plantations, Department of Natural Resources, Division of Fish and Wildlife

James E. Myers, Senior Wildlife Biologist, (7/21/80)

Comment - Very limited access to Hope Island should be considered. Scheduled and advertised boat travel will greatly increase the number of visitors to the island during the nesting and non-nesting season. Scheduled boat travel to Patience Island would create similar problems of disturbance to the habitat.

Response - There will be no access to Hope Island during the nesting season and there will be limited access during the rest of the year.

Comment - Hunting not only "appears essential" (page 12) but is essential to the maintenance of optimal habitat. The islands have no natural population controls except disease and starvation.

Response - Comment accepted.

Comment - General research was proposed, but no studies, projects, inventories, or suggested studies were incorporated into the plan, except for the policy statement allowing Fish and Wildlife to continue ongoing programs.

Response - One of the highest priorities of the sanctuary manager, and the Sanctuary Advisory Committee will be the development of a research plan.

Comment - Within the funding proposal, scientific study is stressed, but no indication of funding level is noted. Even small amounts of funding for shellfish, bird, and mammal surveys would provide valuable baseline information to the scientific community.

Response - We concur with the need for funding for such studies that you have recommended. Unfortunately, estuarine sanctuary funds cannot be used for funding specific research projects. The State is expected to pursue funding for research through such programs as Sea Grant, National Science Foundation, Environmental Protection Agency, NOAA/OCZM §306 funds, etc. The Estuarine Sanctuary Program Office will assist the State as much as possible to secure these needed funds.

Comment - Trained staff and presently-owned equipment from various divisions and sections within DEM could utilize any additional funding to complete baseline surveys and not delegated to a park naturalist as an aside to his primary task of interpretive tours and protection.

Response - Comment accepted. The sanctuary manager's job will not include doing specific research, but rather to assist qualified researchers in their endeavors.

Comment - The primary goals of the sanctuary program can be achieved by a slow expansion of use, combined with necessary research planning and management. It is my opinion that the education mandate of the Act is being unduly and incorrectly stressed in the present plan for this fragile island system.

Response - The State is aware that an estuarine sanctuary is different from a state park and all usages must be approached in a cautious manner. Research and education must occur within estuarine sanctuaries. However, it is the State's prerogative concerning the emphasis it places on each activity.

State of Rhode Island and Providence Plantations, Department of Transportation
Joseph F. Arruda, Chief Planning Division, (7/3/80)

Comment - No procedures stated in the document for minimization of impact that the public would have on the sanctuary (potential impacts, p. 24).

Response - DEM will have personnel in the sanctuary to enforce restrictions imposed upon the public.

Comment - Pages 6 and 10 of the DEIS have statements that seem to contradict each other regarding field officers that already exist or that will be hired and trained to enforce restrictions.

Response - Comment accepted and change made to read: "DEM has or will hire and train" field personnel.

Town of Abington, Massachusetts

Wilbur G. Hollis, Town Executive Secretary, Abington, Massachusetts,
(7/1/80)

Comment - Opposed to activities that adversely impact the quality of life presently enjoyed at the island. Adamantly opposed to any proposal to transport persons into or through the sections where private residences are situated.

Response - See General Response B.

Comment - No objection to the use of the area on a limited basis for such activities as nature walks, research and the like. Agreeable to swimming and picnic area at the South and if those using the facilities did not encroach on privacy and if their numbers are restricted.

Response - Comment accepted; however, the estuarine sanctuary is totally separate from the park in the south end of the island. See General Response A.

STATE INTEREST GROUPS

The Conservation Law Foundation of Rhode Island

John Jewett, (7/1/80)

Comment - DEM should make a special effort to explain what visitors to the northern end of Prudence Island will and will not find in the way of facilities and surroundings. Hopefully DEM is considering a thorough informational approach including graphic displays, printed materials, etc.

Response - DEM is planning a thorough educational program, located on the south end of Prudence, with displays and printed materials that will explain what visitors will find in the way of facilities and environmental surroundings on the north end.

Comment - Asks whether a system has been developed to regulate the number of visitors who will walk along roads or shoreline of Prudence Island from the south to the north.

Response - There is no way legally to prevent visitors from walking along the road or shoreline on publicly-owned or controlled property. The information center on the south end will inform visitors to avoid all private property on the island.

Comment - Page 12 of the DEIS states that 300 full-time and 1,600 part-time shellfishers use Narragansett Bay. How many of these fish around the islands and how will the sanctuary proposal affect them? Would the boundaries of the sanctuary be amenable to change to accommodate some of these needs, once established?

Response - We do not anticipate that the sanctuary proposal will adversely affect the current level of shellfishing. The boundary out to the 18 foot isobath was selected by DEM to protect the sanctuary area for research purposes. If DEM decides to change the boundaries later on, hearings will be held with opportunity for public participation. The number of full-time and part-time shellfishers who normally fish within the proposed sanctuary area will be studied as part of the research program.

INDUSTRIAL GROUPSAtlantic Richfield Company

Dr. D. W. Chamberlain, Senior Science Advisor, Environmental Sciences,
Los Angeles, California (7/10/80)

Comment - pp 12-13 - Past recreational activities which will be allowed to continue, such as fishing, deer hunting, small game and duck hunting, are not entirely consistent with the stated desire in the proposal to provide long-term protection for representative, undisturbed estuarine areas.

Response - As you point out, the Estuarine Sanctuary Guidelines encourage compatible use of the natural resources available. It is the policy of the Federal government to encourage States to allow those uses in a sanctuary that have existed prior to sanctuary designation provided such uses do not degrade the natural habitat and environment within the sanctuary or interfere with basic research. The effects of hunting, and sport and commercial fishing will be studied and monitored over time to determine if these public uses significantly alter the natural system within the sanctuary.

