The State of Rhode Island Coastal Resources Management Program

As Amended June 28, 1983

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This document was prepared
for the Coastal Resources Management Council by

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and
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This document replaces Chapters 1 through 5 of the Program adopted by the Coastal Resources Management Council in 1977.

Other adopted elements of the Rhode Island Program include the Energy Amendments of 1979, Management Procedures, Rights of Way to the Shore, and Special Area Management Plans for selected areas. These documents may be obtained from the Council's offices.

Acknowledgments

Many people devoted time and thought to this document and made significant contributions to its form and content.

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Barbara B. Colt, Secretary

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Charles Ted Wright

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State of Rhode Island and Providence Plantations

EXECUTIVE CHAMBER, PROVIDENCE

J. Joseph Garrahy
Governor

EXECUTIVE ORDER

No. 17

November 16, 1977

Designation of Office of the Governor as Recipient of Federal Coastal Zone Management Program Implementation Funds

WHEREAS, the State of Rhode Island desires to manage the resources of its coastal region in a manner which achieves the objectives of Section 46-23-1 of the General Laws of 1956 as amended, and to utilize the authorities existing in the several agencies of state government and all available sources of technical and financial assistance in managing these resources, including such federal grants as may be available; and

WHEREAS, the State of Rhode Island has prepared an effective, coherent, and unified program for the management of its coastal resources which can be implemented through existing authorities and by existing agencies; and

WHEREAS, the State of Rhode Island has requisite authority through its agencies to administer land and water regulations, control development, resolve conflicts, and otherwise carry out its management program, and adequate provision has been made for coordinated participation of all governmental entities in the implementation of the State's Coastal Resources Management Program; and

WHEREAS, the Coastal Resources Management Council is established by law as the principal agency to administer and implement the State's Coastal Resources Management Program;

NOW, THEREFORE, by the virtue of authority vested in me as Governor of the State of Rhode Island and Providence Plantations, it is hereby ordered as follows:

1) The Office of the Governor is hereby designated as the Agency which shall fulfill the requirements of sub-section 306(c)(5) of the Coastal Zone Management Act of 1972, as amended (16 USC 1455(c)(5).) In this capacity, the Office of the Governor shall apply for, receive, and administer grants under Section 306; shall monitor and evaluate the management of the State's coastal resources; shall account for the expenditure of federal funds by all recipients of such funds; shall make periodic reports to the Office of Coastal Zone Management, all governmental agencies concerned, and the public on the management of the State's coastal resources; and shall request federal approval of amendments or refinements of the management program as necessary.

2) The "State of Rhode Island Coastal Resources Management Program," September 1977, sets forth the policies and program for management of the coastal resources of this State. The Coastal Resources Management Council is given principal responsibility for the implementation of this program. The Coastal Resources Management Council and all appropriate agencies of the State government including, but not limited to, the Department of Environmental Management, the Department of Health, and the Statewide Planning Program, shall act in accordance with the policies and objectives of the management program, to the extent consistent with State statutes and regulations.

3) The Office of the Governor shall prepare an annual work program and application for federal funds under Section 306 and submit said work program and application to the Office of Coastal Zone Management. The work program and allocation of funds shall be prepared in consultation with all agencies concerned. Approval of the annual work program and funding allocations shall be subject to mutual agreement of the Office of the Governor and the Coastal Resources Management Council.

Respectfully yours,

J. Joseph Garrahy
GOVERNOR

Guidelines for Applicants

Step One. Is a Council Assent Required?

All the activities listed on the vertical axis of Table 1 (page 23) require a Council Assent if the activities proposed are (1) in Rhode Island's tidal waters; (2) on a shoreline abutting tidal waters or a coastal pond; and/or (3) within the 200-foot contiguous area landward of all coastal features (coastal beaches, dunes, wetlands, cliffs, bluffs, embankments, rocky shores, and manmade shorelines).

Persons proposing subdivisions of six units or more, or facilities requiring one acre or more of parking, any portion of which extends onto a shoreline feature or its contiguous area or is within the watershed of the poorly flushed estuaries delineated on the maps accompanying this Program, are required to apply for a Council Assent.

Persons proposing selected inland activities anywhere in the state that may require a Council Assent shall request a review of the project to determine whether impacts on the environment of the coastal region are likely and, therefore, whether a Council Assent will be required. These selected inland activities are (1) energy generation, transfer, processing, or storage; (2) chemical processing; (3) minerals extraction; (4) sewage treatment and disposal; or (5) solid waste disposal.

Step Two. For Which Area Is the Activity or Alteration Being Proposed?

Locate the area for which the activity or alteration is proposed on the maps that accompany this Program. Then note the water use category (if an on-land activity is proposed, the adjoining water use category). If the shoreline is designated a Critical Erosion Area, note the average annual erosion rate. In these areas, non-water-dependent structures must be set back a distance equivalent to 30 times the annual erosion rate (see Section 140). The prerequisites, standards, and Category B requirements for on-land activities listed in Section 300.1 through 300.15 and in Section 330 of this document apply to both shoreline features and their 200-foot contiguous area.

Identify the shoreline features that may be affected. The maps give some indication of the shoreline features that may be involved, but this must be verified by inspecting the site. The definitions of shoreline features in Part Two of this document will further assist you in identifying what shoreline features are present.

Step Three. What Regulations Apply?

The prerequisites, policies, and standards in this Program are regulations that must be met by all persons who undertake alterations and activities under the Council's jurisdiction.

If the alteration proposed is for tidal waters or for a shoreline feature, turn to the appropriate section of Table 1 and match the activity with the water area and shoreline type. The table will tell you if the activity you propose is prohibited or will be processed as a Category A or Category B application. Table 1A lists the review categories for activities proposed in the 200-foot area contiguous to shoreline features.

A. Category A Applications

1. Review the policies in Part Two for the water use and shoreline categories your proposal may affect. These may set limits on what may be permitted or provide guidance on how the work should be undertaken.

2. Turn to the appropriate section in Part Three and (a) note any prerequisites that you must meet before filing for a Council Assent, and (b) review all standards.

When filing a Category A application, you

must commit yourself to upholding all applicable standards. If you cannot or do not wish to meet one or more standards, you must apply for a variance (Section 120).

3. File your application. If the activity you propose is not starred (*) on Table 1 and you meet all applicable standards, and if all information requirements have been verified by the Council's staff, you may expect to receive an Assent within 30 working days of filing the application. If grounds for a substantive objection (Section 110) exist on the proposed site (for example, the presence of rare or endangered species or severe building constraints), a Council member or the Council's staff will recommend review by the full Council, and the application will be put out to public notice.

4. If the activity you propose is starred (*), public notice will be given of your proposal; abutters to the affected property and local and state officials will be notified of your proposal. If one or more substantive objections (see Section 110) are filed within the 30-day notice period, a public hearing on your proposal will be scheduled and a Council subcommittee appointed to hear the objections, review your application, and recommend action to the full Council.

B. Category B Applications

1. Complete 1 and 2 above as for a Category A Assent.

2. Prepare in writing an environmental assessment of your proposal. This must address all items listed in Section 300.1 and any additional requirements for Category B applications listed for the activity in question in the appropriate sections of Part Three. The amount of detail appropriate for each topic will vary depending on the magnitude of the project and the likely impacts. If, in your opinion, some issues do not apply, simply note: "Does not apply."

3. All Category B applications are put out to public notice. A public hearing will be scheduled if one or more substantive objections are filed within the 30-day notice period. A Council subcommittee will review your proposal, the comments prepared by its staff, and all other pertinent materials, and will recommend action to the full Council. If your proposal is uncontested, you may expect Council action within 30 working days of verification by the Council's staff that all informational requirements have been met. The Council shall base its decision on consideration of how your proposal conforms to goals for the shoreline features and water use categories affected, other relevant policies, and the significance of the likely impacts of your proposal on the environment of the coastal region.

4. Although the Council may grant Special Exceptions to certain prohibited activities, the test which must be met to grant a Special Exception is narrow and specific (see Section 130). The need for a Special Exception will be difficult to substantiate and is expected to occur infrequently.

The Program's Enabling Legislation (1971) as Amended

Chapter 23 of the General Laws of Rhode Island

Coastal Resources Management Council

46-23-1. LEGISLATIVE FINDINGS. Creation. The general assembly recognizes and declares that the coastal resources of Rhode Island, a rich variety of natural, commercial, industrial, recreational, and aesthetic assets are of immediate and potential value to the present and future development of this state; that unplanned or poorly planned development of this basic natural environment has already damaged or destroyed, or has the potential of damaging or destroying, the state's coastal resources, and has restricted the most efficient and beneficial utilization of such resources; that it shall be the policy of this state to preserve, protect, develop, and where possible, restore the coastal resources of the state for this and succeeding generations through comprehensive and coordinated long-range planning and management designed to produce the maximum benefit for society from such coastal resources; and that preservation and restoration of ecological systems shall be the primary guiding principle upon which environmental alteration of coastal resources will be measured, judged, and regulated.

That effective implementation of these policies is essential to the social and economic well-being of the people of Rhode Island because the sea and its adjacent lands are major sources of food and public recreation, because these resources are used by and for industry, transportation, waste disposal, and other purposes, and because the demands made on these resources are increasing in number, magnitude, and complexity; and that these policies are necessary to protect the public health, safety, and general welfare. Furthermore, that implementation of these policies is necessary in order to secure the rights of the people of Rhode Island to the use and enjoyment of the natural resources of the state with due regard for the preservation of their values, and in order to allow the general assembly to fulfill its duty to provide for the conservation of the air, land, water, plant, animal, mineral, and other natural resources of the state, and to adopt all means necessary and proper by law to protect the natural environment of the people of the state by providing adequate resource planning for the control and regulation of the use of the natural resources of the state and for the preservation, regeneration, and restoration of the natural environment of the state.

That these policies can best be achieved through the creation of a coastal resources management council as the principal mechanism for management of the state's coastal resources.

46-23-2. COASTAL RESOURCES MANAGEMENT COUNCIL CREATED—APPOINTMENT OF MEMBERS. There is hereby created the coastal resources management council. The coastal resources management council shall consist of seventeen (17) members, two (2) of whom shall be members of the house of representatives, at least one (1) of said members shall represent a coastal municipality, appointed by the speaker, two (2) of whom shall be members of the senate, each of whom shall represent a coastal municipality, appointed by the lieutenant governor, two (2) of whom shall be from the general public appointed by the speaker of the house for a term of two (2) years, two (2) of whom shall be from a coastal municipality appointed by the speaker of the house for a term of three (3) years. Four (4) appointed or elected officials of local government appointed by the governor, one (1) of whom shall be from a municipality of less than 25,000 population, appointed to serve until January 31, 1972, one (1) of whom shall be from a coastal municipality of more than 25,000 population appointed to serve until January 31, 1974, and one (1) of whom shall be from a coastal community of more than 25,000 population appointed to serve until January 31, 1975, said populations to be determined by the latest federal census; all such members shall serve until their successors are appointed and qualified; during the month of January 1972 and during the month of January thereafter, the governor shall appoint a member to succeed the member whose term will then next expire for a term of four (4) years commencing on the first day of February then next following and until his successor is named and qualified; each such municipal appointment shall cease if the appointed or elected official shall no longer hold or change the office which he held upon appointment, and further, each such appointee shall be eligible to succeed himself. Three (3) members shall be appointed by the governor from the public, with the advice and consent of the senate, one (1) of whom shall serve until January 1, 1972, one (1) of whom shall serve until January 1, 1973, and one (1) of whom shall serve until January 1, 1974, said members and their successors shall represent a coastal community. All such members shall serve until their successors are appointed and qualified; during the month of January 1972 and during the month of January thereafter the governor shall appoint, with advice and consent of senate, a member to succeed the members whose term will then next expire for a term of three (3) years commencing on the first day of February next following and until his successor is named and qualified. A member shall be eligible to succeed himself. No more than two (2) persons on said council shall be from the same community.

Appointments shall first be made by the governor then by the lieutenant governor and, then by the speaker. A vacancy other than by expiration, shall be filled in like manner as an original appointment but only for the unexpired portion of the term. The director of environmental management and the director of health shall serve ex officio.

In addition to the foregoing voting members, the council shall include a varying number of other members who shall serve in an advisory capacity without the right to vote and who shall be invited to serve by either the governor or the voting members. These advisory members

shall represent the federal agencies such as the navy, coast guard, corps of engineers, public health service and the federal water pollution control administration and such regional agencies as the New England river basins commission and the New England regional commission and any other group or interest not otherwise represented. The council shall have authority to form committees of other advisory groups as needed from both of its own members and others.

46-23-3. QUALIFICATIONS OF MEMBERS. Each appointed member of the council, before entering upon his duties, shall take an oath to administer the duties of his office faithfully and impartially, and such oath shall be filed in the office of the secretary of state.

46-23-4. OFFICERS OF THE COUNCIL; QUORUM AND VOTE REQUIRED FOR ACTION. The governor, upon the appointment of the appointed members of the council shall select from said appointed members a chairman and vice chairman. The council shall thereupon select a secretary from among its membership or staff. The council may engage such staff as it deems necessary. A quorum shall consist of nine (9) members of said council. A majority vote of those present shall be required for action.

46-23-5. EXPENSES OF MEMBERS. The members of the council shall be paid fifty dollars ($50.00) per meeting as compensation and shall be reimbursed for their actual expenses necessarily incurred in the performance of their duties.

46-23-6. POWERS AND DUTIES. In order to properly manage coastal resources the council shall have the following powers and duties:

A. Planning and Management.

The primary responsibility of the council shall be the continuing planning for and management of the resources of the state's coastal region. The council shall be able to make any studies of conditions, activities, or problems of the state's coastal region needed to carry out its responsibilities.

The resources management process shall include the following basic phases:

a) Identify all of the state's coastal resources, water, submerged land, air space, finfish, shellfish, minerals, physiographic features, and so forth.

b) Evaluate these resources in terms of their quantity, quality, capability for use, and other key characteristics.

c) Determine the current and potential uses of each resource.

d) Determine the current and potential problems of each resource.

e) Formulate plans and programs for the management of each resource, identifying permitted uses, locations, protection measures, and so forth.

f) Carry out these resources management programs through implementing authority and coordination of state, federal, local, and private activities.

g) Formulation of standards where these do not exist, and reevaluation of existing standards.

An initial series of resources management activities shall be initiated through this basic process, then each phase shall continuously be recycled and used to modify the council's resources management programs and keep them current.

Planning and management programs shall be formulated in terms of the characteristics and needs of each resource group of related resources. However, all plans and programs shall be developed around basic standards and criteria, including:

a) The need and demand for various activities and their impact upon ecological systems.

b) The degree of compatibility of various activities.

c) The capability of coastal resources to support various activities.

d) Water quality standards set by the department of health.

e) Consideration of plans, studies, surveys, inventories, and so forth prepared by other public and private sources.

f) Consideration of contiguous land uses and transportation facilities.

g) Consistency with the state guide plan.

B. Implementation.

The council is authorized to formulate policies and plans and to adopt regulations necessary to implement its various management programs.

Any person, firm, or governmental agency proposing any development or operation within, above, or beneath the tidal water below the mean high water mark, extending out to the extent of the state's jurisdiction in the territorial sea shall be required to demonstrate that its proposal would not (1) conflict with any resources management plan or program; (2) make any area unsuitable for any uses or activities to which it is allocated by a resources management plan or program; or (3) significantly damage the environment of the coastal region. The council shall be authorized to approve, modify, set conditions for, or reject any such proposal.

The authority of the council over land areas (those areas above the mean high water mark) shall be limited to that necessary to carry out effective resources management programs. This shall be limited to the authority to approve, modify, set conditions for, or reject the design, location, construction, alteration, and operation of specified activities or land uses when these are related to a water area under the agency's jurisdiction, regardless of their actual location. The council's authority over these land uses and activities shall be limited to situations in which there is a reasonable probability of conflict with a plan or program for resources management or damage to the coastal environment. These uses and activities are:

a) Power generating and desalination plants.

b) Chemical or petroleum processing, transfer, or storage.

c) Minerals extraction.

d) Shoreline protection facilities and physiographic features and all directly associated contiguous areas which are necessary to preserve the integrity of such facility and/or features.

e) Coastal wetlands and all directly associated contiguous areas which are necessary to preserve the integrity of such wetlands. For the purpose of this chapter a coastal wetland shall mean any salt marsh bordering on the tidal waters of this state, whether or not the tidal waters reach the littoral areas through natural or artificial watercourses, and such uplands directly associated and contiguous thereto which are necessary to preserve the integrity of such marsh. Marshes shall include those areas upon which grow one (1) or more of the following: Smooth cordgrass (*spartina alterniflora*), salt meadow grass (*spartina patens*), spike grass (*distichlis spicata*), black rush (*juncus gerardi*), saltworts (*salicornia* spp.), sea lavender (*limonium carolinianum*), saltmarsh bulrushes (*scirpus* spp.), hightide bush (*iva frutescens*), tall reed (*phragmites communis*), tall cordgrass (*spartina pectinata*), broadleaf cattail (*typha latifolia*), narrowleaf cattail (*typha angustifolia*), spike rush (*eleocharis rostellata*), chairmaker's rush (*scirpus americana*), creeping bent-grass (*agrostis palustris*), sweet grass (*hierochloe odorata*), wild rye (*elymus virginicus*).

f) Sewage treatment and disposal and solid waste disposal facilities.

C. Coordination.

The council shall have the following coordinating powers and duties:

a) Functioning as a binding arbitrator in any matter of dispute involving both the resources of the state's coastal region and the interests of two (2) or more municipal or state agencies.

b) Consulting and coordinating actions with local, state, regional, and federal agencies and private interests.

c) Conducting or sponsoring coastal research.

d) Advising the governor, the general assembly, and the public on coastal matters.

D. Operations.

The council shall be authorized to exercise the following operating functions, which are essential to management of coastal resources:

a) Issue, modify or deny permits for any work in, above, or beneath the water areas under its jurisdiction, including conduct of any form of aquaculture.

b) Issue, modify or deny permits for dredging, filling, or any other physical alteration of coastal wetlands and all directly related contiguous areas which are necessary to preserve the integrity of such wetlands.

c) Grant licenses, permits, and easements for the use of coastal resources which are held in trust by the state for all its citizens, and impose fees for private use of such resources.

d) Determining the need for and establishing pierhead, bulkhead, and harbor lines.

e) Developing, leasing, and maintaining state piers and other state-owned property assigned to the agency by the department of environmental management, the governor, or the general assembly.

f) Investigating complaints alleging violations of state law or riparian rights in the state's tidal waters.

E. Rights of way.

The council shall be responsible for the designation of all public rights of way to the tidal water areas of the state, and shall carry on a continuing discovery of appropriate public rights of way to the tidal water areas of the state.

The council shall maintain a complete file of all official documents relating to the legal status of all public rights of way to the tidal water areas of the state.

The council shall, subject to the provisions of chapter 6 of title 37, as amended, have the power to designate for acquisition and development by the department of environmental management land for tidal rights of way parking facilities and other council related purposes.

In conjunction therewith every state department controlling state owned land close to or adjacent to discovered rights of way are authorized to set out such land, or so much thereof as may be deemed necessary for public parking.

No such use of land for public parking shall conflict with existing or intended use of such land, and no improvement shall be undertaken by any state agency until detailed plans have been submitted to and approved by the governing body of the local municipality.

46-23-7. VIOLATIONS. (a) In any instances wherein there is a violation of the coastal resources management program, or a violation of regulations or decisions of the council, the council shall have the power to order the violator to cease and desist or to remedy such violation.

For the purposes of this section any development, operation, alteration or construction undertaken in any area under the council's jurisdiction as set forth in this chapter, without a valid permit of this council, shall be deemed to be a violation of a regulation or order of this council.

If the violator does not conform to the council's order then the council, through its chairman, may bring prosecution by complaint and warrant, and such prosecution shall be made in the district court of the state.

The chairman without being required to enter into any recognizance or to give surety for cost, may institute such proceedings in the name of the state. It shall be the duty of the attorney general to conduct the prosecution of all such proceedings brought by the council.

The chairman may delegate his authority to bring prosecution by complaint and warrant to such numbers of conservation officers as he may deem necessary, and said conservation officers shall not be required to enter into any personal recognizance or to give surety for cost.

The division of enforcement shall enforce the laws and regulations of the council and to this end:

(1) Conservation officers shall be empowered to issue written cease and desist orders in any instance where

activity is being conducted which constitutes a violation of the coastal resources management program or a violation of the statute, regulations or decisions of the council.

(2) Conservation officers, council members and council staff shall have authority to apply to a court of competent jurisdiction for a warrant to enter on private land to investigate possible violations of this chapter; provided that they have reasonable grounds to believe that a violation of the provisions of this chapter has been committed, is being committed or is about to be committed.

(b) The chairman, at the direction of the council, may obtain relief in equity or by prerogative writ whenever such relief shall be necessary for the proper performance of the council's duties hereunder. The superior court shall have the jurisdiction in equity to enforce the provisions of this chapter and any rule or regulation or order made by the council in conformity therewith. Proceedings under this section shall follow the course of equity and shall be instituted, and prosecuted in the name of the chairman and council by the attorney general, but only upon the request of the chairman, at the direction of the council.

(c) Any person in violation of an order of the council shall be guilty of a misdemeanor and upon conviction thereof shall be fined not more than three hundred dollars ($300) or shall be imprisoned for not exceeding three (3) months, or both so fined and imprisoned for each such offense; and each day such violation, omission, failure or refusal continues shall be deemed a separate offense.

(d) The chairman or vice chairman of the council is hereby empowered to apply to any court of competent jurisdiction for an injunction to prevent the unlawful posting or blocking of any tidal water public right of way.

46-23-8. GIFTS, GRANTS AND DONATIONS. The council is authorized to receive any gifts, grants or donations made for any of the purposes of its program, and to disburse and administer the same in accordance with the terms thereof.

46-23-9. SUBPOENA. The council is hereby authorized and empowered to summon witnesses and issue subpoenas in substantially the following form:

Sc.
To of greeting:

You are hereby required, in the name of the State of Rhode Island and Providence Plantations, to make your appearance before the commission on

in the city of

on the day of to give

evidence of what you know relative to a matter upon investigation by the commission on

and produce and then and there have and give the following:

Hereof fail not, as you will answer to default under the penalty of the law in that behalf made and provided.

Dated at the day of

in the year

46-23-10. COOPERATION OF DEPARTMENTS. All other departments and agencies and bodies of state government are hereby authorized and directed to cooperate with and furnish such information as the council shall require.

46-23-11. RULES AND REGULATIONS. The rules and regulations promulgated by the council shall be subject to the administrative procedures act.

46-23-12. REPRESENTATION FROM COASTAL COMMUNITIES. Upon the expiration of a term of a member appointed by the governor as an appointed or elected official of local government from a coastal municipality as set out in 46-23-2, the governor shall appoint an appointed or elected official of a coastal municipality which at the time of the governor's appointment has no appointed or ex-officio representation on said council.

46-23-13. APPLICATION AND HEARING FEES. The council shall be authorized to establish reasonable fees for applications and hearings.

46-23-14. EXPERT TESTIMONY. The council shall be authorized to engage its own expert and outside consultants and the council shall be empowered to use such testimony in making its decisions.

46-23-15. FEDERAL AND INTERSTATE RELATIONS. The council is authorized to accept any federal grants. It is further given the power to administer land and water use regulations and to acquire fee simple and less than fee simple interests under any federal or state program. The council is authorized to coordinate and cooperate with other states in furtherance of its purposes. The council may expend such grants and appropriations.

46-23-16. LENGTH OF PERMITS, LICENSES AND EASEMENTS. The council is authorized to grant permits, licenses and easements for any term of years or in perpetuity.

46-23-17. ANNUAL PROGRESS REPORT ON RIGHTS OF WAY. Within ninety (90) days after the end of each fiscal year, the council shall submit a written progress report on the development of public rights of way to the tidal water areas of the state to the state planning

council, the department of environmental management, and the joint committee on the environment, for review, evaluation and recommendation of the program's suitability, relevance to the recreation element of the state guide plan and impact on the natural resources of the state. The report shall also provide detailed records of expenditures and a proposed schedule of future projects.

46-23-18. ACTIVITIES PROHIBITED WITHOUT PERMISSION OF COUNCIL. (a) No person, firm or corporation shall, without a permit issued by the Coastal Resources Management Council, dredge beneath the waters or construct a marina within two thousand (2,000) feet of a shellfish management area as defined by rules and regulations of the Department of Environmental Management.

(b) Any person, firm or corporation desiring to conduct either of the activities specified in Subsection (a) shall file an application with the Coastal Resources Management Council upon forms furnished by the Coastal Resources Management Council. A hearing shall be held on said application within thirty (30) days of filing and, if at the conclusion of said hearing, the Council is satisfied that there will be no adverse impact upon the environment or natural resources of the state as a result of said activities, the Coastal Resources Management Council shall grant the permit requested. The applicant shall bear the burden of proving that there will be no adverse impact upon the environment or natural resources of the state, and the Coastal Resources Management Council shall be empowered to deny such application if the applicant does not demonstrate, in addition to the other requirements of this chapter, that the activity will not adversely affect any shellfish management area as designated by the Department of Environmental Management or the Marine Fisheries Council.

Part One. Authorities and Procedures

Section 100. Alterations and Activities That Require an Assent from the Coastal Resources Management Council

100.1. Tidal Waters, Shoreline Features, and Contiguous Areas

A. A Council Assent is required for all alterations and activities listed in Table 1 that are proposed for (1) tidal waters within the territorial sea (including coastal ponds, some of which are not tidal but which are coastal waters associated with a barrier beach system); (2) shoreline features; and (3) areas contiguous to shoreline features. Contiguous areas include all lands and waters directly adjoining shoreline features that extend inland two hundred (200) feet from the inland border of that shoreline feature.

B. Council Assents are also required for any other activity or alteration not listed in Table 1 but which (1) has a reasonable probability of conflicting with the Council's goals and its management plans or programs, and/or (2) has the potential to damage the environment of the coastal region.

C. Tidal waters and coastal ponds have been assigned to one of six use categories. Findings, goals, and policies pertaining to each water use category are found in Part Two of this document. Large-scale maps showing the use categories are available in coastal town halls and at the Council's offices in Providence. The precise delineation of the seaward boundaries of the state's territorial sea must be clarified through special state legislation. Until that time, the Council shall use as a guideline the boundaries shown in Figure 1. The landward boundary of the territorial sea is the mean high water mark along the Rhode Island coast.

D. Shoreline features together encompass the entire shore and are assigned to the following categories:

(1) coastal beaches and dunes;
(2) barrier beaches;
(3) coastal wetlands;
(4) coastal cliffs, bluffs, and banks;
(5) rocky shores; and
(6) manmade shorelines.

The prerequisites, standards, and Category B requirements for on-land activities listed in Sections 300.1 through 300.15 and in Section 330 of this document apply to both shoreline features and their 200-foot contiguous area.

100.2. Inland of Shoreline Features and Contiguous Areas

A. The Council reserves the right to review the following categories of alterations and activities proposed inland of shoreline features and their contiguous areas:

(1) power-generating plants,
(2) petroleum storage facilities,
(3) chemical or petroleum processing,
(4) minerals extraction,
(5) sewage treatment and disposal,
(6) solid waste disposal facilities, and
(7) desalination plants.

Where, on the basis of a review, it is found that a proposal has a reasonable probability of conflict with adopted resource management plans or programs, and/or has the potential to damage the coastal environment, the Council shall require that an Assent be obtained. Inland activities and alterations that may be subject to Council permitting are defined, and Council findings, goals, policies, and regulations are set forth, in Part Three, "Activities Under Council Jurisdiction."

Section 110. Applications for Category A and Category B Council Assents

110.1. Category A Applications

A. The activities and alterations listed as "A" in Table 1 (shoreline features and tidal waters) and Table 1A (the 200-foot area contiguous to shoreline features) include routine matters and categories of construction and maintenance work that do not

require review by the full Council if criteria (1) through (4) below are all met.

(1) The goals, policies, prerequisites, and standards in Parts Two and Three of this document that apply to the areas and activities in question are met.

(2) All buffer zone and setback requirements as contained in Sections 140 and 150 are met.

(3) Substantive objections are not raised by abutters, the CRMC staff, or CRMC members. (Note that starred Category A activities listed in Table 1 are put out to public notice.)

(4) Proof of certification of compliance with all applicable state and local statutes, ordinances, and regulations is provided.

B. If the Council's executive director verifies that these criteria have been met, an Assent for the proposed activity or alteration will be issued. This Assent may include stipulations or conditions to ensure compliance with the goals, policies, and standards of this Program.

C. If the criteria listed in Section 110.1(A) are not verified as met or a substantive objection is filed, the application shall be considered a Category B application and will be reviewed by the full Council.

D. Applicants desiring relief from one or more standards may apply for a variance (Section 120).

110.2. Category B Applications

A. Applicants for activities and alterations listed as "B" in Table 1 or in Table 1A, in addition to adhering to the applicable policies, prerequisites, and standards, are required to address in writing all Category B requirements as listed in the applicable sections of Part Three, and, where appropriate, other issues identified by the Council.

B. Formal notice will be provided to all interested parties once completed forms for a Category B application have been filed with the Council. A public hearing will be scheduled if there are one or more substantive objections to the project, or at the discretion of one or more members of the Council.

C. A Category B Assent shall be issued if the Council finds that the proposed alteration conforms with the goals, policies, prerequisites, informational requirements, and standards of this Program.

110.3. Substantive Objections

A. Substantive objections are defined by one or more of the following:

(1) threat of direct loss of property, property values, or other tangible assets of the objector(s) at the site in question;

(2) direct evidence that the proposed alteration or activity does not meet all of the policies, prerequisites, and standards contained in applicable sections of this document;

(3) evidence is presented which demonstrates that the proposed activity or alteration has a potential for significant adverse impacts on one or more of the following descriptors of the coastal environment: (a) circulation and/or flushing patterns; (b) sediment deposition and erosion; (c) biological communities, including vegetation, shellfish and finfish resources, and wildlife habitat; (d) areas of historic and archaeological significance; (e) scenic and/or recreation values; (f) water quality; (g) public access to and along the shore; (h) shoreline erosion and flood hazards; or

(4) evidence that the proposed activity or alteration does not conform to state or duly adopted municipal development plans, ordinances, or regulations.

Table 1. Review Categories and Prohibited Activities in Tidal Waters and on Adjacent Shoreline Features. (See pages 23-28 following.)

Review categories for activities within the 200-foot area contiguous to shoreline features are listed in Table 1A. All Category B activities and starred(*) Category A activities are put out to public notice. Maintenance of existing structures is treated in Section 300.14. Letter codes are as follows: A — Category A Assent required. B — Category B Assent required. P — Prohibited. NA — Not applicable.

Footnotes

[1] *See definitions in Section 300.2(A) for differentiation between Category A and B reviews.*

[2] *Municipal sewer lines are reviewed as Category B.*

[3] *Utility lines are reviewed as Category B.*

[4] *See Section 210.3(C)6; the review categories shown here for Type 3, 4, 5, and 6 waters apply to wetlands designated for preservation.*

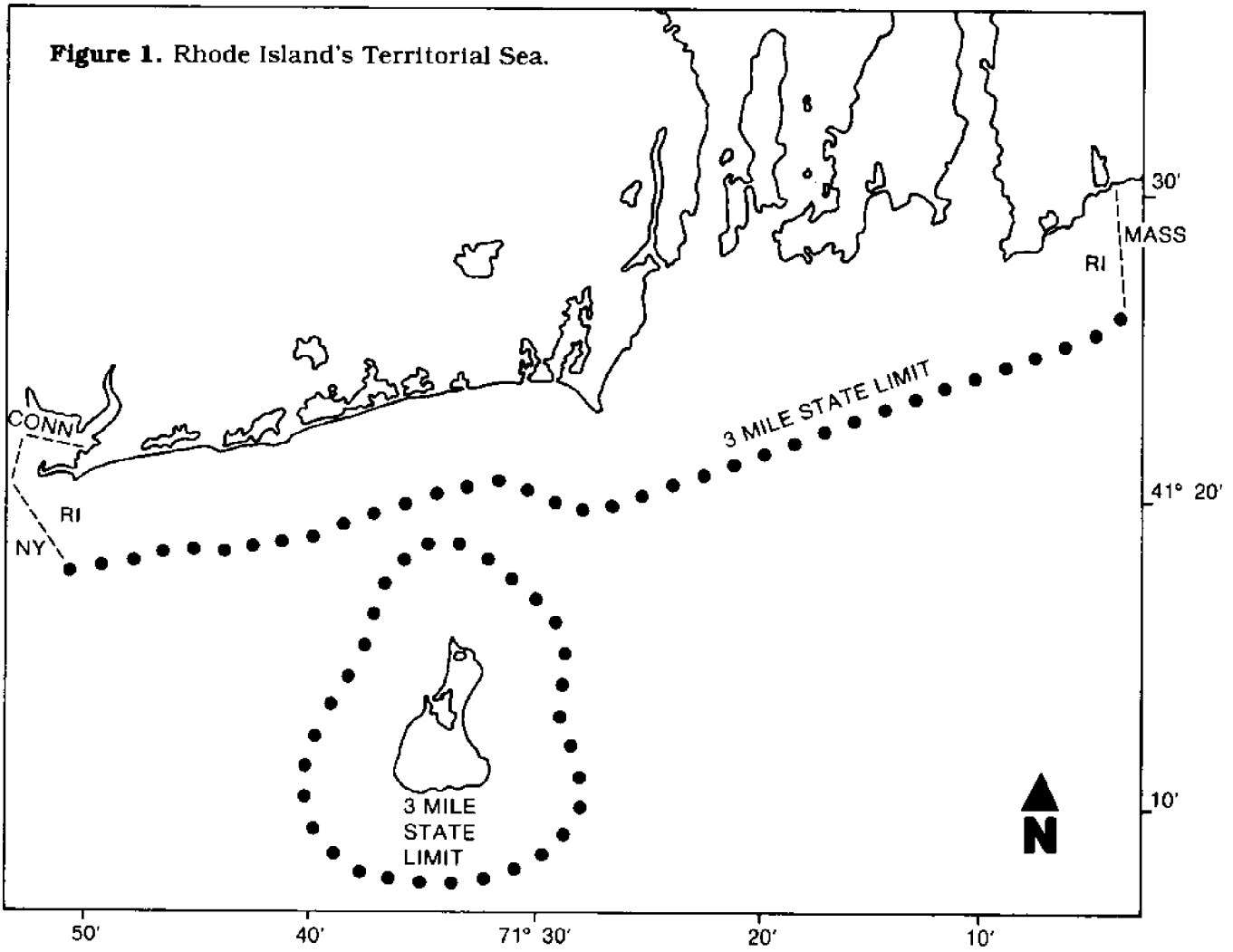


Figure 1. Rhode Island's Territorial Sea.

