

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **El Dorado Beach and Black Pond Wetlands**

Designated: **August 15, 1993**

County(ies): **Jefferson**

Town(s): **Ellisburg**

7½' Quadrangle(s): **Henderson, NY**

<u>Score</u>	<u>Criterion</u>
25	Ecosystem Rarity (ER) One of the largest undeveloped, coastal barrier-wetland ecosystems in the Great Lakes Plain ecological region.
16	Species Vulnerability (SV) Black tern (SC) nesting; northern harrier (T) and least bittern (SC) have been sighted in the area, but extent of use is not adequately documented.
9	Human Use (HU) One of the most popular birdwatching sites around eastern Lake Ontario, of regional significance. Locally important for recreational fishing and waterfowl hunting.
9	Population Level (PL) A major concentration area on Lake Ontario for migrant shorebirds; populations levels unusual in Great Lakes Plain ecological region.
1.2	Replaceability (R) Irreplaceable

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

= **71**

DESIGNATED HABITAT: EL DORADO BEACH AND BLACK POND WETLANDS

HABITAT DESCRIPTION:

El Dorado Beach and Black Pond Wetlands are located on the eastern shore of Lake Ontario, in the northwestern corner of the Town of Ellisburg, Jefferson County (7.5' Quadrangle: Henderson, NY). The fish and wildlife habitat is an approximate 750 acre area, encompassing an extensive freshwater wetland complex, a mile-long segment of undeveloped barrier beach, rocky shores, and interspersed uplands.

This area includes all of the NYSDEC's Black Pond Wildlife Management Area, The Nature Conservancy's El Dorado Beach Preserve, and some privately owned lands. Black Pond is an approximate 25 acre, shallow pond, located at the point on Lake Ontario where the extensive barrier beaches of the eastern shore give way to rocky coastline. Little Stony Creek (a small, slow-moving, warmwater stream) and several unnamed tributaries flow into Black Pond, which opens through a small outlet to Lake Ontario. Much of El Dorado Beach and Black Pond Wetlands is scrub-shrub and forested wetland, with lesser amounts of emergent marsh; Black Pond is the only sizeable area of open water included in the habitat. Upland areas include the wooded barrier beach, and dense groves of eastern red cedar. The land area bordering the north, east, and south sides of El Dorado Beach and Black Pond Wetlands is rural in nature, including deciduous forest, abandoned fields, active agricultural lands, and low density residential development. South of the undeveloped segment of barrier beach, much of the sand dune formation has been heavily developed for seasonal camps and permanent residences. Human disturbances in the area are generally limited to uncontrolled recreational activities, including use of off-road vehicles on the barrier beach.

FISH AND WILDLIFE VALUES:

El Dorado Beach and Black Pond Wetlands comprise one of several very large, undeveloped, coastal wetland ecosystems in the Great Lakes region of New York. It includes the northernmost of the marshes created by the extensive barrier beaches forming the eastern shore of Lake Ontario. Some of the wetlands in El Dorado Beach Preserve are classified as inland calcareous lake/pond shore, which may be an uncommon natural community type in New York.

Several rare plant species, including sand dune willow (heartleaf willow) and sand cherry, occur on the beaches in this area. The large size, ecological diversity, and lack of human disturbance of El Dorado Beach and Black Pond Wetlands are important factors contributing to the fish and wildlife values of this area.

El Dorado Beach and Black Pond Wetlands provide suitable habitats for a variety of wetland wildlife species. Studies of the area have documented numerous breeding bird species, including mallard, wood duck, turkey vulture, red-tailed hawk, black tern (SC), black-billed cuckoo, belted kingfisher, red-headed woodpecker, willow flycatcher, marsh wren, brown thrasher, American redstart, common yellowthroat, red-winged blackbird, white-throated sparrow, and swamp sparrow. A recent NYSDEC study documented black tern (SC) nesting with 3 pairs present in 1990 and 2 pairs in 1991. Other possible nesting birds in the area include green heron, American black duck, blue-winged teal, American bittern, least bittern (SC), and northern harrier (T), but breeding by these species has not been documented since at least 1980.

The most significant wildlife use of El Dorado Beach and Black Pond Wetlands may be the occurrence of large concentrations of shorebirds, waterfowl, and wading birds during spring and fall migrations. This location is an important feeding and resting area for hundreds of migrants on a daily basis, with the greatest numbers of most species recorded between August and November. At least 30 species of shorebirds, gulls, and terns, and 20 species of waterfowl have been observed at El Dorado Beach, including some that have rarely been seen elsewhere in New York State. El Dorado Beach and Black Pond Wetlands is well documented as one of the major concentration areas for migratory shore and water birds on Lake Ontario.

In addition to avian use, El Dorado Beach and Black Pond Wetlands also support sizeable populations of several fur-bearer species, including muskrat, beaver, raccoon, and mink. Other wildlife species occurring in the area include white-tailed deer, snapping turtle, northern water snake, bullfrog, and wood frog. Black Pond also supports a relatively small, but significant warmwater fish community. Fish species found in the pond include brown bullhead, northern pike, largemouth bass, and carp.

The abundance and diversity of fish and wildlife species in El Dorado Beach and Black Pond Wetlands provide many potential opportunities for human use of the area. Birdwatching is by far the greatest use of this area, attracting visitors from throughout central New York during bird migration periods. Bird clubs from as far away as Rochester, Syracuse, Utica, and Binghamton frequent El Dorado Beach, and considerable bird banding work has been done at this site. Waterfowl hunting, fishing, trapping, and informal nature study also attract a significant number of local residents to the area. Access to the area for passive recreational uses is available from the south end of Black Pond Wildlife Management Area, and from the north end of El Dorado Beach Preserve.

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.

Despite its predominant status as a nature preserve and wildlife management area, El Dorado Beach and Black Pond Wetlands remain vulnerable to a number of potential impacts. Of greatest concern are activities on adjacent private lands, and uncontrolled recreational disturbances of the habitat. Any activity that would substantially degrade water quality, increase turbidity or sedimentation, reduce water levels, alter flows, or increase water level fluctuations at El Dorado Beach and Black Pond Wetlands could adversely affect a variety of fish and wildlife species. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers, herbicides, or insecticides) into any of the tributary streams may result in adverse impacts on fish and wildlife resources in the area. Elimination of wetland habitats as a result of dredging, filling, construction of roads, or motorboat access development, could severely reduce the value of this area to fish and wildlife. However, habitat management activities, including water level management or expansion of shallow open water areas, may be designed to maintain or enhance populations of certain fish or wildlife species.

Any significant disturbance of the Black Pond area would be especially detrimental during wildlife breeding seasons (April - July for most species), whereas disturbance of shoreline areas would be of greatest concern during bird migration seasons. Barriers to fish passage through Black Pond outlet, whether physical or chemical, could have significant effects on fish populations within the pond and in Little Stony Creek. Existing areas of natural vegetation bordering the wetlands should be maintained for their value as cover for wildlife, perching sites, and buffer zones. In particular, the integrity of the sand dunes that shelter Black Pond Wetlands must be maintained, by stabilizing vegetation cover and restricting human uses, to protect the fish and wildlife habitat. Incompatible human disturbance of the area, including use of motorized vehicles, camping, swimming, and release of pet animals, should be minimized through enforcement of existing Wildlife Management Area and Preserve regulations.