

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Port Bay**

Designated: **October 15, 1987**

County: **Wayne**

Town(s): **Huron, Wolcott**

7½' Quadrangle(s): **North Wolcott, NY**

<u>Score</u>	<u>Criterion</u>
16	Ecosystem Rarity (ER) Relatively large, shallow, sheltered bay; unusual in the Lake Ontario subzone.
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
9	Human Use (HU) Recreational fishery attracts anglers from throughout central New York.
9	Population Level (PL) One of the major spawning and nursery areas for yellow perch in Lake Ontario.
1.2	Replaceability (R) Irreplaceable.

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

= **41**

DESIGNATED HABITAT: PORT BAY

LOCATION AND DESCRIPTION OF HABITAT:

Port Bay is located on the southern shore of Lake Ontario, approximately five miles north of the Village of Wolcott, in the Towns of Huron and Wolcott, Wayne County (7.5' Quadrangle: North Wolcott, N.Y.). The fish and wildlife habitat is an approximate 400 acre open water portion of the bay, situated north of the NYSDEC's Lake Shore Marshes Wildlife Management Area (Port Bay Unit), and separated from the lake by a barrier beach formation. Port Bay is relatively shallow (less than 25 feet deep), with dense beds of submergent aquatic vegetation. The bay is connected to Lake Ontario by a small outlet through the beach, and receives inflow primarily from Wolcott Creek. Wolcott Creek is a relatively large, medium gradient, warmwater stream, draining approximately 27 square miles of rural farmland. Port Bay and nearly all of the land area bordering it are privately owned, resulting in extensive development of residential areas, marinas, and bulkheads, and considerable disturbance of shoreline habitats. The western segment of the barrier beach, and wetlands located in the State Wildlife Management Area, remain in a natural condition. Port Bay receives heavy recreational use (e.g., fishing, swimming, boating) during the summer months.

FISH AND WILDLIFE VALUES:

Port Bay is one of several large, sheltered, coastal bays on Lake Ontario. Extensive littoral areas, such as those found in Port Bay, are uncommon in the lake. Although human activities in the area have resulted in considerable habitat disturbance, the bay still serves as a very productive area for many fish and wildlife species.

Port Bay has outstanding habitat values for resident and lake-based fisheries resources. The dense beds of aquatic vegetation, high water quality, sandy substrates, and freshwater inflow create highly favorable conditions for spawning and nursery use by many species. Wetland areas within and bordering Port Bay contribute significantly to fisheries production in the area. Warmwater fishes found in the bay include brown bullhead, white perch, yellow perch, largemouth bass, pumpkinseed, bluegill, rock bass, and northern pike. Port Bay is a major concentration area for yellow perch in Lake Ontario. Concentrations of white sucker, smallmouth bass, and various salmonid species (e.g., coho and chinook salmon, and steelhead) occur in Port Bay prior to and after spawning runs in Wolcott Creek.

The diverse and productive fisheries in this area provide excellent opportunities for recreational fishing. Public access to Port Bay is available from several locations, and there is heavy fishing pressure throughout the year. Anglers from throughout central New York State are attracted to the area, especially for the yellow perch ice fishery and the spring salmonid and bullhead fisheries.

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 Port 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 (March - July for most warmwater species, and September - November for most salmonids). Elimination of wetland habitats (including submergent aquatic beds), through dredging or filling, would reduce fisheries production in Port Bay. 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, perching sites, and buffer zones. Barriers to fish migrations between Port Bay, Lake Ontario, and Wolcott Creek, could have significant effects on fish populations in all three areas. Establishment of a permanent outlet to the lake may enhance the fisheries resources in Port Bay, but would also increase human use and disturbance of the area. The overall integrity of the barrier beach which shelters Port Bay should be maintained, by stabilizing vegetative cover and restricting certain human activities including use of motorized vehicles, camping, and swimming. However, public access to Port Bay should be maintained or enhanced to ensure that adequate opportunities for compatible human uses of the fish and wildlife resources are available.