

Attachment B:

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Beaverdam Creek**
Designated: **March 15, 1987**
Date Revised: **December 15, 2008**
County: **Suffolk**
Town(s): **Brookhaven**
7½' Quadrangle(s): **Bellport, NY**

Assessment Criteria

	Score
Ecosystem Rarity (ER)–the uniqueness of the plant and animal community in the area and the physical, structural, and chemical features supporting this community.	
ER assessment: Relatively undeveloped tidal creek and wetlands, rare in Suffolk County.	9
Species Vulnerability (SV) – the degree of vulnerability throughout its range in New York State of a species residing in the ecosystem or utilizing the ecosystem for its survival. (E = Endangered, T = Threatened, SC = Special concern)	
SV assessment: No endangered, threatened or special concern species reside in the area.	0
Human Use (HU) – the conduct of significant, demonstrable, commercial, recreational, or educational wildlife-related human uses, either consumptive or non-consumptive, in the area or directly dependent upon the area.	
HU assessment: Recreational salmonid fishery of county-level significance.	4
Population Level (PL) – the concentration of a species in the area during its normal, recurring period of occurrence, regardless of the length of that period of occurrence.	
PL assessment: A large stream on Long Island which supports significant concentrations of sea-run brown trout, brook trout, and rainbow trout, of regional significance.	9
Replaceability (R) – ability to replace the area, either on or off site, with an equivalent replacement for the same fish and wildlife and uses of those same fish and wildlife, for the same users of those fish and wildlife.	
R assessment: Irreplaceable.	1.2

Habitat Index = (ER + SV + HU + PL) = 22

Significance = HI x R = 26.4

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

BEVERDAM CREEK

LOCATION AND DESCRIPTION OF HABITAT:

Beaverdam Creek is located approximately one-half mile east of the Village of Bellport, flowing southward into Bellport Bay, in the Town of Brookhaven, Suffolk County (7.5' Quadrangle: Bellport, N.Y.). The fish and wildlife habitat encompasses the tidal portion of Beaverdam Creek, up to the Beaver Dam Road Bridge, including the creek channel and approximately 130 acres of adjoining tidal wetlands. Beaverdam Creek is one of six groundwater fed creeks that contribute to the riverine input of Great South Bay. Beaverdam Creek is also recognized by the U.S. Fish and Wildlife Service as a priority wetland under the federal Emergency Wetlands Resources Act of 1986. The NYSDEC owns approximately 16 acres of tidal wetlands near the mouth of Beaverdam Creek. Portions of the area have been disturbed by residential development and construction of boat docking facilities.

FISH AND WILDLIFE VALUES:

Beaverdam Creek is a relatively undeveloped tidal stream channel, bordered by a substantial area of productive marshland. Habitats such as this are rare in Suffolk County due to extensive residential development and marina development along the south shore. Beaverdam Creek is one of a few streams on Long Island that supports significant concentrations of sea-run brown trout, brook trout, and rainbow trout. Stream assessments conducted over a 14 year period, from 1990-2003, also indicate that American eel and eastern mudminnow inhabit the waters of Beaverdam Creek. During the fall (September - November), this fisheries resource supports a recreational fishery of county-level significance. No formal public access to the area has been developed. No unusual concentrations of any wildlife species are known to occur in the area. The tidal marshes adjoining Beaverdam Creek contribute significantly to the biological productivity of Bellport Bay.

IMPACT ASSESSMENT:

Any activity that would degrade water quality, increase turbidity, increase sedimentation, or alter flows, temperature, or water depths would have a significant impact on fish and wildlife species inhabiting Beaverdam Creek. All species may be affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity or sediment loading, non-point source run-off, waste disposal (including vessel wastes), and stormwater runoff. Efforts should be made to improve water quality, including reduction or elimination of discharges from vessels and upland sources, effective oil and toxic chemical spill prevention and control programs, upgrading of wastewater treatment plants, enactment of pet waste ordinances to reduce coliform

contributions, and the implementation of erosion control and stormwater pollution prevention best management practices. Vegetated upland buffer zones (e.g. wetlands and forested areas) should be protected or established to reduce non-point source pollution and sedimentation from upland sources.