Comment - Suggests that representative undisturbed control areas be set aside and protected by the strict exclusion of impacting activities. Consideration should be given to reserving Hope Island, allowing no hunting, fishing, shellfish collection, or other impacting activity, except for occasional investigations by qualified scientists because it is one of the largest wading-bird rookeries in the northeast.

Response - Hope Island will be managed under strict controls. Current use of the island for small game hunting from October-December will be permitted to continue. Guided interpretative tours limited to very small groups will be offered during late summer and early fall. The island is closed to visitors--except qualified scientists with approval by DEM--during the April 15-July 31 nesting season.

Comment - Consideration should be given to setting aside representative parcels of the variety of habitats on Patience Island that are not found on Hope Island by posting, fencing off, or otherwise restricting public access to provide control sites to compare use impacts on similar island environments, provide a source of nursery stock for replenishing undisturbed habitats, and be of educational use for comparing natural and disturbed areas.

Response - Comment accepted. In the research program for the sanctuary, the idea of setting aside certain areas and habitats for research scientists to use for control sites will be implemented.

Comment - Suggests changing the title of DEIS to "Narragansett Bay Estuarine Sanctuary and Environmental Management Area."

Response - Since the Estuarine Sanctuary Program is specifically authorized and titled by statute, adding "Environmental Management Area" to the title would be confusing and inappropriate.

Comment - Suggests strengthening Part I of the DEIS by adding a description of how the proposed area agrees with the Arcadian or Virginian biogeographic classifications and reflects regional differentiation as required in Section 921.4 of the Estuarine Sanctuary Guidelines.

Response - Comment accepted. A brief description has been added to FEIS.

RESIDENTS

John Antaya, Attleboro, Massachusetts
(6/30/80)

Comment - Opposed to opening the north and south ends of Prudence Island to commercial traffic.

Response - See General Response B.

Charlotte R. and Daniel Barrett, Prudence Island, RI
(6/29/80)

Comment - Would prefer maximum protection for our environment, close restrictions on use by people, sanctuary status for the north and south ends of Prudence Island, primary research and study programs, no camping or campsites at all, restricted passage through private property and no bussing or public vans at all.

Response - See General Responses A, B, and C.

Beverly and Rick Bowen, Prudence Island, Rhode Island
(6/28/80)

Comment - Favor the establishment of the Estuarine Sanctuary for research and study programs, as long as sanctuary standards are enforced.

Response - Comment accepted.

Comment - Object to the formation of the park with its associated influx of people and busses. The roads and fire and police departments are inadequate to handle the normal summer crowd, let alone additional visitors to the park. Strongly oppose camping and campfires.

Response - See General Responses A, B, C, and D.

Donald D. Deignan, Prudence Island, Rhode Island
(6/30/80)

Comment - Insists that no public busses or vans be permitted passage through private property. Article V of the U.S. Constitution supports this. Legal problems relating to personal and property liability, as well as damage to contiguous environmental resources strengthen this restriction.

Response - See General Response B.

Comment - Use of the sanctuary should be limited to research. Campsites should not be permitted. Use of the sanctuary by the public should be closely monitored by appropriate personnel.

Response - Comment accepted; see General Response C.

Margaret and Louis DelPapa, Pawtucket, Rhode Island
(no date)

Comment - Questions the adequacy of the proposed staff of the Bay Islands Park to maintain the area, supervise visitors, and enforce the law. Feels the area should be patrolled constantly and maintained daily.

Response - Information regarding supervision of visitors, patrolling the area, and enforcing the law has been added to the FEIS.

Comment - Concerned that if camping is permitted on South Prudence, campers will also camp out on North Prudence if there is no room at the south end or if their permits expire.

Response - See General Response C.

Comment - Cautions that people who visit the park at the south end and are then transported to the sanctuary at North Prudence will treat the sanctuary as a recreational park, rather than an area designed for quiet nature study.

Response - It will be explained in advance to all visitors to the sanctuary that the guided tours are strictly for educational purposes and will be carefully controlled.

Comment - The sanctuary should be kept as a place where people come with a purpose - nature study or guided tours. These people will respect the area and not abuse it.

Response - Comment accepted.

Judith DiPrete, Prudence Island, Rhode Island
(6/29/80)

Comment - Believes that the proposed Bay Islands Park and the Estuarine Sanctuary are incompatible. The park will attract recreationists rather than conservationists. Increased activity of recreational boaters will lead to pollution of the south end as has already happened at Potters Cove in North Prudence. It is unlikely that the state will be able to adequately fund the proposed park for proper and necessary management.

Response - See General Response A.

Comment - Supports the use of the Estuarine Sanctuary for research and study programs with maximum environmental protection of the island. Opposes overnight camping, the hostel, and transporting people between South and North Prudence. The south end of Prudence should be subject to Estuarine Sanctuary standards with tighter control on people use of the area.

Response - See General Responses A, B, and C.

Leonard R. DiPrete - Duncan B. Campbell Co., Providence, Rhode Island
(7/3/80)

Comment - Would like to see the former Navy land on the southern part of Providence Island maintained in its natural state. I am against the idea of bussing campers.

Response - See General Responses A, B, and C.

Mary Drew, Prudence Island, Rhode Island
(6/30/80)

Comment - Prudence Island is a wonderful, quiet and peaceful place to live, and should remain that way. There are many other places that people can go to picnic, camp, etc. Keep Prudence Island as a sanctuary, so those who respect the land and its natural beauty can enjoy it.

Response - Comment accepted. See General Response C.

Marcy Dunbar, Prudence Island, Rhode Island
(6/29/80)

Comment - Does not want a State Park on Prudence Island. If it has to be, leave it in its natural state.