The offshore limits of the state's territorial sea are being litigated before the U.S. Supreme Court. This sketch shows the maximum area that the state may claim under existing laws and treaties.

Type 1 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barrier Beaches	Moderately Developed Barrier Beaches	Developed Barrier Beaches	Coastal Wetlands	Cliffs, Bluffs, and Banks	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	P	P	A[1]	A[1]	P	P	P	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	P	B
Commercial/Industrial Structures	P	P	P	P	B	P	P	P	P	P
Public Recreational Structures	P	P	P	B	B	P	P	P	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	P	P	P	P	P	P	P	P	P	P
Launching Ramps*	P	P	P	P	P	P	P	P	P	P
Residential Docks,* Piers,* and Floats	P	P	P	P	P	P	P	P	P	P
Mooring of Houseboats	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	P	P	P[2]	B	P	P	P	P	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	P	B
Point Discharges — Runoff	B	A	A	A	A	A	A	A	A	A
Point Discharges — Other	P	P	P	P	B	P	P	P	P	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection Facilities	P	P	P	P	P	P	P	P	B	B
Energy-related Activities/Structures	P	P	P	P[3]	B	P	P	P	B	B
Dredging — Improvement	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging — Maintenance	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	P	B	B	B	P	P	P	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	P	P	P	P	B	P	P	P	B	B

Type 2 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barrier Beaches	Moderately Developed Barrier Beaches	Developed Barrier Beaches	Coastal Wetlands	Cliffs, Bluffs, and Banks	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	P	P	A[1]	A[1]	P	P	P	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	A	B
Commercial/Industrial Structures	P	P	P	P	B	P	P	P	B	P
Public Recreational Structures	P	P	P	B	B	P	P	P	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	P	P	P	P	P	P	P	P	P	P
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,* Piers,* and Floats	A	A	P	A	A	A	A	A	A	B
Mooring of Houseboats	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	P	P	P[2]	B	P	P	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	P	B
Point Discharges — Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges — Other	B	P	P	P	B	P	P	P	P	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection Facilities	B	B	P	P	P	P	B	B	B	B
Energy-related Activities/Structures	B	P	P	P[3]	B	P	P	P	B	B
Dredging — Improvement	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging — Maintenance	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	P	B	B	B	P	P	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	P	P	P	B	P	P	P	B	B

Type 3 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barrier Beaches	Moderately Developed Barrier Beaches	Developed Barrier Beaches	Coastal Wetlands[4]	Cliffs, Bluffs, and Banks	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	P	B	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Public Recreational Structures	B	B	P	B	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	B	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,* Piers,* and Floats	A	A	P	A	A	A	A	A	A	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	P	P	P[2]	B	P	P	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	B	B
Point Discharges — Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges — Other	B	B	P	B	B	P	P	P	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection Facilities	B	B	P	P	B	P	B	B	B	B
Energy-related Activities/Structures	B	P	P	P[3]	B	P	B	B	B	B
Dredging — Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging — Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	P	P	P	B	P	B	B	B	B

Type 4 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barrier Beaches	Moderately Developed Barrier Beaches	Developed Barrier Beaches	Coastal Wetlands[4]	Cliffs, Bluffs, and Banks	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	B	B	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Public Recreational Structures	B	B	P	B	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	B	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,* Piers,* and Floats	A	A	P	A	A	A	A	A	A	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	B	B	P	P[2]	B	P	B	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	A	B
Point Discharges — Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges — Other	B	B	P	B	B	P	B	B	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection Facilities	B	B	P	P	B	P	B	B	B	B
Energy-related Activities/Structures	B	B	P	P[3]	B	P	B	B	B	B
Dredging — Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging — Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	B	P	P	B	P	B	B	B	B

Type 5 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barrier Beaches	Moderately Developed Barrier Beaches	Developed Barrier Beaches	Coastal Wetlands[4]	Cliffs, Bluffs, and Banks	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	B	B	A[1]	B
Residential Structures	P	P	P	P	A	P	B	B	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Public Recreational Structures	B	B	P	B	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	B	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,* Piers,* and Floats	A	A	P	A	A	A	A	A	A	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	B	P	P[2]	B	P	B	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	B	B	A	B
Point Discharges — Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges — Other	B	B	P	B	B	P	B	B	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection Facilities	B	B	P	P	B	P	B	B	B	B
Energy-related Activities/Structures	B	B	P	P[3]	B	P	B	B	B	B
Dredging — Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging — Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	B	P	P	B	P	B	B	B	B

Type 6 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barrier Beaches	Moderately Developed Barrier Beaches	Developed Barrier Beaches	Coastal Wetlands[4]	Cliffs, Bluffs, and Banks	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	B	B	A[1]	B
Residential Structures	P	P	P	P	A	P	B	B	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Public Recreational Structures	B	B	P	B	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	B	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,* Piers,* and Floats	B	B	P	B	B	B	B	B	B	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	B	B	P	P[2]	B	P	B	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	B	B	A	B
Point Discharges — Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges — Other	B	B	P	B	B	P	B	B	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection Facilities	B	B	P	P	B	P	B	B	B	B
Energy-related Activities/Structures	B	B	P	P[3]	B	P	B	B	B	B
Dredging — Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging — Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	B	P	P	B	P	B	B	B	B

Table 1A. Review Categories in the 200-Foot Area Contiguous to Shoreline Features.

Alteration or Activity	*Review Category*
Filling, Removal, and Grading of Shoreline Features	A/B[1]
Residential Buildings and Associated Structures	A
Commercial and Industrial Structures	B
Public Recreational Structures	B
Municipal Sewage Treatment Facilities	B
Individual Sewage Disposal Systems	A
Point Discharges — Runoff	A
Point Discharges — Other	B
Structural Shoreline Protection	B
Non-Structural Shoreline Protection	A
Upland Dredged Material Disposal	B
Energy-related Structures	B
Mining	B
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, and Airports	B

[1]*See Section 300.2(A)2 for differentiation between Category A and B reviews.*

Section 120. Variances

A. Applicants desiring a variance from a standard shall be granted an Assent only if the Council finds that the following five criteria are met:

(1) The proposed alteration conforms with applicable goals and policies in Parts Two and Three.

(2) The proposed alteration will not result in significant adverse environmental impacts or use conflicts.

(3) Due to conditions at the site in question, the standard will cause the applicant an undue hardship.

(4) The modification requested by the applicant is the minimum necessary to relieve an undue hardship.

(5) The undue hardship is not the result of any prior action of the applicant.

B. Relief from a standard does not remove the applicant's responsibility to comply with all other Program requirements.

Section 130. Special Exceptions

A. Special exceptions may be granted to prohibited activities to permit alterations and activities that do not conform with a Council goal for the areas affected or which would otherwise be prohibited by the requirements of this document only if and when the applicant has demonstrated that:

(1) The proposed activity serves a compelling public purpose which provides benefits to the public as a whole as opposed to individual or private interests. The activity must be one or more of the following: (a) an activity associated with public infrastructure such as utility, energy, communications, transportation facilities; (b) a water-dependent activity that generates substantial economic gain to the state; and/or (c) an activity that provides access to the shore for

broad segments of the public.

(2) All reasonable steps shall be taken to minimize environmental impacts and/or use conflict.

(3) There is no reasonable alternative means of, or location for, serving the compelling public purpose cited.

B. Special exceptions may be granted only after proper notice in accordance with the Rhode Island Administrative Procedures Act, a public hearing has been held, and the record of that hearing has been considered by the full Council. The Council shall make public the findings and conclusions upon which a decision to issue a Special Exception are based.

C. In granting a Special Exception, the Council shall apply conditions as necessary to promote the objectives of the Program. Such conditions may include, but are not limited to, provisions for:

(1) minimizing adverse impacts of the alteration upon other areas and activities by stipulating the type, intensity, and performance of activities, and the hours of use and operation;

(2) controlling the sequence of development, including when it must be commenced and completed;

(3) controlling the duration of use or development and the time within which any temporary structure must be removed;

(4) assuring satisfactory installation and maintenance of required public improvements;

(5) designating the exact location and nature of development; and

(6) establishing detailed records by submission of drawings, maps, plots, or specifications.

Section 140. Setbacks

A. Definition: a setback is the minimum distance from the inland boundary of a coastal feature at which an approved activity or alteration may take place.

B. Setbacks shall be maintained in areas contiguous to coastal beaches, coastal wetlands, coastal cliffs and banks, rocky shores, and existing manmade shorelines, and apply to the following categories of activities and alterations:

(1) filling, removal, or grading, except when part of an approved alteration involving a water-dependent activity or structure (Section 300.2);

(2) residential buildings, excluding associated structures (Section 300.3);

(3) individual sewage disposal systems, sewage treatment plants, and associated sewer facilities excluding outfalls (Section 300.6);

(4) industrial structures, commercial structures, and public recreation structures that are not water-dependent (Section 300.3); and

(5) transportation facilities that are not water-dependent (Section 300.13).

C. Setbacks shall extend not less than fifty (50) feet from the inland boundary of the coastal feature except in areas designated by the Council as Critical Erosion Areas. In Critical Erosion Areas (Table 2), the depth of the setback shall be not less than 30 times the calculated average annual erosion rate.

D. Applicants for alterations and activities who cannot meet the minimum setback standards may apply to the Council for a variance (Section 120).

E. The setback provisions do not apply to minor modifications or restoration of structures that conform with all other policies and standards of this program.

Table 2. Setbacks in Critical Erosion Areas.

Erosion Category (on accompanying maps)	*Annual Estimated Rate (in feet)*	*Setback Distance (in feet)*
(A)	2-2½	75
(B)	3-4	120
(C)	4-5	150
(D)	5-6	180

Section 150. Buffer Zones

A. Definition: a buffer zone is a land area on or contiguous to a shoreline feature that is retained in its natural and undisturbed condition by the applicant.

B. Buffer zones must be tailored to on-site conditions and the specific alterations and activities that are to be undertaken. The determination of the boundaries of a buffer zone must balance the property owner's rights to enjoy his property with the Council's responsibility to preserve and, where possible, restore ecological systems. The benefits of buffer zones may be summarized as follows:

(1) Erosion Control. Undisturbed vegetation when retained on and adjacent to steep slopes and banks of unconsolidated material stabilizes soils and can prevent gullying by slowing the velocity of runoff water. Marshes assist in preventing or slowing upland erosion and provide protection to the toe of a bank or shoreline protection structure.

(2) Pollution of Water Bodies. Vegetation along the perimeter of water bodies is effective in trapping pollutants carried by runoff waters and absorbing nutrients from groundwater; this is particularly important in areas abutting poorly flushed water bodies such as salt ponds and some river estuaries that are threatened by an overabundance of nutrients and contaminated runoff waters.

(3) Protection of Flora and Fauna. Buffer zones protect the habitat for wildlife, an important resource in many coastal areas; these zones help preserve the nesting and feeding habitats that are particularly important on shorelines abutting coastal wetlands and Type 1 and 2 waters. Buffer zones are frequently essential to the protection of rare or unusual occurrences of wildlife and unusual or otherwise significant plant species, stands, or communities. The maintenance of species diversity and transition zones between communities is important, as is the protection of species that have particular value as wildlife food.

(4) Preservation and Enhancement of Scenic Qualities. Buffers help preserve the natural appearance of the shoreline, which gives Narragansett Bay and the South Shore salt ponds much of their beauty; vegetation should screen buildings in areas of rural character from vantage points on the water and neighboring shore. (See Section 330.) Natural buffer zones should be used where possible to blend in those facilities that are water-dependent, such as stairways, and make them less obtrusive. Vegetated buffer strips greatly enhance the appearance of the commercial areas adjacent to Type 5 and 6 waters and need not interfere with the activities that take place on the site. Buffer zones should be used where possible to lessen the intrusion of new facilities in historic areas and to protect sensitive or archaeological sites.

C. Buffer zones shall be established according to the values and sensitivities of the site as assessed by the Council's staff engineer and biologist. The areas designated as buffer zones on Council Assents may be wider than the setback distance and shall be maintained by the applicant as undisturbed areas and in their natural condition. Minor pruning and trimming may be permitted if so stipulated by the Council. Fertilizers shall not be applied within buffer zones except where necessary to establish vegetation in areas that are eroding or need to be restored.

Section 160. Fees

A. The General Laws of the State of Rhode Island, Title 46, Chapter 23, Section 2, Subsection 46-23-6D.C, authorize the Council to "grant licenses, permits, and easements for the use of Coastal Resources, which are held in trust by the state for all its citizens, and impose fees for private use of such resources."

B. The Council requires fees for land created by the filling of tidal waters and the long-term (dead) storage of vessels. Factors to

be considered in establishing the fee include:

(1) the degree of preemption associated with the activity or alteration involved;

(2) the degree of irreversibility associated with the activity or alteration;

(3) the value of opportunities for other activities lost to the public as the result of the activity; and

(4) the economic return to the applicant resulting from pursuing the activity or making the permitted alterations.

Payments required by the fee shall be determined by the Council upon the completion of a professional appraisal based on the criteria listed above. The Assent recipient shall bear the cost of the appraisal.

C. A Council permit for aquacultural activities, excluding seasonally deployed aquaculture apparatus such as spat collectors, will be in the form of a lease.

(1) The annual rental fee is seventy-five dollars ($75.00) for half an acre or less, one hundred and fifty dollars ($150.00) for a half to one acre, and one hundred dollars ($100.00) for each additional acre. Annual rental fees are payable in full, in advance, on the first business day in the month of January of each rental year. Leases are not to exceed ten years and shall be renewable upon application of the permittee for successive periods of up to five years each. Any assignment or sublease of the whole or any portion of a leased area shall constitute a breach of the lease and be cause for termination of the lease, unless such assignment or subletting has received the prior approval of the Council.

(2) In the event a lease holder fails to make full payment of the annual rental fee by the first business day of the month of February of each rental year, the lease agreement shall be terminated, and all permits and authorities granted under this section shall be revoked. In the event the leased area is not actively used for a period of more than two years, the lease shall be terminated, and all licenses and authorities granted thereunder revoked. Lease holders shall be notified 60 days prior to such revocation and may appeal the Council's decision.

(3) Persons wishing to deploy small-scale seasonal apparatus such as spat collectors shall apply for a Council Assent and will not be charged a rental fee.

Section 170. Violations and Enforcement Actions

A. Chapter 23, Section 3, Subsection 46-23-7 of the General Laws of Rhode Island authorizes the Council to order violators of the Program to cease and desist or to remedy violations. A violation of this Program is defined as any development, operation, alteration, or construction in an area under Council jurisdiction which is (1) undertaken without a valid Council Assent; (2) undertaken in a manner other than that prescribed in such an Assent where one has been issued; (3) continued after a written cease and desist order has been issued by the Council or its authorized agents; or (4) undertaken after a restoration order has been issued by the Council.

B. Cease and desist orders are written orders to a violator of the Coastal Resources Management Program to halt all illegal activities immediately. The chairman of the Council and state conservation officers are empowered to issue written cease and desist orders. Restoration orders are issued by the chairman of the Council for violators to return the altered area, feature, or waters to a condition as close as possible to their previous unaltered condition as required by this Program.

C. The Division of Enforcement of DEM enforces the laws and regulations of the Council. The division is assisted by the professional field personnel from the Divisions of Coastal Resources and Fish and Wildlife, who monitor work in progress and conformance with Council Assents.

D. The chairman shall issue restoration orders whenever the violation, if halted but

not redressed, is determined to represent or is capable of causing significant adverse environmental impacts, or is inconsistent with the resource management goals, policies, and regulations of this Program.

E. Any person in violation of an order of the Council shall be guilty of a misdemeanor and upon conviction thereof shall be fined not more than three hundred dollars ($300), or shall be imprisoned for a period not exceeding three months, or both. Each day such violation, omission, failure, or refusal continues shall be deemed a separate offense.

F. The chairman or vice chairman of the Council shall apply to any court or competent jurisdiction for any injunction to prevent the unlawful posting or blocking of any tidal water public right-of-way.

Section 180. Emergency Assents

A. The executive director may grant an Emergency Assent when catastrophic storms, flooding, and/or erosion has occurred at a site under Council jurisdiction, and where, if immediate action is not taken, the existing conditions may cause one or more of the following:

(1) bodily harm or a threat to public health;

(2) significant adverse environmental impacts; or

(3) significant economic loss.

These Emergency Assents may permit only such action at the site that will correct conditions (1) through (3) above in a manner consistent with the policies of this Program. Emergency Assents shall not be granted to permit permanent structural alterations to coastal features or tidal waters and coastal ponds that are not fully consistent with the policies and prohibitions of this Program as they apply to conditions then existing at the site.

B. Where catastrophic storms, flooding, and/or erosion has significantly altered conditions at a site, the full Council, if necessary at an emergency meeting, may permit permanent structural measures to be taken that shall balance the following considerations:

(1) immediate and long-term environmental impacts at the site;

(2) economic impacts; and

(3) the impact on adjacent features, activities, and/or property.

In cases involving structural shoreline protection facilities, full consideration shall be given to the requirements of Section 300.7(E)2.

Part Two.
Areas Under Council Jurisdiction

Section 200. Tidal and Coastal Pond Waters

A. Introductory Findings

1. Rhode Islanders have a deep commitment to their coastal environment. Their concern for Narragansett Bay and the South Shore coastal ponds has been voiced in numerous ways, including support of landmark legislation in 1971 that created the Coastal Resources Management Council, endorsement of many of the efforts of environmental organizations such as Save the Bay and the Audubon Society of Rhode Island, and passage of the largest bond issue in the state's history in order to relieve chronic pollution in upper Narragansett Bay caused by the antiquated Providence municipal sewage treatment plant. The concerns of the public have in large measure been responsible for decisions not to build oil refineries in Jamestown and Tiverton, and to halt the indiscriminate destruction of salt marshes and the improper disposal of dredged spoils. Narragansett Bay is widely accepted as the state's greatest resource, and our coastal waters and shoreline are the focus not only of tourism but of efforts to attract new businesses into the state. Rhode Island strives to maintain the image of a desirable place to work and raise a family, and these attributes are inextricably bound to a varied and beautiful shoreline, where water quality and, no less important, visual quality are excellent and well protected. The qualities that make Rhode Island's coast beautiful and an unparalleled recreational resource are fully as important as the more readily quantifiable commercial and industrial water-dependent activities. The designation of large stretches of waters or coastline for conservation and low-intensity use by this Program recognizes these facts and will help maintain a high quality of coastal environment for future generations of Rhode Islanders.

2. The six categories of waters defined in this Program are directly linked to the characteristics of the shoreline, since the activities on the adjacent mainland are the primary determinant of the uses and qualities of any specific water site. Thus, Type 1 waters abut shorelines in a natural undisturbed condition, where alterations, including the construction of docks and any dredging, are considered by the Council as unsuitable. Type 2 waters are adjacent to predominantly residential areas, where docks are acceptable, but more intense forms of development, including more marinas and new dredging projects (but not maintenance dredging), would change the area's character and alter the established balance among uses. Alterations such as these would bring more intensive uses and are therefore prohibited in Type 2 waters. The waters along some 70 percent of the state's 420 miles of shoreline have been assigned to Type 1 and Type 2, and should be expected to retain their high scenic value and established patterns of low-intensity use. Type 3 waters are dominated by commercial facilities that support recreational boating. Here, marinas, boatyards, and associated businesses take priority over other uses, and dredging and shoreline alterations are to be expected. Type 4 areas include the open waters of the Bay and the Sounds, where a balance must be maintained among fishing, recreational boating, and commercial traffic. Here high water quality and a healthy ecosystem are primary concerns. The last two water use categories are assigned to areas adjacent to ports and industrial waterfronts. In these waters, maintenance of adequate water depths is essential, high water quality is seldom achievable, and some filling may be desirable. Within Type 5 ports, a mix of commercial and recreational activities must co-exist, while in Type 6 waters water-dependent industrial and commercial activities take precedence over all other activities. The water categories described in this section are complemented by policies for shoreline types (Section 210), and the two must be combined to identify the Program's policies for a specific coastal site.

3. More than 90 percent of Rhode Island's tidal waters are classified by the R.I. Department of Environmental Management as SA, the highest water quality rating. Water pollution, however, is a major concern, with eutrophication and bacterial contamination a growing concern in the salt ponds and with all major indicators of pollution showing strong gradients down the Bay from the Providence metropolitan area. Despite the pollutants and intense fishing pressure, Rhode Island's tidal waters support large seasonal populations of a variety of finfish. In the Bay, the quahog supports a large and important commercial fishery. Recreational fishing for flounder, bluefish, and striped bass is important nearshore.

4. Rhode Island has a rich history of maritime commerce and industry. In this century, however, the once-booming urban waterfronts of the upper Bay have stagnated and declined despite major infusions of public funds to deepen the access channel to Providence to 40 feet and build new terminal facilities. During the postwar decades, oil imports have dominated waterborne commerce, but this sector has declined sharply since the mid-seventies. In 1973, the U.S. Navy announced a major pullout from its extensive facilities in the lower Bay, and by 1980 hundreds of acres of port facilities at Quonset, Davisville, Melville, and Coddington Cove had been turned over to the state. The State of Rhode Island now owns a large inventory of unutilized or underutilized port facilities. As commercial shipping has declined, recreational boating has increased. Facilities for the in-water storage of boats are in short supply, but with very few exceptions expansion of marinas into new areas could only be accomplished if remaining salt marshes and other important natural features were sacrificed. Since this is considered unacceptable by the Council, the emphasis must be on the more efficient use of existing facilities, recycling of underutilized but already disturbed sites, and improvements to public launching facilities.

5. Activities that are dependent on Rhode Island's tidal waters generate substantial economic benefits to the state. Nearly one billion dollars are generated each year by such water-related activities as marine industry, transportation and education, commercial fishing and marine recreation (Farrell and Rorholm, 1981). Substantial additional economic benefits are generated by water-enhanced residential development, tourism, and the importance of an attractive marine environment in drawing high-quality businesses to Rhode Island.

200.1. Type 1 Conservation Areas

A. Definition

Included in this category are (1) water areas that are within the boundaries of designated wildlife refuges and conservation areas, (2) water areas that have retained undisturbed natural habitat or maintain scenic values of unique or unusual significance, and (3) water areas that are particularly unsuitable for structures due to their exposure to severe wave action, flooding, and erosion.

B. Findings

1. The coastline that fronts directly on Long Island and Block Island Sounds includes some of the most dynamic and naturally scenic features in Rhode Island. These include the South Shore barrier beaches, the erosion-prone bluffs of Block Island, and Newport's rocky promontories. In order to preserve these shorelines adequately and to avoid inappropriate activities in these areas, structural alterations in the tidal waters directly adjacent to these features must be severely restricted or prohibited.

Potter Salt Pond, South Kingstown. *Photo by Virginia Lee.*

2. Brigg's Marsh in Little Compton, Sachem Pond on Block Island, and Hundred Acre Cove in Barrington are examples of water areas which have exceptional value as waterfowl nesting and feeding habitat. Rare and unique assemblages of plants and animals and rich shellfish beds are found in these undisturbed waters. Many, but not all, water areas of well-recognized significance to wildlife are within established sanctuaries or management areas.

3. Opportunities for scientific research and education have been enhanced by the designation of a National Estuarine Sanctuary in the upper Bay, one of some 15 similar designations nationwide. The sanctuary includes Bay waters extending to the 18-foot depth contour around Patience Island, the northern half of Prudence Island, and Hope Island.

4. Valuable conservation areas are not all in clean, rural environments. For example, Watchemoket Cove in the heart of the East Providence industrial waterfront is an important waterfowl resting area, particularly during the winter months when large numbers of canvasbacks, scaup, widgeon, and black ducks are present.

5. Several stretches of shoreline within Narragansett Bay have survived the rapid proliferation of residential development during recent decades in pristine condition. Examples include the Potowomut River, the Palmer River in Barrington and Warren, and the Mt. Hope Cliffs in Bristol. It is important that as much of this land as practicable be preserved from alteration to assure that Rhode Island's rich diversity of shoreline types and high scenic value are preserved.

C. Policies

1. The Council's goal is to preserve and protect Type 1 waters from activities and uses that have the potential to degrade scenic, wildlife, and plant habitat values, or which may adversely impact water quality and the diversity of natural shoreline types.

2. The mooring of houseboats and floating businesses, the construction of recreational boating facilities, filling below mean high water, point discharge of substances other than runoff water, and the placement of industrial or commercial structures or operations (excluding fishing and aquaculture) are all prohibited in Type 1 waters.

3. In Type 1 waters, activities and alterations including dredging, dredged materials disposal, structural shoreline protection, and grading and excavation on abutting shoreline features are all prohibited unless the primary purpose of the alteration or activity is to preserve or enhance the area as a conservation area and/or a natural buffer against storms.

4. Since runoff can be a major source of pollutants from developed areas, new or enlarged point discharges of runoff shall be permitted in Type 1 waters only when it is demonstrated that no reasonable alternative exists and that no significant adverse impact to the receiving waters will result. The cumulative impacts of runoff are of particular concern in Type 1 waters.

5. Applicants for Council Assents for alterations or activities in or contiguous to Type 1 waters shall describe the measures taken to mitigate impacts on the scenic quality of the area (see Section 330).

6. Activities and alterations subject to Council jurisdiction contiguous to public parks, public beaches, public rights-of-way to the shore, and conservation areas abutting Type 1 waters shall not significantly interfere with public use and enjoyment of such facilities. Where significant interference is found, the Council shall suitably modify or prohibit that alteration or activity.

200.2.
Type 2 Low-Intensity Use

A. Definition

This category includes waters in areas with high scenic value that support low-intensity recreational and residential uses. These waters include seasonal mooring areas where good water quality and fish and wildlife habitat are maintained.

B. Findings

1. Type 2 waters are similar to Type 1 waters in their high scenic qualities, high value for fish and wildlife habitat, and, with some exceptions, good water quality. Densely developed residential areas abut much of the waters in this category, and here docks and the activities and small-scale alterations associated with residential waterfronts are considered suitable.

2. Major portions of the salt ponds along the South Shore between Watch Hill and Point Judith are assigned to Type 2 waters. Nearly all have retained their scenic and natural characteristics while accommodating residential docks, minor dredged channels, and small-scale shoreline protection structures. Each coastal pond is an individually distinct ecosystem and a unique feature of great scenic value. Continuing residential development within the watersheds of the salt ponds poses severe threats to future water quality in the form of both bacterial contamination and eutrophication. Permanent breachways built in the 1950s to provide easy access for boats to the ocean have radically altered the ecology of many of the larger ponds and are causing rapid siltation within the ponds.

3. Waters along open coasts which support low-intensity uses associated with residential areas are found along stretches of the lower Bay. An example is the Sakonnet River, which separates Aquidneck Island from Tiverton and Little Compton. The Sakonnet's waters are of high quality except for small areas adjacent to the few densely developed areas, and its shorelands are varied and picturesque, displaying large salt marshes, rocky cliffs, open agricultural fields, and wooded shoreline. The upper half of the Sakonnet River is a productive quahog ground and is fished commercially. Conchs are fished commercially throughout the river, and Almy Brook, which drains into the Sakonnet from Nonquit Pond, contains a sizable alewife run.

4. Several small riverine estuaries such as the Kickamuit River in Warren and the Pettaquamscutt (Narrow) River in Narragansett, South Kingstown, and North Kingstown are also assigned to Type 2 waters. These rivers contain extensive salt marshes and a rich diversity of fish, shellfish, and waterfowl. Extensive residential development and restricted flushing combine to pose severe water quality concerns similar to those in the more developed salt ponds. Scenic values, however, remain high, and local residents are highly concerned that activities such as shellfishing and swimming are maintained and not preempted by poor water quality.

C. Policies

1. The Council's goal is to maintain and, where possible, restore the high scenic value, water quality, and natural habitat values of these areas, while providing for low-intensity uses that will not detract from these values.

2. New or deepened dredged channels and basins (termed "improvement dredging" by the Army Corps of Engineers); new marinas, and expansion of pre-existing marinas in excess of 25 percent of their capacity as of January 1981; the mooring of houseboats and floating businesses; industrial and commercial structures and operations (excluding fishing and aquaculture); and filling are all prohibited in Type 2 waters.

3. Residential boating facilities, public launching ramps, and structural shoreline protection facilities may be permitted.

4. Applicants for Council Assents for alterations or activities in Type 2 waters shall

describe the measures taken to mitigate impacts on the scenic quality of the area (see Section 330).

5. Since runoff can be a major source of pollutants from developed areas to poorly flushed estuaries, new or enlarged discharges shall be permitted into the following Type 2 waters only when it is demonstrated that no reasonable alternative exists and that no significant adverse impact to the receiving waters will result:

(a) Winnapaug Pond
(b) Quonochontaug Pond
(c) Ninigret Pond (Charlestown Pond)
(d) Green Hill Pond
(e) Potters Pond
(f) Point Judith Pond
(g) Nanaquacket Pond
(h) Palmer River
(i) Kickemuit River
(j) Fishing Cove (Wickford)
(k) Pettaquamscutt River

6. Activities and alterations subject to Council jurisdiction contiguous to public parks, public beaches, public rights-of-way to the shore and conservation areas abutting Type 2 waters shall not significantly interfere with public use and enjoyment of such facilities. Where significant interference is found, the Council shall suitably modify or deny that alteration or activity.

Potter Salt Pond, South Kingstown. *Photo by Prentice Stout.*

200.3.
Type 3 High-Intensity Boating

A. Definition

This category includes intensely utilized water areas where recreational boating activities dominate and where the adjacent shorelines are developed as marinas, boatyards, and associated water-enhanced and water-dependent businesses.

B. Findings

1. Marinas are the principal means by which the boating public gains access to tidal waters, and therefore provide an important public service. Only beachgoing involves more Rhode Islanders in a recreation activity that makes direct use of tidal waters. In 1978, some 65 percent of all slips and moorings were within marinas and yacht clubs, and nearly all of these are within Type 3 waters.

2. Marinas face a number of difficulties. The boating season in Rhode Island is confined to six months, with most of the activity concentrated in June, July, and August. Many marina operations have difficulty in generating income during the remainder of the year and are economically marginal businesses. Nearly all the existing marinas were built when the value of waterfront property was far lower than it is today, and the pressure is mounting to convert marginal operations occupying high-value waterfront land to more profitable uses.

Pawtuxet Cove, Warwick and Cranston. *Photo by Robert Izzo.*

3. Areas suitable for marinas are severely limited, and the steady growth in the number of recreational boats is increasing the competition for the available facilities. Unfortunately, sheltered waters suitable for marinas are limited, and most of the remaining potential sites contain salt marshes that could only be developed at great environmental as well as high economic costs. Persons proposing new marinas are also hampered by local zoning and high land costs, and neighborhood opposition is frequently vociferous. The solution to growing demand is therefore to use the available facilities more efficiently and to recycle already altered sites in the upper Bay and on excessed Navy holdings, such as Allens Harbor in North Kingstown and along the Aquidneck west shore.

