COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Van Buren Point**

Designated: **October 15, 1987**

County: **Chautauqua**

Town(s): **Portland, Pomfret, Dunkirk**

7½' Quadrangle(s): **Brocton, NY**

Score	Criterion
9	Ecosystem Rarity (ER) Relatively large, shallow, rocky shoal area, uncommon in Chautauqua County's coastal area.
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
6	Human Use (HU) This area contributes to commercial and recreational warmwater fisheries of county-level significance. Additive division: 4 +4/2 = 6.
9	Population Level (PL) This is one of only a few major valleys spawning areas in the New York section of the Great Lakes.
1.0	Replaceability (R) Difficult to replace; cost of replacement prohibitive.

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

= **24.0**

DESIGNATED HABITAT: VAN BUREN POINT

LOCATION AND DESCRIPTION OF HABITAT:

Van Buren Point is located on the shoreline of Lake Erie, approximately four miles southwest of the city of Dunkirk, in the Towns of Portland, Pomfret, and Dunkirk, Chautauqua County (7.5' Quadrangle: Brocton, N.Y.). The fish and wildlife habitat is an approximate 2,500 acre area of open water, generally located within a two and one-half mile radius of Van Buren Point. This area encompasses a broad, productive, littoral zone, extending roughly from the southern boundary of Lake Erie State Park northward to a point of land near the intersection of Shorewood Drive and Lakewood Road. Water depths throughout this area are generally less than 30 feet below mean low water (568.6 ft. m.s.l.), and the bottom substrate is predominantly gravel and cobble with some shale substrate in the western portion of the area. Much of the shoreline around Van Buren Point has been developed into medium and high density residential areas, accompanied by extensive rip-rapping for erosion protection. However, relatively few permanent boat launching facilities have been constructed in the area.

FISH AND WILDLIFE VALUES:

Van Buren Point is one of only a few large areas of relatively shallow, gravelly shoals in the Chautauqua County portion of Lake Erie. There are no comparable areas west of Van Buren Point in New York State. This extensive littoral zone serves as an important spawning area for a variety of warmwater fish species, including walleye, yellow perch, and smallmouth bass. Documented walleye spawning areas such as this are unusual in the New York section of Lake Erie. Spawning by this species occurs between mid-March and early-May, when water temperatures reach 6.7 to 8.9 C in water approximately 5-10 feet deep. Reproduction by yellow perch also takes place in the shallow water around Van Buren Point. Smallmouth bass spawn in the area in May and June, with the greatest concentrations reported near Lake Erie State Park. As a result of the abundant fish populations around Van Buren Point, this area attracts significant recreational fishing pressure throughout the year, primarily by residents of Chautauqua County. Boat access to the sport fishery is available at Dunkirk Harbor.

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:
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> - destroy the habitat; or,
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> - 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, or reduces physical diversity of bottom substrates around Van Buren Point area would affect the fisheries resources of this area. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including nutrient loads) will adversely impact on fish populations. Activities such as dredging, oil and gas drilling, and solid waste disposal, are all potential causes of permanent habitat degradation. Installation of breakwalls or jetties would result in loss of walleye spawning habitat in rocky shoal areas, in favor of sheltered, vegetated waters used by other warmwater fish species. Temporary habitat disturbances would be most detrimental during fish spawning and nursery periods (mid March - July for most warmwater species). Any unavoidable human disturbance of the littoral zone should be scheduled during late summer or fall to minimize potential impacts on fisheries use of the area. Thermal discharges, depending on time of year, would also have adverse effects on fish populations, especially walleye. Installation and operation of water intakes would also have a significant impact on the value of this habitat to concentrations of spawning fish through impingement of juveniles and adults, or entrainment of eggs and larval stages. These impacts should be avoided by using alternatives other than water cooling technologies. Public access to the Van Buren Point area should be maintained or enhanced to ensure that compatible human uses of the fisheries resources are available.