Response - See General Response A.

Comment - Prefer maximum protection of the environment, restrictions on people use, no camping, no bussing or public vans.

Response - See General Responses B and C.

Barbara A. Ellsworth, Prudence Island, Rhode Island
(6/28/80)

Comment - How is it that hunting will be allowed in a sanctuary, whereas Webster's dictionary defines a sanctuary as an area where birds and animals are sheltered, and may not be hunted or otherwise molested?

Response - DEM has always permitted hunting on the island, and it is carefully regulated. Hunting is permitted to maintain healthy populations on the island. The island usually cannot support large populations. See General Response C.

Comment - Inquires whether anyone has really done an extensive and intensive study of our wildlife? There is a definite environmental impact by the publicity generated by this project, having a detrimental effect on our wildlife.

Response - DEM's Division of Fish and Game has conducted extensive studies of the wildlife within the sanctuary and has data available. The wildlife in the sanctuary will continue to be monitored to determine whether use of the sanctuary is having a detrimental impact.

Comment - I would ask, rather plea, that further attention and continued studies be applied before approval is granted.

Response - Comment accepted. It is not felt that various scientific studies are needed prior to sanctuary approval.

The Farnham Family, Prudence Island, Rhode Island
(7/5/80)

Comment - Prefer to leave the south end of Prudence Island in its natural state, no parks, no campsites.

Response - See General Responses A and C.

Cecilia S. and Daniel R. Finn, Prudence Island, Rhode Island
(6/29/80)

Comment - Concerned with the plan for a park on the south end of the island with campsites and ferry transportation and transportation from the north end of the island by means of a van and ferry. Feel that the south end of Prudence Island should be a sanctuary too.

Response - See General Responses A, B, and C.

Mrs. Archie Friswell, Prudence Island, Rhode Island
(6/29/80)

Comment - Favor maximum environmental protection of Prudence, Hope, and Patience Islands. Oppose campsites, busses, vans and invasion by people of the south or north ends of Prudence Island.

Response - See General Responses A, B, and C.

Jean P. and Don P. Friswell, Prudence Island, Rhode Island
(6/29/80)

Comment - Favor maximum environmental protection of Prudence, Patience, and Hope Islands.

Response - Comment accepted.

Sandy Fyfe, Pawtucket, Rhode Island
(7/1/80)

Comment - Supports the formation of the Bay Island Park.

Response - Comment accepted.

Comment - Strongly opposes the maximum number of people the State feels the Park can accommodate. Recommends a maximum of 200 people at a time.

Response - See General Responses A and B.

Comment - Sanctuary standards should be enforced wherever appropriate. Opposes camping, the formation of a hostel and plans for transportation on the island.

Response - See General Responses A and B.

Wallace E. Guertin, Prudence Island, Rhode Island
(7/5/80)

Comment - As a hiker, bird-lover, and gardener, I beg of you to keep Prudence as close to its natural state as possible for people who really love nature.

Response - Comment accepted.

Comment - Favors close restriction on people-use, no buses, vans or trucks over private roads, sanctuary standards enforced for both north and south ends of Prudence, no camping or campsites, maximum protection of the environment, and use of the area primarily for research.

Response - See General Responses A, B, and C.

Margaret and Robert Heile, Prudence Island, Rhode Island
(7/30/80)

Comment - Favors making the estuarine sanctuary available for research programs.

Response - Comment accepted.

Comment - Recommends limiting the number of people using the sanctuary to one boatload per day.

Response - See General Response B.

Comment - Believes that the plans for the park are not compatible with the uses of the sanctuary. For example, camping and its associated fire hazard, the hostel, and the proposed bus service seem to conflict with the sanctuary concept.

Response - See General Responses A, B, and C.

Comment - Department of Environmental Management has not adequately considered the problems of increased usage of the island, such as people missing the boat, emergency medical problems, and increased need for police and fire protection.

Response - See General Response D.

Richard E. Jenness, Lynn, Massachusetts
(6/30/80)

Comment - Desires for the island are maximum protection of the environment, limited people, and certainly no bussing or public vans.

Response - See General Response B.

Geraldine and Martin Johnson, Prudence Island, Rhode Island
(no date)

Comment - Support maximum protection of the environment, the use of the sanctuary primarily for research and study programs, close restrictions on people-use, enforcement of sanctuary standards for north and south ends of Prudence, and restricting passage through private property on Prudence to emergency and support vehicles. Oppose campsites and camping, and buses or public vans.

Response - See General Responses A, B, and C.

Ruth E. Just, Providence, Rhode Island
(6/30/80)

Comment - Supports the establishment of an Estuarine Sanctuary on the north end of Prudence Island, Patience, and Hope Islands.

Response - Comment accepted.

Comment - Opposes several elements of the park proposal, including overnight camping and bussing between north and south ends of Prudence Island. Fire is also a hazard due to the increased number of visitors. Recommends that only day camps with adequate patrols be permitted in the south end of Prudence.

Response - See General Responses A, B, and C.

Janette C. Korchinsky, Prudence Island, Rhode Island
(7/2/80)

Comment - Provide maximum protection of the environment and place very close restriction on the people who use it.

Response - See General Responses A and C.

Mary B. and Douglas H. Lawrence, Prudence, Rhode Island
(7/1/80)

Comment - Proposal for creation of an estuarine sanctuary for Prudence, Patience, and Hope Islands is excellent, providing changes and adjustments are made in planning, management, and operation as outlined in the DEIS.

Response - Comment accepted.

Comment - The impact of an estuarine sanctuary on middle private Prudence seems favorable if minor changes are made.

Response - Comment accepted.

Comment - The Bay Islands Park at South Prudence is not compatible with the estuarine sanctuary.

Response - See General Response A.