4. In many locations, marina operators are plagued with siltation problems and find it difficult to find acceptable sites for their dredged materials. Dredging problems can be best solved if the marina operators within a cove or harbor join together to finance the dredging and find a common local solution to the disposal problem. Options such as marsh building, beach nourishment, or the transport of materials to a more distant location become technically and economically feasible when a sufficiently large volume of material is to be moved and a united effort to solve the problem is organized.

5. The growth in the size of the recreation fleet, limited berthing opportunities, and the increasing expense of in-water storage have contributed to rapid growth in the number of trailered boats. This has placed a heavy demand on public launching ramps, which are in short supply and many of which are in deteriorating condition or have limited parking capacity.

6. Type 3 waters and the adjacent shoreline, while utilized intensely for the needs of the recreational boating public, nevertheless retain numerous natural assets of special concern to the Council. These include coastal wetlands, and the value these areas provide as fish and shellfish spawning and juvenile rearing grounds. These factors must be weighed when the Council considers proposals that may impact these assets.

C. Policies

1. The Council's goal is to preserve, protect, and, where possible, enhance Type 3 areas for high-intensity boating and the services that support this activity. Other activities and alterations will be permitted to the extent that they do not significantly interfere with recreational boating activities or values.

2. The highest priority uses of Type 3 waters and adjoining land areas within the Council jurisdiction are (a) marinas, mooring areas, public launching ramps, and other facilities that support recreational boating and enhance public access to tidal waters; and (b) boatyards and other businesses that service recreational boaters.

3. The Council encourages marinas to seek innovative solutions to increased demands for moorings, dockage, and storage space, and allows marina operators to alter the layout of their facilities and increase their capacity up to 25 percent (as of January 1981) within approved marina perimeters without applying for a new Assent (see Section 300.4).

4. The Council shall encourage more and improved public launching facilities by protecting existing facilities from interference by other uses subject to Council jurisdiction, identifying appropriate sites for new ramps and parking areas, and working with other agencies to build new ramps and maintain existing facilities.

200.4.
Type 4 Multipurpose Waters

A. Definition

This category includes (1) large expanses of open water in Narragansett Bay and the Sounds which support a variety of commercial and recreational activities while maintaining good value as a fish and wildlife habitat; and (2) open waters adjacent to shorelines that could support water-dependent commercial, industrial, and/or high-intensity recreational activities.

B. Findings

1. The open waters of Narragansett Bay and the Sounds are used for a number of purposes including commercial and sport fishing, boating, commercial shipping, aquaculture, and scientific research. These areas are highly productive of fish and shellfish, and support substantial commercial fisheries including a small dragger fishery, seasonal lobstering, and shellfishing. The overwhelming majority of activity is in shellfishing, particularly quahogging. The quahog fishery has grown steadily over the past decade, and in 1980 the reported landings of quahog meats peaked at an all-time high of 3.5 million pounds, worth over $11 million. It is generally accepted that the reported catch is substantially less than the actual. In 1980, Rhode Island supplied more than one-quarter of the nation's total harvest, and the fishery provided full-time employment to some 1,300 fishermen and part-time employment to an additional 2,300. The boundaries of principal grounds for the quahog trawler and lobster fisheries are shown in a general manner on maps in "An Aquaculture Management Plan for Rhode Island Coastal Waters," prepared in 1981 by W.J. Lapin of the Department of Environmental Management. A significant portion of the Bay's quahog beds is in upper Bay areas permanently closed to shellfishing, and many of the currently most productive grounds are closed for much of the year. Water pollution is thus a major threat to the Bay's shellfisheries.

2. In the early years of this century, the Bay supported a lucrative oyster culture industry. In 1910, some 20,000 acres of Bay bottom were leased to private growers. Conflicts between oyster growers and commercial shellfishermen were intense. The oyster industry began a rapid decline in the 1930s and ended in 1957. In the late 1970s, a new form of aquaculture using intensive off-bottom culture methods was proposed for several locations. By mid-1982 three leases had been granted by the Council in the Bay and in the coastal ponds. Commercial fishermen oppose the re-establishment of aquaculture in the Bay fearing encroachment on their grounds and impacts on shellfish prices. Aquaculturists argue that their intensive methods need not compete with traditional fisheries for prime grounds and that aquaculture could provide the state with a new industry, providing jobs and revenues from a renewable native resource. Aquaculturists use floating structures such as rafts or lines suspended from buoys or may conduct their activities on the bottom. Most aquacultural activities involve fixed and relatively permanent structures. While the species potentially suitable for aquaculture are almost unlimited, the species of current interest for Narragansett Bay are mussels, oysters, and quahogs.

3. Boaters and sport fishermen are another major user group of Type 4 waters. The majority of the state's estimated 33,000 (1979) recreational boats are used on the Bay. Sport fishermen take large numbers of flounder, bluefish, and striped bass each year. The scenic qualities of the Bay, good water quality, and control over preemptive uses are essential to all recreational users.

4. A major concern to all users of Type 4 waters is good water quality. The major source of all principal pollutants to the Bay, including pathogenic bacteria, nutrients, petroleum hydrocarbons, metals, and exotic organic chemicals, are the urban and industrial centers that discharge into the Providence River. Strong down Bay gradients are seen in both the sediments and water column for all these pollutants. The long-term combined impacts of pollutants on the Bay

ecosystem are not well understood. There is evidence, however, that pollutants that enter the Providence River may be impacting the Bay as far south as Hope Island. The major sources of pollutants to the Bay are the rivers that drain some 2,000 square miles in Rhode Island and Massachusetts, the effluents from sewage treatment plants, and urban runoff.

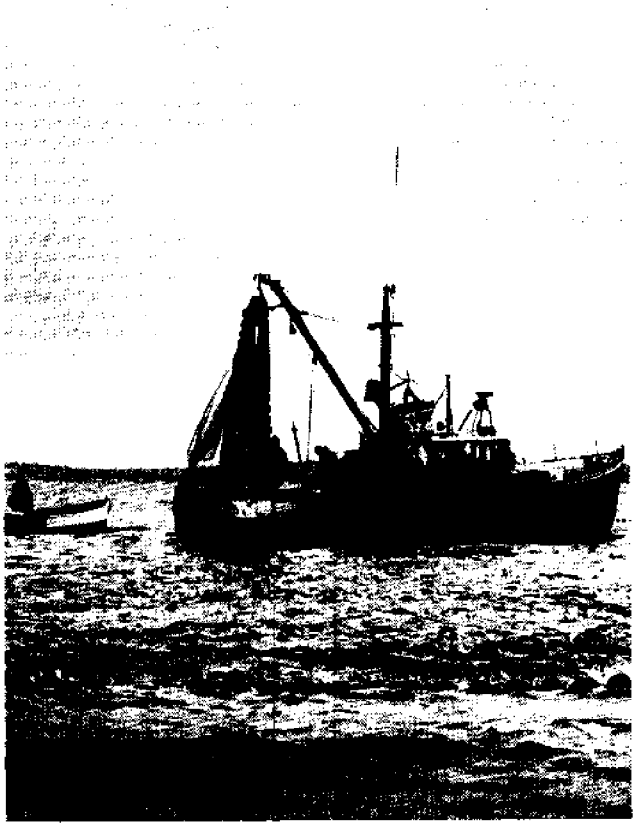
C. Policies

1. The Council's goal is to maintain a balance among the diverse activities that must coexist in Type 4 waters. The changing characteristics of traditional activities and the development of new water-dependent uses shall, where possible, be accommodated in keeping with the principle that the Council shall work to preserve and restore ecological systems.

2. The Council recognizes that large portions of Type 4 waters include important fishing grounds and fishery habitats, and shall protect such areas from alterations and activities that threaten the vitality of Rhode Island fisheries.

3. Aquaculture leases shall be considered if the Council is satisfied there will be no significant adverse impacts on the traditional fishery.

4. The Council shall work to promote the maintenance of good water quality within the Bay. While recognizing that stresses on water quality will always be present in urban areas such as the Providence River, the Council shall work to promote a diversification of activities within the upper Bay region through the water quality improvement process.



(Left) East Passage off Newport. *Photo by Daniel Dunn.* (Right) Purse seining in Narragansett Bay. *Photo by Robert Izzo.*

200.5. Type 5 Commercial and Recreational Harbors

A. Definition

These waters are adjacent to waterfront areas that support a variety of tourist, recreational, and commercial activities. They include all or portions of the following harbor areas:

(1) Newport Harbor
(2) Bristol Harbor
(3) Warren waterfront
(4) Wickford Harbor
(5) Old Harbor, Block Island
(6) East Greenwich Harbor
(7) Watch Hill Harbor

B. Findings

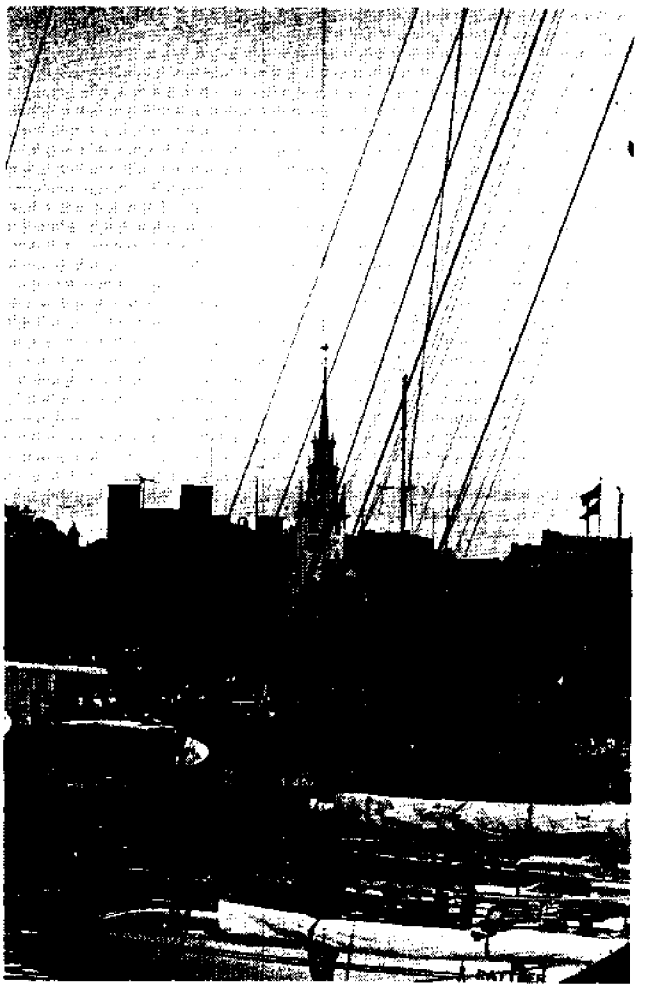
1. Type 5 waters all support a vibrant mix of commercial and recreational waterfront activities. All have important historic value that must be preserved. Competition for space is intense in all Type 5 waters. Commercial fishing vessels, recreational boats, and ferries compete for limited water space, while waterfront businesses of many varieties vie for a position on the waterfront. The visual quality of these areas is highly important, since all are centers for tourism.

C. Policies

1. The Council's goals are to maintain a balance among diverse port-related activities, including recreational boating, commercial fishing, restaurants, and other water-enhanced businesses; to promote the efficient use of space; and to protect the scenic characteristics that make these areas valuable to tourism.

2. The highest priority uses of Type 5 waters and adjoining land areas within Council jurisdiction are (a) berthing, mooring, and servicing of recreational craft, commercial fishing vessels, and ferries; (b) water-dependent and water-enchanced commerce, including businesses catering to tourists; (c) maintenance of navigational channels and berths, and removal of obstructions to navigation; and (d) activities that maintain or enhance water quality and scenic qualities, including the preservation of historic features. The Council shall suitably modify or prohibit activities that significantly detract from or interfere with these priority uses.

3. Applicants for Council Assents for alterations or activities in Type 5 waters shall describe measures taken to mitigate impacts on the scenic quality of the area (see Section 330).



Newport Harbor. *Photo by Jane Brawley.*

200.6. Type 6 Industrial Waterfronts and Commercial Navigation Channels

A. Definition

These water areas are extensively altered in order to accommodate commercial and industrial water-dependent and water-enhanced activities. They include all or portions of the following areas:

(1) Port of Providence
(2) Tiverton shipping area
(3) Quonset Point and Davisville
(4) Coddington Cove
(5) Melville
(6) Galilee and Jerusalem
(7) Westerly waterfront

B. Findings

1. The Port of Providence extends some ten miles along the Providence and East Providence shores of the Providence River and is the state's principal general cargo and petroleum port. Import and export of products moving through the port have a major impact on the state's economy and generate jobs and economic activity in many other sectors. In fiscal 1981, 5.3 million tons of petroleum, steel, cement, automobiles, lumber, scrap metal, and other non-petroleum commodities were received or shipped. The Providence shipping channel is dredged to an authorized depth of 40 feet. Large segments of shoreline and water in the port area are in derelict condition and littered with abandoned piers and sunken barges. Efforts to expand and improve the port have been underway for many years. In East Providence, across the channel from the Providence municipal wharf, the Providence and Worcester Railroad Company has made large investments in a major new landing pier. On the Providence side, infusions of public funds have brought many improvements, but much remains to be done. Priority problems include the difficulty in finding acceptable sites for dredged materials produced by maintaining or improving existing channels and berths, and the need to remove some 26,000 cubic yards of debris that forestalls the reuse of presently derelict areas. Coordinated planning and development efforts are essential to any initiative to improve the port and make it more competitive.

2. In the 1970s large-scale port facilities and waterfront industrial sites at Quonset-Davisville, Coddington Cove, and Melville were declared surplus by the Navy. These sites are available for redevelopment principally through the R.I. Port Authority. Some of the port facilities in these areas are in disrepair, and will require major infusions of capital if they are to be reused, while others are in good condition and are in active use for shipbuilding and other water-dependent purposes. These facilities, when combined with the derelict waterfront in the Providence River, give the state a large inventory of unutilized or underutilized port facilities.

3. Rhode Island supports a thriving offshore commercial fishing industry based at the ports of Galilee and Newport. Galilee is home port to some 160 vessels, which landed 56 million pounds of fish and shellfish worth $11.7 million in 1982. The port facilities at Galilee are owned by the state and managed by the Department of Environmental Management. A large portion of the 21 million pounds of fish and shellfish worth $13 million (1979) landed at Newport is caught by vessels that have home ports out of state. Fishing vessels berthing at Newport utilize facilities managed under lease by the Department of Environmental Management. Rhode Island's commercial fishing fleets are growing but are severely hampered by limited berthing and unloading facilities. An expansion and improvement program of the state facilities at Galilee and Newport has been underway for a decade.

4. Nearly all Rhode Island's boating and shipping facilities require periodic dredging to maintain adequate water depths in channels and turning basins and at berths. Until the mid-sixties, dredged spoils were disposed

with little concern for environmental impacts. Salt marshes were filled, new sandbars and spits created, and the largest project in recent history, the deepening of the Providence channel from 30 to 40 feet, left a large spoil mound off Brenton Reef in the Sound and a legacy of vehement opposition by fishing interests to any offshore disposal. For the past two decades, finding acceptable solutions to dredged materials disposal needs has proved difficult. Salt marsh building, bulkheading, and beach nourishment are frequently viable solutions where small volumes are concerned, but offshore dumping may be the only cost-effective solution for large projects. All solutions raise concerns, and energetic opposition is frequently organized. Finding acceptable, environmentally sound solutions to dredged materials disposal remains an important challenge for the coastal program.

C. Policies

1. The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and support modernization and increased commercial activity related to shipping and commercial fisheries.

2. Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels; (b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities.

The Council shall prohibit activities that substantially detract from or interfere with these priority uses.

3. The Council will encourage and support port development and modernization and increased economic activity in the marine industries by participating wherever possible in the joint long-range planning and development activities with other state and local agencies, including the R.I. Port Authority, the Department of Environmental Management, and coastal cities and towns.

4. Through its Special Area Plan for Providence Harbor, and other planning initiatives, the Council will identify and designate acceptable disposal solutions and sites adequate to meet the need for dredging, and provide the assurances required by industry that channel depths will be maintained, while minimizing environmental effects. The solutions may be more costly than older disposal practices, and may involve innovative technology. The Council will also work in cooperation with the Cities of Providence and East Providence and the Corps of Engineers toward achieving the removal of dilapidated piers and abandoned barges, which presently preclude economic use of large areas within Providence Harbor.

Quonset Point, North Kingstown. *Photo by Robert Izzo.*

Section 210. Shoreline Features

A. Introductory Findings

1. A great variety of geologic forms can be found where tidal waters meet the land. Where a coast is exposed to the forces of the open ocean, as along the South Shore, seacliffs and wide sandy beaches predominate. In sheltered waters, salt marshes and mud flats are common. The shoreline of Narragansett Bay is composed principally of narrow beaches of gravel and cobbles that lead to a frequently unvegetated bank of unconsolidated glacial sediments. Rhode Island's diversity of shoreline types provides a wealth of visually distinct areas, each of which supports different mixtures and intensities of use. This diversity must be recognized and maintained. The postwar decades have brought an explosion in the development of formerly rural coastal lands, and by the early 1980s most of the waterfront property that could be readily developed had been subdivided. Nearly all the remaining available parcels are within existing developments or they present natural constraints to the developer, such as poorly draining soils or steep slopes. Despite the recent surge of building along the lower Bay and South Shore, the coastline has retained much of its beauty. The appearance of long stretches of the coast from the water and vantage points along the shore provides a sense of natural beauty and open land; structures are not overly obtrusive. This quality, however, could be lost over the next few decades as the remaining farmland and estates, now worth great sums, come on the market and are sold off as house lots. Another major concern for the Council is the cumulative impact of individually minor alterations, particularly those brought about by residential development, on the qualities of the coastal environment.

2. All shoreline systems are dynamic, and change their shape and character in response to storms, currents, human modifications, and the gradual rise in sea level. Several thousand years ago, during the last glaciation, Rhode Island's ocean shore was many miles seaward of its present position. Sea level has been rising at varying rates ever since, causing the shore to gradually retreat inland. The present rate of sea-level rise is about one foot each century. A foot of vertical rise, however, accounts for an inland retreat of some 30 feet along low-profile shores.

3. A principal concern of waterfront property owners is erosion and flooding. The susceptibility of any length of shoreline to erosion is determined by the type of shoreline (see Table 3) and its exposure to storm surge and waves during storms and hurricanes. Storm surge occurs when a combination of low atmospheric pressure and the force of high winds over a large expanse of open water causes sea level to rise dramatically along the coast, particularly at the head of funnel-shaped embayments like Narragansett Bay. During the 1938 hurricane, the storm surge forced water levels 12 feet above mean high water at Point Judith and over 13 feet at Providence. Waves 10 feet high and more were measured on top of the surge level. Such events are not rare; the state has been struck by 71 hurricanes in the past 350 years, 13 of which have caused severe flooding and erosion. In this century, the 1938 hurricane left 311 dead and nearly 2,000 houses destroyed, and Hurricane Carol killed 15 people and destroyed 3,800 houses in 1954.

4. In Rhode Island, most shoreline erosion takes place during severe storms, and the rate of erosion is slow in intervening periods. Many of today's shorefront residents do not realize that the low rates of erosion of the past three decades are not the norm and are unaware that major storms and hurricanes occur periodically and radically reshape many stretches of coastline. Most privately built shoreline protection structures are overbuilt for the low rates of erosion between storms but along exposed shores will not withstand the next "big one."

5. The federal government does not subsidize the building of shoreline protection

structures that will benefit only the individual property owner. The federal flood insurance program, however, guarantees subsidized insurance for buildings that meet defined construction standards in flood hazard areas. This program has encouraged building on some highly hazardous barrier beaches. Passage of the 1982 Coastal Barrier Resources Act has removed insurance subsidies for development on portions of the several barriers (see Table 4) that have been classified, according to federal criteria, as undeveloped.

Table 3. Shoreline Types and Their Susceptibility to Erosion (Adapted from Boothroyd and Al-Saud, 1978).

(A, most susceptible; E, least susceptible)

Type	*Characteristics*	*Example areas most susceptible to erosion due to their exposure*
Beaches (A)	unconsolidated sand, gravel, or cobbles; usually backed by a bank	• Oakland Beach (Warwick)
Barrier Beaches (A)	unconsolidated sediments that form a spit parallel to the mainland and separated from it by a marsh or pond; sand dunes are often present	• all South Shore barriers • south side Conimicut Pt. (Warwick) • Barrington Beach (Barrington) • Jenny Pond spit (Prudence Island) • Briggs Marsh barrier (Little Compton)
Glacial Outwash Banks (B)	sand and gravel deposited by rivers as glaciers melted 10,000 years ago	• Buttonwoods (Warwick) • Occupessatuxet Neck (Warwick) • Coggeshall (Warren) • Island Park (Portsmouth)
Glacial Till Banks (C)	compacted clay, sand, gravel, and boulders that have not been sorted by river action	• northeast side of Pt. Judith (Narragansett) • Briggs Pt. (Little Compton)
Soft Bedrock (D)	usually in the form of terraces or scalloped cliffs	• east shore of the Bonnet (Narragansett) • east facing segment of the Newport Cliffs
Hard Bedrock (E) and Discontinuous Bedrock	hard bedrock is composed of granite and metamorphic rocks; discontinuous bedrock, either hard or soft; outcrops often extend out from the shore and help break up waves	• least susceptible to erosion

210.1. Coastal Beaches and Dunes

A. Definitions

1. Coastal beaches include expanses of unconsolidated, usually unvegetated sediments that are commonly subject to wave action. They generally parallel the coastal trend and extend from low water landward to an upland rise, usually the foot of a dune, cliff, bank, or manmade structure.

2. Dunes are hills, mounds, or ridges of sand formed by wind action, and usually follow the general coastal trend immediately inland of a beach. Dunes which are undisturbed are usually vegetated with beach grass and shrubs.

A construction line has been designated to protect dunes on three developed barrier beaches. These are defined as follows:

Misquamicut Beach (Westerly). West of utility pole #165, the construction line links the seaward wall of residential and commercial buildings existing as of June 1982; east of utility pole #165 the construction line links the landward walls of residential and commercial buildings existing as of June 1982 and landward of portions of dunes identified by the Council staff through a site inspection.

Coast Guard Beach (New Shoreham). The construction line links the seaward wall of residences existing as of June 1982.

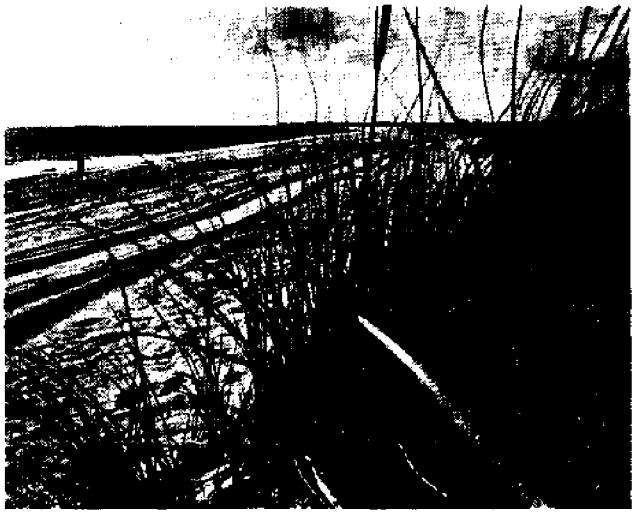
Sand Hill Cove Beach (Narragansett). The construction line links the seaward wall of residences existing as of June 1982.

In no case are construction lines, so defined, to be established seaward of the setback line, as described in Section 140.

B. Findings

1. Beaches are dynamic, flexible features. The character of a beach is determined primarily by the particle size of the sediment and by the amount of wave and current action. Beaches are formed by sediments that are carried by waves and currents from eroding headlands, the deposits of streams and rivers, and offshore bars. It is often difficult to establish the source of sediment for an individual beach, but shoreline protection facilities such as bulkheads, seawalls, groins, or jetties can alter significantly the volume supplied by suppressing the source or altering the flow of currents along the shore. Such structures can solve erosion problems at one site while increasing erosion rates on an adjoining property. Beaches commonly alter their shape and size in response to seasonal weather patterns. During rough weather, waves wash sand from the beach and deposit it as sandbars close to shore. In calm periods, the sand washes back onto the beach to form a broad berm, which is usually present in summer months. Longshore currents formed by waves striking the shore at an angle cause sand to drift along an exposed shore. Solid structures that extend over all beaches and into the water tend to interrupt the flow of sediments along a beach, causing deposition on one side of the structure and erosion on the other.

2. All beaches associated with barrier beaches along the ocean shore and several isolated beaches within the Bay are important recreational resources that are used by some 100,000 residents and tens of thousands of out-of-state tourists on hot summer days.



A South County beach. *Photo by Robert Izzo.*

3. Dunes, like beaches, are dynamic features. While beaches are shaped by the forces of waves, dunes are created and shaped primarily by the wind. As reservoirs of sand, dunes provide sediment to severely eroding beaches and a flexible barrier that protects the lands and salt ponds behind them. The height and stability of dunes are dependent largely on beach grass, which traps and anchors windblown sand. Although resistant to salt air and desiccation, beach grass is easily killed by trampling. When beach grass is destroyed, the sand is exposed to the wind and erodes rapidly; the dune then becomes more susceptible to overwash, and its effectiveness as a buffer against storms is reduced.

C. Policies

1. The Council's goals are (a) to preserve the qualities of, and public access to, those beaches which are an important recreational resource (adjacent to Type 1 and 2 waters); (b) to prevent activities that will significantly disrupt longshore and/or onshore-offshore beach processes, thereby creating an erosion or flooding hazard; (c) to protect dunes from activities that have a potential to increase wind or wave erosion; and (d) to protect the scenic value of both beaches and dunes.

2. Construction on beaches adjacent to Type 1 and Type 2 waters and on undeveloped dunes is prohibited except where the primary purpose of the project is beach or dune restoration or nourishment.

3. Construction on beaches adjacent to Type 3, 4, 5, and 6 waters may be permitted if (a) the construction is undertaken to accommodate a designated priority use for the abutting water area; (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; and (c) only the minimum alteration necessary to support the designated priority use is made.

4. Developed dunes are limited to the areas of three developed barrier beaches: Misquamicut Beach (Westerly), Coast Guard Beach (New Shoreham), and Sand Hill Cove (Narragansett). Here building on dunes is only permitted landward of the designated construction line as defined above.

5. Vehicles are prohibited on dunes except on trails marked expressly for vehicular use.

6. Vehicular use of beaches where not otherwise prohibited or restricted by property owners or by private or public management programs is permitted only under the following conditions:

(a) Motorcycles, minibikes, snowmobiles, all-terrain motorized cycles, and tricycles are prohibited except for authorized management-related vehicles.

(b) A Coastal Resources Management Council annually renewable use permit is required for all vehicles. Such permits may be obtained for a fee from the Division of Enforcement of the Department of Environmental Management subject to the following requirements and conditions. In the event these requirements and conditions are not met, the use permit shall be subject to revocation by the Council or its agents.
(1) Vehicles shall have all documentation and registration necessary for operation on the public highways of this state.
(2) All permit applicants shall exhibit proof of current insurance coverage.
(3) All persons operating said vehicles shall have valid operator licenses.
(4) Maximum speed on all beaches shall not exceed 10 mph. Maximum speed on beaches shall not exceed 5 mph when approaching pedestrians.
(5) Ruts or holes caused by vehicles shall be filled and debris removed.
(6) Headlights shall be used by all vehicles while in motion between sunset and sunrise.
(7) Riding on or driving from any position outside the vehicles is prohibited.
(8) Vehicles are prohibited on swimming beaches during the period they are protected by lifeguards and in operation.
(9) Vehicles shall be at all times subject to town ordinances and all regulations restricting the use of private, state, or federal properties.

7. The Council requires, for the operator's safety and benefit, that every vehicle operated on a beach carry the following equipment (in good working order):

(a) shovel (heavy-duty or military entrenching tool);
(b) tow rope or chain (15 feet, load strength of 1,800 lbs., chain size 5/16″);
(c) jack and support stand (minimum 18″ x 18″ x ⅝″, plywood);
(d) street legal tires (4-ply tread, 2-ply sidewalls)—snow or mud tires are not recommended;
(e) spare tire;
(f) low-pressure tire gauge (0-20 lbs.);
(g) first aid kit (approved by Coast Guard);
(h) fire extinguisher (approved by Coast Guard or Interstate Commerce Commission);
(i) road flares; and
(j) flashlight.

Table 4. Undeveloped, Moderately Developed, and Developed Barrier Beaches.

Undeveloped

Sandy Point Island, Westerly[1]
Napatree Beach, Westerly[1] (west of Watch Hill Beach Club)
Maschaug Beach, Westerly[1]
Quonochontaug Beach, Westerly/Charlestown[1] (west of Breachway)
East Pond Beach, Charlestown
East Beach (Ninigret conservation area to Charlestown Breachway)[1]
Green Hill Beach, South Kingstown[1] (central portion)
Moonstone Beach, South Kingstown
Browning Beach, South Kingstown[1]
Long Pond Beach, Little Compton[1]
Round Pond Beach, Little Compton[1]
Briggs Beach, Little Compton[1]
Ship Pond Cove, Little Compton
Round Meadow Pond, Little Compton
Quicksand Pond Beach, Little Compton[1]
High Hill Marsh Barrier, Little Compton[1] (eastern portion)
Sandy Point/West Beach, New Shoreham[1]
Casey Point, North Kingstown[1]
Greene Point, North Kingstown[1]
Bissel Cove Barrier, North Kingstown
Tibbit's Creek, North Kingstown
Baker's Creek, Warwick
Buttonwood Cove, Warwick
Gaspee Point, Warwick
Conimicut Point, Warwick
Nayatt Point Beach, Barrington
Mussachuk Creek, Barrington
Rumstick Point, Barrington
Hog Island, Portsmouth[1] (2 separate areas)
Musselbed Shoals, Portsmouth
Nag Pond/Jenny Pond, Portsmouth[1]
Gull Point, Portsmouth
Sheep Pen Cove, Portsmouth
McCurry Point, Portsmouth
Sapowet Point, Tiverton
Fox Hill Pond, Jamestown

Moderately Developed

Napatree Beach, Westerly (easterly portion)
Michel Pond Beach, Charlestown
Garden Pond Beach, Charlestown
Narragansett Beach, Narragansett
Bonnet Shores Beach, Narragansett
Mackerel Cove Beach, Jamestown
Hazards Beach, Newport
Bailey's Beach, Newport
First (Easton's) Beach, Newport (western portion)
Second Beach, Middletown
Third Beach, Middletown
Fogland Point, Tiverton[1]
Tunipus Pond Beach, Little Compton
Watch House Pond Beach, Little Compton[1]
Sakonnet Harbor Beach, Little Compton[1] (eastern portion)
Crescent Beach, New Shoreham

Developed

Atlantic Beach, Westerly
Quonochontaug Beach, Charlestown (east of breachway)
East Beach, Charlestown (west of Ninigret conservation area)
Charlestown Beach, Charlestown
Green Hill Beach, South Kingstown (westerly and easterly portions only)
East Matunuck/Jerusalem Beach, South Kingstown and Narragansett
Roger Wheeler Beach (Sand Hill Cove), Narragansett
First (Easton's) Beach, Middletown (easterly portion)
Coast Guard Beach, New Shoreham
High Hill Marsh Barrier, Tiverton (western portion)

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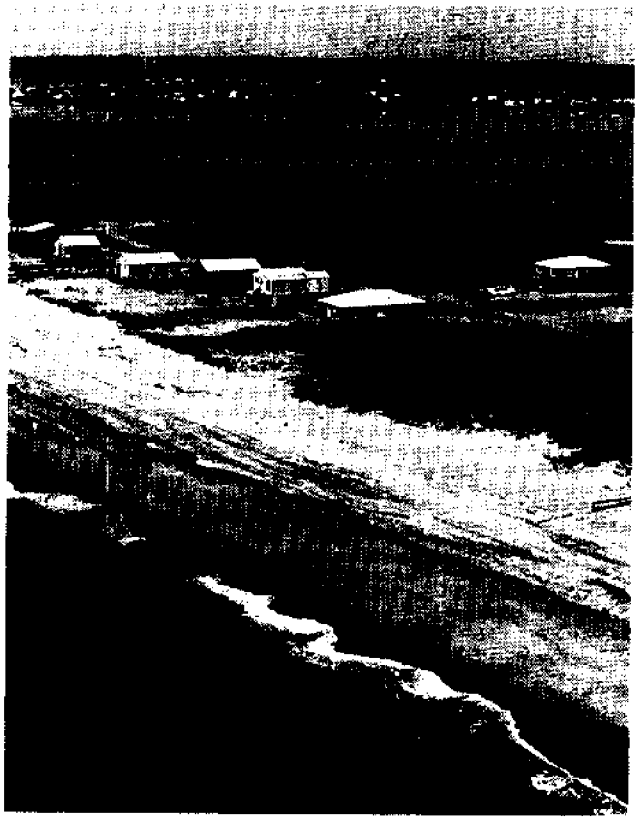
[1] *Denotes those barrier beaches or portions thereof where the Coastal Barrier Resources Act of 1982 prohibits federal subsidies for most new development and federal flood insurance for all new development.*

210.2. Barrier Beaches

A. Definition

Barrier beaches are narrow strips of land made of unconsolidated material, usually extending parallel to the coast and separated from the mainland by a coastal pond, tidal water body, or coastal wetland. In most cases, barrier beaches contain dunes or dune fields. The lateral limits of barrier beaches are defined by the area where unconsolidated sand or cobble abut rock, glacial till, or other sediments unrelated to deposits made by the forces of the wind and waves. The state's barrier beaches have been mapped and assigned by the Coastal Resources Management Council to three categories, as listed in Table 4.



