United States Department of the Interior

FISH AND WILDLIFE SERVICE

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FP-04/35

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Colonel Richard J. Polo, Jr.
District Engineer, New York District
U.S. Army Corps of Engineers
Jacob K. Javits Federal Building
New York, New York 10278-0090

Dear Colonel Polo:

The U.S. Fish and Wildlife Service (Service) has reviewed preliminary project information for the U.S. Army Corps of Engineers, New York District's (Corps) Liberty State Park ecosystem restoration project located in Jersey City, Hudson County, New Jersey. The Liberty State Park restoration is part of the Corps' Hudson-Raritan Estuary (HRE) restoration study. The Service participated in Planning Development Team (PDT) meetings for Liberty State Park on September 25, 2003, December 9, 2003, and January 13, 2004, as well as a specific wildlife meeting on December 11, 2003. The Service provides this Planning Aid Letter (PAL) pursuant to a Scope of Work dated June 15, 2004. The Service has also reviewed the most current conceptual design for proposed restoration.

The focus of the Corps project is an approximate 225-acre undeveloped site in the interior of Liberty State Park, including a roughly 45-acre dredge spoil disposal area. Potential ecosystem enhancement measures in the park interior include creation of tidal marsh in the dredge spoil disposal area, protection and enhancement of freshwater wetlands, and upland management to control the encroachment of invasive species. The proposed enhancements would be carried out in cooperation with the New Jersey Department of Environmental Protection (NJDEP) Division of Parks and Forestry (DPF), the non-federal sponsor for the post-Feasibility phases of the Liberty State Park project. The Service appreciates the Corps' efforts in the planning stages for this highly visible restoration project that will benefit fish and wildlife and provide opportunities for public outreach and education.

AUTHORITY

The following comments are provided as planning aid and do not constitute the report of the Secretary of Interior pursuant to Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 *et seq.*) (FWCA). Comments are also provided under the authority of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA) and

the Migratory Bird Treaty Act (MBTA) (40 Stat. 755;16 U.S.C. 703-712), and are consistent with the intent of the Service's Mitigation Policy (Federal Register, Vol. 46, No. 15, Jan. 23, 1981).

SERVICE COMMENTS

To assist in project planning and the preparation of environmental documents, the Service provides the following summary of preliminary comments and recommendations that were previously offered in our November 8, 2002 letter (or log no. FP-02/47) and verbally at meetings.

General Comments

Recent studies of compensatory mitigation in New Jersey (Balzano *et al.*, 2002) and across the country (National Research Council, 2001) have found that the success of wetland restoration and creation projects is far from guaranteed. However, the science of environmental restoration has progressed considerably over the past two decades, and many lessons may be learned from earlier wetland restoration efforts. Consistent with the findings of these studies, the Service offers the following general recommendations:

- design the restored habitats to become self-sustaining and avoid over-engineered structures (*i.e.*, artificial structures requiring long-term maintenance);
- consider a phased approach to project implementation to allow for correction of problems in establishing target plant communities, and conduct early monitoring as part of adaptive management;
- thoroughly evaluate and address environmental contaminants concerns;
- avoid impacts to protected and sensitive species (*e.g.*, State-listed species) during construction, and include project features to enhance conditions for such species;
- develop a water budget and design the restoration to provide naturally variable hydrologic conditions;
- provide appropriately heterogeneous topography;
- coordinate closely with the contractors responsible for actual project construction, and conduct post-grading on-site meetings and inspections to ensure consistency with construction plans;
- incorporate design features to avoid re-establishment of invasive species, and incorporate invasive and nuisance species vegetative control and herbivore management into project planning;
- consult the scientific literature and use the best available information regarding planting

elevation, depth, soil type, and seasonal timing, and subsurface conditions to include soil and sediment geochemistry and physics, groundwater quantity and quality, and infaunal communities;

- implement a monitoring plan adequate to evaluate success of the subject project, inform the larger HRE restoration planning effort, and contribute to the science of wetland restoration, particularly in urban settings; and

- continue close coordination with existing public and private environmental protection efforts in the HRE throughout project planning, implementation, and monitoring.

Specific Comments

The Service supports the general design concept that would provide various tidal marsh and shrub communities, freshwater wetlands and pools (if a water source is available), upland grasslands, and upland forest.

The Service recommends the Corps:

- test existing water quality of parking lot runoff proposed as a freshwater source, and design treatment basins to ensure that water directed into the restoration area is sufficiently clean to support diverse aquatic communities; and

- test North Cove sediments, groundwater, and soils for environmental contaminants in the excavation areas at the depths to be excavated. Based on a preliminary review, the Service supports the proposed use of invertebrate Effects Range - Low (ERLs) guidelines as one screening tool, but notes that ERLs do not address potential acute or chronic toxicity to species in upper trophic levels, or the potential for contaminants to bioaccumulate or biomagnify. Bioavailability of contaminants to appropriate wildlife endpoints (*e.g.* northern harrier (*Circus cyaneus*) reproduction) should be the ultimate determinant of the need for remedial actions (*e.g.*, clay liner). The Service requests an opportunity to review proposed methodologies for assessing bioavailability, including the selection of upper-trophic-level endpoints.

The Service recommends the Corps and the DPF:

- consolidate planned cover types (particularly grassland and forest) into larger patches, designed to maximize the area of interior habitat;

- test salinity and pH of groundwater and vernal pools as possible limiting factors in amphibian abundance;

- conduct or fund in accordance with any recommendations from NJDEP Endangered and Nongame Species Program (ENSP), northern harrier monitoring before, during, and after construction, including nest site location, nest success, a tagging program, and (if birds

are present year-round) contaminants testing;

- design and schedule construction to minimize disturbance to nesting harriers;
- plant trees along the interior road to minimize fragmentation effects and control invasive species;
- plant trees in small patches of "old field" cover types that are too small to support grassland species and that fragment the developing forest;
- plant a diverse array of native warm season grasses in the grassland areas, with a large "butterfly garden" (native wildflowers) located in an area of high visibility to the public;
- preserve orchid and moss mat areas; and
- design construction to avoid impacts to known occurrences of State-listed plants.

The Service concurs with the DPF's plan to generally leave upland shrub and forest communities to succeed with minimal interference, and recommends that the DPF:

- develop a long-term habitat management plan (to include control of invasive species and a grassland mowing regime); and
- develop a long-term species monitoring program (*e.g.*, State-listed birds, amphibians), including management actions as appropriate (*e.g.*, predator control, nest platforms).

The Service appreciates the opportunity to provide input into the Corps' Liberty State Park environmental restoration project. Should you have any questions, please contact John Staples or Wendy Walsh of my staff at (609) 646-9310 extensions 18 and 48, respectively.

Sincerely,

Clifford G. Day
Supervisor

REFERENCES

Balzano, S., A. Ertman, L. Brancheau, and W. Smejkal. 2002. Creating Indicators of Wetland Status (Quantity and Quality) Freshwater Wetland Mitigation in New Jersey. New Jersey Department of Environmental Protection, Division of Science, Research and Technology. Trenton, New Jersey.

National Research Council. 2001. Compensating for Wetland Losses Under the Clean Water Act. National Academy Press. Washington, D.C.