Comment - Opposes camping, the hostel, and public van or bus access to North Prudence. Sanctuary standards should be enforced at South Prudence, the maximum number of visitors should be lowered, and park activities should be restricted to the park area.

Response - See General Responses A, B, and C.

Comment - Page 6, item 2 - ...uses of these islands must respect and harmonize with the natural environment. Who decides which uses and activities are compatible with the environmental capabilities of the Island?

Response - The Department of Environmental Management (DEM) and the Sanctuary Advisory Committee, working together, will determine the uses and activities that are compatible with the island's environmental capabilities. Each island will be treated individually.

Comment - Page 8, item b - South Prudence is described as durable. Not so! Shuttle bus is proposed through the fragile-private-middle sanctified Prudence. Not a compatible plan. Who is the DEM Assistant Director for Operations, and what are the work programs to be submitted to him/her? What are the lines of decisionmaking and authority? Who determines what research is to be done? Who determines if research is damaging the sanctuary? Who decides on the activities compatible with sanctuary guidelines? To whom does the sanctuary manager report?

Response - DEM will administer all of the programs within the estuarine sanctuary. Basically, the sanctuary manager will be hired by DEM to make decisions on use of the sanctuary, but he/she also will be responsible to the Sanctuary Advisory Committee (SAC). SAC will review all research proposals before they are sent to DEM and offer guidance and advice to the sanctuary manager. The divisions within DEM that are responsible for wildlife and fisheries management, enforcement, and forestry will assist the sanctuary manager as needed.

Comment - How long does this sanctuary status last?

Response - The estuarine sanctuary is planned to preserve the area in perpetuity for research and education.

Comment - What prevents the sanctuary from reverting to other uses?

Response - The Federal government has invested money for the purpose of maintaining the estuarine sanctuary in perpetuity. If the sanctuary is changed to another land use, the Federal government could request its money back.

Comment - Page 10, item 2 - The Sanctuary Advisory Committee should be organized now.

Response - Comment accepted.

Comment - Page 10, item 3 - Want more details on enforcement. How many field offices, where and when will they be stationed?

Response - Details are covered in the FEIS.

Comment - Page 12, item c - Who in DEM will monitor activities? There is conflict on policy of pets, radios, and other electronic devices between the sanctuary guidelines and the park guidelines. How will they be resolved?

Response - Pets, radios, and other electronic devices will not be allowed within the sanctuary. Other activities will be closely regulated by the sanctuary manager and his/her staff.

Comment - Page 12, paragraph 3 - Where will recreational boating be relocated if it causes significant adverse impacts?

Response - If boating in Potter Cove is restricted or prohibited, boaters will not be "relocated," they will use other bay areas that are not restricted.

Comment - Page 13, item 1 - Any camping is not compatible with the sanctuary. Furthermore, the publication entitled "The Bay Islands Park: A Marine Recreation Plan for the State of Rhode Island," put out by the Coastal Resources Center of the University of Rhode Island in 1976, states that sewage disposal is difficult due to the hardpan subsoil and sewage contamination of limited and shallow groundwater becomes increasingly real with continued development. In addition, page 29 of the DEIS states that freshwater supplies are limited--another argument against camping on the islands. The URI report mentioned earlier describes Patience Island and North Prudence as "interdependent, and to acquire one for recreational and conservation purposes without similarly protecting the other makes little practical or aesthetic sense." The proposal for Patience Island does not suit sanctuary purposes, so no camping should be permitted here.

Response - See General Responses C and D.

Comment - Supports the sanctuary proposal for Hope Island.

Response - Comment accepted. However, the proposal also includes Patience Island and the northern end of Prudence Island.

Comment - Page 13, item d - Connections from south to north Prudence and the other islands should be by ferry only. Passengers should be met and escorted by a trained ranger.

Response - See General Response B.

Comment - Page 17, item b - Sanctuary Advisory Committee should be able to review proposed research programs in advance.

Response - Comment accepted. Reviewing research proposals is one of the roles designated for the committee.

Comment - Page 17, item b, part 1 - What happens after three years when management funds expire?

Response - One-half of the management and operation funds will be provided by the Federal government for five years, after which the State will appropriate all funds to maintain the sanctuary for research and education.

Comment - Page 18 - Not selecting South Prudence as part of the sanctuary was a mistake.

Response - The Bay Islands Park Plan called for South Prudence to become the hub for the water accessible elements of the Bay Islands Park.

Comment - Page 19, item 4 - The statement, "Establishment of estuarine sanctuary would provide financial support which would assist in the start up of Bay Islands Park," seems to conflict with Guidelines, Section 921.5b, which reads, "There shall be no effort to balance or optimize uses of an estuarine sanctuary on economic or other bases..."

Response - Funds provided by the Federal government are for the establishment of the sanctuary, not the park. The statement on page 19 is misleading and has been omitted in the FEIS. The Guidelines reference is on using the sanctuary for economic gain and is not relevant to the issue raised in the comment.

Comment - Page 21, item 2 - states that southern Prudence "will support facilities and activities incompatible with the primary purposes of the sanctuary." Page 27 reads "the proposed estuarine sanctuary would be managed as part of the park system. The objectives of these two programs are compatible and mutually supportive." These statements appear to conflict. Modifying the South Prudence Park proposal could resolve it.

Response - Comment accepted. Language has been changed in the FEIS.

Comment - Page 21 - The present park plan should be altered to provide more effective barriers between the park and the rest of Prudence Island.

Response - See General Response A.

Comment - Page 24 - Construction of boardwalks should be done only after careful study of the impact on local wildlife.

Response - Comment accepted.

Comment - Page 25 - What are the Rhode Island holding tank laws?

Response - DEM should be contacted for information about State requirements for holding tanks.

