COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Stony Point - Lime Barrel Shoals**

Designated: **August 15, 1993**

County(ies): **Jefferson**

Town(s): **Henderson, Hounsfield**

7½' Quadrangle(s): **Henderson Bay, NY**

Score	**Criterion**
25	Ecosystem Rarity (ER) An extensive rocky shoal area, uncommon in the Great Lakes Plain ecological region.
0	Species Vulnerability (SV) No endangered, threatened or special concern species are known to reside in the area.
20	Human Use (HU) Contributes to a recreational fishery which attracts many anglers from outside New York State. Geometric mean: $(16x25)^{½} = 20$.
9	Population Level (PL) Concentrations of spawning lake trout and smallmouth bass are unusual in the Great Lakes Plain ecological region. Geometric mean: $(4x9)^{½} = 6$.
1.2	Replaceability (R) Irreplaceable

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

= **65**

DESIGNATED HABITAT: STONY POINT-LIME BARREL SHOALS

HABITAT DESCRIPTION:

The Stony Point-Lime Barrel Shoals area is located in eastern Lake Ontario, immediately northeast of Stony Point, in the Towns of Henderson and Hounsfield, Jefferson County (7.5' Quadrangle: Henderson Bay, NY). The habitat consists of an approximate 900 acre shoal area extending out to a depth of approximately 20 feet below mean low water datum. Upland habitats within the area, especially the developed portions of Association Island, are not considered a critical component of this habitat.

FISH AND WILDLIFE VALUES:

Stony Point-Lime Barrel Shoals provides an extensive shallow water area for fish spawning and feeding that is relatively rare in New York's Great Lakes waters. This large shoal area provides habitat for several important fish species. Smallmouth bass use the shoals as spawning and feeding grounds. These spawning grounds contribute to a significant smallmouth bass fishery in eastern Lake Ontario. The shallow waters are also a regionally important spawning area for lake trout, which are being restored to Lake Ontario through stocking by the NYSDEC. Lake trout have been confirmed spawning in the vicinity of Association Island, primarily in water depths of up to 20 feet. Other fish species which use the shoal areas for spawning and nursery areas include rock bass, pumpkinseed, white perch, yellow perch and brown bullhead. During the winter months, when open water exists, waterfowl such as scaup, bufflehead, and mergansers use this area to a limited extent for resting and feeding.

Anglers from around New York as well as out of state are attracted by the recreational fishing opportunities for bass, lake trout, and other salmonids in this area of Lake Ontario. This use is especially heavy during the spring and fall seasons. There are no significant commercial fishing operations within this shoals area.

IMPACT ASSESSMENT:

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:
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> - destroy the habitat; or,
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> - 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 activities that may degrade water quality, alter water depths, or increase temperature or turbidity, could adversely affect the spawning activities of fish species utilizing this habitat. Late spring (May-July) is the critical spawning period for smallmouth bass, while lake trout spawn in fall (September-November primarily). Dredging and disposal of spoil material on these shoals would be especially detrimental to the fisheries resources of the region. Disturbance of upland habitats within the area should be carried out in a manner which prevents adverse impacts on the fisheries resources of the area.