COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Alley Pond Park**

Designated: **September 15, 1992**

County: **Queens**

Town(s): **New York City (Queens)**

7½' Quadrangle(s): **Flushing, NY; Sea Cliff, NY**

Score	Criterion
12	Ecosystem Rarity (ER) A sizeable area of salt marsh, tidal flat, and freshwater wetlands; unusual in the northern Queens County and East River area. Geometric mean: $(9 \times 16)^{½} = 12$.
25	Species Vulnerability (SV) Northern harrier (T) overwintering.
13.5	Human Use (HU) Environmental education programs and opportunities for informal (recreational) nature study attract visitors from throughout the New York City metropolitan area. Additive division: 9 + 9/2 = 13.5.
4	Population Level (PL) Concentrations of various fish and wildlife species associated with tidal and freshwater wetlands are unusual in northern Queens County.
1.2	Replaceability (R) Irreplaceable.

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

= **65**

DESIGNATED HABITAT: ALLEY POND PARK

HABITAT DESCRIPTION:

Alley Pond Park is located at the southern end of Little Neck Bay, in the Borough of Queens, Queens County (7.5' Quadrangles: Flushing, NY; and Sea Cliff, NY). The fish and wildlife habitat encompasses the northern half of this New York City park, which is operated as a conservation, education, and recreation area; some private lands are also included. This approximate 225 acre area includes a diversity of natural habitat types, including salt marsh, tidal flats, a tidal creek channel (Alley Creek), freshwater wetlands, and upland forest. Alley Pond Park is surrounded by dense residential and commercial development, and prior to the early 1970's was subject to considerable habitat disturbance, including road construction, filling, and waste disposal. Since 1974, substantial efforts have been made to restore and maintain natural habitats in the park, and facilities for environmental education and public use have been developed.

FISH AND WILDLIFE VALUES:

Alley Pond Park is one of the few remaining natural resources within northern Queens County. The availability of relatively large areas of various habitat types, especially tidal wetland communities, is unusual in the East River and western Long Island Sound area. In addition to providing habitats for fish and wildlife species within the area, the wetlands in Alley Pond Park contribute to the biological productivity of Little Neck Bay and adjacent marine waters.

A full complement of wetland wildlife species occurs in and around the marshes at Alley Pond Park. Probable or confirmed breeding bird species in the area include green-backed heron, black duck, mallard, Canada goose, clapper rail, common moorhen, killdeer, fish crow, marsh wren, red-winged blackbird, sharp-tailed sparrow, and seaside sparrow. These and many other species of herons, waterfowl, shorebirds, raptors, and passerines use the area as a stopover during spring and fall migrations (March - May and September - November, generally). Concentrations of wintering waterfowl on Little Neck Bay, especially American black duck, mallard, and Canada goose, often feed in Alley Pond Park, depending on the extent of ice cover each year. Northern harrier (T) also use the area as overwintering habitat. Other wildlife species occurring in the area include raccoon, muskrat, opossum, diamondback terrapin (SC; occasional use), snapping turtle, garter snake, northern water snake, Fowler's toad, and two-lined salamander. Alley Pond Park contains abundant shellfish and crustacea, such as fiddler crab, horseshoe crab, ribbed mussel, hard clam and snails. Finfish species found in the tidal shallows and Alley Creek include bluefish, striped bass, scup, Atlantic silversides, menhaden, and winter flounder. The diversity and abundance of fish and wildlife species occurring in Alley Pond Park are unusual in northern Queens County.

As an environmental education center, Alley Pond Park is an outstanding facility in the New York City metropolitan area attracting some 30,000 visitors in the area annually. Public use of the area centers on environmental education classes, birdwatching, informal nature study, and outdoor recreation. A visitor's center and system of trails have been developed in the area to facilitate compatible public uses.

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.

Despite its current status as a nature preserve and environmental education center, Alley Pond Park's fish and wildlife remain vulnerable to a number of potential impacts. Surrounding land uses may be the most

important factor affecting the fish and wildlife resources of this area. Encroachment of human disturbance, including transportation, industrial, commercial, or residential development could have significant impacts on species using the area. Discharges of sewage (combined sewer overflows or marine sanitation discharges) or stormwater runoff from adjacent areas could seriously degrade the wetland and aquatic habitats in Alley Pond Park. Construction and maintenance activities (along with stormwater runoff) associated with the parkways and expressways may also have significant effect on water quality and habitat value in this area. Elimination of wetland or aquatic habitats, through dredging, filling, bulkheading, or construction of additional roads could severely reduce use of the area by fish and wildlife. Habitat management activities, including expansion of productive intertidal areas, may be designed to maintain or enhance populations of certain species. Maintenance of the tidal wetlands and their associated fish and wildlife is dependent upon keeping the connection to Little Neck Bay open and accessible for fish passage. Compatible public use of the area should be maintained or enhanced.