

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Slater Creek**

Designated: **October 15, 1987**

County: **Monroe**

Town(s): **Greece**

7½' Quadrangle(s): **Braddock Heights, NY**

<u>Score</u>	<u>Criterion</u>
0	Ecosystem Rarity (ER) Very small artificially-warmed, tributary stream; not a rare ecosystem type.
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
9	Human Use (HU) Diverse recreational fisheries attract fishermen from throughout the Rochester metropolitan area.
9	Population Level (PL) Year-round concentrations of salmonids, smelt, and various warmwater species are unusual in the Great Lakes coastal region.
1.0	Replaceability (R) Technically feasible to replace the warmwater discharge, but the cost of replacement, for fisheries habitat purposes, would be prohibitive.

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

= **18**

DESIGNATED HABITAT: SLATER CREEK

LOCATION AND DESCRIPTION OF HABITAT:

Slater Creek is located on the south shore of Lake Ontario, approximately one mile northwest of the City of Rochester, in the Town of Greece, Monroe County (7.5' Quadrangle: Braddock Heights, N.Y.). Slater Creek is a small, medium gradient, warmwater stream, which drains approximately 5 square miles of rural and suburban residential area. Warmwater discharges from a Rochester Gas and Electric power plant enter Slater Creek approximately 1000 feet above the mouth. The fish and wildlife habitat includes the creek upstream to Ling Road, and a small area of open water in Lake Ontario at the stream mouth.

FISH AND WILDLIFE VALUES:

Slater Creek is a very small tributary of Lake Ontario, without substantial natural fish or wildlife values. However, Slater Creek is significant because of the year-round warmwater discharge from the Rochester Gas and Electric facility. This discharge attracts lake-dwelling salmonids, such as coho and chinook salmon, brown trout, and steelhead (lake-run rainbow trout), and a variety of warmwater species, such as white perch and gizzard shad, into the creek, especially during the winter months. There is also a significant smelt run in Slater Creek each spring. Many anglers come from the City of Rochester and surrounding communities to fish in Slater Creek for the various salmonid and warmwater fish species, and to a lesser extent for smelt. The NYSDEC has developed a public fishing access and parking area on the east side of the creek, near the mouth. As a result of the fish concentrations and presence of open water in winter, the area also attracts large numbers of ring-billed gulls and waterfowl, such as scaup, common goldeneye, mergansers, black duck, and mallard.

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 turbidity, or significantly alters stream flows, at any time of year, would adversely affect fisheries resources in Slater Creek and in adjacent waters of Lake Ontario. A shutdown or loss of the warmwater discharge from the power generating facility would reduce the large concentrations of fish and wildlife utilizing the area, particularly during the winter months, when mass mortality might occur. However, adequate dispersion of this thermal effluent must be maintained to avoid attracting excessive populations of fish or wildlife species, and adversely affecting their reproduction or survival.