Comment - The fire danger from campers is enormous and not compatible with sanctuary guidelines.

Response - See General Response C.

Comment - What are the plans to prevent alcohol and drug use in the park?

Response - There will be rangers on the site and enforcement agents available to control the use of alcohol and drugs within the sanctuary.

Comment - Page 25, item 2 - the effect of the park and estuarine sanctuary on the Town of Portsmouth has not been adequately explored.

Response - See General Response D. The FEIS has been modified to show in greater detail what the impact will be.

Comment - Not enough copies of the DEIS were distributed to local residents. No written public notice of the June 25th public hearing at Portsmouth was posted on Prudence Island with the name of a contact person, as required by guidelines.

Response - Adequate notice of the availability of copies was given. Copies of the DEIS were distributed at the public hearing. Public notice of the hearing was published in area newspapers and in the Town Hall at Portsmouth.

Comment - DEM has been careless about informing the public of its plans until they were all made. DEM should make public the survey conducted in April 1980 among the homeowners and taxpayers on the island.

Response - DEM has tried to communicate with the residents of Prudence Island and Portsmouth. A public information meeting on the proposed sanctuary was held in Portsmouth on March 12, 1980, and some residents from Prudence attended. Other meetings on the Bay Islands Park Plan have been held. An interest survey was taken among island residents in April. The results are available from DEM to those who inquire.

Dorothy W. Little, Prudence Island, Rhode Island
(7/1/80)

Comment - Favors the maximum protection of the north and south ends of Prudence Island and supports the use of the area for research programs. Would like both the north and south ends of Prudence Island included in the sanctuary.

Response - Comment accepted. See General Response A.

Comment - Opposes campsites and camping due to fire hazard.

Response - See General Response C.

Comment - Objects to bussing and the use of public vans.

Response - See General Response B.

Judith W. Little, Prudence Island, Rhode Island
(7/2/80)

Comment - Requests the Estuarine Sanctuary Program be developed cautiously and only after much deliberation.

Response - Comment accepted.

Comment - Reluctantly accepts the presence of the park, but sees no reason for bussing between the park and the sanctuary in the north end.

Response - See General Response B.

Comment - Concerned that allowing camping in South Prudence will attract young people who might leave the park area and enter private property or become intoxicated.

Response - See General Response C.

Jennifer Lowe, Prudence Island, Rhode Island
(6/29/80)

Comment - North end of Prudence Island should be left in its natural state; no camping on the island, bussing and tours should also be ruled out.

Response - See General Responses A, B, and C.

Kenneth H. Lowe, Prudence Island, Rhode Island
(7/2/80)

Comment - Favors the establishment of the Estuarine Sanctuary for research purposes only.

Response - The program, as established by Federal law, is both for environmental education and research.

Comment - Strongly opposes the bussing and ferrying of all visitors, as well as overnight camping.

Response - See General Responses B and C.

Comment - Page 2 of the DEIS states that one of the research purposes of the sanctuary is to serve "as a natural control...that will aid in evaluation of the impacts of human activities on estuarine ecosystems." If people are allowed to use the sanctuary, what happens to the reliability of the sanctuary as a natural control?

Response - The primary purpose of estuarine sanctuaries is to provide long-term protection for natural areas so that they may be used for scientific and educational purposes. Controlled multiple use, under close supervision will be encouraged to the extent that such use is compatible with the primary sanctuary purpose. The FEIS addresses this issue.

Marjorie Nuttall, Prudence Island, Rhode Island
(7/1/80)

Comment - Concern centers on the impact of daily visitors on the already limited water supply on Prudence Island. Questions the adequacy of the septic system at the abandoned Naval Base to meet the needs of the additional visitors to the island.

Response - See General Response B.

Comment - Are there any provisions in the Estuarine Sanctuary/Bay Islands Park proposal which would mandate the discontinuance of the program if negative effects such as water shortages or disruption of wildlife habitat result?

Response - It is not anticipated that these problems would occur to such an extent that the Estuarine Sanctuary Program would be discontinued. Close monitoring will detect any disturbances before they become disruptive. There are provisions for further regulating use activities if they are having negative impacts.

Eric and Charlotte Olson, West Barrington, Rhode Island
(7/2/80)

Comment - Supports the use of the sanctuary for research.

Response - Comment accepted.

Comment - Opposes campsites and camping and bussing or the use of vans.

Response - See General Responses B and C.

Grafton and Audrey Rice, Prudence Island, Rhode Island
(no date)

Comment - The proposals of the DEM seem to be in direct conflict with the concept of maintaining an estuarine sanctuary - higher priority on a park system rather than the basic concept of an estuarine sanctuary.

Response - See General Responses A, B, C, and D.

Linda Rice, Prudence Island, Rhode Island
(7/1/80)

Comment - Supports creation of the sanctuary for environmental research.

Response - Comment accepted, but will also include environmental education.

Comment - Would like to keep Prudence Island unblemished by commercial enterprises and tourists attractions. Opposes camping and campsites on Prudence Island due to the litter and disturbances caused by tourists in residential areas.

Response - The Estuarine Sanctuary would not allow commercial enterprises. See General Response C.

David and Mary Sargent, Prudence Island, Rhode Island
(6/30/80)

Comment - Supports the formation of the Estuarine Sanctuary.

Response - Comment accepted.

Comment - Opposes the grandiose plans of the Rhode Island DEM for the development of parks on the north and south ends of Prudence Island.

Response - See General Response A.

Comment - Objects to overnight camping and the proposed hostel on the south end due to the risk of fire. High winds and inadequate fire-fighting facilities increase the danger of fire.

Response - See General Responses A, C, and D.

Comment - Oppose the conveyance of visitors (by bus or van) from Southern Prudence to the north end of the island.

