COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Sandy Pond Tributaries**

Designated: **October 15, 1987**

County: **Oswego; Jefferson**

Town(s): **Sandy Creek; Ellisburg**

7½' Quadrangle(s): **Ellisburg, NY; Sandy Creek, NY**

Score	Criterion
12	Ecosystem Rarity (ER) High quality, unobstructed, coldwater tributaries; rare on Lake Ontario, but rarity is reduced by human disturbance. Geometric mean: $(9 \times 16)^{½}$
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
9	Human Use (HU) Popular salmonid fishing areas for residents of central New York.
16	Population Level (PL) Includes 2 of 3 streams in New York that have been stocked with Atlantic salmon to restore this species to Lake Ontario; concentrations of naturally reproducing salmonids are unusual on Lake Ontario.
1.2	Replaceability (R) Irreplaceable.

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

= **44**

DESIGNATED HABITAT: SANDY POND TRIBUTARIES

LOCATION AND DESCRIPTION OF HABITAT:

Sandy Pond Tributaries are located east of North Sandy Pond, in the Town of Sandy Creek, Oswego County, and the Town of Ellisburg, Jefferson County (7.5' Quadrangles: Sandy Creek, N.Y.; and Ellisburg, N.Y.). The fish and wildlife habitat includes portions of the three largest tributaries of North Sandy Pond: Skinner Creek (approximately 7 miles included); Lindsey Creek (6 miles); and Little Sandy Creek (5 miles). Each of these streams are relatively small (less than 20' wide), free flowing, medium gradient, and coldwater, with a gravelly substrate and high water quality. Sandy Pond Tributaries drain out of forested headwaters in eastern Oswego County and flow through rural residential and agricultural areas en route to Lake Ontario. Portions of these streams have been disturbed by livestock grazing, bank clearing, road crossings, and channeliza-tion, resulting in some degradation of the habitat.

FISH AND WILDLIFE VALUES:

Sandy Pond Tributaries are relatively small stream ecosystems, but are unusual in the Lake Ontario coastal area because they are among the few free-flowing, coldwater tributaries of the lake. These streams support naturally reproducing salmonid populations, including coho salmon, steelhead (lake-run rainbow trout), brook trout, and possibly brown trout and chinook salmon. These fish populations are supplemented by the NYSDEC's ongoing effort to establish a major salmonid fishery in the Great Lakes through stocking. Spawning runs may occur as far inland as the Town of Boylston, but population levels in these reaches are not well documented. The salmonid fishery in the Sandy Pond Tributaries supports significant recreational use by central New York anglers, although this is somewhat limited by the lack of public access areas. Little Sandy Creek is especially popular for steelhead fishing, attracting some anglers from outside New York State. The greatest significance of the Sandy Pond Tributaries, however, is their role in the NYSDEC's experimental program for restoration of Atlantic salmon in Lake Ontario. Lindsey and Little Sandy Creek are two of only three streams selected statewide to receive hatchery-raised yearling Atlantic salmon. A total of approximately 14,000 and 31,000 fish were released in these tributaries in 1984 and 1985, respectively. Although no Atlantic salmon have been released in Skinner Creek, it has comparable stream characteristics, and may also be used once a spawning run is established in the Sandy Pond area.

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:
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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 activity that substantially degrades water quality, increases turbidity or sedimentation, reduces flows, or increases water temperatures in the Sandy Pond Tributaries would adversely affect the fisheries resources of this area. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers, herbicides, or insecticides) will adversely impact on fish populations. Efforts should be made to reduce stream disturbance by agricultural activities, especially grazing, through fencing and restoration of riparian vegetation. Reduction of stream channel diversity, through dredging, filling, or channelization could result in a direct loss of valuable habitat area. Barriers to fish migration, whether physical or chemical, would have significant impacts on fish populations in this area. Habitat disturbances would be most detrimental during fish spawning and nursery periods (late February - July for steelhead, and September - May for most fall spawning salmonids). Existing areas of natural vegetation bordering the Sandy Pond Tributaries should be maintained to provide bank cover, soil stabilization, and buffer zones. Recreational fishing pressure in the area may need to be restricted to minimize taking of Atlantic salmon during the experimental restoration program.