Green Hill barrier beach. *Photo by Robert Izzo.*

Undeveloped barrier beaches are free of commercial/industrial buildings (excluding public utility lines), houses, surfaced roads, and structural shoreline protection facilities. Many are owned and managed as conservation areas. *Moderately developed* barrier beaches are those that are free of houses, and commercial/industrial buildings (excluding public utility lines) that contain surfaced roads, public recreational structures, and/or structural shoreline protection facilities. *Developed* barrier beaches contain houses and/or commercial/industrial structures; they may also contain surfaced roads and structural shoreline protection facilities. Maps of designated barrier beaches are available for inspection at the offices of the Coastal Resources Management Council.

The barrier beaches or portions thereof designated by the federal government as undeveloped pursuant to their criteria, under the Coastal Barrier Resources Act of 1982 (Public Law 97-348), are noted in Table 4. In these federally designated areas, flood insurance for most forms of construction is not available.

B. Findings

1. Rhode Island's South Shore coastal ponds and a frequently low-lying mainland are protected from the forces of the open ocean by a chain of low, narrow barrier beaches. Their importance as buffers against storms, the continuing pressures to build upon them, and a long history of disasters during hurricanes have made the regulation of activities on barrier beaches a primary concern of the Coastal Resources Management Council. Several barriers that were swept clean of all houses in 1938 and 1954 are again developed, and pedestrian and vehicular traffic has halted the recovery of dunes on many barriers classified as conservation areas.

2. The flexibility of barrier beaches permits them to withstand the severe forces of erosion to which they are exposed. All ocean-fronting barriers are migrating inland in response to those natural erosion forces and

to sea-level rise. The migration process takes the form of "rolling over," whereby sand is eroded from the ocean beach and washed over the barrier into the pond behind. The peat sometimes seen along the ocean shore of barrier beaches is evidence of the past existence of a marsh that once flourished behind an older, more seaward barrier. This same flexibility makes barrier beaches particularly ill-suited to human occupation. Not only can buildings weaken the dunes but during major hurricanes debris from shattered structures is swept inland, causing additional destruction on low-lying mainland areas, endangering more lives, increasing property damage, and complicating cleanup efforts. Sixty-five percent of Rhode Island's 27.3 miles of ocean-fronting barrier beaches is undeveloped. The recreational opportunities and uniquely beautiful open space they provide are of growing importance in an increasingly developed region.

3. Within Narragansett Bay there are several small barrier beaches that are also highly susceptible to damage during major storms. With few exceptions, these barriers have not been developed and provide locally important natural areas of great beauty and often considerable recreational value.

C. Policies

1. On barrier beaches classified as undeveloped in Table 4, the Council's goal is to preserve, protect, and, where possible, restore these features as conservation areas and as buffers that protect salt ponds and the mainland from storms and hurricanes.

2. On barrier beaches classified as developed in Table 4, the Council's goal is to ensure that the risks of storm damage and erosion for the people inhabiting these features are minimized, that activities that may reduce the effectiveness of the barrier as a storm buffer are avoided, and that associated wetlands and ponds are protected.

3. On barrier beaches classified as moderately developed in Table 4, existing roads, bridges, public utility lines, public recreational structures, and shoreline protection facilities may be maintained.

4. Construction is prohibited on undeveloped barriers except where the primary purpose of the project is restoration or improvement of the feature as a conservation area or storm buffer.

5. It is the Council's policy to assure that all construction permitted on developed barrier beaches is undertaken to provide for the greatest physical security of the inhabitants of the barrier and adjoining mainland and to maintain, to as great an extent as possible, the qualities of the adjacent coastal ponds and wetlands. (See detailed regulations on developed dunes, undeveloped dunes, beaches, and flood hazard areas in Section 300.3.) The construction of new buildings is prohibited on developed barriers on which only roads, utility lines, and other forms of public infrastructure were present as of 1975.

6. With the exception of boardwalks and snow fencing utilized to trap sand, all residential and non-water-dependent recreational, commercial, and industrial structures on dunes destroyed 50 percent or more by storm-induced flooding, wave or wind damage may not be reconstructed regardless of the insurance coverage carried.

7. Persons utilizing undeveloped beaches are required to observe the following rules:

(a) Destruction or removal of signs, snow fencing, or other sand-stabilizing devices; camping unless in vehicles equipped with a self-contained toilet; and open fires are all prohibited.

(b) Vehicles are permitted only on marked roads or trails and on the beach. Vehicles that drive on the beach and designated unstabilized trails on undeveloped barriers shall abide by Policies 4, 5, and 6 in Section 210.1.

(c) Persons shall be at all times subject to applicable town ordinances and regulations restricting the use of private, state, or federal properties.

210.3. Coastal Wetlands

A. Definition

Coastal wetlands include salt marshes and freshwater or brackish wetlands contiguous to salt marshes. Areas of open water within coastal wetlands are considered a part of the wetland.

Salt marshes are areas regularly inundated by salt water through either natural or artificial water courses and where one or more of the following species predominate: smooth cordgrass (*Spartina alterniflora*), salt meadow grass (*Spartina patens*), spike grass (*Distichlis spicata*), black rush (*Juncus gerardi*), saltworts (*Salicornia* spp.), sea lavender (*Limonium carolinianum*), saltmarsh bulrush (*Scirpus* spp.), high tide bush (*Iva frutescens*).

Contiguous and associated freshwater or brackish marshes are those where one or more of the following species predominate: tall reed (*Phragmites communis*), tall cordgrass (*Spartina pectinata*), broadleaf cattail (*Typha latifolia*), narrowleaf cattail (*Typha angustifolia*), spike rush (*Eleocharis rostellata*), chairmaker's rush (*Scirpus americana*), creeping bentgrass (*Agrostis palustris*), sweet grass (*Hierochloe odorata*), wild rye (*Elymus virginicus*).

B. Findings

1. Coastal wetlands are important for a variety of reasons. They provide food and shelter for large populations of juvenile fish and are nurseries for several species of fish. The mud flats and creeks associated with many coastal wetlands are rich in shellfish, particularly soft-shelled clams. Coastal wetlands also provide important habitat for shorebirds and waterfowl, and many are among the most scenic features of the Rhode Island shore. Coastal wetlands are effective in slowing erosion along protected shores.

2. Much of the original acreage of coastal wetlands in Rhode Island has been destroyed, and the pressures to fill coastal wetlands continue. Downtown Providence, much of Quonset, and many other low-lying coastal communities are built on what was once coastal wetland. We do not know how much coastal wetland has been destroyed by development, but some 10 percent of our coastal wetlands of 40 acres or more is reported to have been filled between 1955 and 1964. Since coastal wetlands are found in sheltered waters, they frequently coincide with attractive sites for marinas and waterfront homes. The pressures to fill or otherwise alter coastal wetlands therefore remain. According to a 1975 survey, there are some 3,700 acres of salt marsh in the state, of which some 10 percent were fringe marshes less than five yards wide. Approximately 90 percent of the state's salt marshes abut Type 1 and 2 waters.

3. Most of Rhode Island's wetlands are small and, when viewed in isolation, may appear to be of insignificant value. In order to better understand the value of individual salt marshes, the Council has sponsored research to investigate the feasibility of rating the relative value of individual coastal wetlands. Two years of research revealed that it is not possible to rate coastal wetlands if all ecological considerations are given equal weight. The study also showed that there is little if any correlation between the perceived scenic coastal wetland and its ecological characteristics.

4. Land uses and activities abutting coastal wetlands may have a strong impact upon the wetland itself. Nearby drainage patterns which affect sedimentation processes and the salinity of waters may easily be altered, with detrimental effects. Wildlife must be protected from harassment. Bulkheading and filling along the inland perimeter of a marsh prevents inland migration of wetland vegetation as sea level rises.

C. Policies

1. The Council's goal is to preserve and, where possible, restore coastal wetlands.

2. To offset past losses in coastal wetlands and unavoidable alterations to surviving coastal wetlands: (a) disturbed wetlands should be restored as directed by the Council or enhanced when possible, and (b) in areas selected on the basis of competent ecological study, the Council will encourage the building of new wetlands.

3. All alterations to salt marshes and contiguous freshwater or brackish marshes abutting Type 1 waters are prohibited except for minimal alterations required by the construction or repair of an approved structural shoreline protection facility (see Section 300.7). In Type 1 waters, structural shoreline protection may be permitted only when the primary purpose is to enhance the site as a conservation area and/or a natural buffer against storms.

4. Alterations to salt marshes and contiguous freshwater or brackish marshes abutting Type 2 waters are prohibited except for minor disturbances associated with (a) residential docks and walkways approved pursuant to the standards set forth in Section 300.3, and (b) approved construction or repair of structural shoreline protection facilities.

5. Salt marshes designated for preservation adjacent to Type 3, 4, 5, and 6 waters are identified on maps available for inspection at the Council's offices and at the town halls of coastal cities and towns. In these designated wetlands only the alterations described in #4 above may be permitted. Dredging and filling in these designated coastal wetlands are prohibited. The maps of designated coastal wetlands serve to identify individual wetlands; in all cases precise boundaries shall be determined through a field inspection when proposals that could impact these features are being considered.

6. Salt marshes adjacent to Type 3, 4, 5, and 6 waters that are not designated for preservation may be altered if (a) the alteration is made to accommodate a designated priority use for that water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the priority use is made.

7. The Council encourages efforts to create new coastal wetlands from dredged material in a manner and in locations determined as suitable on the basis of competent study. The Council may require persons who alter salt marshes with a Council Assent to build a replacement salt marsh of similar size.

Card Ponds, South Kingstown. *Photo by Robert Izzo.*

210.4.
Coastal Cliffs, Bluffs, and Banks

A. Definition

Coastal cliffs, bluffs, and banks are the seaward face of any elevated landform directly abutting coastal waters, a beach, coastal wetland, or rocky shore.

B. Findings

1. Coastal cliffs, bluffs, and banks include a wide variety of landforms ranging from low scarps of easily erodible glacial till to the dramatic rocky shores of Newport and Narragansett. They are among our most scenic coastal features and are the sites for popular scenic overlooks. More than 300,000 visit Newport's Cliff Walk each year.

2. Exposed banks of unconsolidated material, such as those along the Matunuck shore in South Kingstown, have been known to recede by as much as 30 feet in a single severe hurricane. Portions of the Mohegan Bluffs on Block Island have eroded similar distances in less severe storms. Human activities can greatly increase the susceptibility of bluffs and banks to erosion. Structures close to the face of a bank or bluff can make the feature unstable, and concentrated runoff and devegetation can cause a marked acceleration of erosion. Factors that affect the ability of a cliff or bluff to withstand erosion include its composition (rock or soil type), slope, stratigraphy, height, exposure, vegetative cover, and the amount of human disturbance to which it is subjected. Since bluffs are composed of unconsolidated sediments, primarily glacial tills, they are more susceptible to erosion than cliffs.

3. Eroding bluffs and banks can be important sources of sediment to nearby beaches. The bluffs of Watch Hill in Westerly, for example, are probably an important source of sand to the South Shore barrier beaches. Extensive bulkheading of this shore may have a detrimental effect on these apparently distant and unconnected beaches. Due largely to their inaccessibility to man and other predators, some cliffs and bluffs provide important nesting sites for several species of birds.

C. Policies

1. The Council's goals are to (a) protect coastal cliffs, bluffs, and banks from activities and alterations that may damage the value of these features as sources of sediment to beaches and as a buffer against storm waves and flooding; (b) prevent any construction in contiguous areas that may weaken the feature and has the potential of creating a hazard; and (c) preserve the scenic and ecological values of these features.

2. Due to their well-recognized scenic value and their use as tourist attractions and low-intensity recreation areas, the Council designates the following coastal cliffs, bluffs, and banks as Coastal Natural Areas: Bonnet Point, Hazard Rocks, Fort Wetherill, Ocean Drive, the Brenton Cove Cliffs, Cliff Walk, Purgatory Chasm, Sakonnet Point, and Mohegan Bluffs. A Council priority when considering proposed alterations on or adjacent to these features is the preservation and, where possible, the restoration of their scenic qualities.

3. On shorelines adjacent to Type 1 and 2 waters, the Council shall prohibit construction on or alteration of coastal cliffs, bluffs, and banks and contiguous areas where such construction or alteration has a reasonable probability of causing or accelerating erosion or degrading a generally recognized scenic vista. The Council shall require suitable unaltered buffer zones on cliffs, bluffs, or banks where erosion or substrate stability can be affected by facility construction or use.

In determining whether a reasonable probability exists that increased erosion or loss of scenic values will result from the proposed construction or alteration, the Council shall consider the following:

(a) the exposure of the feature to the erosional forces of tidal currents, storm waves and flooding, wind and surface runoff, and other such natural processes;

(b) the composition of the feature involved as well as its slope, stratigraphy, height, exposure, and vegetative cover;
(c) existing types and levels of use and alteration;
(d) competent geological evidence to evaluate whether natural erosion of the feature in question is a significant source of sediments to nearby beaches and whether the proposed construction or alteration will substantially reduce that source of sediment; and
(e) inclusion of the feature on an accepted inventory of significant scenic or natural areas or evidence of public use and enjoyment as a scenic or natural area.

4. The Council shall encourage the use of non-structural methods to correct erosion problems associated with coastal cliffs, banks, and bluffs adjacent to Type 1 and Type 2 waters. In considering applications for permits for erosion-control measures, the Council shall weigh the impact of the proposed structure on the supply of sediments to nearby beaches. Where the Council finds that a substantial reduction or elimination of sediment is likely to result, and that natural erosional processes affecting the nearby beach will thereby be accelerated, it shall deny its Assent.

5. Construction or alterations to coastal cliffs, bluffs, and banks contiguous to Type 3, 4, 5, and 6 waters may be permitted if (a) the construction is undertaken to accommodate a designated priority use for the abutting water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the designated priority use is made.

Mohegan Bluffs, Block Island.

210.5. Rocky Shores

A. Definition

Rocky shores include naturally occurring shorelines composed of bedrock ledge or boulder-strewn areas, extending from below mean low water to above the mean high water mark. These areas frequently contain tide pools.

B. Findings

1. Rocky shores play an important role in storm damage prevention and provide habitat to specially adapted assemblages of organisms. Gently sloping terraces of bedrock and boulders dissipate wave energy and are effective buffers that protect the mainland from storm damage. Rocky shores harbor a diversity of specially adapted plants and animals that can withstand both wave action and occasional desiccation. Tide pools are particularly beautiful features that should be protected.

2. Many rocky shores, especially in the lower Bay, are well recognized for their scenic value. Beavertail Point in Jamestown and sections of Ocean Drive in Newport are notable examples. Rocky shores are often important tourist attractions, and are used for surf casting and skin diving by increasing numbers of people.

C. Policies

1. The Council's goal is to preserve and protect these features for their role in erosion prevention, for the unique assemblages of organisms that they may support, and for their recreation and scenic value.

2. The alteration of rocky shores abutting Type 1 water areas, excepting approved projects for shoreline protection, is prohibited.

3. On shorelines adjacent to Type 1 and 2 waters, the Council shall prohibit construction on or alteration of rocky shores and contiguous areas where such construction or alteration has a reasonable probability of causing or accelerating erosion or degrading a generally recognized scenic vista.

In determining whether a reasonable probability exists that increased erosion or loss of scenic value will result from the proposed construction or alteration, the Council shall consider the following: (a) the exposure of the feature to the erosional forces of tidal currents, storm waves and flooding, wind and surface runoff, and other such natural processes; (b) the composition of the feature involved and any significant plant or animal communities present; (c) existing types and levels of use and alteration; and (d) inclusion of the feature on an accepted inventory of significant scenic or natural areas or evidence of general public use and enjoyment as a scenic or natural area.

4. The construction or alterations to rocky shores adjacent to Type 3, 4, 5, and 6 waters may be permitted if (a) the construction is undertaken to accommodate a designated priority use for the abutting water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the designated priority use is made.

Conanicut Island. *Photo by Robert Izzo.*

210.6. Manmade Shorelines

A. Definition

Manmade shorelines are those characterized by concentrations of shoreline protection structures and other alterations, to the extent that natural shoreline features are no longer dominant. They most commonly abut Type 3, 5, and 6 waters. The presence of isolated seawalls, bulkheads, and similar structures does not constitute a manmade shoreline, as the term is used in this Program.

B. Findings

1. A 1978 survey of the Narragansett Bay shoreline revealed that along 25 percent of the shore natural features have been sheathed by manmade structures. Many of these have been built since the 1954 hurricane as attempts at "erosion prevention," undertaken at great cost by private property owners. Many will not survive a major hurricane that strikes the coast from the south. Many structures are overbuilt for the control of minor erosion between major storms.

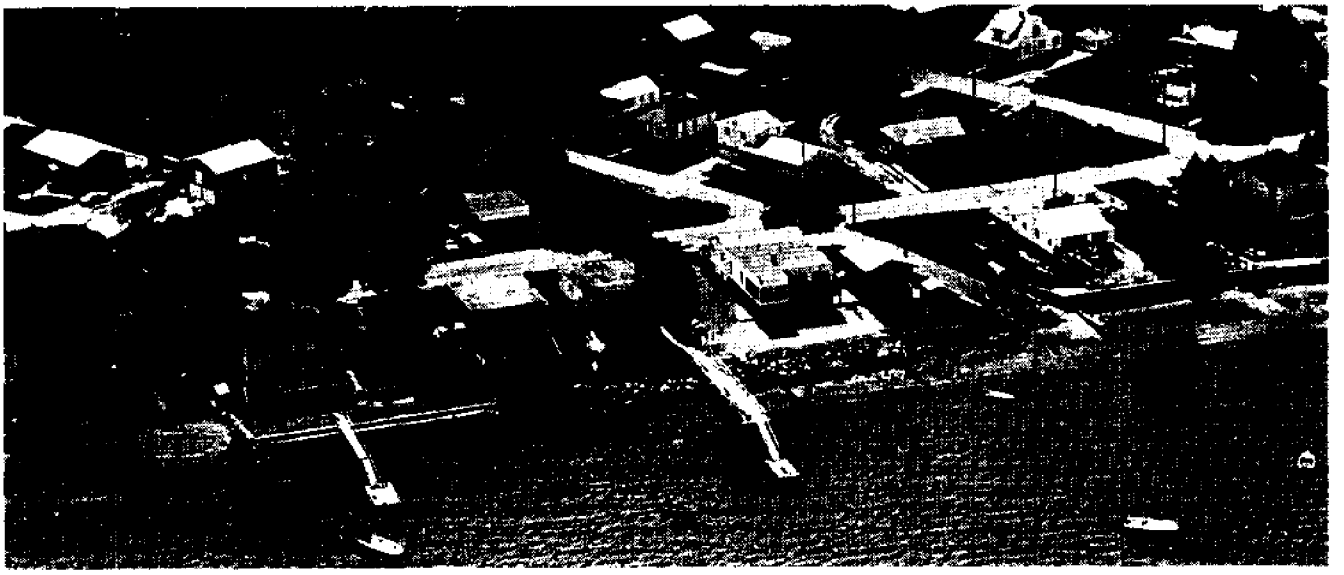
2. Manmade shorelines usually have a major impact on the appearance of the shore, interfere with public access to and along the coast, and may alter erosion-accretion processes on neighboring beaches.

C. Policies

1. The Council's goals are (a) to encourage the maintenance of structures that effectively mitigate erosion and/or sustain landforms adjacent to the water, and (b) prevent the accumulation of debris along the shore where such structures are ineffective or no longer in active use.

2. The Council encourages proper maintenance of existing shoreline protection structures (see Section 300.7).

3. The Council shall endeavor to determine the ownership of abandoned and deteriorating shoreline protection structures and shall encourage the owners of such structures to restore or remove them. The Council may order restoration or removal where it finds that the structure poses a hazard to navigation, interferes with the public's right of access to and along the shore, causes flooding or wave damage to abutting properties, or degrades the scenic qualities of the area.



Greenwich Bay, Warwick. *Photo by Jon Boothroyd.*

Section 220. Areas of Historic and Archaeological Significance

A. Definition

Historic and archaeological resources include districts, sites, buildings, structures, objects, and landscapes included in or eligible for inclusion in the state and national registers of historic places, or areas designated as historically or archaeologically sensitive according to the predictive model developed by the Rhode Island Historical Preservation Commission.

B. Findings

1. The Rhode Island coastal region has a rich and long history, and possesses many well-preserved examples of prehistoric and historic sites. The coastal zone contains an abundant and diverse number of native American Indian settlements, some dating back at least 3,000 years. The bulk of the information still to be obtained concerning Rhode Island's prehistory is associated with sites in the coastal zone. The Historical Preservation Commission has developed a predictive model that identifies those coastal sites where significant archaeological finds are most likely to be present.

2. Beginning with the first Europeans under Giovanni da Verrazano, who visited the site of Newport in the early 1500s, the coastal

Wickford historic district. *Photo by Robert Izzo.*

zone has been the location of important historic and architectural development. The Rhode Island coastal region is nationally recognized for its outstanding historic architecture, and the majority of all the sites and districts currently on the state and national registers of historic places are located in the coastal zone. Significant historic and archaeological sites are extremely valuable cultural, educational, economic, and recreational resources to the state's citizens and visitors alike, and they are part of the essential character of the coastal zone. Historic properties are a key element in defining the state's quality of life, and hence its attractiveness to a growing tourist industry and as a location for new investment. Historic sites and districts provide access to and enjoyment of scenic coastal areas, both in terms of the sites themselves and in the traditional land-use patterns which define many scenic qualities in the coastal zone.

3. Historic and archaeological resources in the coastal zone are under great pressure from a variety of forces which threaten their outright destruction or the degradation of their historic qualities and setting. Unsympathetic new development, erosion, artifact collectors, and rising sea levels are major factors in reducing the number and quality of these irreplaceable resources.

C. Policies

1. The Council's goal is to, where possible, preserve and protect significant historic and archaeological properties in the coastal zone.

2. Preservation of significant historic and archaeological properties is a high priority use of the coastal region. Activities which damage or destroy important properties shall be considered a low priority.

3. The Council shall require modification of, or shall prohibit proposed actions subject to, its jurisdiction where it finds a reasonable probability of adverse impacts on properties listed in the *National Register of Historic Places*. Adverse impacts are those which can reasonably be expected to diminish or destroy those qualities of the property which make it eligible for the *National Register of Historic Places*. The Council shall solicit the recommendations of the Historical Preservation Commission regarding impacts on such properties.

4. Prior to permitting actions subject to its jurisdiction on or adjacent to properties eligible for inclusion (but not actually listed in the *National Register of Historic Places*), and/or areas designated as historically or archaeologically sensitive by the Historical Preservation Commission as the result of their predictive model, the Council shall solicit the recommendations of the Commission regarding possible adverse impacts on these properties. The Council may, based on the Commission's recommendations and other evidence before it, including other priority uses of this Program, require modification of or may prohibit the proposed action where such adverse impacts are likely.

Part Three. Activities Under Council Jurisdiction

Section 300. In Tidal and Coastal Pond Waters, on Shoreline Features and Their Contiguous Areas

300.1. Category B Requirements

All persons applying for a Category B Assent (see Table 1) are required to:

(1) describe the need for the proposed activity or alteration;

(2) demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met;

(3) describe the boundaries of the coastal waters and land area that are anticipated to be affected;

(4) describe potential impacts on erosion and deposition processes along the shore and in tidal waters;

(5) describe potential impacts on the abundance and diversity of plant and animal life;

(6) describe potential impacts on public access to tidal waters and/or the shore;

(7) describe potential impacts on water circulation, flushing, turbidity, and sedimentation;

(8) demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

(9) describe potential impacts to areas of historic and archaeological significance;

(10) describe potential conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce; and

(11) describe measures taken to minimize any adverse scenic impacts (see Section 330).

Each topic shall be addressed in writing.

Additional requirements are listed for specific Category B activities and alterations in the sections that follow.

300.2. Filling, Removing, or Grading of Shoreline Features

A. Definitions

1. Filling is the deposition of materials of upland origin onto shoreline features or their contiguous areas (see Section 300.9 for on-land disposal of dredged materials).

2. Removing is the process of taking away, including excavation, blasting, or mining, any portion of a shoreline or its contiguous area.

3. Grading is the process whereby fill or the soils of a shoreline or its contiguous area are redistributed or leveled.

Established agricultural practices in areas contiguous to shoreline features are excluded from this section.

Filling, removing, or grading activities shall be reviewed at the Category B level when (a) the filling or removing involves more than 2,000 cubic yards of material, (b) the affected area is greater than one acre, or (c) the affected area is a designated historic area or archaeologically sensitive site.

B. Prohibitions

1. Filling, removing, or grading is prohibited on beaches, dunes, undeveloped barrier beaches, coastal wetlands, cliffs and banks, and rocky shores adjacent to Type 1 and 2 waters unless the primary purpose of the alteration is to preserve or enhance the feature as a conservation area or buffer against storms.

2. Filling, removing, or grading on coastal wetlands is prohibited adjacent to Type 1 and 2 waters, and in coastal wetlands designated for preservation adjacent to Type 3, 4, 5, and 6 waters, unless a consequence of an

approved mosquito-control ditching project (Section 300.12).

3. On-site beach materials (cobbles, sand, etc.) may not be used as construction material.

4. Mining is prohibited on coastal features.

C. Standards

1. The following standards apply in all cases where filling, removal, or grading is undertaken:

(a) Fill slopes shall have a maximum grade of 30 percent.

(b) All excess excavated materials, excess fill, excess construction materials, and debris shall be removed from the site and shall not be disposed in tidal waters or on a coastal feature.

(c) Disturbed uplands adjacent to a construction site shall be graded and revegetated or otherwise stabilized to prevent erosion during or immediately after construction.

(d) Removal or placement of sediments along jetties or groins may be permitted only as part of an approved dredging or beach nourishment project (see Section 300.9).

(e) All fill shall be clean and free of materials which may cause pollution of tidal waters.

(f) Cutting into rather than filling out over a coastal bank is the preferred method of changing upland slopes.

2. The following upland and shoreline earthwork standards shall be required in those cases where the Council determines that additional measures are warranted in order to protect the environment of the coastal region. Such requirements shall be listed on Assents as stipulations.

(a) For earthwork on shoreline features:

(1) Prior to initiation of construction, the contractor shall meet on-site with the CRMC staff to discuss and clarify the conditions of the permit.
(2) A revegetation plan shall be submitted for review and approval when construction is undertaken on a barrier beach. This plan shall describe plant material, methods of planting, time of planting, soil amendments, and maintenance.
(3) Construction materials and excavated soils shall not be placed or stored on any shoreline feature excepting developed barrier beaches and manmade shorelines.
(4) All disturbed soils shall be graded smooth to a 3:1 to 4:1 slope and revegetated immediately after construction, or temporarily stabilized with mulch, jute matting, or similar means until seasonal conditions permit such revegetation.
(5) In sensitive areas, work shall be carried out from areas above slope from coastal features. Machinery shall normally not be allowed to operate on a coastal wetland. For unavoidable work on a coastal wetland, a protective cover shall be deployed to minimize disturbance.
(6) In instances where the CRMC permits temporary disturbance of a coastal feature, shoreline slope, buffer zone, or area of beach grass, the disturbed area shall be completely restored by the owner under the guidance of CRMC staff.
(7) Concrete structures which will come in contact with salt water shall be constructed with concrete which utilizes a Type II or Type V air-entraining Portland cement or an equivalent that is resistant to sulfate attacks of seawater.

(b) For upland earthwork, measures shall be taken to minimize erosion:

(1) A line of staked hay bales or other erosion-preventing devices (including diversion ditches, check dams, holding ponds, filter barrier fabric, jute or straw mulch) shall be placed at the downslope perimeter of the proposed area of construction prior to any grading, filling, construction, or other earthwork. Hay bales shall be toed in to a depth of 3 to 4 inches, and maintained by replacing bales where necessary until permanent revegetation of the site is completed. No soils or other materials should pass beyond the bale line.
(2) All slopes shall be returned to the original grade unless otherwise specified.
(3) Where natural or manmade slopes are or have become susceptible to erosion, the

slopes shall be graded to a suitable slope and revegetated with a thick rooting brush vegetation. Mulch shall be applied as necessary to provide protection against erosion until the vegetation is established.
(4) Construction shall be timed to accommodate stream and/or runoff flow and not allow flows over exposed, unstabilized soils, or into or through the excavation. Flows shall not be restricted in such a manner that flooding or inhibition of normal flushing occurs.
(5) Any pumping of groundwater which may be necessary for dewatering shall be discharged into sediment traps consisting of a minimum of staked hay bale rings enclosing crushed stone or trap rock of a size sufficient to disperse inflow velocity. Hay bales shall be recessed 4 to 6 inches into the soil and maintained.
(6) There shall be no discharge of sediment-laden waters into storm drains. Storm drains shall be surrounded by staked hay bales to intercept sediment.

(c) For any disturbance of steep slopes (over 15 percent):

(1) Where such construction is allowed, the following shall be observed: (1) no fill shall be allowed on the slope; (2) excavation shall be kept to an absolute minimum; and (3) vegetative cover on the slope shall be permanently maintained to the maximum extent physically possible.
(2) Where the potential for damage to a slope exists from runoff, staked hay bales, berms, or similar diversions shall be placed at the top and toe of the slope. Collected water shall be suitably discharged through properly constructed drains or swales. Wherever possible, drainage swales shall be constructed along and adjacent to property lines so as to avoid drainage onto adjacent properties. Swales shall be capable of handling runoff from a 10-year-rainfall occurrence.
(3) For excavations on slopes or directly adjacent to coastal features, the excavated material shall be cast upslope of the trench or excavation so as to minimize downslope runoff of sediment.
(4) Pedestrian access over steep shoreline slopes and banks shall be in the form of field stone or similar stabilized paths or elevated stairs. Access over bluffs shall be with elevated stairs only.

300.3. Residential, Commercial, Industrial, and Public Recreational Structures

A. Definitions

1. Residential buildings include houses, cabanas, and other structures used primarily for human habitation which are built on a shoreline feature or its contiguous area.

2. Associated residential structures include decks, porches, walls, boardwalks, swimming pools, roads, driveways, parking lots, and other structures integral to or ancillary to a residential building.

3. Commercial and industrial structures and operations on a shoreline feature, its contiguous area, or within tidal waters include all buildings and alterations to such features related to the manufacturing and interchange of goods or commodities, or any other business activity.

4. Public recreational structures include cabanas, pavilions, decks, and other structures constructed for public recreational purposes on a shoreline feature, its contiguous area, or in tidal waters.

B. Prerequisites

1. Applicants for residential structures shall obtain, as necessary, a local building permit or a letter from the building inspector stating that all local requirements will be met and a permit will be issued.

2. Applicants proposing to build an individual sewage disposal system (ISDS) shall obtain a permit from the Department of Environmental Management.

3. Applicants for industrial, commercial, and public recreational structures shall demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, as contained in the Rhode Island State Building Code, and all state safety codes, fire codes, and environmental requirements have been met.

4. Applicants shall demonstrate that connections to public water supply and sewer systems shall be provided where on-site water withdrawal and/or sewage disposal will have a significant environmental or public health impact.

5. Applicants for commercial, industrial, and public recreational structures shall demonstrate that adequate transportation and utility services to support the proposed operations and related activities are available.

C. Prohibitions

1. Industrial operations and structures are prohibited in Type 1 and 2 waters or on shoreline features abutting these waters.

2. The mining and extraction of minerals, including sand and gravel, from tidal waters and salt ponds is prohibited. This prohibition does not apply to dredging for navigation purposes, channel maintenance, habitat restoration, or beach replenishment.

3. Solid waste disposal and minerals extraction is prohibited on shoreline features and their contiguous areas.

4. The use of fill for structural support of buildings in flood hazard V zones is prohibited.

D. Standards

1. General:

(a) See standards given in "Filling, Removing, or Grading of Shoreline Features" (Section 300.2), as applicable.
(b) See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

2. Residential, commercial, industrial, and public recreational buildings:

(a) Excavation and grading shall be restricted to those activities and areas necessary for the construction of the building and/or appurtenant structures (see Section 300.1).
(b) In order to reduce the inflow of pollutants carried by surface runoff, permeable surfaces (crushed stone, crushed shells, gravel, etc.) for driveways and parking areas shall be utilized when feasible and especially on shoreline features and their contiguous areas adjacent to Type 1 and 2 waters.
(c) Persons proposing to add to, or make interior modifications to, existing residential structures that result in additional bedrooms shall obtain written approval from the ISDS section of the Department of Environmental Management certifying that the existing ISDS is capable of treating sewage effluents adequately.

