## The Greenwich Bay Special Area Management Plan: A Partnership to Protect and Restore a Vital Coastal Resource in Rhode Island

Coastal Features

The CRMC's continuing mission to preserve, protect, and restore Rhode Island's priceless coastal resources is currently focused on Greenwich Bay, a shallow embayment that marks the western-most reach of Narragansett Bay. This focus is in the form of a Special Area Management Plan (SAMP), which will be implemented through the collective efforts of a dedicated partnership including government agencies, academic interests, non-governmental organizations, and others. This special edition of Coastal Features outlines the Greenwich Bay SAMP's framework for management and highlights the goal of resource protection and restoration.

#### I. Framework for Management: Authorities and Regulations Federal and State Mandates for Special Area Management Planning

The CRMC has direct authority over Greenwich Bay, its shoreline and associated coastal resources. The SAMP as developed and managed by the CRMC is specified and detailed in the CZMA (16 U.S.C. §1451) Section 309 Enhancement Grants Program. The CRMC is authorized by Rhode Island General Law 46-23-15 to administer land and water uses to fulfill responsibilities mandated by the federal Coastal Zone Management Act, as amended. In partnership with RIDEM, the CRMC is responsible for developing and implementing the Rhode Island Coastal Nonpoint Pollution Control Program under § 6217 of the Coastal Zone Reauthorization Amendments (CZARA) of 1990. The state legislative mandate for coastal resource management and preservation is guided by the following principles:

"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 these 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" (G.L.R.I. 46-23-1). C R M C

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This Special Issue of **Coastal Features reports** on the Greenwich Bay Special Area Management Plan which is being developed through a communitybased partnership of government, academic interests, non-governmental organizations, and the citizens whose daily lives and activities both effect, and are effected by, Greenwich Bay. The Greenwich Bay SAMP is underway. A major management initiative of the Coastal Resources Management Council, the Greenwich Bay SAMP represents a watershed approach to protecting and restoring the bay's water quality and habitats which support important shellfish and other natural resources

The SAMP utilizes an ecosystem-based examination of the resources, their use

and impacts of their use, the evident problems, and the existing institutional network managing the watershed. The SAMP policies and regulations are designed specifically to insure the preservation of the vital elements of the ecosystem, to guide future development within the limitations of the land, and to resolve existing problems. The CRMC has the authority to require that allocations of land use consider impacts on the ecosystem and its services including the affects on surface and groundwater resources, wetlands, coastal features, and other sensitive and fragile natural resources.

#### Federal Mandate for Special Area Management Planning

The federal mandate for ecosystem-based planning and management of coastal resources by the use of Special Area Management Plans is the Coastal Zone Management Act (U.S.C. § 1452) under Section 303(K)(3). In creating this mandate, the United States Congress declared that it is the nation's policy:

"To encourage the preparation of special area management plans which provide for increased specificity in protecting significant natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas likely to be affected by land subsidence, sea level rise or fluctuating water levels of the Great Lakes, and improved predictability in governmental decision making" (16 U.S.C. § 1452).

The federal government encourages the preparation of SAMPs because these serve as a management framework that protects natural resources, improves protection of life and property (especially in hazardous areas), and improves the predictability of government decision making.

#### Federal Consistency

The CRMC also has authority over the entire watershed for various federal and federally licensed or supported activities through the federal consistency process. This process is executed according to the provisions set forth in the RICRMP, Section 400, and the most recent version of the CRMC's Federal Consistency Manual.

#### II. Management Efforts in the Watershed Coastal Resources Management Council

The CRMC has direct and comprehensive authority over Greenwich Bay, its

shoreline and associated coastal resources. The CRMC also has comprehensive authority over the entire watershed through the federal consistency process of the CZMA. Through implementation of the SAMP, the CRMC has attempted to network with other regulatory authorities, including state and municipal bodies, to take a comprehensive and unified approach to management of the watersheds. The challenge is for the various regulating bodies

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#### **Rhode Island Department of Environmental Management**

The Rhode Island Department of Environmental Management has authority within the Greenwich Bay region in regards to water quality for human health, shellfish monitoring, and other fisheries. The RIDEM is responsible for water quality as mandated in the federal Clean Water Act (CWA) Section 303(d). The forthcoming responsibilities under the CWA 303(d) include:

