COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **East Bay**

Designated: **October 15, 1987**

County: **Wayne**

Town(s): **Huron**

7½' Quadrangle(s): **Sodus Point, NY**

Score	Criterion
12	Ecosystem Rarity (ER) A sizable, shallow, sheltered bay; unusual in Lake Ontario, but several larger areas exist in Wayne County. Geometric mean: $(9 \times 16)^{½}$
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
4	Human Use (HU) Warmwater fishery is popular among Wayne County residents.
0	Population Level (PL) No unusual concentrations of any fish or wildlife species occur in the area.
1.2	Replaceability (R) Irreplaceable.

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

= **19**

DESIGNATED HABITAT: EAST BAY

LOCATION AND DESCRIPTION OF HABITAT:

East Bay is located on the southern shore of Lake Ontario, approximately five miles east of the Village of Sodus Point, in the Town of Huron, Wayne County (7.5' Quadrangle: Sodus Point, N.Y.). The fish and wildlife habitat is an approximate 120 acre open water portion of the bay, situated north of the NYSDEC's Lake Shore Marshes Wildlife Management Area (East Bay Unit), and separated from the lake by a narrow, undeveloped, barrier beach. East Bay is relatively shallow (less than 10 feet deep), with dense beds of submergent aquatic vegetation, and a fringe of emergent wetland vegetation. The bay is intermittently connected to Lake Ontario by a very small inlet through the beach, and receives inflow from several small, low gradient, warmwater streams. Sizeable areas of emergent wetland vegetation have developed at the lower ends of these tributaries. East Bay and nearly all of the lands bordering it are privately owned, resulting in some adjacent residential development. However, there has been only limited disturbance of shoreline habitats, and a relatively large area of the bay remains in a natural condition. East Bay receives light recreational use (e.g., fishing, swimming, boating) during the summer months.

FISH AND WILDLIFE VALUES:

East Bay is one of the least disturbed of several large, sheltered, coastal bay ecosystems on Lake Ontario. Extensive littoral areas, such as those found in East Bay, are uncommon in Lake Ontario, although they are very abundant in eastern Wayne County. Because human disturbance of the bay has not been severe, it provides high quality habitats for many fish and wildlife species.

East Bay is a productive area for a variety of resident and lake-based fisheries resources. The dense beds of aquatic vegetation, high water quality, sandy substrates, and freshwater tributaries, create highly favorable conditions for spawning and nursery use by many species. Warmwater fishes found in the area include brown bullhead, white sucker, yellow perch, largemouth bass, pumpkinseed, bluegill, rock bass, and northern pike. When the inlet is open, various salmonid species may occur in East Bay prior to and after spawning runs in the major tributaries. The diverse and productive fisheries in this area provide excellent opportunities for recreational fishing. However, due to limited public access, and the availability of similar areas in the vicinity, most of the fishing pressure on East Bay is provided by residents of Wayne County.

Wetland areas within and bordering East Bay contribute significantly to the productive fisheries in the bay, and support a variety of wildlife species. These wetlands serve as nesting and feeding areas for waterfowl and other marsh birds, including green-backed heron, great-blue heron, mallard, wood duck, belted kingfisher, marsh wren, red-winged blackbird, and swamp sparrow. Concentrations of various waterfowl species, as well as loons, grebes, gulls, and terns, may occur in East Bay during spring and fall migrations (March-April and September-November, respectively). Other wildlife species found around East Bay include white-tailed deer, beaver, raccoon, mink, muskrat, green frog, northern leopard frog, and painted turtle. However, no unusual concentrations of any wildlife species have been reported in the 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:
>
> - 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 temperature or turbidity, alters water depths, reduces inflows, or increases water level fluctuations in East Bay would 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) could adversely impact on fish and wildlife resources of the area. Habitat disturbances would be especially detrimental during fish spawning and nursery periods (April - July for most warmwater species) and wildlife breeding seasons (April - July for most species).

Elimination of wetland habitats (including submergent aquatic beds), as a result of dredging or filling, would severely reduce the value of this area to fish and wildlife. Construction and maintenance of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development, could have a significant impact on the habitat. Existing areas of natural vegetation bordering the bay should be maintained for their value as cover, perch sites, and buffer zones. Barriers to fish migrations between East Bay, Lake Ontario, and tributary streams, could have significant effects on fish populations in the area, although periodic closure of the outlet appears to occur naturally. Establishment of a permanent outlet to the lake may enhance the fisheries resources in East Bay, but would also significantly increase human use and disturbance of the area. The overall integrity of the barrier beach which shelters East Bay must be maintained, primarily by restricting human activities, to protect the fish and wildlife habitat. Use of motorized vehicles, camping, and swimming, on the beach should be restricted. On the other hand, it may be desirable to increase public access to East Bay to provide greater opportunities for compatible human uses of the fish and wildlife resources in this area.