COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Lakeview Marsh**

Designated: **August 15, 1993**

County(ies): **Jefferson**

Town(s): **Ellisburg**

7½' Quadrangle(s): **Adams, NY; Ellisburg, NY; Henderson, NY**

Score	Criterion
64	Ecosystem Rarity (ER) An extensive undeveloped, lake shore barrier beach, wetland, and tributary complex. Rare in New York State.
37	Species Vulnerability (SV) Northern harrier (T), least bittern (SC), and black tern (SC) nesting. Additive division: 25 + 16/2 + 16/4 = 37.
21	Human Use (HU) Recreational salmonid fishery of Statewide significance, and commercial bullhead fishery of regional significance. Additive division: 16 + 9/2 = 21.
9	Population Level (PL) Salmonid concentrations are of regional significance; population level of nesting black terns is unknown, but may be unusual in the region.
1.2	Replaceability (R) Irreplaceable

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

= **157**

DESIGNATED HABITAT: LAKEVIEW MARSH

HABITAT DESCRIPTION:

Lakeview Marsh is located on the eastern shore of Lake Ontario, approximately four miles west of the Village of Ellisburg, in the Town of Ellisburg, Jefferson County (7.5' Quadrangles: Henderson, NY; Ellisburg, NY; Adams, NY; and Sandy Creek, NY). This approximate 3,400 acre area consists of a five mile long barrier beach, freshwater marshes and ponds, two coldwater streams (Sandy Creek and South Sandy Creek), and interspersed uplands. Most of the area is included in the NYSDEC's Lakeview Marsh Wildlife Management Area (WMA), and in Southwick Beach State Park. The NYSDEC recommends that the coastal area boundary be extended inland along Sandy Creek and South Sandy Creek to the first impassable barriers. These are: the falls on Sandy Creek, at the hamlet of Belleville; and, the Monitor Mills Dam on South Sandy Creek, approximately one mile north of the Village of Ellisburg.

FISH AND WILDLIFE VALUES:

Lakeshore barrier beach and wetland complexes such as this are rare in New York State. In recognition of this, the area has been designated as a National Natural Landmark by the U.S. Department of the Interior. Lakeview Marsh supports many different species of fish and wildlife. Black tern (SC), northern harrier (T), and least bittern (SC) are all confirmed nesting species in the area. Waterfowl, shorebirds, and passerines utilize Lakeview Marsh during the spring and fall migrations, and a sizeable concentration of mallards and American black ducks overwinter in a small spring-fed pond just east of Lakeview Pond. Mid-winter aerial surveys for the period 1986-1991 indicate average concentrations of approximately 1080 birds in the area each year (1,688 in peak year), including significant numbers of American black duck (750 in peak year) and mallard (725 in peak year), along with lesser numbers of mergansers, oldsquaw, Canada goose, scaup, and common goldeneye. Other probable or confirmed nesting species at Lakeview Marsh include green-backed heron, mallard, blue-winged teal, common moorhen, willow flycatcher, marsh wren, yellow warbler, red-winged blackbird, and swamp sparrow.

Lakeview Marsh also supports a large population of furbearing animals and is one of the major muskrat trapping areas in the region. Upland areas throughout Lakeview Marsh WMA provide opportunities for hunting various wildlife species, including white-tailed deer, eastern cottontail, ruffed grouse, woodcock, and ring-necked pheasant.

The two major streams in this area, Sandy Creek and South Sandy Creek, support both warmwater fish species and coldwater fish species. Northern pike spawn in the lower reaches of the creeks and the adjacent ponds. Both streams, upstream to the first impassable barrier, are significant smallmouth bass spawning streams that are important to the Lake Ontario bass population. South Colwell Pond supports a major commercial bullhead fishery that is important to the region. Coho salmon and chinook salmon are presently being stocked in both Sandy and South Sandy Creeks, and steelhead (lake-run rainbow trout) are stocked in the latter. These salmonids enter the creeks each fall and spring seeking spawning habitat. In 1984, approximately 10,000 coho and 100,000 chinook salmon were released in each of the streams, and approximately 25,000 steelhead were released in South Sandy Creek. These concentrations of salmonids are unusual among Lake Ontario tributaries. This salmonid fishery presently is of significance for anglers of New York and neighboring states and provinces. With the increasing salmonid fishery in the Great Lakes, coldwater tributaries like Sandy Creek and South Sandy Creek will become even more important to accommodate the increased demand for recreational angling opportunities which this fishery will produce. The recreational warmwater fisheries in Lakeview Marsh are of significance to anglers in the eastern Lake Ontario region.

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 activity that would substantially degrade water quality, increase temperature or turbidity, reduce water levels, alter flows, or increase water level fluctuations in Lakeview Marsh could adversely affect a variety of fish and wildlife species. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers, herbicides, or insecticides) may result in adverse impacts on fish and wildlife resources of the area. Elimination of wetland habitats, or significant human encroachment into the area, as a result of dredging, filling, construction of roads, or motorboat access development, could severely reduce its value to fish and wildlife. Wildlife populations would be most sensitive during the breeding season, which extends from March through July for most species. However, habitat management activities, including water level management or expansion of shallow open water areas, may be designed to maintain or enhance populations of certain fish or wildlife species.

Any significant disturbance of Sandy Creek or South Sandy Creek between March and July when most warmwater fish spawn, or between September and December, when most salmonids spawn, could be especially detrimental. Barriers to fish migration in the creek, whether physical or chemical, could have significant effects on fish populations within the marsh and in connected waters. Existing areas of natural vegetation bordering Lakeview Marsh should be maintained for their value as cover for wildlife, perch sites, and buffer zones. In particular, the integrity of the sand dunes bordering Lakeview Marsh must be maintained, by stabilizing vegetative cover and restricting human uses, to protect the fish and wildlife habitat. Disturbance to the barrier beach could adversely affect the wetlands and ponds which it protects from coastal erosion processes. Incompatible disturbance of the area, including use of motorized vehicles (including boats), camping, and swimming, should be controlled through enforcement of existing Wildlife Management Area regulations.