- 1) The establishment of water quality standards (WQS) for the state;
- 2) Monitor these WQS for the states' waters;
- 3) Identify and list impaired waters to be included in the 303(d) list

- 4) For all impaired waters, set a priority ranking;
- 5) Determine Total Maximum Daily Loads (TMDLs) that will establish acceptable pollutant loads from both point and non-point pollution sources that will then meet the WQS for each listed waterbody and each reason for impairment;
- 6) Submit the prepared 303(d) list to the US Environmental Protection Agency for approval; and,
- 7) Incorporate the determined TMDLs into the state's planning process.

Under Section 305(b) of the CWA, states are required to survey their waters for attainment of the fishable/swimmable goals of the Act. These data will be reported in the biennial "State of the States' Waters Report", also known as the 305(b) Report. Five designated uses are evaluated: aquatic life, drinking water supply, shellfishing, fish consumption, and swimming. How well the waters support their designated use determines how well the waterbody meets the goals of the CWA.

RI DEM is mandated by the National Shellfish Sanitation Program (NSSP) and Title 20 (G.L.R.I. 20-8.1) of the Rhode Island General Laws to monitor shellfish grounds. In order to meet the NSSP standards, Rhode Island is required to conduct continuous bacteriological monitoring of shellfish harboring waters to maintain certification of these waters for shellfishing for human consumption. Title 20 of the RI General Laws entitled "Shellfish Grounds" empowers the director, as designated by DEM, to "investigate the sanitary condition of the waters overlying shellfish grounds" and to declare "those waters that are found to be in an unsatisfactory sanitary condition for the taking of shellfish for human consumption...to be polluted areas." Additional responsibilities mandated by the National Shellfish Sanitation Program are to conduct shoreline surveys for the determination of non-point and point source pollutant levels that may contribute to unsanitary conditions for shellfishing.

#### Municipalities

The Rhode Island Comprehensive Planning and Land Use Act of 1988 (Land Use Act) (G.L.R.I. 45-22.2) and the Rhode Island Land Development and Subdivision Review Enabling Act of 1992 (Development Review Act) (G.L.R.I. 45-23) address the recognized need for a comprehensive and coordinated land use and development plan. The Rhode Island Department of Administration and the Division of Planning implement the comprehensive planning program. Combined with the Land Use Act and the Development Review Act, the program is a single integrated approach to state oversight of local land use for residence, business, industry, municipal facilities, public and private recreation, major institutional facilities, mixed uses, open space, and natural and fragile areas. Optimum intensities and standards of development must be established for each use classification and location and will be based upon current development, natural land characteristics, and projected municipal, regional and state services and facilities. Allocations of land use must consider impacts on surface and groundwater resources, wetlands, coastal features, and other sensitive and fragile natural resources. Under the Development Review Act, the framework for review of development applications will provide for more up-front review input by state agencies to be afforded to the towns before they make their series of reviews. This significantly improves the coordination of the numerous regulatory agencies involved and parallels the joint cooperative review as envisioned for the SAMP.

The framework for review as required by the Development Review Act revolves around the town designating and Administrative Officer to administer the Act and coordinate all joint reviews of development applications. The towns have three levels of review: master plan, preliminary plan, and final plan. This municipal review process enables applicants or municipalities to request a preliminary application meeting with all applicable boards, commissions, and where appropriate, state agencies, for information on standards, regulatory process, etc. At the master plan level, the town will bring local, state, and federal agency comments together, and provide a general public informational forum prior to any planning board action. Before the preliminary plan level, all state approvals required prior to construction must be in place (including CRMC, RIDEM, Wetlands, ISDS, etc.), and a formal public hearing must be held. The town will then move on to the final plan approval, where local regulatory require-

ments and any mitigation through public improvements are made final.

The development and implementation of Harbor Management Plans (HMP's) by each municipality is an important tool for managing the waterbodies and conflicting uses.