Alteration of tidal patterns in Beaverdam Creek (e.g., sediment removal by dredging, channelization, bulkheading), would have negative impacts on the biotic communities present. No new navigation channels should be excavated within the area. Dredging to maintain boat channels should be minimized and scheduled in late summer, winter, or early spring to avoid disturbance of the fall salmonid fishery. Unregulated dredged material placement in this area would be detrimental to the habitat, but such activities may be designed to maintain or improve the habitat for certain species of wildlife.

Construction of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development (e.g., natural salt marsh, tidal flats, or shallows), would result in the loss of productive areas which support the fish and wildlife resources of Beaverdam Creek. Elimination of salt marsh and intertidal areas, through loss of intertidal connection, ditching, excavation, or filling, would result in a direct loss of a valuable habitat.

Substantial alteration of the stream channel, such as impoundment or creation of barriers to fish passage should be prohibited. Impediments to movement and migration of aquatic species, whether physical or chemical (e.g. dams, dikes, channelization, bulkheading, sedimentation, etc.), should be prohibited. Plans to mitigate the impacts of existing hydrological modifications should be developed, including the rejoining of formerly connected tributaries, and the removal of obstructions or barriers to fish passage. Enhancement efforts should be monitored, and the associated habitat effects should be reported and evaluated (e.g. the amount of upstream passage opened through upstream passage projects and the passability of blockages for different species of anadromous fish). Activities within the stream itself should be scheduled to avoid disruption of the fall (September to December) spawning run of brown trout and native brook trout.

Restoration of previously connected portions of the habitat, including the removal of structures (e.g. bulkheads, groins, jetties) which disrupt natural sedimentation and deposition patterns and physically alter the habitat may be beneficial. Maintenance of existing erosion control structures which interfere with natural coastal process should be carefully evaluated for need and where possible, non-structural solutions should be utilized.

Elimination or disturbance of adjacent wetland and forested habitats would adversely affect the habitat. Such areas should be protected, and where possible restored in order to maintain and/or improve water quality. Control of invasive plant species, through a variety of means, may improve fish and wildlife species use of the area.

HABITAT IMPAIRMENT TEST:

A **habitat impairment test** must be applied to any activity that is subject to consistency review under federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area.

The specific **habitat impairment test** is as follows.

In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would:

- destroy the habitat; or,
- significantly impair the viability of a habitat.

Habitat destruction is defined as the loss of fish or wildlife use through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate, or hydrology, or increases in runoff, erosion, sedimentation, or pollutants.

Significant impairment is defined as reduction in vital resources (e.g., food, shelter, living space) or change in environmental conditions (e.g., temperature, substrate, salinity) beyond the tolerance range of an organism. Indicators of a significantly impaired habitat focus on ecological alterations and may include but are not limited to reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The *tolerance range* of an organism is not defined as the physiological range of conditions beyond which a species will not survive at all, but as the ecological range of conditions that supports the species population or has the potential to support a restored population, where practical. Either the loss of individuals through an increase in emigration or an increase in death rate indicates that the tolerance range of an organism has been exceeded. An abrupt increase in death rate may occur as an environmental factor falls beyond a tolerance limit (a range has both upper and lower limits). Many environmental factors, however, do not have a sharply defined tolerance limit, but produce increasing emigration or death rates with increasing departure from conditions that are optimal for the species.

The range of parameters which should be considered in applying the habitat impairment test include but are not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;
2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,
3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxins and hazardous materials).

Although not comprehensive, examples of generic activities and impacts which could destroy or significantly impair the habitat are listed in the Impact Assessment section to assist in applying the habitat impairment test to a proposed activity.