3. Construction in wave velocity (V) zones, as defined by federal flood insurance rate maps:

(a) All new construction and substantial improvements shall be elevated on adequately anchored pilings or columns, and securely anchored to such piles or columns so that the lowest portion of the structural members of the lowest floor (excluding the pilings or columns) are elevated above the wave crest level. Unless otherwise specified on the flood insurance rate maps, the wave crest level shall be 6 feet above the designated base flood level.
(b) If timber pilings are used, they shall meet the American Society for Testing and Materials (ASTM) standards for Class B piles and shall have a minimum tip diameter of 8 inches. Wooden pilings shall be treated with a wood preservative. Bracing between piles is required.
(c) Pilings in ocean fronting areas shall penetrate no less than 10 feet below mean sea level.
(d) Floor joists shall be secured with hurricane clips where each joist encounters a floor beam. These metal fasteners or straps shall be nailed on the joist as well as on the beam.

(e) To secure the exterior wall to the floor joists, galvanized metal strap connections shall be used connecting the exterior wall studs to the joists.

(f) Roof trusses or rafters shall be placed 16 to 24 inches on center and, as required by the Rhode Island Building Code, shall be connected to the exterior wall with galvanized metal straps.

(g) As required by the Rhode Island Building Code, all windows shall meet manufacturers' standards for wind loads of 110 mph.

(h) As required by the Rhode Island Building Code, the space below the lowest floor and between pilings shall be kept free of obstruction, or they shall be enclosed with "breakaway walls" designed to collapse under stress so that the impact on the structural integrity of the dwelling by abnormally high tides or wind-driven water is minimized. Such temporarily enclosed spaces shall not be used for human habitation, or for the enclosure of any utility or item essential to the structure, unless such items are floodproofed.

(i) All plans submitted to the CRMC for buildings proposed for V zones shall be stamped by a registered professional engineer or architect.

4. Construction in coastal stillwater flood (A) zones:

(a) Lowest floor elevation including basements of new or substantially improved residential buildings in A zones shall be elevated to the 100-year level as established on flood insurance rate maps.

(b) Parallel concrete walls or pilings rather than fill shall be used to elevate habitable residential structures when the difference between the original ground elevation and the flood elevation is more than 50 percent of the flood elevation.

(c) Standards (d), (e), (f), and (g) for residential building in V zones apply.

(d) New construction or substantial improvement of any structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood level the structure is watertight, with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that these standards will be met.

300.4. Recreational Boating Facilities

A. Definitions

Recreational boating facilities include marinas, launching ramps, residential boating facilities, recreational wharves, piers and slips, floats or floating docks, and recreational mooring areas.

1. Marina: any dock, pier, wharf, float, floating business, or combination of such facilities that service five or more recreational boats as a commercial enterprise or in association with a club.

2. Launching ramp: a manmade or natural facility used for the launching and retrieval of boats.

3. Residential boating facility: a dock, pier, wharf, or float, or combination of such facilities, contiguous to a private residence that may accommodate up to four boats.

4. Recreational mooring area: any designated water area managed by a commercial enterprise, a club, city, or town where five or more recreational craft are kept at moorings.

B. Policies

1. The Council encourages marinas to utilize techniques that make the most efficient use of space and increased demands for moorage, dockage, and storage space by considering dry stack storage, innovative slip and mooring configurations, and the like.

2. In order to limit the cumulative impacts of many individual residential boating facili-

ties, the Council encourages the construction of facilities that service a number of users.

3. The Council recognizes that the United States Coast Guard has primary authority over navigational aids and marine boating safety, and that these responsibilities are complemented by the Department of Environmental Management, local harbormasters, and public boating service organizations such as the Coast Guard Auxiliary.

4. The Council requires municipalities preparing to implement harbor management programs and/or regulations relating to activities and structures in tidal waters to apply for a Council Assent to assure conformance between such programs and/or regulations and the Coastal Resources Management Program and the General Laws of the State of Rhode Island (see Section 300.15).

C. Prerequisites

1. Persons proposing to establish a new marina will be required to obtain a permit from the Army Corps of Engineers.

2. Persons proposing to establish a recreational mooring area are required to obtain a permit from the Army Corps of Engineers.

3. An application for a Council Assent for a marina and/or mooring area will include a map prepared and stamped by a professional engineer, land surveyor, or architect that designates the area of tidal water that will be incorporated within the marina.

D. Prohibitions

1. The building of new marinas in Type 1 and 2 waters is prohibited.

2. The building of new residential docks, piers, and wharfs in Type 1 waters is prohibited.

3. The unloading of catches by commercial fishing vessels at residential boating facilities is prohibited.

E. Standards

1. For marinas:

(a) Sufficient sanitary facilities shall be provided to service the patrons of the marina.

(b) Sufficient parking shall be provided for the patrons of the marina. A standard of 300 square feet is required for each parking space; the minimum requirements for the total number of parking spaces provided is one space for each 1.5 boats and one space for each 1.2 employees.

(c) Discharge of sanitary wastes to tidal waters from boats using the facility by devices other than those approved by the United States Coast Guard is prohibited.

(d) A Council Assent for a marina permits the marina operator to undertake routine maintenance of approved facilities where such maintenance will not alter the purpose of the facility. In those cases where routine maintenance requires the use of heavy machinery, such as the use of a pile driver, the Council shall be advised in writing at least ten days prior to undertaking such maintenance. Maintenance of facilities shall not be construed to include maintenance dredging.

(e) Marina and/or mooring operators with Council Assents may alter the layouts of the facility to provide for a change of up to 25 percent in the number of boats that may be accommodated at the marina, as defined in the original Council Assent; such alterations shall not extend the facility beyond the perimeter defined in the original Council Assent. In cases where proposals are made to alter the layout of an existing marina for which the boundaries of the water area have not been designated, the Council shall designate the water area within which alterations may take place. When alterations to the layout as described herein are proposed, the Council shall be notified in writing at least ten days prior to undertaking such activities, and the marina operator shall obtain Council approval certifying that the boat capacity alterations, if any, meet the 25 percent standard and the Council's standards for parking and sanitary facilities.

2. For launching ramps:

(a) Ramps shall be constructed at an angle no greater than 15 percent from the horizontal. Where upland modification is necessary, the slope will be created, where possible, by cutting back into the upland, rather than by placing fill on a shoreline feature. Ramps shall be approximately even with beach grade.

(b) Ramps shall extend a sufficient distance inland to prevent washout at the inland edge and shall extend a minimum of 3 feet beyond extreme low water. Single-lane ramp width shall not be less than 15 feet.

(c) Where a form of pavement is necessary in areas of unconsolidated sediment, ramps will be constructed using 6 inch by 6 inch by 12 feet reinforced concrete ties connected with galvanized steel rods placed perpendicular to the slope of the ramp, and packed within and underlain by 6 inches of crushed stone. Concrete ties shall utilize an air-entraining, Type II or Type V Portland cement, or an equivalent sulfate-resistant substitute.

(d) Side slopes of the ramp (above water line) shall be constructed of sloped riprap or, if the slope permits, vegetated.

(e) See Section 300.2, "Filling, Removing, or Grading of Shoreline Features," and Section 300.7, "Construction of Shoreline Protection Facilities."

3. For residential docks, piers, and floats:

(a) Applications for all residential recreational boating facilities shall indicate all work associated with access to these structures; a bottom survey showing water-depth contour lines and sediment types along the length of the proposed structure shall also be provided. All pathways, boardwalks, and cutting or filling of coastal features shall be specified. All such work shall be in accordance with applicable standards for "Filling, Removing, or Grading" (Section 300.2) and "Residential, Commercial, Industrial, and Public Recreational Structures" (Section 300.3).

(b) All residential piers and floating docks shall be built with pile bents spaced a minimum of 15 feet apart.

(c) Where possible, piles shall penetrate a minimum of 10 feet into the sediment. Piles shall have a minimum cross-section of 15 square inches. Pier bent cross members (pile caps) shall have a total minimum cross-sectional area of 30 square inches.

(d) Fixed structures which are for pedestrian access only shall be capable of supporting 40 pounds per square foot live load as well as their own dead weight; floating structures shall be capable of supporting a uniform 20 pounds per square foot live load, or a concentrated load of 400 pounds.

(e) Non-leaching wood preservatives shall be used for all wooden portions of the structure except decking.

(f) To permit light penetration, the minimum spacing between plank decking shall be ½ inch. Deck boards shall be no less than one inch thick, and shall be supported by stringers with a minimum cross-section of 2 by 8 inches and spaced no more than 24 inches apart.

(g) Standard dock or pier width is 4 feet; standard float size shall not exceed 150 square feet.

(h) To allow public access along the shore, piers and docks shall provide a stairway or maintain a minimum 5-foot clearance over the intertidal area at the mean high water mark.

(i) Flotation devices shall be securely contained. All expanded polystyrene (open cell, white foam flotation) shall be encased in vinyl or other suitable substance and protected by billet boards (2" by 8" size) located below the flotation and adequately through-bolted to the main body of the float.

(j) Hot-dipped galvanized connections shall be used.

(k) Where possible, piers shall span coastal wetlands; when pilings are placed within coastal wetlands, only the immediate area of piling penetration may be disturbed. Construction in a coastal wetland shall be accomplished by working out from completed sections. No construction equipment shall traverse the wetland while the facility is being built. Piers shall be constructed at a height above underlying marsh, which

allows for the growth of marsh vegetation. The Council will stipulate appropriate heights on the basis of staff biologist recommendations.

(l) Access to shoreline or piers from the top of an unconsolidated embankment shall be from a set of stairs elevated above the feature and not by way of a path.

(m) Owners are required to maintain their facilities in good working condition. Facilities may not be abandoned. The owner shall remove from tidal waters and coastal features any structure or portions of structures which are destroyed in any natural or man-induced manner.

(n) Float ramps and other marine appurtenances or equipment shall not be stored on a coastal wetland, shoreline embankment, or in any area designated as a buffer zone.

(o) The use of cribs for structural support shall be avoided. Where unavoidable, they shall be designed and stamped by a registered professional engineer or architect.

(p) Residential boating facilities shall not intrude into the area within 10 feet of an extension of abutting property lines, unless (1) it is to be a common structure for two or more adjoining owners, concurrently applying, or (2) a letter or letters of no objection from the affected owner or owners are forwarded to the CRMC staff with the application.

(q) Residential boating facilities shall not extend beyond that point which is (1) 25 percent of the distance to the opposite shore (measured from mean low water), or (2) 50 feet seaward of mean low water, whichever is the lesser.

(r) No sewage, refuse, or waste of any kind may be discharged from the facility or from any vessel utilizing it.

(s) A Council Assent is not required for the routine maintenance of an existing private recreational boating facility previously authorized by a Council Assent. Routine maintenance of existing structures includes those activities that will not change the design, purpose, or size of the structure. Notice of routine maintenance that involves the use of heavy equipment, such as pile drivers, shall be made in writing to the Council at least 10 days prior to the undertaking of such maintenance.

300.5. Mooring and Anchoring of Houseboats and Floating Businesses

A. Definitions

1. Houseboat: a building constructed on a raft, barge, or hull that is used primarily for single- or multiple-family habitation; if used for transportation this use is secondary.

2. Floating business: a building constructed on a raft or hull that is represented as a place of business, including but not limited to waterborne hotels, restaurants, marinas or marina-related businesses.

B. Policies

1. The Council considers that placement of houseboats and floating businesses in tidal waters is a low-priority use of any coastal water body and is acceptable only in limited numbers and in specific areas. Houseboats and floating businesses are not classified as water-dependent, since it is not their primary purpose to serve as a means of on-water transportation or recreation.

2. When in transit, a houseboat or floating business is considered a boat or vessel and must meet all applicable state and Coast Guard standards and regulations.

C. Prohibitions

1. Houseboats and floating businesses are prohibited from berthing or mooring in coastal ponds (in accordance with G.L.R.I., 46-22-91) and in all Type 1 and 2 waters.

2. Houseboats are prohibited from mooring or anchoring in all other tidal waters of the state unless within the boundaries of a marina.

3. Floating businesses are prohibited from mooring or anchoring in the tidal waters of the state unless within the boundaries of a marina or a port.

4. Discharge of sanitary sewage to tidal waters from houseboats or floating businesses using marina or port facilities by devices other than those approved by the Coast Guard is prohibited.

D. Additional Category B Requirements

1. Applicants for floating businesses shall (a) demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity; (b) demonstrate that there will be no significant conflict with such water-dependent uses and activities as recreational boating, fishing, navigation, commerce, and aesthetic enjoyment of the waterfront; and (c) demonstrate that there will be no significant conflict with riparian rights or harbor lines.

E. Standards

1. Applicants for either houseboats or floating businesses shall meet all pertinent standards given in "Recreational Boating Facilities" (Section 300.4) under standards for residential docks, piers, and floats.

2. Houseboats and floating businesses shall tie into marina or port holding-tank pumpout facilities where available.

300.6. Sewage Treatment and Disposal

A. Definitions

1. Sewage: the Council has adopted the definition of sewage set forth under Title 46, Chapter 12, Section 1 of the General Laws, to wit: ". . . any human or animal excremental liquid or substance, any decomposed animal or vegetable matter, garbage, offal, filth, waste, chemicals, acid, dyestuff, starch, coloring matter, oil and tar, radioactive substances and any compound, solution, mixture or product thereof, and every substance which may be injurious to public health or comfort, or which would injuriously affect the natural and healthy propagation, growth or development of any fish or shellfish in the waters of this state, or of the nourishment of the same, or which would injuriously affect the flavor, taste, or value of food of any such fish or shellfish or which would defile said waters or injure or defile any vessel, boat, wharf, pier, or any public or private property upon, in or under said waters or any shore thereof."

For purposes of the Coastal Resources Management Program, "sewage" is further defined to include freshwater discharges including runoff that may significantly alter the salinity of tidal waters or salt ponds. The term "sewage" also includes discharges of heated waters.

2. Individual sewage disposal system (ISDS): any arrangement for sanitary sewage disposal by means other than discharge into a public sewer system.

3. Point source discharges: any conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, container, transport vehicle or vessel from which sewage is or may be discharged.

4. Sewage treatment plants: sewage collection and treatment facilities, including state, municipal, or privately owned and operated collection, pumping, treating, disposal or dispersion facilities designed for the treatment of sewage from residences, commercial buildings, industrial plants and institutions, together with any groundwater, surface water, or surface runoff that may be present in the waste stream.

B. Policies

1. It is the Council's policy to maintain and, where possible, improve the quality of groundwater and tidal and salt pond surface waters.

2. It is the Council's policy to minimize the amount of ISDS-derived nitrates and other

potential contaminants which may leach into salt ponds and all other Type 1, 2, and 3 waters.

3. Applicants for Assents for ISDSs are encouraged to meet on site with CRMC staff prior to undertaking of ISDS groundwater and soil tests to discuss the location of the system and buffer zones.

C. Prerequisites

1. Applicants for Council Assents to construct, alter, or extend individual sewage disposal systems or point source discharges shall first obtain a permit from the Department of Environmental Management.

2. All federal (EPA) discharge and/or pretreatment regulations under the National Pollution Discharge Elimination System (NPDES) shall be met.

3. The Council shall formally review proposed actions only after all other applicable state/local requirements have been met. However, the Council will comment on preliminary plans for major facilities to assist in the planning process.

D. Prohibitions

1. Point source discharges are prohibited on unconsolidated coastal banks and bluffs (Section 210.4) and in many instances in Type 1 (Section 200.1) and Type 2 (Section 200.2) waters.

E. Standards

1. For individual sewage disposal systems (ISDSs):

(a) See standards given in "Filling, Removing, or Grading" (Section 300.2).
(b) Grading around the ISDS shall direct the flow of surface runoff water away from the ISDS.
(c) Subdrains constructed to lower groundwater levels in an area where an ISDS shall be built shall (1) have a minimum pipe diameter of 6 inches, (2) have no piping located between the anticipated ISDS and the shore, (3) be constructed so as to prevent clogging by soil fines, and (4) have outfalls suitably protected against shoreline erosion and scour.
(d) When existing buildings are changed from seasonal to year-round use, or expanded by adding one or more rooms, certification shall be obtained from the Department of Environmental Management's ISDS Office that the existing ISDS is capable of treating sewage effluents adequately.
(e) Connections to ISDSs and cesspools that are abandoned shall be removed, blocked, or otherwise disconnected, and abandoned cesspools and septic tanks shall be pumped dry and filled with clean fill.
(f) Where necessary, barriers shall be constructed to prevent vehicles from passing over septic systems.

2. For point discharges of surface runoff waters:

(a) Concentrated runoff shall be minimized. The use of sheet flow through natural vegetated areas, or the use of grassy drainage swales for clean water discharge, is preferable to direct discharge through a conduit or other piping. Wherever necessary, drainage swales shall be constructed along and adjacent to property lines so as to avoid drainage of water onto adjacent properties. Swales shall be capable of adequately handling runoff from a 10-year storm.
(b) Where possible, existing natural vegetation shall be left intact along natural drainage easements so as to minimize bank erosion.
(c) Whenever practical, permeable pavement shall be utilized to minimize the production of surface runoff.
(d) No connections to storm, surface, or subsurface drains shall be made to individual building sanitary sewers of ISDSs, nor shall any such drains be constructed within 25 feet of an existing ISDS.

3. For catch basins:

(a) Catch basins shall be employed when necessary to reduce runoff-induced infiltration of particulates into water bodies.
(b) A maintenance and cleaning program for catch basins shall be detailed.

(c) Catch basins shall have a minimum sump depth of 3 feet.
(d) Wherever possible, catch basins with permeable sides and/or bottoms shall be used so as to minimize outflow.

4. For outfalls:

(a) Work on outfalls, drainage channels, etc., shall proceed from the shoreline toward the upland in order that no unfinished or unstabilized lower channel portions be subjected to erosion-producing velocities from upstream. If this cannot be accomplished, all flow shall be diverted from the unfinished areas until stabilization is completed.
(b) Where possible, outfall pipe slopes shall be designed for an exit velocity of less than 5 feet per second.
(c) Screens or grates shall be placed over the end of large outfalls to trap debris.
(d) Beaches or other coastal features in front of outfalls shall be returned to original grade.
(e) Riprap placed on beaches shall not increase the grade of the beach higher than one foot in order to maintain lateral access below mean high water.
(f) Riprap shall be hard, durable, angular stone, with an approximate unit weight of 165 lbs./cubic foot.
(g) Riprap shall be placed with an adequate bedding of crushed rock or other suitable filtering material.

300.7. Construction of Shoreline Protection Facilities

A. Definitions

1. Shoreline protection facilities include breakwaters, groins, bulkheads, jetties, and other structures, the purpose or effect of which is to control, or prevent, the erosion of coastal features.

2. Riprap is a foundation or sustaining wall of stones placed together without mortar.

3. A revetment is a structure built to armor a sloping shoreline face composed of one or more layers of stone or concrete riprap. A revetment blankets, and generally conforms to, the contours of a coastal feature.

4. A groin is a structure built of rock, steel, timber, or concrete that extends from a beach into tidal waters and is used to entrap sand; groins are generally perpendicular to the shoreline's coastal trend.

5. Breakwaters and jetties are fixed or floating structures that protect a shore, harbor, anchorage, or basin by intercepting waves.

6. A bulkhead is a structure or partition built to retain or prevent sliding of the land and protect the inland area against damage from waves.

7. A seawall is a massive bulkhead with a vertical, curved, or stepped face designed to withstand the direct onslaught of ocean waves.

B. Policies

1. The Council favors non-structural methods for controlling erosion such as stabilization with vegetation and beach nourishment.

2. Riprap revetments are preferred to vertical steel, timber, or concrete seawalls and bulkheads except in areas bordering on Type 5 waters and in ports and marinas.

C. Prerequisites

1. Army Corps of Engineers permits are required for structural forms of shoreline protection facilities below extreme high water.

D. Prohibitions

1. Structural forms of shoreline protection are prohibited on shoreline features abutting Type 1 waters unless the primary purpose of the structure is to preserve or enhance the feature as a conservation area or buffer against storms.

E. Additional Category B Requirements

1. On the basis of sound professional information, applicants shall evaluate the feasibility of non-structural methods and, if they are deemed unsuitable, shall state reasons for this conclusion.

2. Applicants for structural measures to control erosion shall (a) demonstrate that the proposed structure has a reasonable probability of controlling the erosion problem; (b) demonstrate that the proposed structure is not likely to increase erosion in adjacent areas; (c) demonstrate that the proposed structure is an appropriate solution to the erosion problem considering the long-term rate of erosion in the area, the likely effects of major storms and hurricanes, and the stability of the shoreline on either side of the proposed project; and (d) describe a long-term maintenance program for the proposed facility including financial commitments to pay for such maintenance.

3. Applicants for breakwaters and jetties in addition to 1 and 2 above shall demonstrate that the proposed structure is necessary to provide protection to a commercial marina, port, or harbor.

4. Applicants for breakwaters and jetties shall also provide an evaluation of the structure's potential for interrupting the longshore movements of sediments. If such an interruption is likely to be significant, the applicant shall design a sand bypass system or another measure that will assure that the effects on sediment transport shall not cause significant erosion along nearby shores.

F. Standards

1. All applicable standards for earthwork (Section 300.2) shall be met. The base of the seawall, bulkhead, or revetment must be located as close as practicable to the shoreline feature it is designed to protect; structural shoreline protection facilities shall be placed landward of coastal wetlands.

2. The ends of shoreline protection structures shall be tied into adjacent structures. Where there are no adjacent structures, the new structure shall gradually return to the slope of the feature and be so designed that opportunities for erosion around the back of the structure are minimized.

3. The base of all shoreline protection structures built on unconsolidated sediments shall, at a minimum, extend to a depth equivalent to mean low water. Original beach materials, or other suitable materials, shall protect this base.

4. To promote good drainage behind seawalls and bulkheads, and to minimize the flow of sediment into waterways and avoid the loss of backfill, all backfill shall be coarse, clean, and free-draining. If soils in the area are fine-grained, a filtering layer shall be placed behind and/or beneath the structure, consisting of suitably graded stone or rock chips or engineering filter fabric. Weep holes shall be provided for drainage in retaining walls and bulkheads. The use of grout or concrete within, behind, or over revetments is not permitted.

5. Where feasible, the areas in back of the structure shall be level for a distance equivalent to the height of the structure.

6. The slope of revetments shall not exceed 1:1.

7. Riprap revetments shall be constructed of angular stone with a minimum unit weight of 165 lbs./cubic foot. Placed riprap is preferred to dumped riprap. The size of stone shall be dependent upon the site's exposure to wave energy in accordance with the following guidelines:

Fetch (nautical miles)	*Weight (lbs.)*	*Size (cubic yards)*
1	400	1/10
2	1,000	1/4
3	2,500	1/2
4	5,000	1
5 & greater	8,000 & greater	2 & greater

The above assumes a 1:1 wall slope and one layer of placed stone.

8. Seawalls and bulkheads which are not supported with earth anchors shall have a

base width which equals a minimum of 40 percent of total wall height, or shall be designed and stamped by a registered professional engineer.

9. Concrete used for wall construction along the shore and in tidal waters shall be resistant to the sulfate attack of seawater; Type 2 or Type 5 air-entraining Portland cement or an equivalent shall be used.

10. Immediately after construction, all groins shall be filled to entrapment capacity with sediment.

11. Floating tire breakwaters may be permitted for seasonal use only, after which they must be removed to an upland location; all tires must be branded or otherwise marked, and the owner of the floating breakwater shall be liable for cleanup costs if the tires break loose.

300.8. Energy-Related Activities and Structures

A. Definitions

1. Energy-related activities include all operations and structures involved in power generation and petroleum processing, transfer, and storage on a shoreline feature or its contiguous area or within tidal waters.

B. Prerequisites

1. Applicants must demonstrate that all relevant local zoning ordinances, building codes, flood hazard standards, and all state safety codes, fire codes, and environmental requirements have been met.

C. Prohibitions

1. Industrial operations and structures are prohibited in Type 1 and 2 waters or on shoreline features and their contiguous areas abutting these waters.

D. Additional Category B Requirements

1. Applicants for activities involving power generation and petroleum processing, storage, and transfer are referred to the 1978 Energy Amendments to the Rhode Island Coastal Resources Management Program for additional detailed standards. The following summary defines the scope of the topics that shall be addressed by applicants for power generating and petroleum processing and storage as they apply to construction, operation, decommissioning, and waste disposal: (a) environmental impacts, (b) social impacts, (c) economic impacts, (d) alternative sites, (e) alternative means to fulfill the need for the facility, (f) demonstration of need, and (g) consistency with state and national energy policies. Shorefront sites shall demonstrate the need for access to navigable waters or cooling and/or process water.

The above requirements for energy facilities do not have to be addressed if the proposal is for an electrical generating facility of less than 10-megawatt capacity or for a petroleum storage facility of less than 2,400-barrel capacity. Such small-scale facilities shall be considered commercial or residential structures (Section 300.3).

E. Standards

1. See standards given in "Filling, Removing, or Grading" (Section 300.2), as applicable.

2. See standards given in "Residential, Commercial, Industrial, and Public Recreational Structures" (Section 300.3), as applicable.

3. See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

300.9. Dredging and Dredged Materials Disposal

A. Definitions

1. Dredging: the excavation of sediments from beneath tidal and coastal pond waters by mechanical or hydraulic means.

Dredging for navigation purposes is divided into two categories by the Army Corps of Engineers: (a) improvement dredging includes new projects in previously undredged areas or the enlarging of existing channels and basins beyond previously authorized depths or boundaries; and (b) maintenance dredging includes projects whose purpose is to restore authorized channels and basins to their original, previously authorized dimensions.

2. Dredged materials disposal: the process of discharging, depositing, dumping, or utilizing the sediments produced by a dredging operation.

B. Policies

1. The Council shall support necessary maintenance dredging activities in Type 2, 3, 4, 5, and 6 waters, provided environmentally sound disposal locations and procedures are identified.

2. The Council favors offshore open-water disposal for large volumes of dredged materials, providing that environmental impacts are minimized.

3. The Council encourages the use of innovative nearshore methods of dredged materials disposal, particularly when small volumes of material must be disposed. These options include creation of wetlands, shellfish habitat, and beach nourishment in suitable areas.

C. Prerequisites

1. Permits for maintenance and improvement dredging and disposal projects for navigational purposes must be obtained from the Army Corps of Engineers as well as the Council. Council and Army Corps requirements are designed to complement one another; applicants should consider the requirements of both agencies when preparing to begin the permit process and may apply for CRMC and Army Corps permits concurrently.

2. A water quality certification from the Department of Environmental Management must be issued before dredging or disposal approval can be granted. The application for such certification shall be forwarded to DEM by the Council when all Council application forms have been completed.

3. Dredged materials must be certified by DEM as non-hazardous, based on an approved analysis process.

4. Upland disposal of dredged materials must comply with local ordinances, and DEM must certify that the materials are not hazardous and that the requirements of the Freshwater Wetlands Act will be met.

D. Prohibitions

1. The disposal of dredged materials on or adjacent to coastal wetlands in Type 1 and 2 waters is prohibited unless associated with a Council-approved program of wetland building or rehabilitation. The disposal of dredged materials is also prohibited on coastal wetlands designated for preservation in Type 3, 4, 5, and 6 waters (see Section 210.3).

2. No dredging for navigational purposes is permitted in Type 1 waters, and only maintenance dredging may be permitted in Type 2 waters.

E. Additional Category B Requirements

1. Applicants for all dredging projects shall provide accurate soundings in the area of the proposed dredging operation.

2. Applicants shall describe any temporary or permanent disturbance to a coastal feature which is required or anticipated in order to gain access for heavy equipment to the dredging or disposal site.

3. When fine-grained sediments are to be removed, the applicant shall install siltation curtains to control the transport of materials placed in suspension by dredging unless the applicant demonstrates to the Council on the basis of competent professional analysis that such transport will not be significant or will be controlled by other measures.

4. The applicant shall limit dredging and disposal to specific times of the year in order to minimize odors and/or impacts on fish and shellfish unless the applicant demonstrates to the Council on the basis of competent professional analysis that such odors or impacts will not be significant or will be controlled by other measures.

5. Applicants for improvement dredging projects shall describe, on the basis of competent professional analysis, anticipated siltation rates, sediment sources, and anticipated maintenance dredging needs.

6. When dredged materials are removed from a marine to an upland environment for disposal, the applicant shall demonstrate that the release of pollutants present in the materials shall not cause significant threats to groundwater or cause other environmental degradation.

F. Standards

1. For dredging:

(a) Bottoms of dredged areas shall slope downward into the waterway so as to maximize tidal flushing.
(b) Bottom slopes at the edges of dredged areas shall have a maximum slope of 50 percent.
(c) Dredging shall be planned so as to avoid undermining adjacent shoreline protection facilities and/or coastal features.
(d) Shellfish dredged from waters classified SB or lower shall not be made available for human consumption or bait.

2. For dredged materials disposal in open water:

(a) Dredged materials may not be placed in areas determined by the CRMC to be prime fishing grounds.
(b) Measures must be employed and described to ensure that all dredged materials will be dumped solely within the confines of an approved site.
(c) Hydrographic conditions at the approved disposal site must be such that the disposed dredged materials will remain within the disposal area and that resuspension of bottom sediments will be minimal.
(d) Following disposal operations involving polluted materials, clean coarse-grained materials must be deposited to cap the spoil mound and minimize the release of any potential contaminants to the water column. The cap shall have a minimum thickness of 6 inches.
(e) The applicant shall provide for an environmental monitoring program designed to detail physical conditions and biological activity at and near the site for a period of at least one year. The results of such programs shall be made public.

3. For dredged materials disposal in the creation of wetlands, aquatic habitat, or islands:

(a) Disposal sites must be in sheltered environments which are approved by the Council for such purposes and are not prone to extensive wave or current energies yet subject to sufficient tidal action to provide adequate flushing.
(b) Dredged materials must be pumped or placed into a containment area that will permit sediment consolidation and prevent erosion.
(c) The applicant must provide for an environmental monitoring program designed to detail physical conditions and biological activity at and near the site for a period of at least one year. The results of such a program shall be made public.
(d) All applicable requirements of Section 300.2 shall be met.

4. For upland disposal:

(a) Dewatering of dredged materials shall occur behind a berm or bulkhead of sufficient height to contain the material.
(b) After dewatering, dredged materials placed on uplands adjacent to tidal waters shall be

vegetated or otherwise permanently stabilized. Surface slopes of the disposal area shall be graded so as to prevent surface ponding.

(c) Where dredged materials are placed behind a wall or bulkhead: (1) the structure shall be suitably engineered to resist the pressures of the dredged material; (2) the material including fines shall be prevented from seeping through the wall or bulkhead by the placement of an adequate filtering device; and (3) all applicable standards listed for shoreline protection facilities (Section 300.7) shall be met.

(d) All applicable requirements of Section 300.2 shall be met.

5. Disposal for beach nourishment:

(a) The placement of dredged materials on a beach is a preferred disposal alternative, providing that the materials in question are predominantly clean sands possessing grain size and such other characteristics to make them compatible with the naturally occurring beach material.

(b) In areas where the processes of littoral drift would result in significant re-entry of dredged sediments into a navigable waterway, dredged materials must be placed on the downdrift side of the inlet.

(c) All applicable requirements of Section 300.2 shall be met.

300.10. Filling in Tidal Waters

A. Definition

1. "Filling in tidal waters" is the deposition of materials from upland sources below the mean high water mark and includes the utilization of dredged materials to create land in tidal waters for purposes other than those covered by the creation of wetlands and by beach nourishment in Section 300.9.

B. Policies

1. It is the Council's policy to discourage and minimize the filling of coastal waters.

2. In considering the merits of any given proposal to fill tidal waters, the Council shall weigh the public benefit to be served by the proposal against the loss or degradation of the affected public resource(s).

C. Prerequisites

1. A water quality certification from the Department of Environmental Management shall be required.

2. Filling of tidal waters requires an Assent from the Army Corps of Engineers.

D. Prohibitions

1. Filling in Type 1 and 2 waters is prohibited unless the primary purpose of the project is to preserve or enhance the area as a conservation area and/or a natural buffer against storms.

2. Regulations governing the filling and other disturbances to wetlands are set forth in Section 210.3.

3. Filling in Type 3, 4, 5, and 6 waters is prohibited unless (a) the filling is made to accommodate a designated priority use for that water area; (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; and (c) the filling is the minimum necessary to support the priority use.

4. Filling may be permitted where necessary for an approved erosion control or bulkheading project and only when it is demonstrated that the amount of filling is minimized.

E. Fees

See Section 160.

