

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **American Island Pools**

Designated: **May 15, 1994**

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

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

7½' Quadrangle(s): **Morristown, NY**

<u>Score</u>	<u>Criterion</u>
25	Ecosystem Rarity (ER) Relatively large, upwelling, open water pools present year-round; one of four similar open water areas on the St. Lawrence River; rare in ecological region.
36	Species Vulnerability (SV) Bald eagle (E) wintering area.
0	Human Use (HU) No significant fish or wildlife related human uses of the area during winter months.
9	Population Level (PL) One of about four major bald eagle wintering areas in the St. Lawrence Plains ecological region.
1.2	Replaceability (R) Irreplaceable.

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

= **84**

DESIGNATED HABITAT: AMERICAN ISLAND POOLS

HABITAT DESCRIPTION:

American Island Pools is located in the mid-St. Lawrence River, approximately four and one-half miles southwest of the Village of Morristown, in the Towns of Morristown and Hammond, St. Lawrence County (7.5' Quadrangle: Morristown, N.Y.). The fish and wildlife habitat is an approximate 1200 acre area of the main river channel that remains partially open (i.e., ice-free) throughout the winter. The pools are quite consistent in presence and extent during most winters. The St. Lawrence River is generally less than 20 feet deep and narrow at this location, resulting in strong currents and considerable turbulence. Bottom substrates are rocky, and have minimal vegetative cover. American Island, located at the northern portion of the habitat, is a small, seasonally inhabited rock island, with some mature woody vegetation.

FISH AND WILDLIFE VALUES:

American Island Pools is an area containing relatively large, open water pools during the winter ice-in season. The presence of such open water areas is uncommon on the St. Lawrence, providing an unusual ecosystem type. During much of the year, fish and wildlife use of the area is not significantly different than elsewhere in the river. However, during the winter months (December - March), the pools attract major concentrations of migratory birds. Of particular significance is the presence of wintering bald eagles (E) in the area. This is the principal area on the St. Lawrence River (in New York) where eagles are most frequently noted in winter. Apparently, fish concentrations are available near the river surface, and because this area rarely freezes, it provides a dependable prey base for these birds. Bald eagles have been reported in the area for several years, with as many as ten observed there at one time (e.g., in January 1986).

American Island is a primary roosting site for the eagles on the American side of the river. Other roosting sites are in Canadian waters, including Crossover Island. Roosting habitat typically includes large mature trees which are not particularly abundant in the area. Although roosting occurs over a broad area, mature trees should be protected for roosting values and woodland management policies which promote growth of mature tree stands should be encouraged.

American Island Pools also harbors substantial concentrations of waterbirds, waterfowl, and gulls during most winters. Mid-winter aerial surveys of waterfowl abundance for the period 1986-1991 indicate average concentrations of approximately 970 birds in the area between Ogdensburg and Chippewa Bay each year (2,115 in peak year), dominated by mergansers and common goldeneye. American Island Pools is a primary concentration area for these wintering waterfowl populations, which are among the largest on the St. Lawrence River. There are no significant human uses associated with the wildlife resources of this area.

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, alter river flows or ice formation, or increase human disturbance during winter months at American Island Pools could adversely affect fish and wildlife use of this area. Winter navigation use of the St. Lawrence Seaway could be an especially serious threat to the area, as a result of flow diversion, shipping traffic in the vicinity, bilge discharge, and increased risk of oil spills or other hazardous substances. Major physical alteration to the river channel, through dredging or installation of diversion structures (including water supply intakes), could enhance ice formation around American Island and impact critical wildlife feeding areas. Removal of large mature trees would further reduce available roosting habitat which is already limited near the river. Introduction of toxic chemicals from upstream sources may also affect bird populations using these pools. Thermal discharges, depending on time of year, may have variable effects on use of the area by aquatic species and migratory birds. Human disturbances around American Island Pools should be minimized from December through March.