Response - See General Response B.

Comment - Recommends that Southern Prudence be subject to sanctuary standards or else remain a separate entity with no link to Northern Prudence, except for emergency vehicles.

Response - See General Response A.

Woody Sargent, Prudence Island, Rhode Island
(6/30/80)

Comment - No camping or vehicles should be allowed on the north end of Prudence or Patience Islands. Proposed park in the south end of Prudence should be used for serious overnight campers only, with no bussing or public vans used to transport visitors from north to south.

Response - See General Responses A, B, and C.

Captain and Mrs. Manuel Sausa, Prudence Island, Rhode Island
(6/30/80)

Comment - Opposes camping or campsites and the use of buses or vans.

Response - See General Responses B and C.

Comment - Believes that the prohibitive cost of ferry service will discourage large families from using the park.

Response - See General Responses A and B. Consideration is being given to not changing any fare for trips to the sanctuary. Other fares are planned to be inexpensive.

Albert R. and Lillian B. Sims, Prudence Island, Rhode Island
(6/29/80)

Comment - Disturbed by the State of Rhode Island to establish "park" arrangements at the north and south ends of Prudence particularly those proposals that would make access to the Island easy, establish campsites, provide transportation around and/or through the Island with possible invasion of private property. Prefer estuarine sanctuaries at both ends of Prudence Island.

Response - See General Responses A, B, and C.

Comment - State should see to it that shellfish laws are rigidly enforced.

Response - The Rhode Island Department of Environmental Management is responsible for finfishing and shellfish activities and enforcement, and is attempting to do the best job that can be done.

James T. Starke, Prudence Island, Rhode Island
(6/29/80)

Comment - Favors the establishment of the Estuarine Sanctuary to maintain Prudence Island in an undisturbed natural state.

Response - Comment accepted.

Comment - Adamantly opposes the introduction of camping and tourists to the island. The police department is already undermanned and the beaches already littered with debris from campers. Increased camping would aggravate the situation.

Response - The issue of having adequate staff to patrol the islands and control people's use of the area is discussed in the FEIS. See General Responses C and D.

Frederick and Margaret Stevenson, Prudence Island, Rhode Island
(6/30/80)

Comment - Supports the proposed estuarine sanctuary.

Response - Comment accepted.

Comment - Recommend limiting the numbers of people, hunters, and hunting areas.

Response - See General Response C.

Comment - Opposes bussing as proposed in the DEIS.

Response - See General Response B.

Comment - Recommend an annual sanctuary newsletter to be distributed describing ongoing research and knowledge gained at the sanctuary.

Response - Your suggestion of a newsletter for the proposed Narragansett Bay estuarine sanctuary is a good one and will be considered by the Sanctuary Advisory Committee. A newsletter on all of the National Estuarine Sanctuaries is issued several times a year and distributed to all sanctuary managers which describes research activities at the various estuarine sanctuaries across the Nation. Copies of this newsletter will be available from the sanctuary manager.

Grace Scott, Attleboro, Massachusetts
(6/30/80)

Comment - Does not want the formation of the Estuarine Sanctuary to change the idyllic, rural atmosphere of Prudence Island.

Response - Comment accepted.

Comment - Concerned about camping and the fire hazard of campfires. Questions whether there will be enough maintenance and patrolling of the north and south ends of Prudence Island so that public transportation will not interfere with the peace and tranquility of the area.

Response - See General Responses B and C.

Constance William, Prudence Island, Rhode Island
(6/30/80)

Comment - Recommends close restrictions on people-use. Opposes overnight camping of both the southern and northern end of Prudence Island, opposes the use of busses or public vans.

Response - See General Responses B and C.

Comment - Believes that sanctuary standards should be enforced at both north and south ends of Prudence Island.

Response - See General Responses A, B, and C.

Dudley A. Williams, Bristol, Rhode Island
(7/7/80)

Comment - Include the southern end of Prudence Island, Dyer Island, and the waters about and between them in a Marine - Estuarine Sanctuary Proposal for Narragansett Bay.

Response - The points made in the letter are well taken. The boundaries of the sanctuary could be expanded at a later time, if the State so desired. The expansion of the boundaries would involve more administration procedures including public hearings.

Carol K. Willin, Prudence Island, Rhode Island
(6/30/80)

Comment - Supports the proposed Estuarine Sanctuary as an important educational and research facility.

Response - Comment accepted.

Comment - Concerned that the proposed management personnel will not be adequate for the type of public access encouraged by the development of the park on South Prudence. Urges increased enforcement personnel and close restrictions on all camping.

Response - See General Response C. The FEIS discusses the adequacy of sanctuary management personnel.

Comment - The threat of fire is due to the high winds in the area. Campsites on South Prudence will add to the risk, particularly because the prevailing winds flow along the axis of the island.

Response - See General Responses A and C.

Comment - Opposes any bus or van service connecting North and South Prudence, particularly because it would use private roads.

Response - See General Response B.

Barbara and Charles W. Worcester, Prudence Island, Rhode Island
(6/29/80)

Comment - Opposes a hostel, campsite, buses, vans, cars, or any other surface vehicle used to transport anyone from a park to a sanctuary.

Response - See General Responses A and B.

Comment - No impact study has been made on the central section of the Island. No thorough mention of sewage, water pressure, road repair, personal injury, invasion of private property, or mid-Island police protection.

Response - See General Response D.

Cynthia M. Worcester, Prudence Island, Rhode Island
(7/1/80)

Comment - Camping on the south end of Prudence Island creates a major fire hazard. Concerned that campers may roam wherever they choose on the Island.

Response - See General Responses A and C.

Comment - Prudence Island had always been a home for birds and deer, and would like it to remain that way.

Response - Comment accepted.

