

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Tifft Farm Nature Preserve**

Designated: **October 15, 1987**

County: **Erie**

Town(s): **Buffalo**

7½' Quadrangle(s): **Buffalo SE, NY**

<u>Score</u>	<u>Criterion</u>
16	Ecosystem Rarity (ER) This is the largest open space/wildlife habitat in the City of Buffalo; included is one of the largest remaining wetlands in the lake Erie coastal region.
24	Species Vulnerability (SV) Least Bittern (SC) nesting; Jefferson salamander (SC) found here. Additive division: 16 + 16/2
14	Human Use (HU) This is the most heavily used environmental education center in the region, attracting visitors for recreational and educational uses. Additive division: 9 + 9/2
16	Population Level (PL) One of only 3 known localities in New York State where burrowing crayfish exist; populations of many other wetland wildlife species are unusual in the region.
1.2	Replaceability (R) Irreplaceable

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

= **84**

DESIGNATED HABITAT: TIFFT FARM NATURE PRESERVE

LOCATION AND DESCRIPTION OF HABITAT:

Tift Farm Nature Preserve is located approximately three miles south of downtown Buffalo, within the city limits, in Erie County (7.5' Quadrangle: Buffalo SE, N.Y.). The preserve is located adjacent to the Small Boat Harbor, bounded roughly by Fuhrmann Boulevard (N.Y.S. Route 5) to the west, and railroad right-of-ways to the north, east, and south. Tift Farm is a 264 acre nature preserve and environmental education center, owned by the City of Buffalo, and operated jointly by the City and the Buffalo Museum of Science. This area contains a diversity of fish and wildlife habitats, including an approximate 75 acre cattail marsh, small freshwater ponds and old canal remnants, old fields (partly covering a former solid waste transfer site), forested wetland, and shrub-sapling stages of succession. The land area surrounding Tift Farm is dominated by active and vacant industrial facilities and railroad properties.

FISH AND WILDLIFE VALUES:

Tift Farm Nature Preserve is the largest contiguous fish and wildlife habitat area within the City of Buffalo. Of special importance is the relatively undisturbed wetland area, which is the largest of its kind along the Lake Erie coastline. The site is inhabited by a diversity of fish and wildlife species that is unusual in this coastal region, especially within the urban area. A full complement of wetland wildlife species occurs in and around the marshes at Tift Farm: pied-billed grebe, green-backed heron, least bittern (SC), American bittern, mallard, blue-winged teal, Canada goose, Virginia rail, sora, common moorhen, American coot, American woodcock, spotted sandpiper, marsh wren, willow flycatcher, common yellowthroat, red-winged blackbird, and swamp sparrow nest here; black-crowned night herons roost and feed in the area during the nesting season; many species of waterfowl, shorebirds, herons, osprey (T), and passerine birds use the area as a stopover during spring and fall migrations; muskrat, mink, northern water snake, snapping and painted turtles, bullfrog, green frog, northern leopard frog, and Jefferson salamander (SC) are year-round residents; and at least two species of fish, the central mudminnow and brook stickleback, are present. Up until the late 1970's, black terns (SC) also nested in the marshes at Tift Farm; the reasons for their disappearance are unknown. Tift Farm also contains a population of burrowing crayfish, one of only 3 known localities for this species in New York State.

In addition to the wetlands, Tift Farm provides a diversity of other fish and wildlife habitats. Upland habitats at Tift Farm support most of the typical species in the region, such as raccoon, eastern cottontail, red fox, gray fox, meadow vole, ring-necked pheasant, various passerine birds, and common garter snake. The largest of the freshwater ponds is directly connected to Lake Erie via a culvert under Fuhrmann Boulevard to the Small Boat Harbor. Consequently, many warmwater fish species occur in the area, including black crappie, yellow perch, rock bass, pumpkinseed sunfish, bluegill, bullhead, carp, largemouth bass, gizzard shad, freshwater drum, northern pike, and longnose gar. The extent to which these fish occur in other aquatic habitats in the preserve is not well known. As an environmental education center, Tift Farm Nature Preserve is an outstanding facility in western New York, attracting some 18,000 visitors to the area in 1984. Public use of the area centers on bird observation and study (especially during spring and fall), fishing during the summer months, environmental education during the school year, and general nature study and outdoor recreation throughout the year. A visitors center and system of trails have been developed in the area. Most of the people using Tift Farm reside within the multi-county Buffalo metropolitan area.

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.

Despite its current status as a nature preserve and environmental education center, Tiff Farm's fish and wildlife habitats remain vulnerable to a number of potential impacts. Surrounding land uses may be the most important factor affecting the wildlife resources of this area. Encroachment of human disturbance, including industrial, commercial, or residential development could have significant impacts on species using the area. Discharges of polluted runoff (or migration of contaminated groundwater) from adjacent areas could seriously degrade the wetland and aquatic habitats in Tiff Farm Nature Preserve. Maintenance of the high

quality urban fishery in this area is dependent upon keeping the connection to Lake Erie open and accessible for fish passage. Opportunities for compatible public use of the area should be maintained or enhanced to utilize this valuable fish and wildlife resource.