

COASTAL FISH & WILDLIFE HABITAT RATING FORM

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Name of Area: **Ironsides Island**

Designated: **August 15, 1993 (Jefferson Co.) May 15, 1994 (St. Lawrence Co.)**

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

Town(s): **Alexandria; Hammond**

7½' Quadrangle(s): **Chippewa Bay, NY**

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**Score**      **Criterion**

<b>25</b>	Ecosystem Rarity (ER) An undisturbed sizeable, isolated rocky island with mature mixed forest type located adjacent to large wetland and bay complexes; rare in the Great Lakes Plain ecological region.
<b>0</b>	Species Vulnerability (SV) No endangered, threatened or special concern species are known to reside in the area.
<b>0</b>	Human Use (HU) No significant fish or wildlife related human uses of the area.
<b>16</b>	Population Level (PL) One of the largest nesting concentrations of great blue herons in New York State.
<b>1.2</b>	Replaceability (R) Irreplaceable.

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

= **49**

## DESIGNATED HABITAT: IRONSIDES ISLAND

### HABITAT DESCRIPTION:

Ironsides Island is located in the mid St. Lawrence River, approximately five miles northeast of the Village of Alexandria Bay, in the Town of Alexandria, Jefferson County, and the Town of Hammond, St. Lawrence County (7.5' Quadrangle: Chippewa Bay, N.Y.). The fish and wildlife habitat is an approximate 30 acre bedrock island ringed with steep cliffs up to 30 or 40 feet high. Vegetative cover is predominantly mature hardwood - white pine forest. No evidence has been found of significant human disturbance for over 100 years. The island is situated near several other relatively small islands, but is otherwise separated from land by nearly one-half mile of open river channel. Ironsides Island is also located in close proximity to four large wetland and bay complexes. Ironsides Island is owned and managed by the Nature Conservancy as a wildlife sanctuary.

### FISH AND WILDLIFE VALUES:

Ironsides Island is an undisturbed, sizeable, isolated, steep cliffed, rocky island with a mature white-pine northern hardwood forest. This combination of factors along with its proximity to four large wetland and bay complexes make Ironsides Island unique among all the islands that occur throughout the Great Lakes Plain ecological region. The island is an important habitat for great blue herons, serving as a nesting site for this species since at least the early 1960's. In 1984 and 1985, there were an estimated 600 pairs of great blue herons nesting on Ironsides Island. In 1991, over 1000 pairs of these birds were documented nesting on the island. This is the only sizeable great blue heron rookery known on the St. Lawrence River, and is among the largest in New York State. The Ironsides Island heron population probably accounts for many of the birds seen in marshes, bays, and creeks throughout the middle St. Lawrence River and Thousand Islands region. A critical feature of the habitat is its isolation from mammalian predators and human disturbance. There are no significant fish or wildlife related human uses of Ironsides Island.

### 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 disturb the Ironsides Island heronry during the nesting period (April - August) could adversely affect the nesting population of great blue herons. Human activity on the island should be minimized during this period. Permanent posting of the area has been provided to help protect the nesting birds, and visitors to the island must obtain written permission from the Nature Conservancy. Introduction or attraction of mammalian predators to Ironsides Island, including pet animals, could also be detrimental to the heron population. Removal of the island's upland forest habitat through cutting or wildfire would have a significant impact on heron populations in the Thousand Islands region of New York. However, habitat management activities, such as manipulation of vegetative cover, may be desirable or necessary in the future to ensure the survival of the great blue heron population at Ironsides Island. Disturbance or elimination of preferred wetland feeding areas (possibly distant, but poorly documented) may also affect birds nesting at Ironsides Island.