John Zompa, Prudence Island, Rhode Island
(7/1/80)

Comment - Supports enforcement of sanctuary standards for the north and south ends of Prudence Island. Opposes camping and campsites.

Response - See General Responses A and C.

PUBLIC HEARING

Listed below are comments and responses to persons that made statements at the public hearing in Portsmouth, Rhode Island, on June 25, 1980.

Audubon Society of Rhode Island
Alfred Hawkes

Comment - The project and the impact statement are excellent.

Response - Comment accepted.

Comment - It is unclear who will supervise the management of the sanctuary in DEM. There are some questions to be addressed in the FEIS. Who will monitor and coordinate and fund the educational and research projects? Who will handle multiple use conflicts?

Response - The DEM Assistant Director for Operations, Frank Geremia, will have ultimate management responsibility for overseeing the estuarine sanctuary. He may have the sanctuary manager report directly to him or to one of his division chiefs. The sanctuary manager will monitor, coordinate, and seek funds for research and educational projects. He/she will be advised in these tasks by the Sanctuary Advisory Committee which will also assist in resolving multiple use conflicts.

Comment - Bus service from the south end of the island is not recommended because the south end of the island is able to endure intensive use, whereas the north end must be protected. The people that use the south end of the island will not be interested in the north end and will be bored. Access to Patience and North Prudence should be by ferry. Each ferry should be met by a naturalist who will direct them into a program that will not give them the freedom to cause trouble.

Response - See General Response B.

Comment - Potter Cove should be limited. It is overcrowded in the summer. There should be a limited number of moorings and the length should be restricted. There should be no camping allowed from boats that are moored.

Response - Comment accepted. As part of the management program for the sanctuary, the extent to which Potter Cove is used for boating and mooring will be evaluated for potential adverse effects. Camping on North Prudence will be prohibited.

Comment - There should be a limit to how intensively the area is used for educational purposes. Extended educational stays would eventually have an impact on the area because of the limited water supply, soil compaction, wildlife disruption, septic systems, and thus ground water pollution. There will need to be some carefully devised constraints on uses.

Response - Comment accepted. See General Responses C and D. Use of the sanctuary for educational purposes will be controlled to avoid adverse impacts on water supply, soil compaction, and disruption of wildlife.

Coalition of Coastal Communities
David Strauss, Executive Director

Comment - The purpose of the Coalition is to protect the resources of Narragansett Bay and the surrounding communities. The surrounding coastal cities and towns will benefit from the establishment of the sanctuary. The Coalition urges that the problems the residents of Portsmouth have with the estuarine sanctuary proposal be worked out to the satisfaction of the community, DEM, and NOAA.

Response - Comment accepted.

Comment - The location of the sanctuary is important. Scientific research on marine pollution and the interface where polluted waters meet clean waters may provide assistance in solving water pollution problems.

Response - Comment accepted.

Comment - The Coalition recommends a committee be created for the planning and pre-management stages of the Bay Islands Park System and the Sanctuary Program. This would allow for a more coordinated effort to meet the needs of parties and alleviate impacts.

Response - A Sanctuary Advisory Committee will be created to assist DEM with the planning for and operation of the estuarine sanctuary so as to provide for maximum utilization of the natural resources for research and education. Coordination between the sanctuary and the Bay Islands Park System will be handled by the Assistant Director for Operations in DEM.

Comment - The proposed sanctuary should be used in its maximum capacity as a marine research center.

Response - The degree of use as a marine research center will depend upon the sanctuary manager's ability to attract research funds and scientists to the sanctuary. This will be one of the basic functions of the sanctuary.

Louis E. DelPapa, Prudence Islander

Comment - It is important that the sanctuary be established. He agrees with what Mrs. Coxe said and agrees with the Rhode Island Audubon Society. Islanders are concerned that there will not be enough staff assigned to properly manage the South Prudence, North Prudence and Patience Islands. Is there going to be bussing to the north end of the island?

Response - DEM will assign sufficient staff to manage the estuarine sanctuary. Regarding the south end of Prudence and bussing to the north end, see General Responses A and B.

Mark Goldberg, Environmentalist

Comment - Supports the establishment of the sanctuary.

Response - Comment accepted.

Comment - Opposes the hostel on the south end of Prudence Island and the bus service.

Response - See General Responses A and B.

Albert Huftalen

Comment - The 18' mark is bad for fishermen.

Response - See response to Richard Brochu's comment (Rhode Island Fisherman's Association). Establishment of the sanctuary will benefit fishermen by safeguarding the habitat for aquatic life.

Mary Brown Lawrence, Prudence Park Association

Comment - The number of campsites on Prudence Island should be limited.

Response - Comment accepted. There will be no campsites on North Prudence. See General Response C.

Comment - Will there by any effort to balance uses in the sanctuary?

Response - The primary uses of the sanctuary will be for research and education. Other uses will be allowed only if they are compatible with these primary purposes. The Sanctuary Advisory Committee and sanctuary manager will decide which uses are compatible.

Comment - Has anyone done an environmental impact assessment on the effects of the proposal on the middle of Prudence Island?

Response - Your point is well taken. The FEIS has taken this into account.

T. W. Lyons, Jr.

Comment - In Appendix II, hunting is not listed as an acceptable use of the sanctuary. Is this an honest oversight or is hunting restricted?

Response - The omission of hunting in the chart in Appendix II listing proposed activities in the Bay Islands Park System was an oversight. Hunting will be allowed to continue on all three islands as long as it is compatible with the primary sanctuary purposes.

Portsmouth Town Council
Carol Zinno, President

Comment - The Town of Portsmouth is generally in favor of the sanctuary. It would be nice if the area could be left as is. Since that is not possible, they are willing to work with the State in harmony.

Response - Comment accepted.

