

COASTAL FISH & WILDLIFE HABITAT RATING FORM

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Name of Area: **Whitehouse - Ogden Island Bays**

Designated: **May 15, 1994**

County(ies): **St. Lawrence**

Town(s): **Waddington**

7½' Quadrangle(s): **Sparrowhawk Point, NY; Waddington, NY**

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**Score**      **Criterion**

- 9**      Ecosystem Rarity (ER)  
A series of shallow littoral embayments with moderate amounts of submerged vegetation and substrates composed of sand, gravel, and rocks; one of only four similar embayment complexes in the county.
- 0**      Species Vulnerability (SV)  
Common tern (T) feeding in area, however the numbers of individuals relying on these embayments is not well documented.
- 9**      Human Use (HU)  
This nursery complex significantly supports a sport fishery of importance in a major region of New York State.
- 9**      Population Level (PL)  
The best documented muskellunge nursery area in the county supporting a young-of-year population level unusual in the St. Lawrence Plains ecological region.
- 1.2**      Replaceability (R)  
Irreplaceable.

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

= **32**

## **DESIGNATED HABITAT: WHITEHOUSE - OGDEN ISLAND BAYS**

### **HABITAT DESCRIPTION:**

Whitehouse - Ogden Island Bays is located in the lower St. Lawrence River, approximately one-quarter mile northwest and one mile west of the Village of Waddington, in the Town of Waddington, St. Lawrence County (7.5' Quadrangles: Sparrowhawk Point, NY; Waddington, NY). The fish and wildlife habitat is approximately 600 acres encompassing three shallow bay areas including, the south shoreline of Ogden Island, the bay east of Leishman Point, and Whitehouse Bay. Water depths in this habitat range from 3 to 13 feet deep. Bottom substrates consist of rocks, sand, and silt with some submerged vegetation. Ogden Island is a large, undeveloped island, with mostly open and shrubby vegetation. Ogden Island, Whitehouse Point and Leishman Point are public lands held by the New York Power Authority. The mainland to the south of Leishman Point and Whitehouse Bay areas are largely in private ownership.

### **FISH AND WILDLIFE VALUES:**

Whitehouse - Ogden Island Bays is an area containing relatively large, shallow, open water bays with substantial littoral zone. The habitat is a discontinuous set of small bays with little or no tributary inflow, little adjacent emergent vegetation, and a moderately sheltered environment. These relatively sheltered bays are uncommon in the lower reaches of the St. Lawrence River, with only four other similar areas in the county.

Despite the fact that these bays were formed when the reservoir for the power project was created, the Whitehouse - Ogden Island Bays complex provides important fish spawning and nursery habitat for warmwater fish. Representative species include brown bullhead, largemouth bass, smallmouth bass, yellow perch, and a variety of forage fish species. Of special significance, however, is the use of these bays by muskellunge. Repeated sampling from 1976 through 1991 has documented either adult muskellunge in spawning condition or young-of-year muskellunge in the small bay along the southern channel around Ogden Island as well as the area east of Leishman Point and in Whitehouse Bay. The most recent studies by NYS DEC confirm significant nursery use of these bays with relatively high catch per unit effort values (approximately 0.60 to 4.0 young-of-year per seine haul). The consistent evidence of annual muskellunge use of these bays along with the number of young indicate that this nursery area supports and contributes significantly to the area's adult muskellunge population. This bay complex is the best documented muskellunge nursery area in St Lawrence County. The adult muskellunge population is the basis of a sports fishery which attracts anglers from throughout the Thousand Islands major recreational region of New York State.

The area may also provide feeding habitat for common terns (T) since concentrations of small forage fish comprise most of the diet of these birds. The use of these bays for feeding is, however, poorly documented. Since most significant common tern nesting is approximately five miles distant, the importance of this area for common tern feeding is likely to be less than the high quality feeding areas located closer to the tern nesting colonies.

Whitehouse - Ogden Island Bays also provides habitat for migrating waterfowl populations during the spring and fall. In particular, dabbling ducks such as mallard, American black duck, and blue-winged teal feed in these productive shallows.

### **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:

- 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 would substantially degrade water quality, further alter river flows, increase turbidity or sedimentation, significantly reduce water levels during spawning season, or increase short term water level fluctuations at Whitehouse - Ogden Island Bays could adversely affect fish and wildlife use of this area. 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 in the area. Spills of oil or other hazardous substances are a potentially serious threat to fish and wildlife in Whitehouse - Ogden Island Bays, and every effort should be made to prevent such contamination. Significant human encroachment into the area, through dredging, filling, construction of roads, waste disposal, marina construction or expansion, or extensive shoreline development could severely reduce the area's value to fish and wildlife. Development of motorboat access to the area should be confined to existing sites to minimize potential disturbance of fish and wildlife species. Habitat disturbances would be especially detrimental during fish spawning and nursery periods (March - July for most warmwater species. Existing areas of natural vegetation bordering these bays Island Bays including mature tree stands, should be maintained for their values as cover for wildlife, perching sites, and buffer zones. Sources of sedimentation in minor tributaries and along the north shore of Whitehouse Bay should be eliminated through vegetative techniques to protect and enhance spawning habitat values.