300.11. Aquaculture

A. Definition

Aquaculture is the culture of aquatic species under natural or artificial conditions in tidal waters and coastal ponds including but not limited to fish farming utilizing pens, tanks, or impoundments and the culture of shellfish on the sea floor or suspended in the water.

Note: Aquaculture conducted on land above mean high water and under Council jurisdiction shall be considered a commercial operation (Section 300.3).

B. Policies

1. The CRMC recognizes that commercial aquaculture is a viable means for supplementing the yields of marine fish and shellfish food products, and shall support commercial aquaculture in those locations where it can be accommodated among other uses of Rhode Island waters.

2. The CRMC shall grant aquaculture applicants exclusive use of the submerged lands and water column, including the surface of the water, when the Council finds such exclusive use is necessary to the effective conduct of the permitted aquaculture activities. Except to the extent necessary to permit the effective development of the species of animal or plant life being cultivated by the permittee, the public shall be provided with means of reasonable ingress and egress to and from the area subject to an aquaculture lease for traditional water activities such as boating, swimming, and fishing. All plant and animal species listed for culture in an aquaculture lease are the personal property of the permittee.

C. Prerequisites

1. Prior to issuing a permit for aquaculture, the Council shall obtain and consider statements from the director of the Department of Environmental Management and the chairman of the Marine Fisheries Council, as required by Chapter 20.10 of the state's General Laws. The director of the Department of Environmental Management shall review the application to determine that the proposed activity will not adversely affect (a) marine life adjacent to the proposed area and the waters of the state, and (b) the continued vitality of indigenous fisheries. The chairman of the Marine Fisheries Council shall review the application to determine that it is consistent with competing uses involved with the exploitation of marine fisheries.

2. Permits for the possession, importation, and transportation of species used in aquaculture must be obtained from the director of the Department of Environmental Management.

D. Additional Category B Requirements

1. Applicants proposing to undertake any aquaculture endeavor shall (a) describe the location and size of the area proposed; (b) identify the species to be managed or cultivated within the permitted area and over which the applicant shall have exclusive right; (c) describe the method or manner of management or cultivation to be utilized, including whether the activities proposed are experimental, commercial, or for personal use; (d) provide such other information as may be necessary for the Council to determine: (1) the compatibility of the proposal with other existing and potential uses of the area and areas contiguous to it, including navigation, recreation, and fisheries; (2) the degree of exclusivity required for aquacultural activities on the proposed site; (3) the safety and security of equipment, including appropriate marking of the equipment and/or lease area; (4) the projected per unit area yield of harvestable product; (5) the cumulative impact of a particular aquaculture proposal in an area, in addition to other aquaculture operations already in place; (6) the capability of the applicant to carry out the proposed activities; and (7) the impact of the proposed activities on the scenic qualities of the area.

E. Standards

1. In the event of revocation of any lease or Assent, the lessee or Assent holder is responsible for restoring the area to pre-existing conditions within six months from the date of permit revocation. This shall include the removal of all structures, rafts, floats, markers, buoys, anchors, and other equipment brought to the site.

2. Any person who maliciously and willfully destroys, vandalizes, or otherwise disrupts aquaculture activities permitted by the Council shall be in violation of an order of the Council and libel to all fines and penalties under law.

3. All permittees shall mark off the areas under permit by appropriate ranges, monuments, stakes, buoys, or fences placed so as not to interfere unnecessarily with navigation and other traditional uses of the water surface. All authorized limitations upon the use by the public of areas subject to the permit shall be posted by the permittee.

300.12. Mosquito Ditching

A. Definition

Mosquito ditching is the maintenance and construction of ditches in coastal wetlands in order to enhance tidal flushing and thereby reduce and control mosquito-breeding sites.

B. Policies

1. The Council recognizes the nuisance caused by large breeding populations of mosquitoes in portions of some coastal wetlands. The Council recognizes that the problem can be effectively controlled by good wetland management practices that include ditch construction and maintenance and, in some cases, the limited use of pesticides.

C. Prerequisites

1. Mosquito control programs in any coastal wetland area will be considered only when authorization from the DEM Division of Fish and Wildlife, the R.I. Mosquito Abatement Board, and the local municipality has been obtained.

2. A permit from the Army Corps of Engineers is required.

D. Prohibitions

1. The practice of applying broad spectrum persistent pesticides on any coastal wetland area is prohibited.

E. Standards

1. Ditching undertaken as part of the mosquito control program shall be minimal and shall utilize open-marsh water management techniques.

2. Marsh sediments excavated during ditch construction shall be spread thinly along the sides of the ditch in order to prevent ponding on the marsh surface and to reduce impacts on marsh vegetation.

3. Ditches shall be no more than 24 inches wide and not less than one foot nor more than 3 feet deep.

300.13. Public Roadways, Bridges, Parking Lots, Railroad Lines and Airports

A. Definition

This category includes all public roadways, bridges, parking lots, railroad lines, airports, and associated structures built on a shoreline feature, its contiguous area, or over tidal waters.

B. Prohibitions

1. The construction of new public transportation facilities in tidal waters and on coastal features is prohibited with the following exceptions: (a) construction on developed barrier beaches may be permitted, subject to the requirements of Section 210.2; (b) unpaved vehicle trails and parking areas may be permitted on undeveloped barrier beaches (Section 210.2); and (c) construction may be permitted on manmade shorelines subject to the requirements of Section 210.6.

C. Additional Category B Requirements

1. Applicants shall demonstrate that all practicable means are taken to minimize direct flows of runoff water into tidal waters and coastal wetlands.

D. Standards

1. See standards given in "Filling, Removing, or Grading of Shoreline Features" (Section 300.2).

2. Permeable materials shall be utilized, where practicable, to surface roadways and parking lots on shoreline features adjacent to Type 1, 2, and 3 waters.

300.14. Maintenance of Structures

A. Definition

1. Maintenance of structures includes rebuilding, reconstructing, or re-establishing to pre-existing conditions and dimensions a damaged structure or facility. With the exception of marinas (see Section 300.4), maintenance includes only those activities that do not alter the approved design, purpose, and size of the structure.

B. Policies

1. Persons proposing to maintain dredged channels and mooring areas (Section 300.9) and mosquito control ditches in coastal wetlands (Section 300.12) are in all cases required to obtain a new Council Assent.

2. Maintenance of structures and facilities (other than dredged channels and mosquito ditches) for which a Council Assent has been issued is permitted without further Council action if the following standards are all met: (a) the value of the structure(s) in question, excepting piers and docks associated with marinas, has not been destroyed 50 percent of more by storm waves or other coastal processes; (b) all applicable standards for the construction and operation of the permitted facility and any stipulations that condition the Council's Assent are continued; and (c) persons proposing to maintain structures in the following categories which require the use of heavy machinery, such as pile drivers, on coastal features or in tidal or coastal waters shall inform the Council in writing at least 10 days before undertaking such maintenance: (1) recreational boating facilities (Section 300.4); (2) shoreline protection facilities (Section 300.7); and (3) public roadways, bridges, and parking lots, railroad lines and airports (Section 300.13).

3. Persons proposing to maintain shoreline protection facilities or coastal features that have been altered by coastal processes since an original Council Assent was granted shall be required to apply for a new Council Assent. For the purposes of this section, the term "altered" is defined as: (a) a significant increase in the rate of erosion at one or both ends of the structure; or (b) a significant decrease in the distance between the toe of the structure and mean high water.

4. Persons proposing to maintain structures (other than piers and docks associated with marinas) the value of which has been destroyed 50 percent or more by storms, waves, or other natural coastal processes shall be required to obtain a new Council Assent.

5. Many structures under Council jurisdiction predate the Council and were not permitted by Council Assent when originally constructed. Persons proposing to maintenance or repair activities on such structures shall inform the Council in writing of the work proposed. The Council's executive director shall determine what standards of this Program apply or whether a Council Assent is required.

300.15. Municipal Harbor Regulations

A. Definitions

Municipal harbor regulations include all rules or management functions that apply to the use of tidal waters adjacent to a municipality.

B. Additional Category B Requirements

1. All municipalities wishing to adopt harbor regulations shall apply to the Council for an Assent. Such applications shall: (a) provide a map prepared and stamped by a professional engineer, land surveyor, or architect that designates the area of tidal water that will be affected by the harbor regulations; (b) describe the manner in which regulations or management programs will be carried out; (c) include a verbatim copy of any proposed ordinance, resolution, or other document which has been or that would be adopted to authorize and/or guide regulation or management; and (d) include a certification from the legal department or solicitor of the municipality that the proposed regulations or management programs conform to the Coastal Resources Management Program and the General Laws of the State of Rhode Island.

2. When a city or town enacts a police ordinance under G.L.R.I. 46-4-2, it shall not be required to request a Council Assent unless such by-law or ordinance affects the planning, regulation, or coordinating functions of the Council.

Section 310. Alterations to Freshwater Flows to Tidal Waters and Water Bodies and Coastal Ponds

A. Definitions

1. Alterations to the flows of tributaries include the installation of dams or other devices that alter flows of tributaries to tidal waters and that significantly change the timing and/or volumes of fresh water to coastal waters. Such alterations have a reasonable probability to conflict with a Council plan or program for resources management or may significantly affect the environment of the coastal region.

2. Alterations to the circulation of tidal waters include all structures that alter the behavior of waters within tidal water bodies, including the removal of tidal waters for industrial cooling or other purposes and the installation of structures in embayments and salt ponds that alter the volumes and/or timing of exchange with outlying tidal waters.

B. Policies

1. The Council recognizes that alterations to the volume of fresh water discharged to estuarine water bodies can have a significant effect on the species and abundance of organisms present in the estuary and may also cause changes to sedimentation, erosion patterns, and flooding.

2. It is the Council's policy to maintain and enhance anadromous fish runs and to consult with the Department of Environmental Management when considering proposals that may affect these features.

C. Prerequisites

1. The construction of dams, tidal gates, and other structures affecting flows of tributaries and the circulation of tidal water bodies shall require an Army Corps of Engineers permit.

D. Standards

1. See standards given in "Filling, Removing, or Grading of Shoreline Features" (Section 300.2), as applicable.

2. See standards given in "Construction of Shoreline Protection Facilities" (Section 300.7), as applicable.

3. See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

Section 320. Inland Activities and Alterations That Are Subject to Council Permitting

A. Definitions

The activities and alterations inland of shoreline features and their contiguous areas within state boundaries that may require a Council Assent are solid waste disposal; minerals extraction; chemical processing, transfer, and storage; power generation (excluding facilities of less than 10-megawatt capacity); petroleum processing, transfer, and storage (excluding storage facilities of less than 2,400-barrel capacity); and sewage treatment and disposal.

B. Policies

1. The Council shall review all proposals inland of the area contiguous to shoreline features which involve any of the above identified activities and alterations. The Council shall determine whether such proposals have a reasonable probability of conflicting with this Program or with adopted CRMC Special Area Management Plans, or have the potential to damage the coastal environment. Since, with the exception of those activities defined in Section D-2 below, it is not practically feasible for persons proposing every activity that may come under Council jurisdiction to undergo such a review, the Council's policy is to assume the responsibility of informing parties proposing such inland activities or alterations when such a review is considered necessary. Where Council jurisdiction has established that there is a reasonable probability of conflict with this Program or an adopted CRMC Special Area Management Plan, or where potential exists to damage the coastal environment, the Council shall require that an Assent be obtained and that suitable modifications to the proposal be made.

C. Prerequisites

1. Solid waste disposal: permits from the Department of Environmental Management are required pursuant to the Solid Waste Management Act; an Air Quality Permit will have to be obtained from DEM if disposal practices include incineration. Disposal of hazardous wastes requires DEM permits pursuant to the R.I. Hazardous Waste Management Program as well as EPA permits.

2. Minerals extraction: DEM may require a wetlands permit and a Water Quality Certificate; the U.S. Department of Interior, Office of Surface Mining, issues permits for mining operations not including sand and gravel extraction.

3. Chemical processing, transfer, and storage: DEM may require permits pursuant to the Solid Waste Management Act and the R.I. Hazardous Waste Management Program, as well as an Air Quality Permit, a Water Quality Certificate, and a Spill Contingency Plan. The EPA Region 1 may require a National Pollution Discharge Elimination System (NPDES) permit.

4. Power generation: persons proposing a hydroelectric plant are required by DEM to obtain a Wetlands Permit, Dam Safety Certificate, and a Water Quality Certificate; a Preliminary Permit will also have to be obtained from the Federal Energy Regulatory Commission (FERC). Other power-generating facilities may require a DEM Air Quality Certificate, Water Quality Certificate, and Spill Contingency Plan. An NPDES permit may have to be obtained from EPA Region 1.

5. Petroleum processing, transfer, and storage: DEM may require an Air Quality Certificate, a Water Quality Certificate, and a Spill Contingency Plan.

6. Sewage treatment and disposal: DEM requires an ISDS permit for on-site sanitary sewage disposal; other facilities may require a DEM Water Quality Certificate, approval of the DEM Division of Water Resources, and a NPDES permit from EPA Region 1.

D. Additional Category B Requirements

1. Applicants proposing energy-related facilities are referred to the Energy Amendments adopted by the Council in 1978.

2. Persons proposing residential subdivisions of six units or more or facilities requiring one acre or more of parking, any portion of which extends onto a shoreline feature or its contiguous area, or is within the watershed of the poorly flushed estuaries delineated on the maps accompanying this Program, are required to apply for a Council Assent. Applicants shall submit the following information to the Council for review in the early stages of planning such facilities:

(a) A soils map of the property (suggested scale 1:200) with an accompanying analysis of the best-use potential of the soils present; the soils maps and use potentials analysis prepared by the U.S. Soil Conservation Service should be used as the basis for this analysis.

(b) An overlay map showing the principal vegetation types or any significant features identified by the Natural Heritage Program of the Department of Environmental Management and the Historic Preservation Commission on the property; the maps prepared by McConnell (1974) and Kupa and Whitman (1972) may be the basis for information on vegetation.

(c) An overlay showing surface drainage patterns and, where available, information on the depth to groundwater and the direction and volume of groundwater flows.

(d) An overlay showing the proposed subdivision layout, including buildings, roadways, parking areas, drainage systems, sewage treatment and disposal facilities, and undisturbed lands.

This information shall be forwarded by the Council to other divisions of DEM for concurrent review. The city or town in which the action is proposed shall be notified of the review and invited to participate; where so requested, all parties shall discuss their findings and recommendations at the municipality's pre-application conference, preliminary hearing, or similar proceeding. The findings and recommendations resulting from the coordinated, joint review shall be forwarded to the full Council. Where the Council finds a reasonable probability of conflict with this Program or with an adopted CRMC Special Area Management Plan, or finds there is a potential to damage the coastal environment, the Council shall require that suitable modification to the proposal be made or shall deny its Assent.

3. In those cases where a subdivision has been approved by the Council, any person wishing to conduct an approved activity, in accordance with the stipulations of the Council Assent, need not apply for a separate Assent.

Section 330. Guidelines for the Protection and Enhancement of the Scenic Value of the Coastal Region

A. General Guidelines

1. The primary goal of all Council efforts to preserve, protect, and, where possible, restore the scenic value of the coastal region is to retain the visual diversity and often unique visual character of the Rhode Island coast as it is seen by hundreds of thousands of residents and tourists each year from boats, bridges, and such public vantage points as roadways, public parks, and public beaches.

2. Every effort should be made to safeguard from obstruction significant views to and across the water from highways, scenic overlooks, public parks, and other vantage points enjoyed by the public.

3. The importance of the skyline as seen from tidal waters in determining the character of a view site must be recognized; it should, where possible, not be disrupted by visually intrusive structures.

4. On sites in or adjacent to historic features and districts, new structures should be designed to provide continuity with the existing scenic and historic character. Within historic districts, applicants shall consult with the Historic Preservation Commission to identify means for minimizing disruption and, where possible, enhancing the historic value of the area.

5. Excellent guidance for preserving the visual character and quality of coastal landscapes in Rhode Island are contained in "Building at the Shore: A Handbook for Residential Development on the Rhode Island Coast." Review copies are available at the Council's offices in Providence.

B. In and Adjacent to Type 1, 2, and 4 Waters

1. Structures along the water's edge should be screened by vegetation, preferably with native species typical to the area rather than exotics.

2. Trees that form the first line of visual definition as one looks landward from the water should be preserved.

3. In new developments, trees should be planted in the drifts that generally follow land contours and parallel the water's edge rather than in lines that cut across landscape contours.

4. Disruptions of natural landforms and vegetation should be minimized.

5. New developments should not compete visually with such significant shoreline features as coves, peninsulas, cliffs, and bluffs; they should be set back and screened.

C. In and Adjacent to Type 3, 5, and 6 Waters

1. In all areas adjacent to Type 3 and 5 waters and, where appropriate, adjacent to Type 6 waters, the public should, where possible, be provided a sense of the water from within the townscape. Views to and across the water through yards, between houses, and from roadways should be preserved and, where possible, created.

2. When new structures are proposed adjacent to Type 3 and 5 waters, the character of new structures should be consistent and in character with existing buildings. The design of new structures should be based on an analysis of the patterns of existing buildings, including rooflines, roof slopes, building materials, colors, and window patterns. It is not necessary, however, to imitate pre-twentieth-century structures.

Glossary

agency. Boards, commissions, departments, or offices thereof, other than the legislature or the courts, authorized by law to make rules, determine contested cases, or issue permits.

agricultural land. (1) Tilled or tillable land upon which a crop is being or has recently been produced, (2) actively managed orchards, nurseries, and cranberry bogs, and (3) land used for livestock pasturing.

alterations to freshwater flows to tidal waters and water bodies and coastal ponds. See Section 310.

anadromous fish. Oceanic or estuarine species that spawn in fresh water.

aquaculture. See Section 300.11.

areas of historic and archaeological significance. See Section 220.

barrier beach. See Section 210.2.

beach grass. The dominant vegetative cover of sand dunes (*Ammophila* spp.).

breachway. A connecting channel, usually between a coastal pond and the ocean, which permits water exchange between the two.

breakwaters and jetties. See Section 300.7.

buffer zone. A land area on or contiguous to a shoreline feature that is retained in its natural undisturbed condition.

bulkhead. See Section 300.7.

cease and desist orders. See Section 170.

coastal beaches and dunes. See Section 210.1.

coastal cliffs, bluffs, and banks. See Section 210.4.

coastal environment. The complete system of living organisms and physical surroundings within the waters and shore lands of estuaries, the nearshore ocean, and the terrestrial areas influenced by this system.

coastal pond. A coastal lagoon usually located behind a barrier beach which, in its natural condition, permanently or occasionally exchanges waters with the ocean.

coastal wetlands. See Section 210.3.

compelling public purpose. Of such concern to the public welfare that it outweighs private or individual interests.

Council. The Rhode Island Coastal Resources Management Council.

Council meeting. Any meeting of the full Council or a subcommittee.

Council representative. A person appointed or employed as the Council's representative or agent.

depositing shore. A shore which is accumulating sand or other sediments, as opposed to a shore which is eroding.

developed barrier beaches. See Section 210.2.

development. Any material change in the use of any structure or land or water body, including but not limited to any building, mining, dredging, filling, excavation, or drilling operation; alteration of the shore, rivers, streams, lakes or ponds; devegetation, demolition, deposition of fill, solid or liquid waste; construction, installation, reconstruction of a structure; a change in the type of class or use of land; or a material increase in the intensity of use.

discharge. Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping either directly or indirectly to the waters of the state of Rhode Island.

dune. See Section 210.1.

ecosystem. A system formed by the interaction of a community of organisms with their environment.

effluents. The outflow from a river, a pipe, or other watercourse.

energy-related activities and structures. See Section 300.8.

estuary. A semi-enclosed body of water that has free connection with the open sea within which seawater is measurably diluted with fresh water derived from land drainage.

eutrophication. Nutrient enrichment in the aquatic environment, leading to excessive growth of aquatic plants, which can detrimentally alter water quality parameters, particularly oxygen concentration.

fauna. Animal life.

filling in tidal waters. See Section 300.10.

filling on shoreline features. See Section 300.2.

floating business. See Section 300.5.

flora. Plant life.

glacial till. Unconsolidated and unsorted material left by the movement of glaciers, consisting of clay, sand, gravel, and boulders.

grading of shoreline features. See Section 300.2.

groin. See Section 300.7.

houseboat. See Section 300.5.

hydrologic. Related to water.

individual sewage disposal system (ISDS). See Section 300.6.

larva. The early form of an animal that at birth or hatching is fundamentally unlike its parent and must metamorphose before assuming the adult form.

launching ramp. See Section 300.4.

license. Includes the whole or part of any agency permit, certificate, approval, registration, charter, or similar form of permission required by law, not including those required solely for revenue purposes.

longshore current. A current that flows parallel and adjacent to the shoreline.

maintenance of structures. See Section 300.14.

manmade shoreline. See Section 210.6.

marina. See Section 300.4.

mosquito control ditching. See Section 300.12.

municipal harbor regulations. See Section 300.15.

ocean dumping. Disposal of non-dredged waste materials from vessels or by other means into marine waters; ocean dumping does not include discharges of effluent incidental to the operation of vessels, the dumping of fish wastes, or the placement or deposit of materials on the sea floor for the purpose of enhancing fisheries.

one-hundred-year flood level. The area above mean high water which has a probability of being flooded once in a one-hundred-year period. The line has been designated by the Department of Housing and Urban Development.

person. Any individual, partnership, corporation, association, governmental subdivision, or public or private organization of any character other than an agency.

petroleum hydrocarbons. A compound originating from an oil, gas, or other petroleum base, and composed primarily of hydrogen and carbon.

petroleum products. Includes crude or refined oils, kerosene, gasoline, natural gas, or liquefied natural gas (LNG), liquefied petroleum gas (LPG), synthetic natural gas (methane or SNG), or other petroleum derivatives.

physiographic feature. A landform or element of the landscape.

plankton. Small, suspended aquatic plants and animals which drift or swim weakly in the water column.

priority of use. Reflection of the Council's assessment of those uses deemed most likely to be consistent with adopted Council policies and regulations.

Program. As stated in this document, the State of Rhode Island Coastal Resources Management Program.

public roadways, bridges, and parking lots, railroad lines and airports. See Section 300.13.

recreation. Any voluntary experience engaged primarily during leisure time from which the individual derives satisfaction.

recreational mooring area. See Section 300.4.

removing a shoreline feature. See Section 300.2.

residential boating facilities. See Section 300.4.

residential, commercial, industrial, and public recreational structures. See Section 300.3.

restoration. Return to a condition closely resembling a former, original, normal, or unimpaired condition.

restoration orders. See Section 170.

revetment. See Section 300.7.

riparian rights. The rights of a person owning land containing or bordering on a watercourse related to access to the water, certain privileges regarding its uses, and the benefits of accretions and relictions.

riprap. See Section 300.7.

rocky shores. See Section 210.5.

runoff. That portion of precipitation which is not absorbed into the ground and which drains naturally or through manmade channels to surface water bodies.

scarp. A line of cliffs or bluffs produced by faulting or erosion.

seawall. See Section 300.7.

sedimentation. The settling to the bottom of suspended sediments.

setback. The minimum distance from the inland boundary of a coastal feature at which an approved activity or alteration may be permitted.

sewage. See Section 300.6.

sewage treatment plant. See Section 300.6.

shoreline category/type. One of the seven categories of Rhode Island shoreline designated as part of this Program.

shoreline protection facilities. See Section 300.7.

significant damage to the environment. Detriment, harm, or destruction of the environment, as opposed to damage of trivial consequence.

siltation curtains. Devices placed in the water during a dredging operation or other activity which resuspends bottom sediments in order to prevent the spreading of those sediments.

Special Exception. See Section 130.

storm surge. An elevation in the sea surface from the effects of a storm.

substantive objective. See Section 110.3.

undue hardship. An inappropriate, unsuitable, unlawful, or excessive standard or requirement levied upon an applicant.

variance. See Section 120.

violation and enforcement actions. See Section 170.

water-dependent activity use. Activities or uses which can only be conducted on, in, over, or adjacent to tidal waters or coastal ponds because the use requires access to the water for transportation, recreation, energy production, or source of water; also includes non-water-dependent activities that provide access to the shore to broad segments of the public.

water use category/type. One of six use designations assigned to Rhode Island coastal waters as part of this Program.

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Note: *URI marine technical reports and bulletins may be obtained from the Publications Unit, Marine Advisory Service, University of Rhode Island, Narragansett Bay Campus, Narragansett, RI 02882 (tel. 401-792-6211).*

Department of Environmental Management publications may be obtained from the Office of Information and Education, 83 Park Street, Providence, RI 02903 (tel. 401-277-6800).

Maps of Water Use Categories

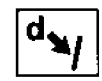
Boundary Line Designations

The following boundary line designations describe those points along the coastline where one water use type changes to another. Each mapped boundary is coded by letter on each quadrangle map to a verbal description as listed below. Except where otherwise noted, the water use classifications along any shoreline reach and between any two boundary line designations run parallel to the general coastal trend and extend 500 feet seaward from the mean high water mark. All water areas within the bounds of channel markers as depicted on U.S. Department of Commerce Nautical Charts #13221 and 13205 (1978) are considered navigation channels, and are classified as 3, 4, 5, or 6 waters, as appropriate.

Legend

Water use category

Type 1 conservation areas (Section 200.1)
Type 2 low-intensity use (Section 200.2)
Type 3 high-intensity boating (Section 200.3)
Type 4 multipurpose waters (Section 200.4)
Type 5 commercial and recreational harbors (Section 200.5)
Type 6 industrial waterfronts and commercial navigation channels (Section 200.6)



Boundary between water use categories

Coastal wetland in Type 3, 4, 5, and 6 waters designated for preservation (Section 210.3)

Boundary of barrier beaches (Section 210.2 and Table 4)

D developed barrier beach
M moderately developed barrier beach
U undeveloped barrier beach

Erosion-prone area requiring additional setbacks for selected structures (see Section 140)

(A) 75-foot setback
(B) 120-foot setback
(C) 150-foot setback
(D) 180-foot setback

Watershed of poorly flushed estuaries where the review of proposed subdivisions is required (Section 320)

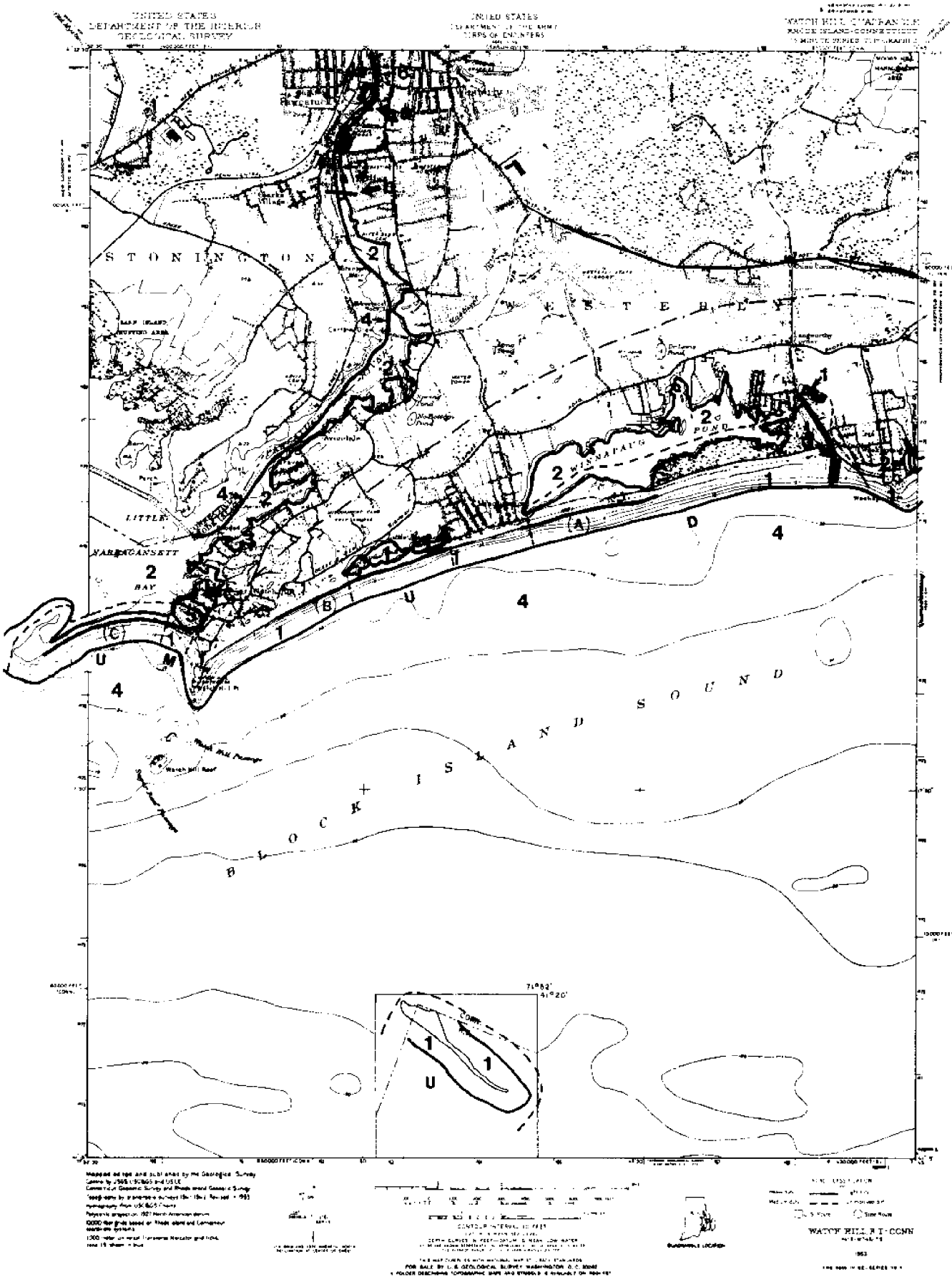
Watch Hill Quadrangle

a A straight line extension of the northern boundary of Cardone's Marina.

b A straight line extension of the south side of the industrially zoned area.

c A straight line across the entrance to Watch Hill Cove from an extension of the western side of Meadow Lane to the tip of the jetty on the north side of Napatree Beach.

d Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Winnipaug Pond.


STONINGTON
LITTLE
NARRAGANSETT
BAY
WINNAPAUG
POND
ISLAND
SOUND
BLOCK

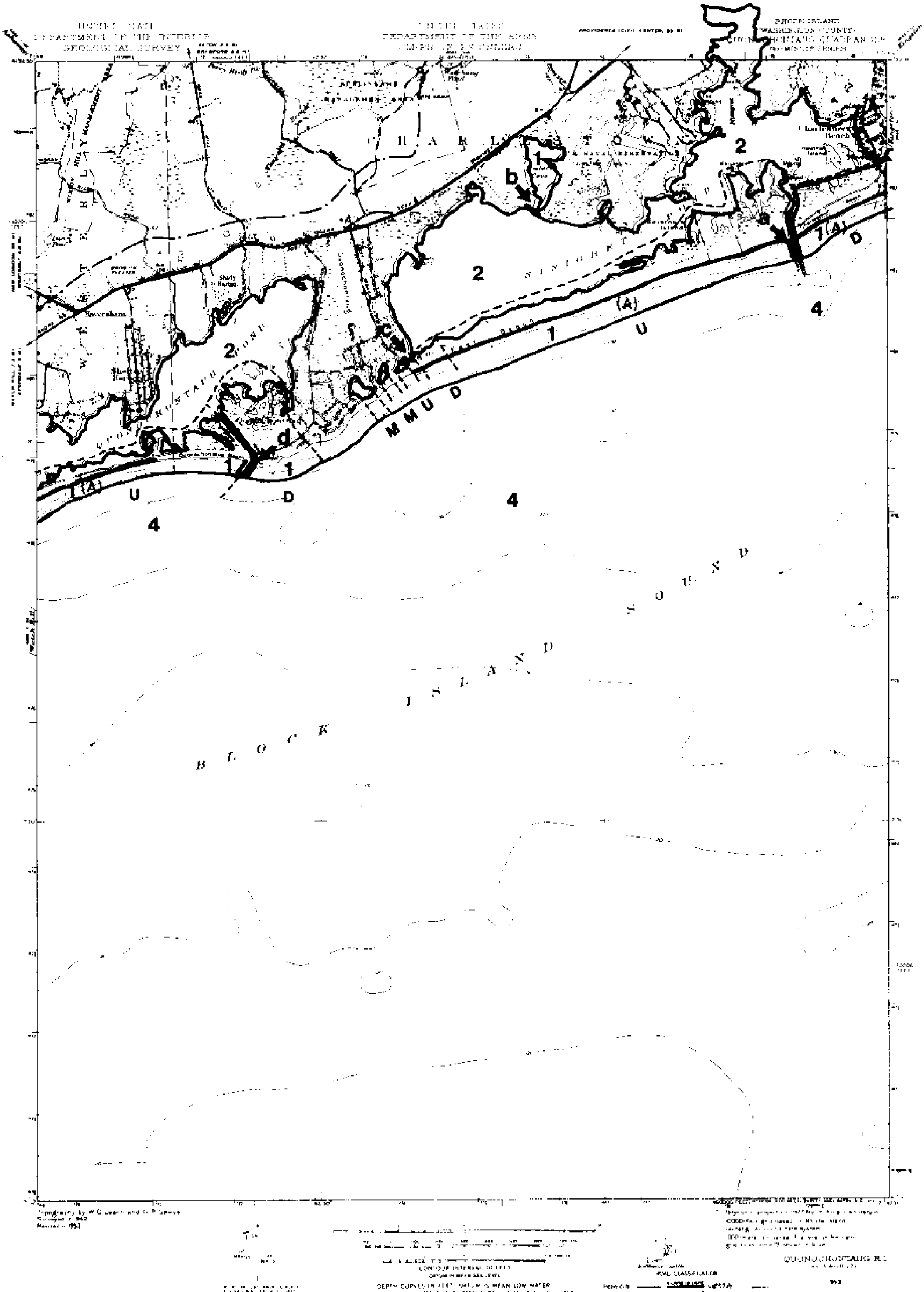
Quonochontaug Quadrangle

a Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Ninigret Pond.

b A straight line along the Ninigret Pond shoreline across the entrance to Foster Cove.

c A straight line along the west side of East Beach Road.

d Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Quonochontaug Pond.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
RHODE ISLAND
WASHINGTON COUNTY
QUONOCHONTAUG QUADRANGLE
C H A R L E S T O W N
NINIGRET
QUONOCHONTAUG POND
B L O C K I S L A N D S O U N D
MMUD
1
2
4
(A)
U
D
a
b
c
d
QUONOCHONTAUG, R.I.

