

## COASTAL FISH & WILDLIFE HABITAT RATING FORM

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Name of Area: **Sterling Creek and Wetlands**

Designated: **October 15, 1987**

County: **Cayuga**

Town(s): **Sterling**

7½' Quadrangle(s): **Fairhaven, NY**

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<u>Score</u>	<u>Criterion</u>
<b>20</b>	Ecosystem Rarity (ER) Relatively large, undisturbed, coastal wetland ecosystem; unusual in Great Lakes region, but somewhat common in eastern Lake Ontario. Geometric mean: $(16 \times 25)^{1/2} = 20$ .
<b>0</b>	Species Vulnerability (SV) Northern harriers (T) occur in the area, but extent of use is not adequately documented.
<b>4</b>	Human Use (HU) Recreational use (fishing and waterfowl hunting) of county level significance.
<b>0</b>	Population Level (PL) No unusual concentrations of any fish or wildlife species occur in the area.
<b>1.2</b>	Replaceability (R) Irreplaceable.

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SIGNIFICANCE VALUE = [( ER + SV + HU + PL ) X R]

= **29.0**

## **DESIGNATED HABITAT: STERLING CREEK AND WETLANDS**

### **LOCATION AND DESCRIPTION OF HABITAT:**

Sterling Creek and Wetlands are located northeast of the Village of Fair Haven, along the south shore of Lake Ontario, in the Town of Sterling, Cayuga County (7.5' Quadrangle: Fair Haven, N.Y.). The fish and wildlife habitat consists primarily of approximately 900 acres of emergent marsh, dominated by broad-leaved cattail. This extensive wetland area is separated from Lake Ontario by a band of eroding drumlins and barrier beaches, located in Fair Haven Beach State Park. The park is heavily used for camping, picnicking, boating and water sports, resulting in some disturbance of the habitat. Much of the central marsh area is privately owned, and is bordered by undeveloped wooded hills and sparse residential development. Also included in the habitat are Sterling Creek, and its principal tributary, Sterling Valley Creek. These are relatively wide (25-50'), slow-moving, warmwater streams which meander through the marsh. A large, shallow, bay area (referred to as "The Pond"), containing dense beds of submergent aquatic vegetation, exists at the mouth of Sterling Creek. The creek outlet has been stabilized to maintain boat access from The Pond to Lake Ontario, and is heavily used as a fishing and swimming area. Above the wetland, Sterling Creek flows through agricultural and rural residential land. The habitat includes Sterling Creek up to the first impassable barrier to fish, located at N.Y.S. Route 104A in the hamlet of Sterling.

### **FISH AND WILDLIFE VALUES:**

Sterling Creek and Wetlands comprise a very large, relatively undisturbed, coastal wetland ecosystem. Such areas are unusual in the Great Lakes Plain ecological region, being concentrated mainly at the eastern end of Lake Ontario. This area provides valuable habitat for a variety of fish and wildlife species, particularly those that are characteristic of Great Lakes coastal marshes. Sterling Creek and Wetlands serve as feeding, resting, and breeding areas for a variety of migratory birds, including waterfowl, herons, rails, shorebirds, raptors, and passerine species. Possible or confirmed breeding bird species include green-backed heron, American bittern, mallard, wood duck, Virginia rail, sora, common moorhen, spotted sandpiper, belted kingfisher, marsh wren, red-winged blackbird, and swamp sparrow. However, no unusual concentrations of these species are known to occur in the area. Northern harrier (T) and osprey (T) are often seen over the marsh during the summer, but evidence of breeding has not been documented. Other wildlife species found in Sterling Creek and Wetlands include muskrat, mink, raccoon, white-tailed deer, northern leopard frog, and painted turtle. The area receives limited use by Cayuga County residents and park visitors for birdwatching, informal nature study, and waterfowl hunting.

Sterling Creek and The Pond support a productive warmwater fisheries for largemouth bass, northern pike, yellow perch, brown bullhead, pumpkinseed, bluegill, and black crappie. Many species of warmwater fishes in Lake Ontario, including smallmouth bass, yellow perch, pumpkinseed, white perch, white bass, and brown bullhead, utilize these areas as spawning, nursery, and feeding areas. This is an important smallmouth bass spawning stream in Cayuga County. Lake Ontario salmonids, including coho and chinook salmon, brown trout, and steelhead (lake-run rainbow trout) make seasonal spawning runs (although unsuccessful in most instances) in Sterling Creek, up to the dam at Route 104A. The fisheries resources in Sterling Creek support a recreational fishery for local and non-resident anglers and visitors to Fair Haven Beach State Park. Most of the fishing pressure is concentrated in The Pond.

### **IMPACT ASSESSMENT:**

A **habitat impairment test** must be met for 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** that must be met 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, toxics and hazardous materials).

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

Any activity that substantially degrades water quality, increases turbidity or sedimentation, reduces flows, or increases water level fluctuations in Sterling Creek and Wetlands, would adversely affect fish and wildlife species in the area. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers, herbicides, or insecticides) could result in adverse impacts on fish and wildlife resources. Elimination of wetland habitats (including submergent aquatic beds), through dredging, filling, or motorboat access development, and human encroachment into the area, would reduce its value to fish and

wildlife. However, there is considerable potential for increasing human use of Sterling Creek and Wetlands without adversely affecting the fish and wildlife resources. In addition, habitat management activities, including expansion of productive littoral areas, may be designed to maintain or enhance populations of certain fish or wildlife species. Barriers to fish migration at the mouth of Sterling Creek, whether physical or chemical, would have significant effects on fish populations within The Pond and in Sterling Creek. Any disturbance of Sterling Creek between late February and July, when most warmwater fish are spawning and incubating, would be especially detrimental. Existing areas of natural vegetation bordering Sterling Creek and Wetlands should be maintained to provide cover for wildlife, perching sites, and buffer zones.