KNOWLEDGEABLE CONTACTS:

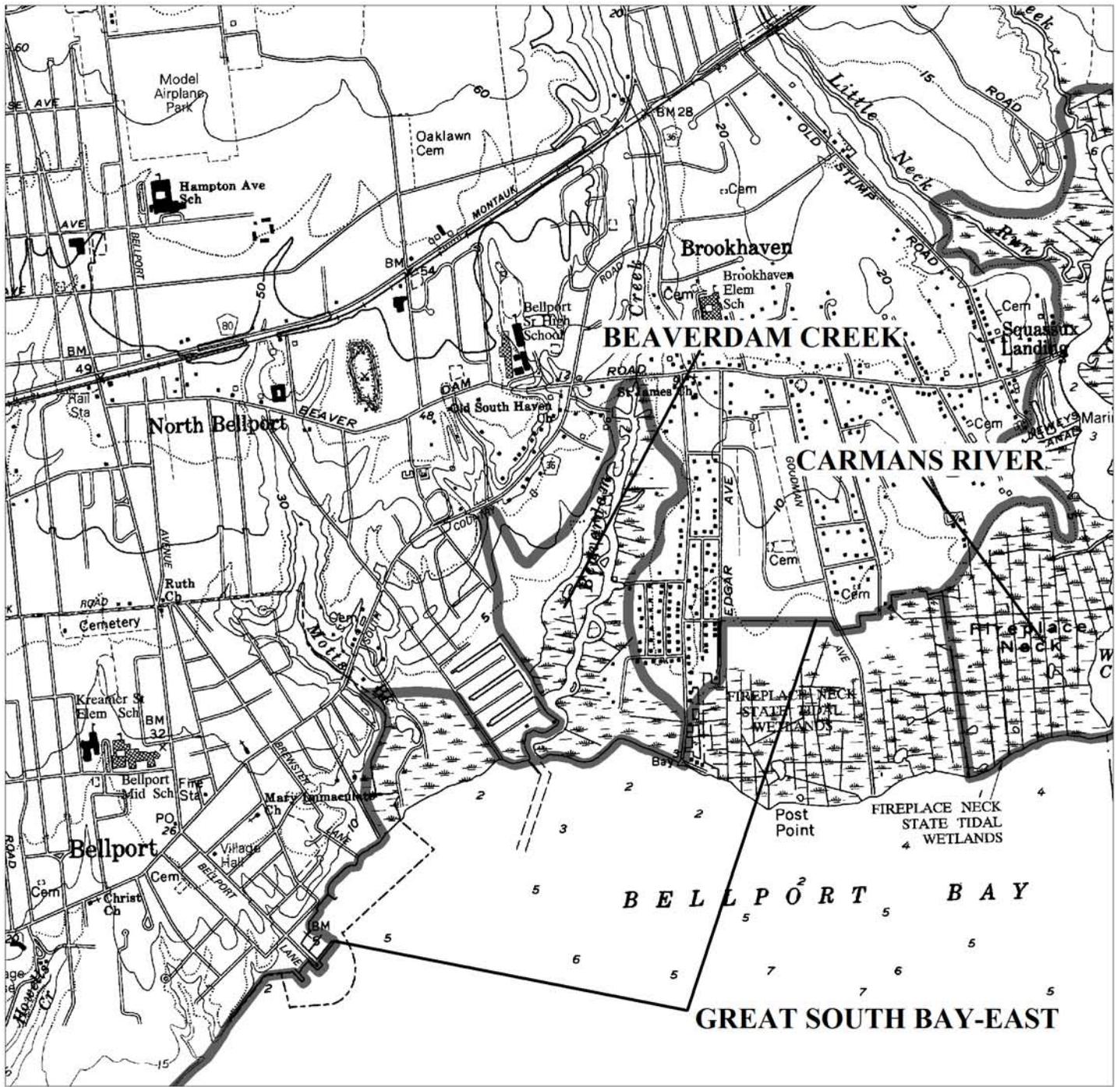
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Significant Coastal Fish and Wildlife Habitats



New York State
Department of State
Division of
Coastal Resources

Beaverdam Creek
Carmans River (In Part)
Great South Bay-East (In Part)

