

## **Greenwich Bay SAMP: Summary of Habitat Protection Chapter First Draft – December 17, 2003**

Greenwich Bay and its watershed encompass a remarkably diverse set of habitats, many of which depend and connect to one another. These systems include freshwater ponds, open Bay waters, tributary rivers and streams, wetlands, mud flats, forests, and beaches. The purpose of this chapter is to describe these unique habitats and to suggest policy to protect and restore these important natural resources.

### **Themes covered in this Chapter are:**

- Fish and Wildlife
- Eelgrass
- Wetlands
- Rare and endangered species
- Vegetated Buffers

### **FISH AND WILDLIFE**

#### **Findings:**

- ? Greenwich Bay and its coves are productive and unique habitats for shellfish. Northern quahog represent an especially important commercial and recreational fishery. Greenwich Bay supports dense populations, particularly behind water quality pollution lines within the coves. Other shellfish species include mussels and soft-shell clams.
- ? Finfish species present within Greenwich Bay include alewife, american eel, bay anchovies, black sea bass, bluefish, cunner, fluke, flounder (fourspot, hogchoker, window-pane, & winter), long-finned *loligo* squid, menhaden, mummichugs, oyster toad fish, sea robins, scup, silversides, sticklebacks, striped bass, squeteage, and tautog.
- ? Anadromous fish runs of alewife and herring pass through the Gorton Pond tributary and may be possible in Bleachery Pond.
- ? Apponaug Cove harbors the second largest population of wintering waterfowl in Rhode Island.

#### **Issues:**

- ? Poor water quality, dredging, marina development, and other disturbances can degrade and destroy shellfish and other aquatic habitats.
- ? Anadromous fish runs suffer from obstructions.

#### **Draft Recommendations:**

- ? Implement water quality policies in Chapter 2 to decrease nitrogen and pathogen inputs to Greenwich Bay and its watershed.
- ? Ensure efforts to increase shoreline access do not degrade habitat quality.
- ? Ensure a proportion of shellfish are relocated prior to any dredge project as dictated by the Rhode Island Department of Environmental Management (DEM) Fish and Wildlife Division.
- ? Create sanctuary areas that protect shellfish and other important aquatic species, such as winter flounder.
- ? Restore anadromous fish runs up Greenwich Bay's tributaries.
- ? Provide special consideration for Apponaug Cove as a harbor for wintering waterfowl and access for fish run.
- ? Construct maps of the benthic habitats of Greenwich Bay.
- ? Document shoaling around storm drains.
- ? Conduct research to determine if anoxia is affecting shellfish recruitment.

## Draft Habitat Chapter Summary

### EELGRASS

#### **Findings:**

- ? No eelgrass meadows are currently present in Greenwich Bay.
- ? Historical records indicate that eelgrass was widespread before the wasting disease epidemic of the 1930s.
- ? Recent efforts by RIDEM and Save the Bay to restore this submerged aquatic vegetation have failed.
- ? The failure of eelgrass to re-establish in Greenwich Bay has been linked to high water temperatures, poor water clarity, grazing, and the presence of shading macroalgae.

#### **Issues:**

- ? Eelgrass beds are no longer present in Greenwich Bay and restoration efforts to date have failed.

#### **Draft Recommendations:**

### WETLANDS

#### **Findings:**

- ? Wetlands border Baker's Creek, Mary's Creek, the tributaries to Greenwich Bay, and are scattered along the Greenwich Bay coastline and throughout the watershed.
- ? Tidal and freshwater wetlands may provide valuable services, such as fish and wildlife habitat, water quality protection, and flood and erosion protection.
- ? Wetlands occupy land that is also valuable for homes, businesses, marinas, and other waterfront developments.

#### **Issues:**

- ? Wetland services are lost or diminished when development occurs in wetlands or too close to wetlands.
- ? Sewer extensions may increase the development pressure on small wetland parcels.

#### **Draft Recommendations**

- ? Develop specific and clear policies for Greenwich Bay and its watershed to preserve and maintain coastal wetlands and habitats.
- ? Create an adopt-a-wetland program.
- ? Initiate volunteer monitoring of wetlands.
- ? Establish vegetated buffers around wetlands.
- ? Identify and restore tidal and freshwater wetlands.
- ? Acquire undeveloped lots containing small wetlands through tax reversion or land acquisition program.

## **RARE AND ENDANGERED SPECIES**

### **Findings:**

- ? Rare and endangered species are found at Warwick City Park and Gorton Pond.
- ? Two rare plants, sickle-leaved golden aster (species of concern) and stiff goldenrod (state endangered), have been recorded at Warwick City Park. Warwick City Park contains almost the last remnant of sandplain/pitch pine woodlands that serve as habitat for these species. These upland natural communities once characterized much of central Warwick.
- ? Gorton's Pond is the site of other rare plant species. Gorton Pond is the only site in Rhode Island where awned umbrella sedge, a state endangered species, is currently observed. Other rare species, like tiny-flowered sedge and tall beaked rush, may also be found at Gorton Pond.

### **Issues:**

- ? Rare and endangered species may be threatened by nearby developments and other human disturbances.

### **Draft Recommendations:**

- ? Establish vegetated buffers around documented rare and endangered species habitat.

## **VEGETATED BUFFERS**

### **Findings:**

- ? Vegetated buffers are undeveloped land areas bordering developed areas or agricultural lands. Vegetated buffers can:
  - Remove nutrients, sediments, and other pollutants,
  - Protect shoreline homes and businesses from flooding and erosion,
  - Provide fish and wildlife habitat and link together protected areas, and
  - Provide visual and physical separation and protection between developed areas, and undeveloped areas or historic and archaeological sites.

### **Issues:**

- ? Current vegetated buffer policies are limited by small lot sizes and do not apply to existing developments.

### **Draft Recommendations:**

- ? Identify critical areas for protection with vegetated buffers.
- ? Use special exception policy to ensure buffers around critical areas.
- ? Create land acquisition program to ensure buffers bordering critical areas remain in an undeveloped naturally vegetated state.
- ? Create more flexible policies for non-critical areas.
- ? Create incentive and education programs to establish vegetated buffers on existing development.
- ? Use engineered buffers in developed areas where traditional undisturbed buffers are not feasible.
- ? Amend road setbacks contained in local zoning that may force homes closer to water on small lots.
- ? Extend CRMC jurisdictional boundary over vegetated buffers to entire watershed, approximated by road boundaries.