In addition to local zoning ordinances, the municipalities can implement other land use management controls and request technical assistance under the following programs and legislation:

- 1) 1990 R.I. Erosion and Sediment Control Act (G.L.R.I. 45-46) enables municipalities to adopt erosion and sediment control ordinances;
- 2) R.I. Septic System Maintenance Act of 1987 (G.L.R.I. 45-24.5) enables municipalities to adopt wastewater management districts;
- 3) Farm, Forest and Open Space Act (G.L.R.I. 44-27) enables municipal tax assessors to assess lands according to current use rather than highest and best use. Landowners apply for the re duced assessments. Farmland must be designated by the RIDEM; Division of Agriculture and forestland must be designated by RIDEM, Division of Forest Environment. Requirements include a minimum of five acres and application for a conservation plan for farmland, and ten acres and a management plan for the forestland;
- 4) Conservation Districts provide technical assistance to municipal officials and landowners. For example, the three conservation districts in Rhode Island have expended great effort in getting municipalities to develop and implement soil erosion and sediment control ordinances;
- 5) Cooperative Extension (URI) this program concentrates on providing technical assistance to landowners and municipal officials on various non-point pollution control issues;
- 6) Sea Grant (URI) this program concentrates on providing technical assistance to landowners and municipal officials on various non-point pollution control issues;
- 7) US Geological Survey Water Quality Initiative and Natural Resources Conservation Service combined efforts – these programs cooperate to address non-point sources of pollution as in the Pawcatuck River Hydrologic Unit Area and the Narragansett Bay Project; and,
- 8) R.I. Sustainable Agriculture Committee this committee formed in 1990 to provide information about practices that are being used or researched in R.I. that reduce pollution, conserve natural resources, and sustain productivity.

### **RI** Watershed Approach

The Rhode Island Rivers Council is authorized and established within the Rhode Island department of administration and division of planning pursuant to Rhode Island General Laws 46-28 (G.L.R.I. 46-28-4). This body is set forth with the purpose of "coordinating, overseeing, and reviewing efforts to improve and preserve the quality of rivers and to develop plans to increase the utilization of river areas throughout the state" (G.L.R.I. 46-28-4). It is recognized that many of the rivers of Rhode Island and areas of adjacent land "possess outstanding aesthetic and recreational value of present and potential benefit to the citizens of this state" (G.L.R.I. 46-28-2). Preservation and protection of these resources and values is declared to be public policy. The following will attain this end:

- 1) Preserve open space, natural resources and features, and scenic landscapes;
- 2) Preserve cultural and historic landscapes and features;
- 3) Preserve opportunities for recreational use of rivers;
- 4) Encourage the establishment of greenways, which link open spaces together;
- 5) Establish a rivers policy consistent with the Rhode Island Comprehensive Planning and Land Use Regulation Act, chapter 22.2 of title 45 as set forth in § 45-22.2-3 (c); and,
- 6) Continue the regional and comprehensive planning activities for rivers, water quality, and land use

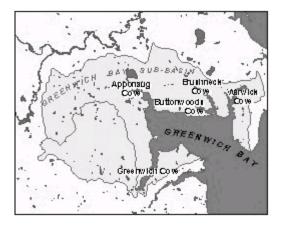
conducted by the Rhode Island Department of Environmental Management and the Rhode Island Department of Administration (G.L.R.I. 46-28-2).

The Rhode Island Rivers Council will have the power to prepare and recommend a plan for the classification of all rivers in the state for adoption by the state planning council as a part of the state guide plan. The Rivers Council will adopt the CRMC's water type classifications for the tidal portions of rivers. In addition, the classification plan shall be consistent with current water quality classification adopted by the department of environmental management. This will include a minimum of three classes of rivers, including:

- 1) Pristine rivers—those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and water relatively unpolluted;
- 2) Recreational rivers—those rivers or sections of rivers that are readily accessible, that may have some development along their shorelines and may have undergone some impoundment or diver sion in the past. These shall include sections of rivers along mill villages, but shall not include sections where development may be characterized as urban; and,
- 3) Working rivers—those rivers or sections of rivers that are readily accessible, that have develop ment along their shorelines, that have undergone impoundment or diversion, and where develop ment may be classified as urban (G.L.R.I. 46-28-7).