Kingston Quadrangle

a A straight line running south along the outside of the eastern jetty at the Point Judith Pond breachway.

b A line running generally southerly, following the outside of the western jetty and breakwater at the Point Judith Pond breachway and Harbor of Refuge.

c A straight line running generally north along the eastern side of the Point Judith Pond breachway, and extending into pond waters to a point where a perpendicular with the Port of Galilee bulkhead is a distance of 200 feet; thence turning generally northeasterly, then generally northwesterly, then generally northeasterly again, paralleling and maintaining the 200-foot distance from the bulkhead, to a point south of Little Comfort Island, it being the point northwest of the northwest corner of the Galilee bulkhead; thence turning an angle generally to the southeast and running until it connects to the northwest corner of the Galilee bulkhead.

d A straight line running generally north along the western side of the Point Judith Pond breachway, and extending into pond waters to a point where a perpendicular with the Jerusalem shoreline is a distance of 200 feet. Thence turning generally north-northwesterly, maintaining the 200-foot distance from the shoreline, and extending to the end of state property. Thence turning a right angle to the west and running until it connects to the shoreline.

e A line along the eastern side of the bridge between Galilee and Great Island.

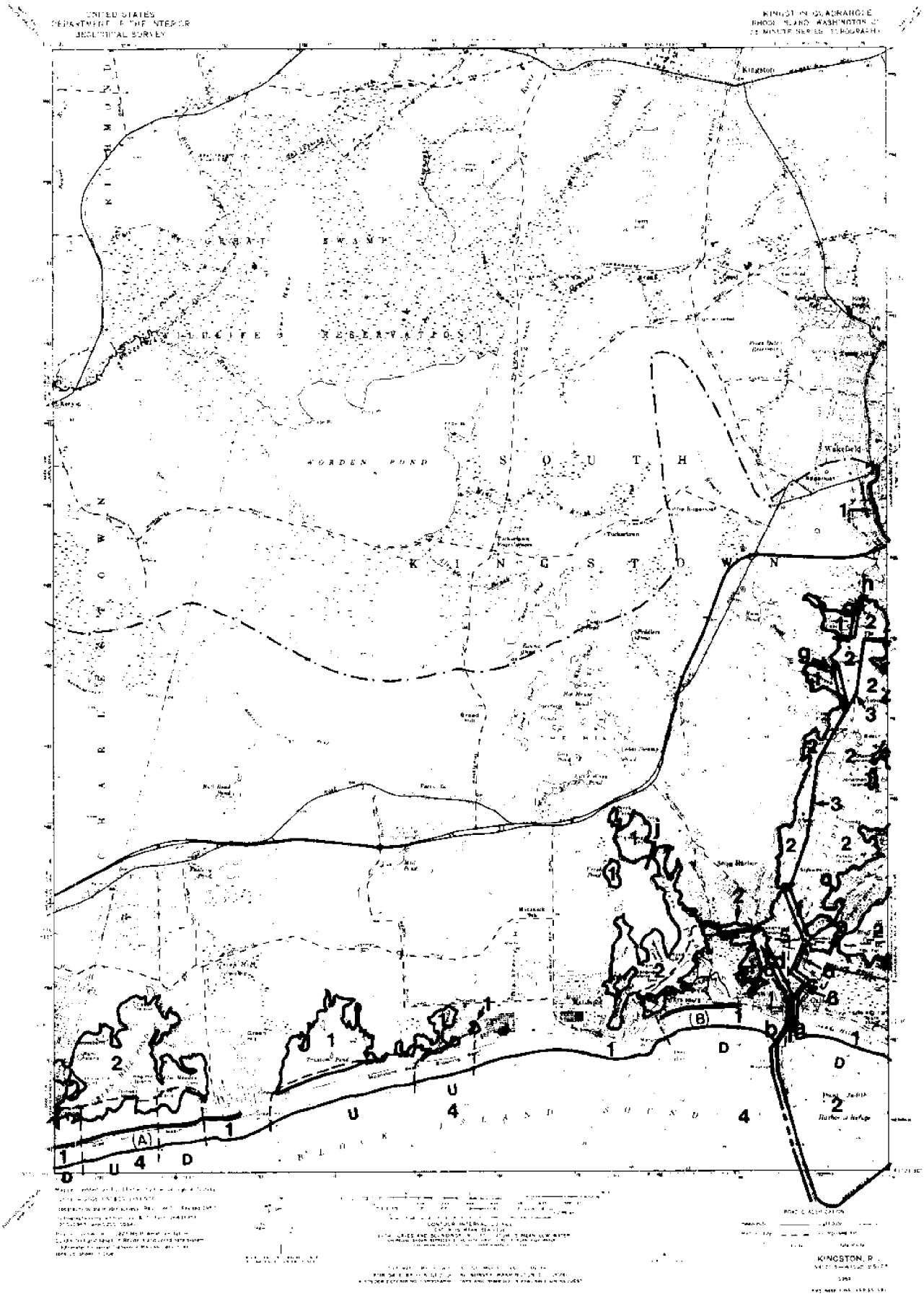
f A straight line running from the most western tip of Little Comfort Island to the most eastern tip of High Point.

g A straight line across Smelt Brook Cove from the eastern tip of Buttonwoods Point to the eastern tip of Crown Point.

h A line across Congdon Cove from the southern tip of the peninsula on the west side of Billington Cove to the southeastern tip of Cummock Island; thence turning due westerly until it touches the mainland on the south side of Congdon Cove.

i A straight line running generally westerly from the border between the RL80 and open-space zones on Gooseberry Island to the border between the open-space and commercial zones south of the Kenport Marina.

j A straight line running from a southern tip of land now or formerly of Collins/Bassett/Murray to the most easterly side of a small salt marsh on land now or formerly of Woodcock/Roberton/McCall.


KINGSTON, R.I.

Narragansett Pier Quadrangle

a A straight line from the southern end of Maple Avenue to the end of the large wharf at Beaverhead.

b A straight line from Southwest Point to the tip of Short Point.

c A straight line extension of the south side of Bonnet Shores Road.

d A straight line across the entrance to Pettaquamscutt Cove from the northernmost tip of land at Little Neck west of the Sprague Bridge, thence generally northwesterly, touching the northeastern border of the wetland called "sedge beds," thence continuing straight to where it meets land on the northern part of the cove entrance.

e A straight line across the entrance to the Narrow River from the south side of Clump Rocks to the tip of the Narragansett Beach barrier spit.

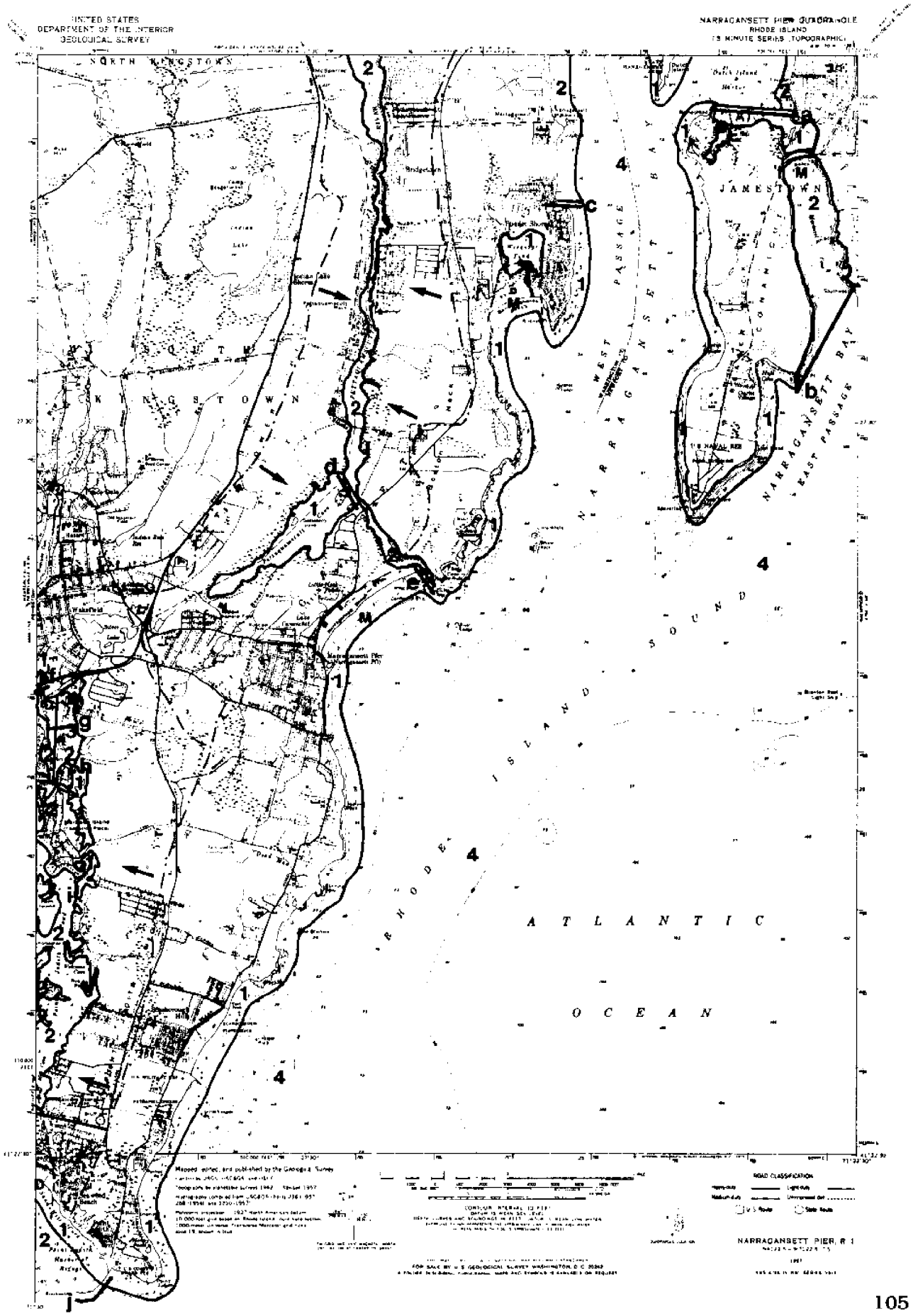
f A line across the northernmost side of the Route 1 bridge.

g A straight line running from west to east through the center of Nun buoy #24.

h A straight line across the inlet to Long Cove at its most narrow point.

i A straight line across the inlet to Champlin Cove from the tip of Cedar Point to the southernmost point on Harbor Island.

j A line along the outside of the Harbor of Refuge breakwater.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
NARRAGANSETT PIER QUADRANGLE
RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
NORTH KINGSTOWN
SOUTH KINGSTOWN
JAMESTOWN
NARRAGANSETT BAY
WEST PASSAGE
EAST PASSAGE
NARRAGANSETT SOUND
RHODE ISLAND
ATLANTIC OCEAN
U.S. NAVAL RES
Mapped, surveyed, and published by the Geological Survey
CONTOUR INTERVAL 10 FEET
ROAD CLASSIFICATION
NARRAGANSETT PIER, R. I.

Wickford Quadrangle

a A line along the east bulkhead wall in the small embayment on the south side of the Allen Harbor entrance channel, extending northerly across the channel to where it meets the opposite shore.

b, c Boundaries were removed prior to Program adoption.

d A straight line extension from the end of the fence separating former Navy lands from private lands, extending offshore 2,000 feet, then turning generally easterly and running to a point where it meets the southern side of the Navy channel.

e A line along the western side of the breakwater from Sauga Point, running across the entrance channel to Wickford Harbor and along the western side of the breakwater from Poplar Point.

f A straight line from the base of the breakwater at Sauga Point to the eastern tip of Cornelius Island.

g A straight line across the entrance to Wickford Cove from the tip of Big Rock Point to the tip of the northern peninsula at the end of West Main Street.

h A line along the western side of the bridge on Brown Street.

i A line along the south side of Hussey Bridge.

j A straight line across the southwestern side of the old railroad causeway.

k A straight line from the northeast side of Rabbit Island to the tip of Calf Neck.

l A straight line from the southern tip of Rabbit Island to the western side of the launching ramp at Long Point.

m A straight line along the western side of the long pier at the end of Enfield and Esmond Streets.

n A straight line extension of Pleasant Street.

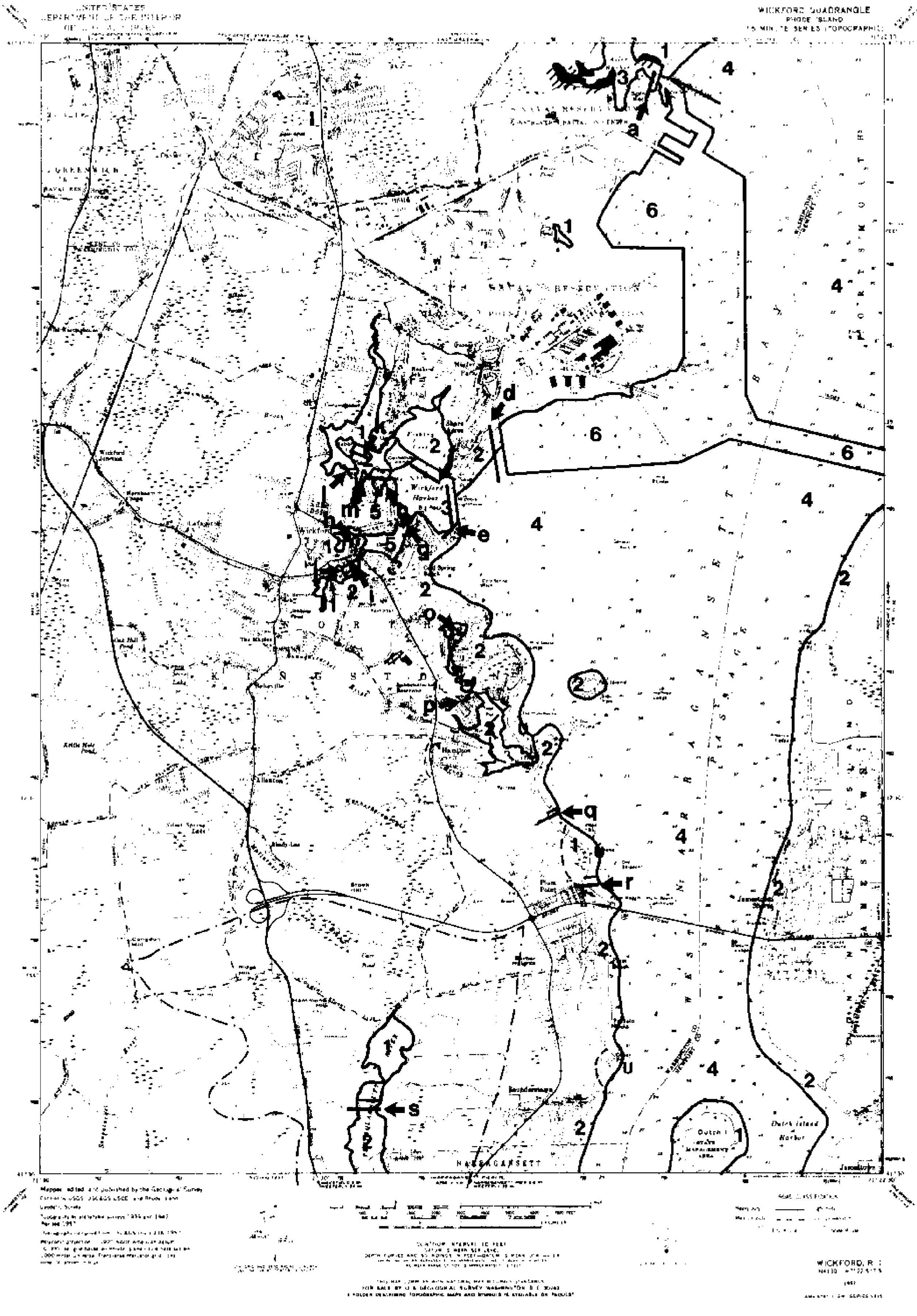
o A straight line across the entrance to Duck Cove at its narrowest point from the northern side of the small peninsula, running generally southeasterly to where it meets the opposite shore on Little Tree Point.

p A straight line along the north side of Waldron Avenue.

q A straight line along the south side of the industrially zoned land.

r A straight line extension of the boundary between the RL and RH zones.

s A straight line extension of the southern border of the open-space zone on the east side of the Pettaquamscutt River.


UNITED STATES
DEPARTMENT OF THE INTERIOR
WICKFORD QUADRANGLE
RHODE ISLAND
NAVAL RESERVATION
NARRAGANSETT
WICKFORD, R. I.

East Greenwich Quadrangle

a A straight line extension from the south side of a launching ramp facility on the northern side of Passeonkquis Cove.

b A straight line running from a point of land on the south side of Occupessatuxet Cove to the tip of the peninsula on the east side of the cove.

c A straight line from the northern side of the end of Randall Street to the base of the easternmost groin at Oakland Beach.

d A straight line from the base of the westernmost groin at Oakland Beach to the base of the easternmost groin on Buttonwood Point.

e A straight line from the tip of Cedar Tree Point to the south side of the breakwater at Folly's Landing.

f A straight line from the northern border of the commercially zoned area to the tip of Long Point at Goddard Park.

g A straight line running due east from the south side of the sewage treatment plant property across Greenwich Cove to where it intersects with land at Goddard State Park.

h A straight line extending northerly from the eastern border of Goddard State Park.

i A straight line along the western side of Beachwood Drive.

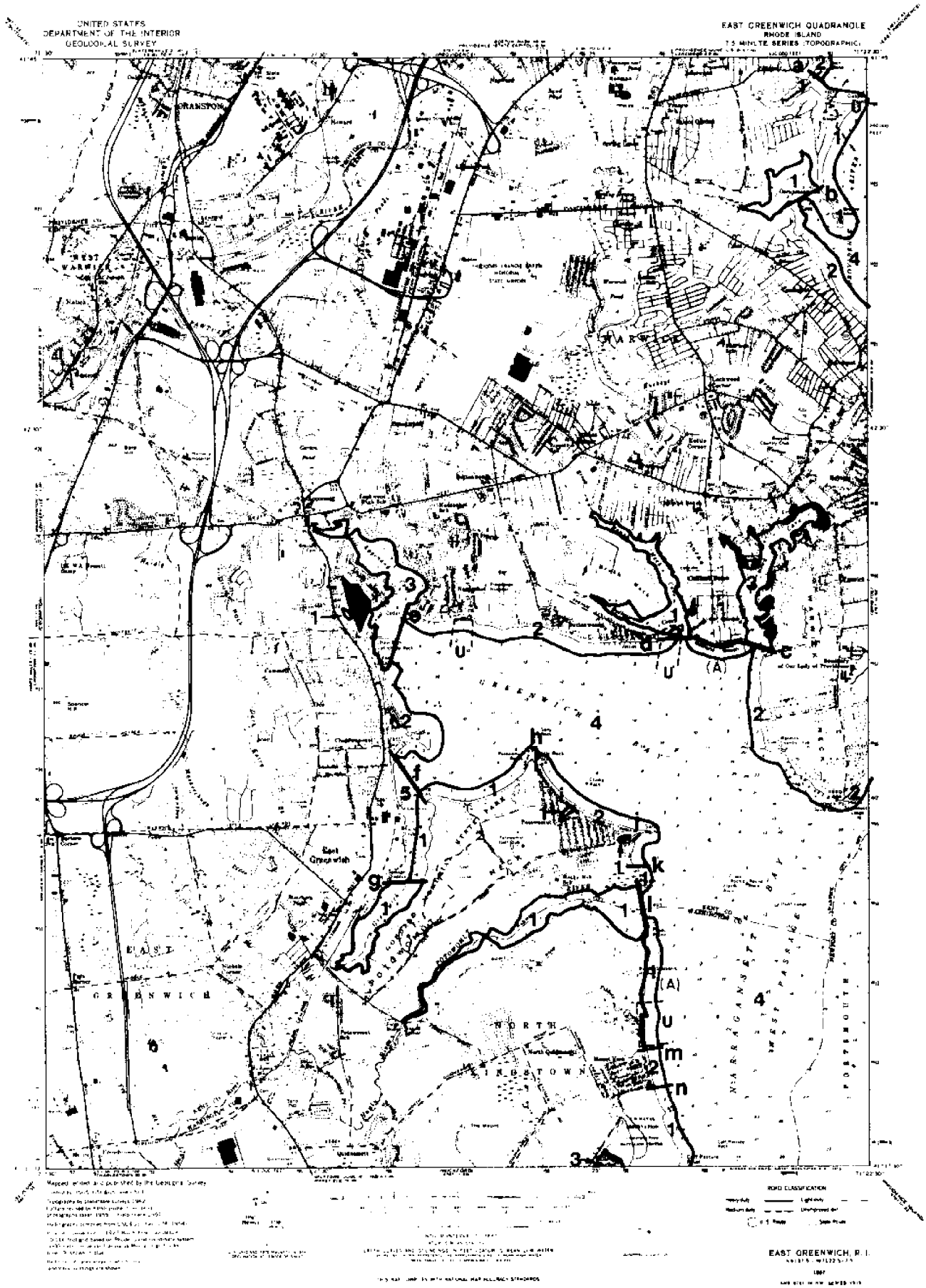
j A straight line across the creek entrance south of Sandy Point.

k A straight line from the end of Bradford Avenue.

l A straight line from the southeast tip of Marsh Point to the tip of Pojac Point.

m A straight line from the northern end of Narragansett Street.

n A straight line from the northern boundary of Navy property.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
EAST GREENWICH QUADRANGLE
RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
EAST GREENWICH, R.I.

Providence Quadrangle

a The base of the falls at the city of Pawtucket.

b A straight line running generally WNW from the Union Oil property boundary south of Bold Point in East Providence to the westerly boundary of India Point Park in Providence.

c The western edge of the former railroad causeway.

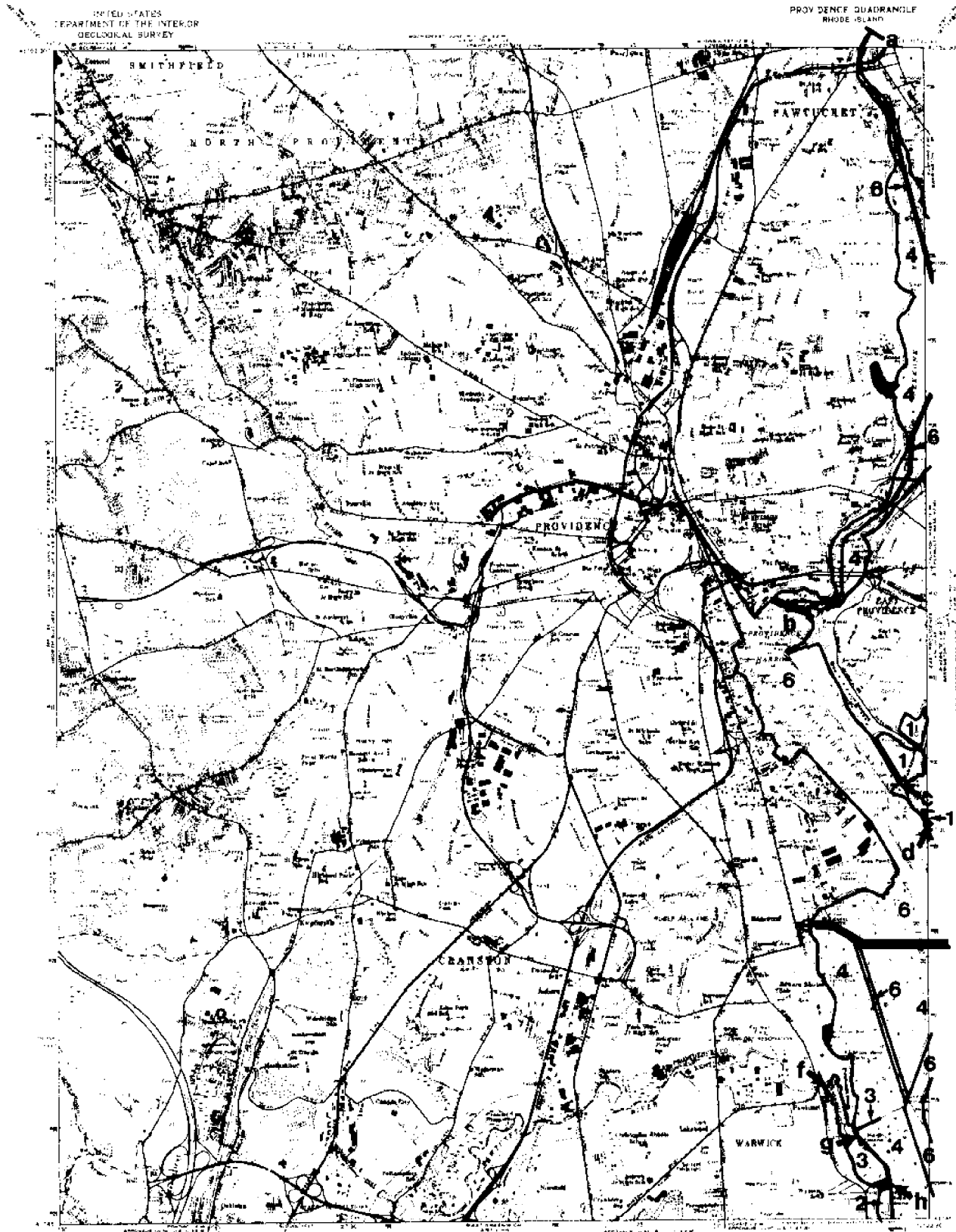
d The western edge of the former railroad causeway.

e From the southern side of the Port Edgewood breakwater, thence easterly to the dolphin on the east side of dredged access channel to Fields Point, thence southeast to the southern boundary of the Mobil Oil Company property in East Providence.

f The base of the falls at the Pawtuxet River.

g A straight line running northwesterly from the easterly side of the Pawtuxet Cove breakwater to the tip of Pawtuxet Neck.

h The northern side of the rubble-mound connector running easterly from the northeast tip of Salter Grove to the Pawtuxet Cove breakwater.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
PROVIDENCE QUADRANGLE
RHODE ISLAND
SMITHFIELD
NORTH PROVIDENCE
PAWTUCKET
PROVIDENCE
EAST PROVIDENCE
CRANSTON
WARWICK
PROVIDENCE, R. I.

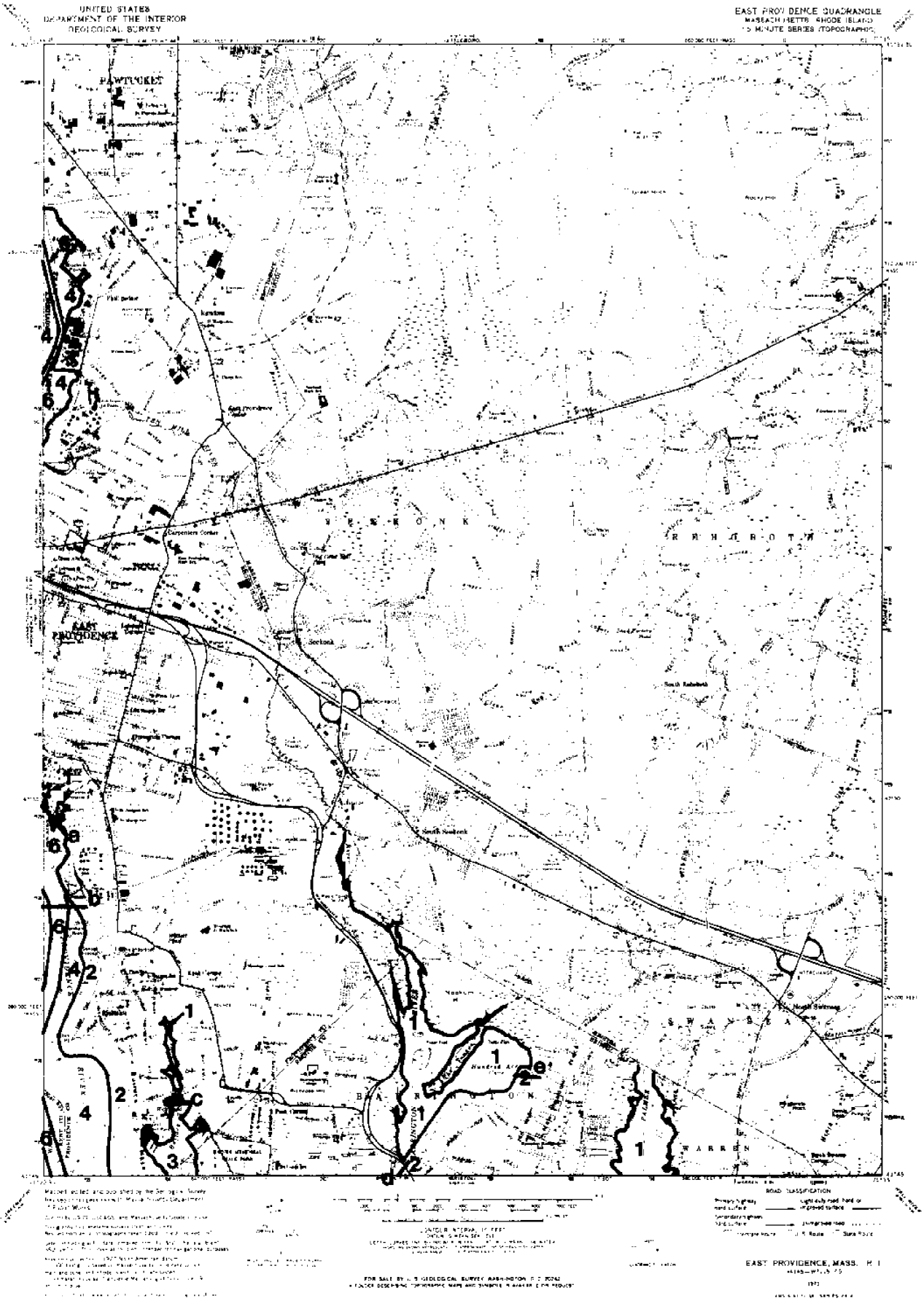
East Providence Quadrangle

a The western edge of the former railroad causeway.

b A straight line running generally westerly from the southern end of the Mobil Oil Company property to the dolphin on the east side of the dredged access channel to Fields Point, thence to the south side of the Port Edgewood breakwater in Providence.

c The northern side of the culverts and breachways under Crescent View Avenue.

d The tip of the small peninsula at the southern side of Walker Farm, Barrington.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
EAST PROVIDENCE QUADRANGLE
MASSACHUSETTS-RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
PAWTUCKET
EAST PROVIDENCE
SEEKONK
REHOBOTH
SWANSEA
BARRINGTON
WARREN
ROAD CLASSIFICATION
CONTOUR INTERVAL 10 FEET
EAST PROVIDENCE, MASS.-R.I.
1970

Bristol Quadrangle

a A straight line along the southern bulkhead wall of Lavin's Marina, then straight across the channel to where it connects to land on the opposite shore.

b A line from the southeastern end of Blanding Avenue, running generally southeasterly across the channel to where it meets the end of Willow Way.

c A line along the edge of a salt marsh at the end of Appian Way.

d The outlet of a small pond and stream south of Beach Road.

e The northwestern border of the salt marsh.

f A straight line extension of Adam's Point Road.

g A straight line extension of the south side of Ferry Lane.

h Along the southern side of the old railroad causeway.

i Along the westerly side of the Barrington River at the tidal creek entrance.

j A straight line from the north side of the end of Stanley Avenue running due easterly to a point of land on the opposite shore.

k Along the pipeline crossing of Belcher Cove.

l Along the southern side of the old railway causeway.

m A straight line extension of the south side of Company Street.

n At the southern end of the industrially zoned area.

o At the outlet of a small stream south of Locust Street.

p At the Bristol/Warren town line.

q Along the inside of the new bridge.

r A straight line from the boundary between RM20 and RM40 zones on Popasquash Neck to the boundary between the industrial and commercial zones on the Bristol waterfront.

s The northern side of the bridge or culvert to Mill Pond.

t The eastern side of the bridge over Silver Creek.

u A straight line extension of Fairview Avenue.

v The eastern side of the Mount Hope Bridge.

w The eastern side of the pier at Weyerhauser Lumber.

x A straight line extending easterly from a point 50 feet north of the edge of the adjacent marsh.