Comment - Overnight camping on Prudence Island is not acceptable. Bussing people to the northern end of the island is unacceptable as is the establishment of a "hostel."

Response - See General Responses A and B.

Comment - It would be difficult for the Portsmouth Volunteer Fire Department to provide protection on Prudence Island for fire or other emergencies. The proposed ferry service appears to be inadequate to evacuate people in an emergency. There appears to be no way for limiting campers to "park" grounds. The one-person Prudence Island Police Department cannot handle the problem of "wandering" campers. The residents will have to deal with the dust, hazards, and noise of 16 busses every day which is undue suffering.

Response - See General Responses B, C, and D.

Rhode Island Fisherman's Association
Richard S. Brochu

Comment - The 18' mark restriction is of concern to the fishermen. Potters Cove and Conimicut Point are good fishing places. If they restrict that, they will restrict fishing totally in the bay.

Response - The 18' depth around the islands in the sanctuary was selected to define the sanctuary boundary, not to restrict fishing. The two areas mentioned in the comment are outside the boundary, and not affected by the sanctuary (assuming Potters Cove was referred to and not Potter Cove which is within the boundary).

Rhode Island Lobsterman Association
Thomas Hall

Comment - The chart on page 39 is incorrect. The commercial finfishing trawling area is incorrect. It does not include Pine Hill Bend which is a traditional finfishing area. The document also states that the south end of Prudence Island marks the north end of the lobsters' summer migration up the bay. This is totally untrue. They migrate as far north as Conimicut Point. They also migrate up into Marco Bay.

Response - The FEIS has been written to provide accurate information on finfish trawling and lobster migration.

Comment - Shellfishing in the area may be shut off within the 18 foot boundary at anytime and they are concerned. They would like an agreement that the lobstering around Hope Island will be allowed to continue. They want to be assured that they will be allowed to fish the way their forefathers did.

Response - DEM regulates shellfishing now and will continue to do so in the best interests of all of the people in the State. Sanctuary status will not alter DEM's present responsibility.

Rhode Island Shellfishermen's Association, Inc.
John Moran, Director

Comment - If the sanctuary is established within the 18' area of the water, would permits for aquaculture in the area be continued?

Response - Existing permits for aquaculture would be continued. New applications for aquaculture permits will be considered on their merits.

Comment - Who has management jurisdiction? What will be changed?

Response - DEM has management jurisdiction. Shellfishing regulations will not be changed providing the method used will not interfere with the primary purposes of the sanctuary--education and research.

Comment - Fishermen want to have continued access from the shore to the 18' marker as historically has been the case.

Response - This access will not change.

Comment - He would rather have the State completely run the sanctuary with no Federal influence or money.

Response - Without Federal matching funds, the State would not be able to acquire Patience Island. The State, however, owns and manages the sanctuary with minimal Federal influence.

Save The Bay

Trudy Coxe, Executive Director

Comment - Narragansett Bay is Rhode Island's greatest natural and economic resource. One of the Bay's best and highest uses is for recreational and educational purposes.

Response - Comment accepted.

Comment - Narragansett Bay has never received the national attention or prestige which it deserves. The Bay has the largest collection and diversity of marine species of any body of water in the world. Rhode Island has been short-changed in terms of money for water pollution clean-up. It is exciting to have the Federal government acknowledging the Bay's ecological importance.

Response - Comment accepted.

Comment - Sanctuary establishment is a solid cornerstone for creating a park system for Rhode Islanders. The best use of the islands is passive uses.

Response - The estuarine sanctuary is intended for research and educational uses; other uses will be passive recreation. The park system will provide active recreation areas and serves a different function than the sanctuary.

Comment - Portsmouth officials have been interested in high-profit industrialization or commercialization of Prudence Island. Sanctuary designation will protect Prudence Island.

Response - Portsmouth officials are supporting the use of Northern Prudence Island as a sanctuary.

Comment - Save The Bay is pleased that DEM has decided to eliminate bus service connecting the north end of Prudence to the south end.

Response - Comment accepted; see General Response B.

Comment - Save The Bay urges NOAA to designate the sanctuary as quickly as possible and urges the State to take every step to ensure the pristine nature of these areas.

Response - Comment accepted.

Dudley Williams, Prudence Land Company

Comment - Why is this area given a Virginian Biogeographic Classification?

Response - The Virginian biogeographic region covers the middle Atlantic coast, from Cape Cod to Cape Hatteras; lowland streams, coastal marshes, and muddy bottoms; biota primarily temperate with some boreal representatives.

Comment - Because of the depth of channels left by geologic eras and the grinding of waves, there is a large amount of ocean water in the Bay. For that reason, it might make sense to include the south end of Prudence, and the South and west side of Dyer Island in the sanctuary for comparison and to have a feeling for the water supporting the sanctuary. Prior to 1920, the State of Rhode Island leased the entire area in the winter for Long Island oyster fattening and harvesting. The eel grass has disappeared. We should be able to find out why this has happened.

Response - Comment accepted. Ideally, the research that begins in the sanctuary waters will be extended over time to take in a larger area of Narragansett Bay to see what affects the ocean currents have on salinity gradient, temperature, nutrients, etc. However, it is not practical to extend the sanctuary boundary to cover the areas you mention in your comment because the south end of Prudence is proposed as the central site for the Bay Islands Park and Dyer Island is privately-owned.

Comment - Baseline data should be gathered before human uses of the sanctuary are allowed. It does not make sense to use the sanctuary before you have an inventory of what is there.

Response - Comment accepted. Baseline data is already being gathered and samples of biota will be taken and analyzed before the sanctuary is opened to visitors.

George Williams

Comment - Seconded what Mrs. Coxé and Mrs. Lawrence stated.

Response - Comment accepted.