To facilitate this end, grants may be made available to local watershed councils and public education and involvement in the process will be supported. The rivers council will establish and recognize local watershed councils to implement the rivers policy as adopted. These watershed councils will have powers to make recommendations for the watershed for the preparation or revision by the municipality of its comprehensive land use plan in accordance with the Rhode Island Comprehensive Planning and Land Use Regulation Act. The establishment of community coordinated river watch programs will facilitate the protection of these waters and the watershed (G.L.R.I. 46-28-8).

The establishment of the Rivers Council and subsequent local watershed councils promotes and institutionalizes the watershed approach to ecosystem management as mandated by the SAMP.



Map showing Greenwich Bay watershed (shaded portion of land) and its arm-like coves where increasing multiple uses of the various embayments and their adjacent coastal lands have continued to stress the bay's sensitive and rich ecosystems.



COASTAL RESOURCES MANAGEMENT COUNCIL

# The Greenwich Bay SAMP: A Watershed Approach

Greenwich Bay provides vital shellfish habitat, shoreline access, boating opportunities, scenic views, and historic significance. Pollution from stormwater runoff, failing septic systems, and overdevelopment threatens the water quality needed to support these uses. Residents, marinas, yacht clubs, shellfishing operations, restaurants, and other commercial enterprises depend on a healthy Greenwich Bay, so all are invited to take part in a plan to restore the bay to well-being.

The Rhode Island Coastal Resources Management Council is coordinating with Warwick, East Greenwich, government agencies, and Rhode Island Sea Grant/Coastal Resources Center to prepare the Greenwich Bay SAMP. The SAMP is being developed through government cooperation and community participation. It will be adopted into state and local law, and recommend policies and actions that government can undertake to protect a complex natural resource that is part of a larger watershed ecosystem. The SAMP will describe the present status of the bay, characterize its watershed, identify sources of pollution, and recommend steps to help government work with communities to restore, protect, and balance uses of Greenwich Bay for this and future generations.

The Greenwich Bay SAMP will work to:

- \* Identify and reduce pollution sources
- \* Protect and restore critical wildlife habitats
- \* Create policy for sustainable use of watershed resources
- \* Help communities work with CRMC
- \* Improve review of development proposals
- \* Balance uses of Greenwich Bay

The SAMP can improve Greenwich Bay's water quality through:

- \* Assessment of waste systems in the watershed, emphasizing coastal areas
- \* Guidelines for controlling stormwater runoff, erosion, and sedimentation
- \* Coordinating water quality improvement efforts in Warwick and East Greenwich
- \* Improving marina pumpout facilities
- \* Working with marinas to adopt clean marina standards
- \* Mandating sewer hookups or alternative septic systems

SAMP strategies for improving Greenwich Bay's habitat management include:

- \* Recommending buffer zones to protect critical wetland and estuarine areas
- \* Encouraging best land-use practices
- \* Developing public education programs
- \* Recommending shellfish protection districts
- \* Connecting dredging needs to habitat restoration

The SAMP approach to hazard and flood protection includes:

- \* Risk assessment and mitigation strategies
- \* Coordination of post-storm restoration plans
- \* Coordination among local, state, and federal agencies involved with disaster response

The SAMP addresses beach erosion and bottom silting by:

- \* Identifying degraded shorelines and sedimentation areas
- \* Recommending beach restoration strategies
- \* Working with communities on dredging issues and beach nourishment

The SAMP protects cultural and historic resources by:

- \* Identifying priority preservation sites
- \* Engaging historic and cultural organizations in watershed protection efforts
- \* Assisting natural disaster plans for historic and cultural resources

SAMP economic strategies

- \* Promote best management and environmental practices for marine dependent tourism
- \* Foster business support for bay research
- \* Promote updating and enforcing municipal development regulations
- \* Guide public investment in marine businesses

The Greenwich Bay SAMP is being developed in partnership with: **Rhode Island Department of Environmental Management Rhode Department of Health Rhode Island economic Development Corporation Rhode Island Marine Trades Association Rhode Island Shellfishermen's Association** Save The Bay **Natural Resources Conservation Service** 

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One of the many marinas that line the shoresof Greenwich Bay

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