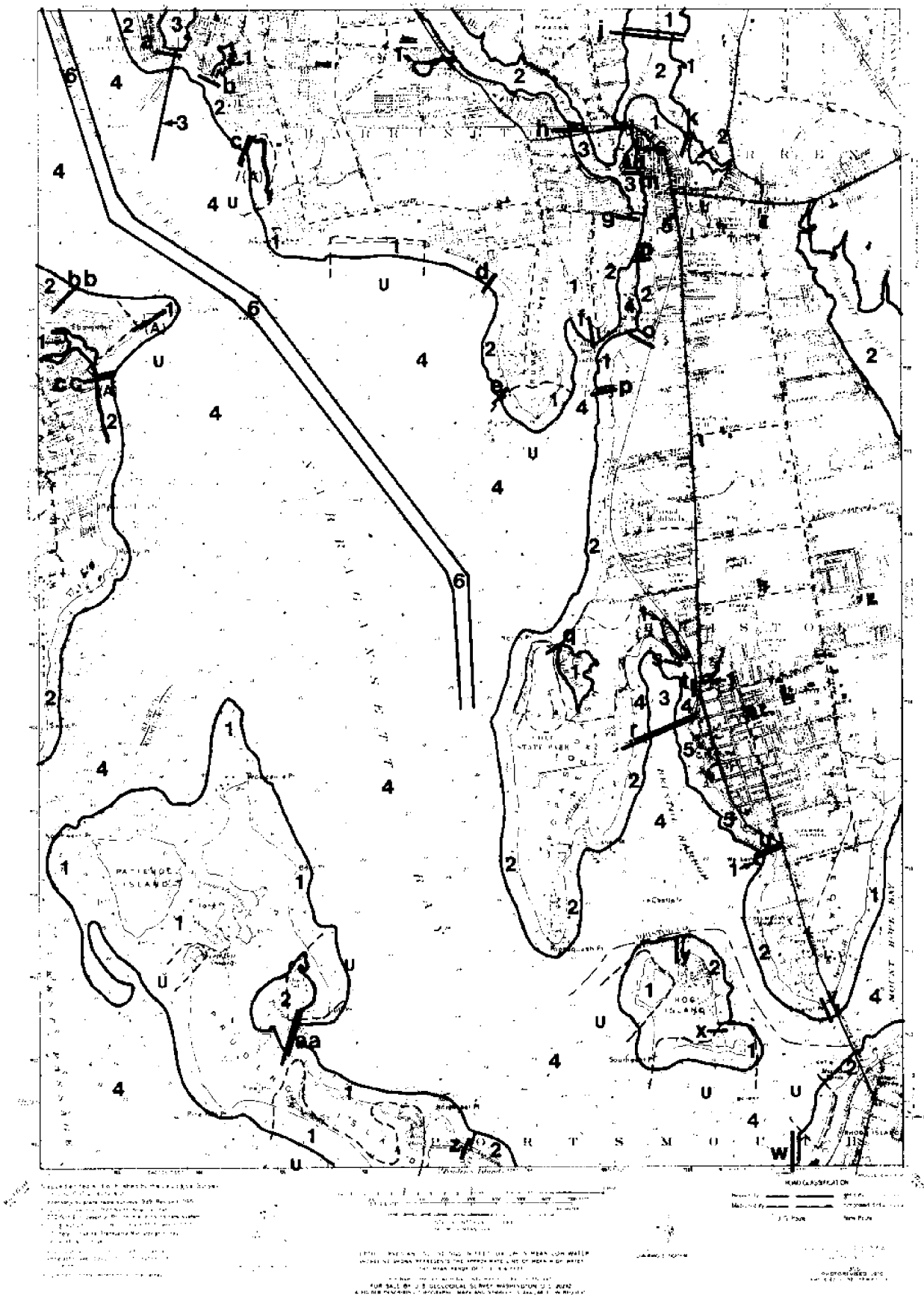
y A line extending northerly from the northern tip of Hog Island.

z The outlet of Mill Creek.

aa A straight line from the tip of Gull Point running generally south-southwesterly, to the boundary between state and private lands on Prudence Neck. (The water use classification boundary around the north end of Prudence Island and Patience Island follows the 18-foot bathymetric contour line. This is consistent with the boundary of the area protected by provisions of the federal Estuarine Sanctuary Program.)

bb A straight line extension of Talcott Street.

cc A straight line extension of River View Street.


PATTERSON ISLAND
HOG ISLAND
ROAD CLASSIFICATION

Prudence Island Quadrangle

a A line perpendicular to the shore from the southern side of the rocky extension north of Prudence Park.

b A line from the outlet of a small, westerly flowing stream south of Prudence Park and north of Crow's Swamp.

c A straight line extension of the boundary between public state park lands and privately owned lands.

d A line connecting the westernmost points of land bordering the entrance into the Bend Boat Basin.

e A line connecting to the southernmost border of D, above, and extending westerly 50 feet from shore; thence generally southerly, maintaining a 50-foot distance from shore and the outer perimeter of the wharves and piers of the Melville industrial facility; thence easterly to connect land at a point 50 feet south of the southernmost pier.

f The northern border of the rubble-mound breakwater.

g A line extending out to meet the tip of the rubble-mound breakwater from the northernmost tip of Coddington Point.

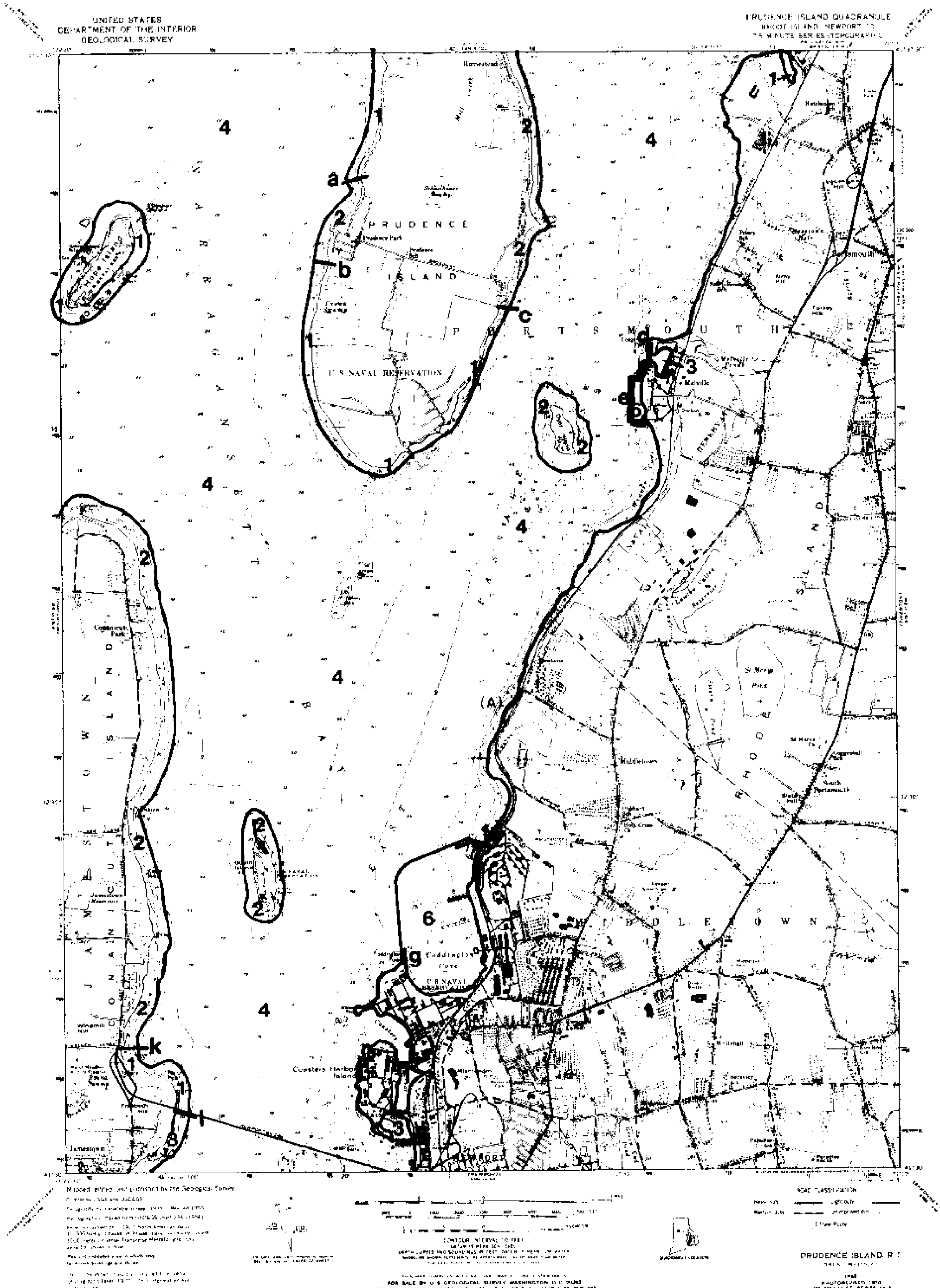
h A line bordering the southernmost side of the northern bridge connecting Coaster's Harbor Island to Aquidneck Island.

i A line bordering the northern side of the bridge on Training Station Road which connects Coaster's Harbor Island to Aquidneck Island.

j A straight line extending from the southern tip of Coaster's Harbor Island to a point where it meets with a straight line extension of an unnamed road.

k A straight line extension from the southern side of Weeden Lane.

l A line bordering the southern side of the Newport Bridge.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
PRUDENCE ISLAND QUADRANGLE
PRUDENCE ISLAND
U.S. NAVAL RESERVATION
PORTSMOUTH
MIDDLETOWN
Melville
Middletown
Coddington Cove
Coasters Harbor Island
Jamestown
a
b
c
d
e
g
k
(A)
1
2
3
4
6
CONTOUR INTERVAL 10 FEET
FOR SALE BY U.S. GEOLOGICAL SURVEY WASHINGTON D.C. 20242
PRUDENCE ISLAND, R.I.

Fall River Quadrangle

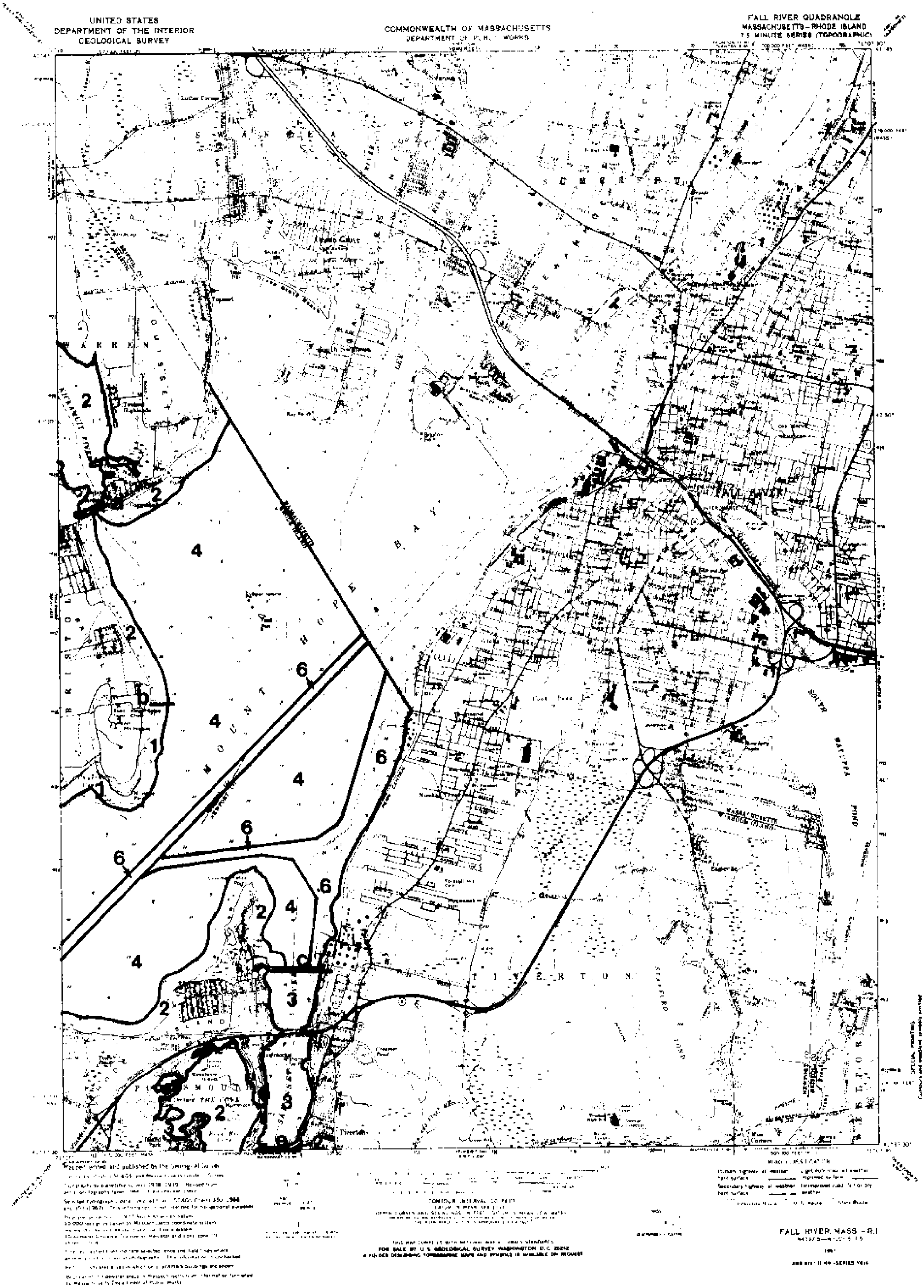
a A straight line from the tip of the peninsula at end of Narrows Road in Bristol to the tip of the peninsula near the end of Brownell Street in Warren.

b A straight line extension along the south side of the large pier south of the Haffenreffer Museum.

c A straight line from the southern border of the industrially zoned area in Tiverton to the tip of the peninsula on the north side of Brewer's Marina in Portsmouth.

d A straight line along the west side of the bridge connecting Point Road and Hummock Avenue at the entrance to Blue Bill Cove.

e A straight line connecting the north sides of the abutments of the former Old Stone Bridge.



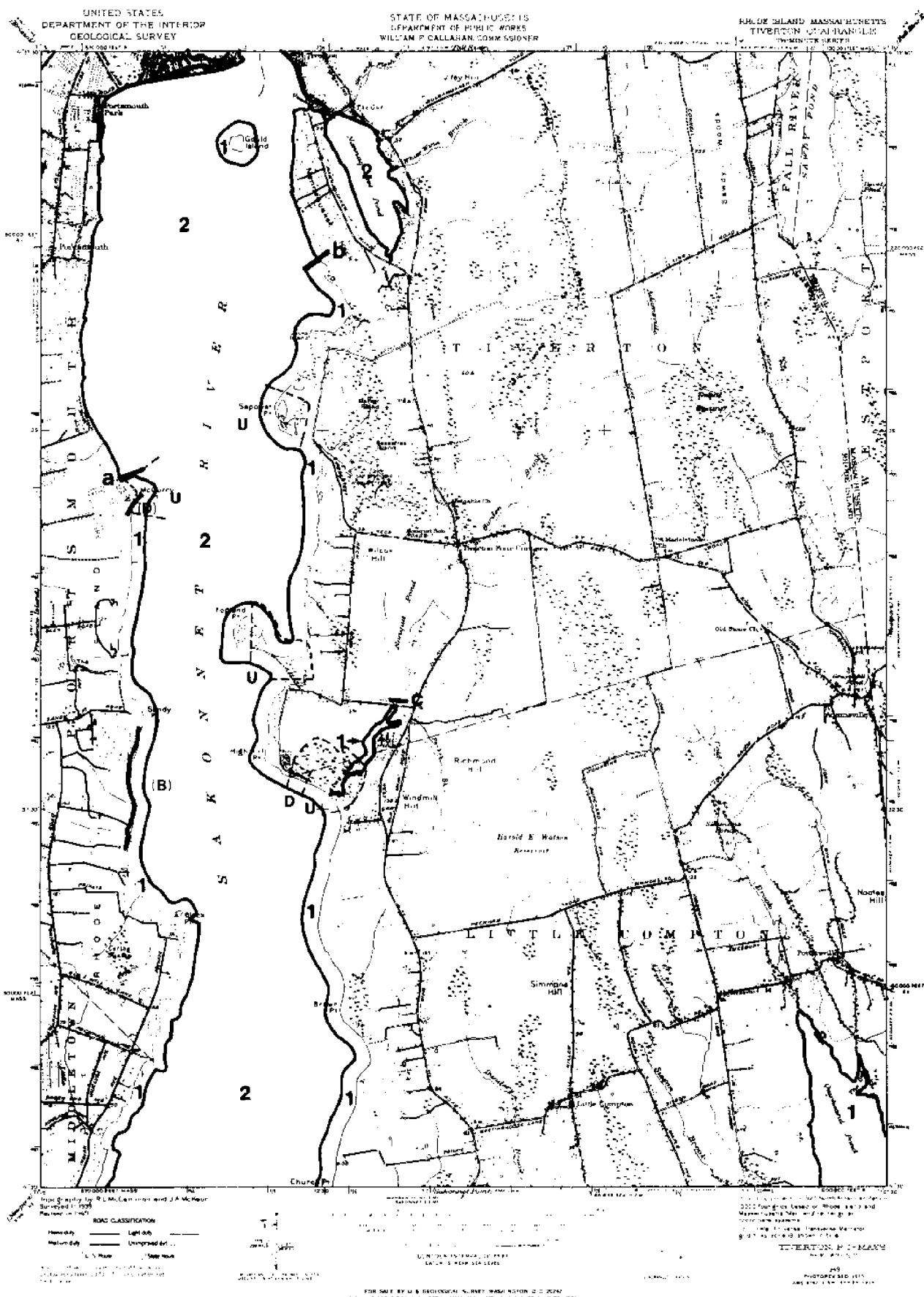
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
FALL RIVER QUADRANGLE
MASSACHUSETTS–RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
S W A N S E A
S O M E R S E T
W A R R E N
FALL RIVER
M O U N T H O P E B A Y
SOUTH WATUPPA POND
T I V E R T O N
1
2
3
4
5
6
b
c
CONTOUR INTERVAL 10 FEET
FALL RIVER, MASS.–R.I.

Tiverton Quadrangle

a A straight line extension of Robin Road.

b A straight line extension of the south side of Island View Road.

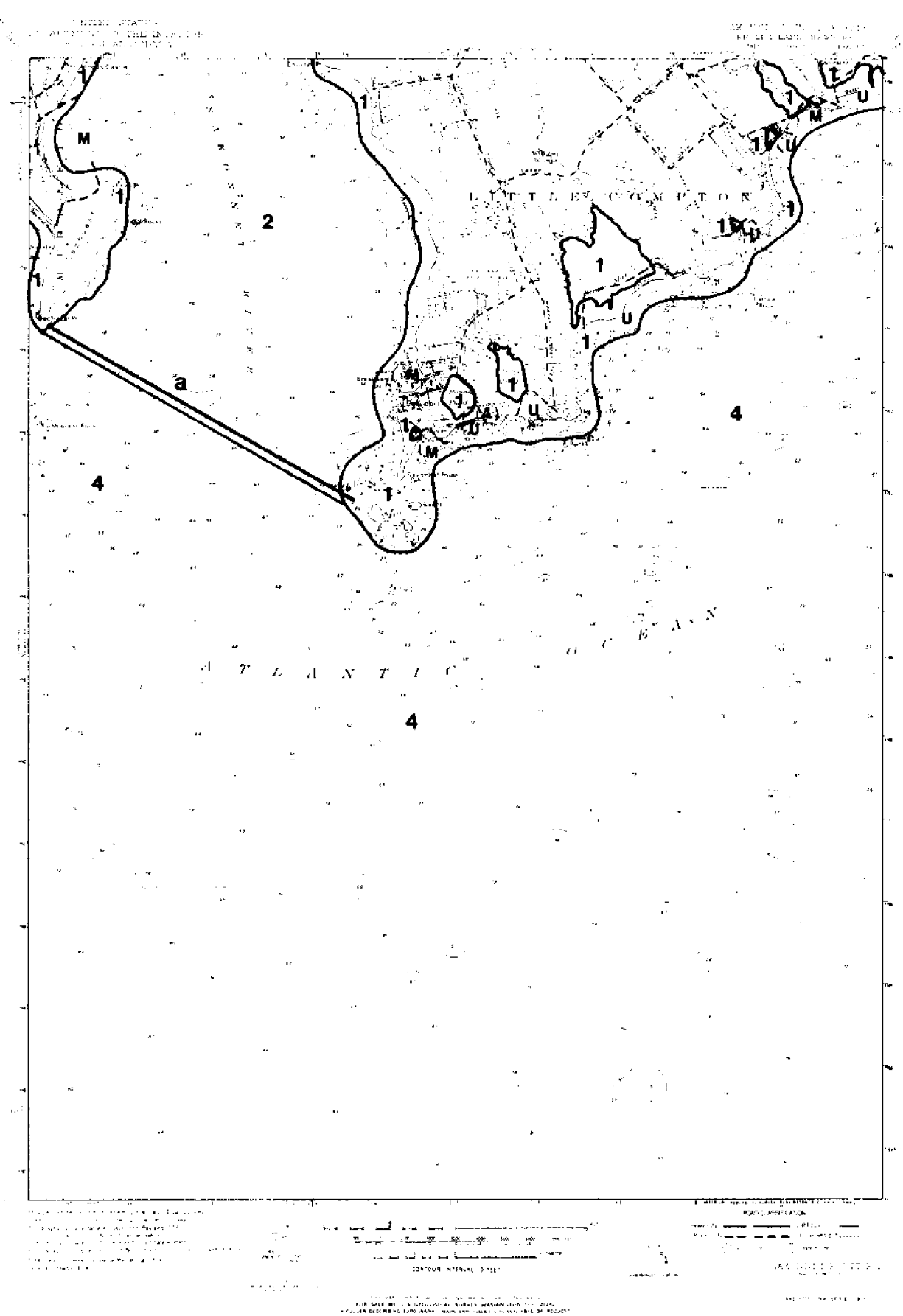
c A straight line at the north side of the Nonquit Pond Dam.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WILLIAM P. CALLAHAN, COMMISSIONER
RHODE ISLAND MASSACHUSETTS
TIVERTON QUADRANGLE
SAKONNET RIVER
MOUNT HOPE BAY
TIVERTON
LITTLE COMPTON
PALL RIVER
Portsmouth
Gould Island
Sapowet Point
Wilcox Hill
Richmond Hill
Windmill Hill
Harold E. Watson Reservoir
Nannes Hill
Simmons Hill
Church
ROAD CLASSIFICATION
Heavy duty
Medium duty
Light duty
Unimproved dirt
U.S. Route
State Route
TIVERTON, R.I.-MASS.

Sakonnet Point Quadrangle

a A straight line across the entrance to the Sakonnet River from the tip of Sachuest Point to the southern tip of West Island near Sakonnet Point.

NOTE: Water use categories for Sakonnet Harbor were not designated on June 28, 1983.


LITTLEHAMPTON
ATLANTIC
OCEAN
1
2
4
M
U
a

Newport Quadrangle

a A line along the southern side of the Newport Bridge.

b A line along the northern side of the causeway to Goat Island.

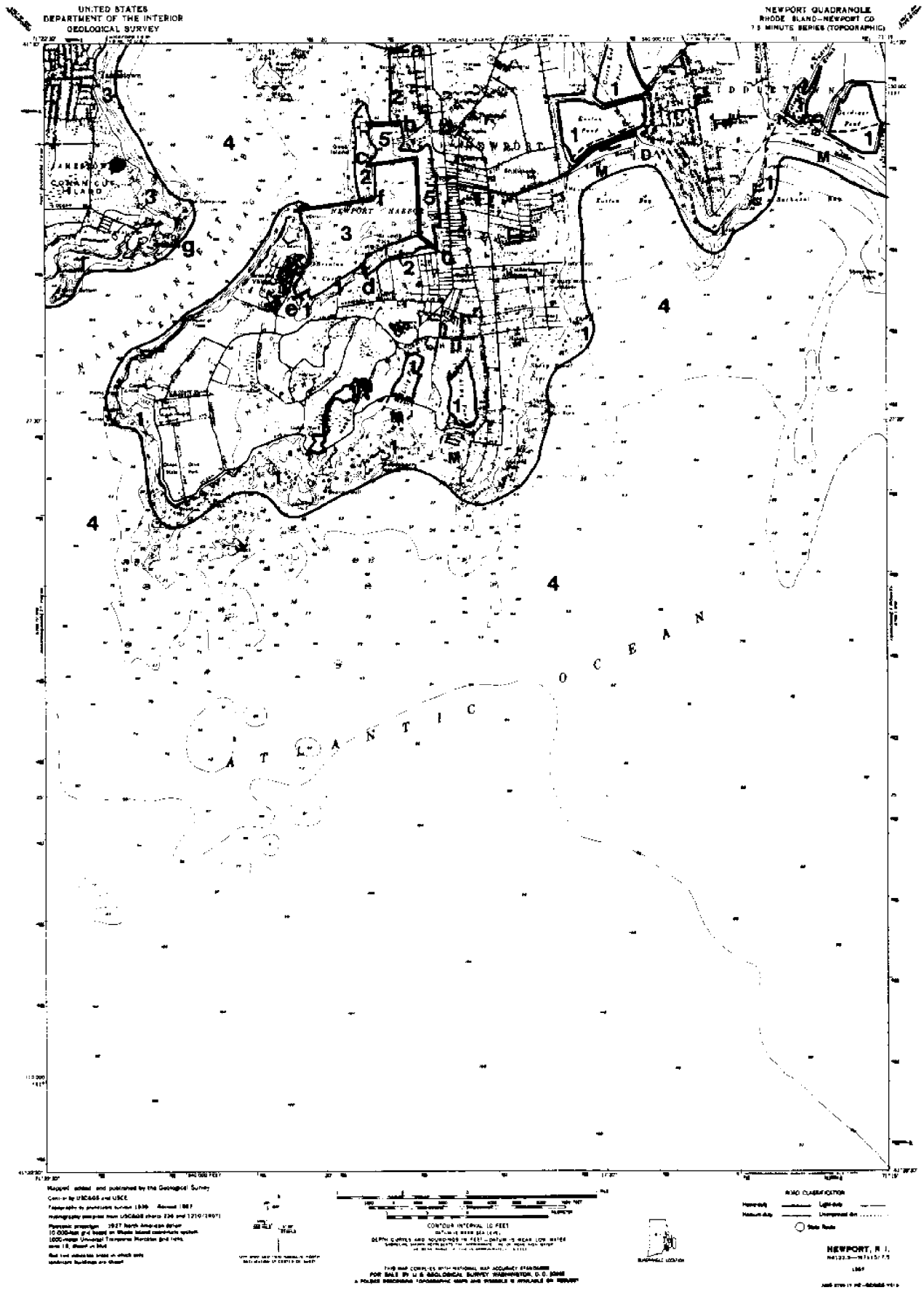
c A straight line commencing in the southeast corner of Newport Harbor, running generally northwesterly through the so-called "Spindle marker," to the point where it meets the edge of the federally established and maintained anchorage area, then generally northerly along the eastern side of the anchorage area, thence westerly to the southern boundary of the Port of Call Marina on Goat Island.

d A straight line extension from shore along the western side of the pier.

e A straight line extension from shore along the southern side of the state-owned boat launching ramp.

f A straight line extension from the northeastern tip of the Fort Adams anchorage basin easterly to the southern light on Goat Island.

g A straight line from shore along the southern side of the docking area at Fort Cove.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
NEWPORT QUADRANGLE
RHODE ISLAND—NEWPORT CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Jamestown
NARRAGANSETT BAY
NEWPORT HARBOR
ATLANTIC OCEAN
NEWPORT, R.I.

Block Island Quadrangle

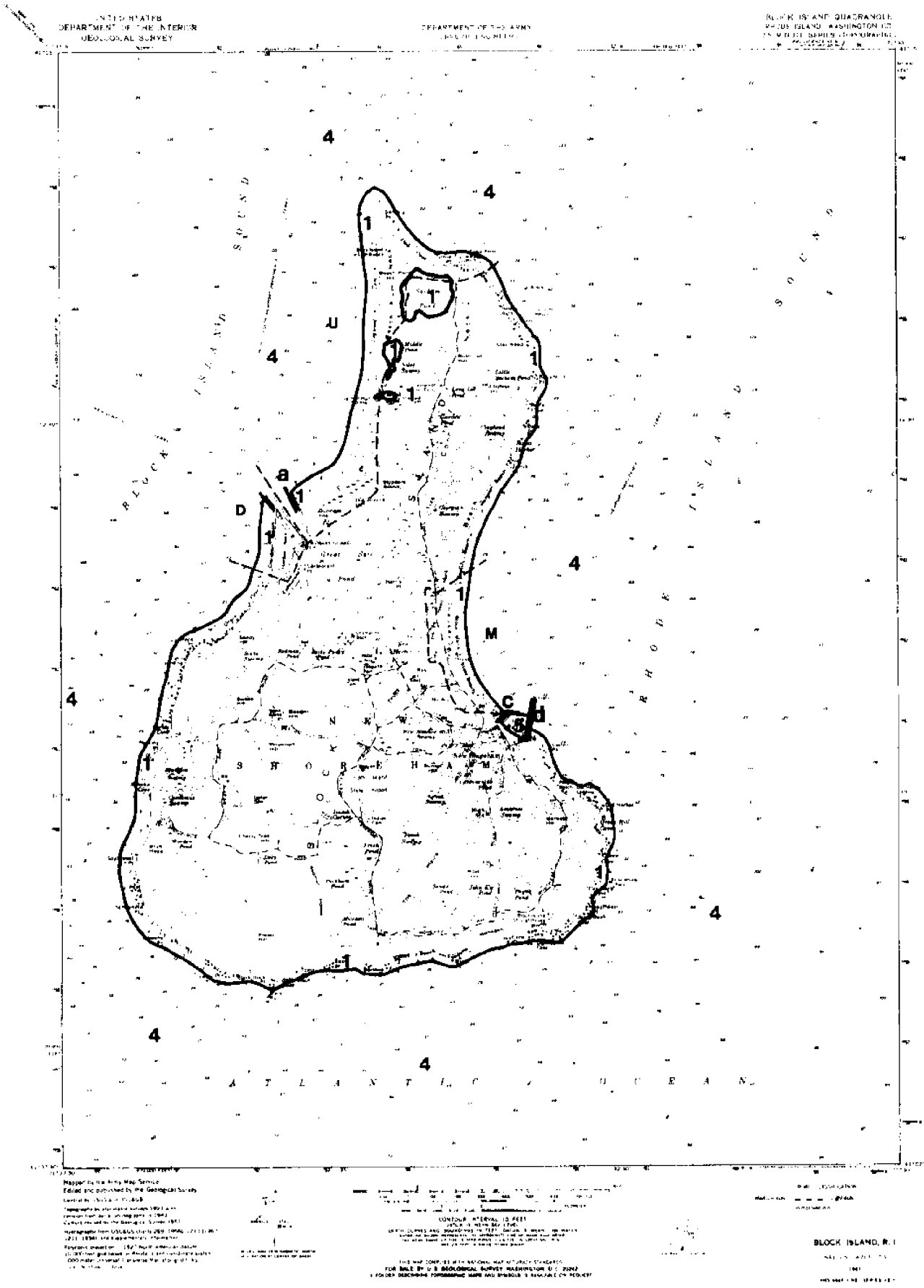
a Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Great Salt Pond.

b See note below.

c A line along the outside of the west breakwater.

d A line along the outside of the east breakwater.

NOTE: Water use categories for the Block Island salt ponds were not designated on June 28, 1983.


BLOCK ISLAND QUADRANGLE
RHODE ISLAND—WASHINGTON CO.
BLOCK ISLAND, R.I.
ATLANTIC OCEAN