State of New Jersey
Department of Environmental Protection

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Land Use Regulation Program
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Minas M. Arabatzis
Department of the Army
Philadelphia District of Engineers
Wanamaker Bldg., 100 Penn Square East
Philadelphia, PA 19107-3390

RE: Pond Creek Salt Marsh Restoration Project
0500-05-0002.1 (CDT050001)
Federal Consistency Determination & Water Quality Certificate
Section 1135, Ecosystem Restoration
Cape May County

Dear Mr. Arabatzis:

The New Jersey Department of Environmental Protection, Land Use Regulation Program, acting under Section 307 of the Federal Coastal Zone Management Act (P.L. 92-583) as amended, has reviewed the information provided by your office dated July 1, 2005. Based on two site inspections by Program staff and supplemental information concerning the proposed project received October 28, 2005, the Program has determined that the project is consistent with New Jersey's Coastal Zone Management Rules N.J.A.C. 7:7E-1.1 et seq, as amended to March 3, 2003, provided that the conditions discussed below are met to the satisfaction of the Department of Environmental Protection.

Project Description

The U.S. Department of the Army, cost shared with the New Jersey Department of Environmental Protection, Division of Fish and Wildlife, proposes to construct one main jettied inlet with three channels and a hydraulic structure that will reintroduce tidal flow into the Pond Creek Salt Marsh. The proposed project will serve to control invasive Phragmites allowing native salt marsh vegetation to reestablish within the State of New Jersey's Higbee Beach Wildlife Management Area. The Pond Creek coastal wetlands currently provide limited habitat for fish and wildlife resources due to the overwhelming presence of dense stands of Phragmites. Reducing the Phragmites will improve habitat value and diversity and will also eliminate the need for the Cape May County Mosquito Commission to spray insecticides in and around marshes and residential areas. The purpose of the project is to restore 170 acres of estuarine inter-tidal emergent wetland habitat for fish and wildlife resources as it existed prior to 1917 when it was manipulated by the Cape May County Mosquito Extermination Commission. The project will also protect adjacent freshwater wetlands in the upper portions of the marsh. Pond Creek Salt Marsh is located along the Delaware Bay and runs north of Sunset Boulevard in the Township of Lower and in the Borough of West Cape May, Cape May County.

The project is located within the Cape May peninsula which is a stopover and foraging area for birds migrating along the Atlantic Flyway. The proposed project involves the construction of a 920-foot long inlet channel with a 20-foot bottom width extending from the Delaware Bay to the constructed water control structure. The water control structure will be located in the middle of the existing north spoil pile and will be approximately 17 feet high and 40 feet wide. Sheet-piling will extend 100 feet from each side of the water control structure in order to aid in the retainment of water that will inundate Pond Creek. A new jetty will be constructed at the edge of the Delaware Bay to stabilize the new inlet for the channel. A new channel will be dredged and extend 154 feet into the Delaware Bay and the material (approximately 2,400 cubic yards) will be placed on the beach. In addition to enlarging the inlet channel, three new interior channel ditches will be constructed within the Pond Creek Salt Marsh. Channel 1 will be approximately 1,750 feet long, channel 2 will be approximately 1,250 feet long and channel 3 will be approximately 1,550 feet long, all channels will have a bottom width of 10 feet. The channels will be dredged through approximately 1.04 acres of existing coastal wetlands. In addition, 0.10 acres of open water area at the current outlet of Pond Creek will be filled to plug the existing outlet and the area converted to a coastal dune habitat. The excavation of the new channel through the beach / dune system will involve the loss of approximately 0.9 acres of beach / dune to a tidal system. The area of existing inlet will be converted to a beach / dune complex of approximately 1.2 acres using material excavated from the new channel. Therefore, the proposed project has no net loss of beach / dune habitat. The proposed project also includes the construction of an access and maintenance road approximately 15 feet wide that wraps around from the north side of the jetty to the south side of the jetty.

The following discussion includes an evaluation of project compliance with the Rules on Coastal Zone Management (N.J.A.C. 7:7E-1.1 et seq.), and identifies the conditions under which the project is found consistent with the rules. **This consistency determination is issued subject to compliance with the identified conditions.**

Wetlands (7:7E-3.27) and Wetlands Buffer (7:7E-3.28)

Wetlands or wetland means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

All tidal and inland wetlands, excluding the delineated tidal wetlands defined pursuant to N.J.A.C. 7:7-2.2, shall be identified and delineated in accordance with the USEPA three-parameter approach (that is, hydrology, soils and vegetation) specified under N.J.A.C. 7:7A-1.4 of the Freshwater Wetlands Protection Act Rules.

The Pond Creek coastal wetlands ecosystem currently provide limited habitat for fish and wildlife resources due to the overwhelming presence of dense stands of common reed (Phragmites). Reducing the Phragmites will improve habitat value and diversity and will also eliminate the need for the Cape May County Mosquito Commission to spray insecticides in and around marshes and residential areas. The U.S. Department of the Army proposes to construct one main jettied inlet with three channels and a hydraulic structure that will reintroduce tidal flow into the Pond Creek Salt Marsh in order to restore 170 acres of estuarine inter-tidal emergent wetland habitat for fish and wildlife resources. The three proposed channels will be dredged through approximately 1.04 acres of existing coastal wetlands. Several alternatives were considered as discussed below. The project will also serve to protect adjacent freshwater wetlands in the upper portions of the marsh and provide flood control to nearby residents.

Although the proposed project will result in impacts to the existing wetland community in terms of the new inlet and channels it will have an overall positive impact on the salt marsh community thus offsetting any negative impacts of the project. Therefore, formal mitigation measures are not needed.

Alternatives

The Army Corp of Engineers has considered three types of alternatives: no action, invasive species control (chemical), invasive species control (flooding – 3 types).

No Action Alternative

The no action alternative would leave Pond Creek as a monoculture of Phragmites and thus will not achieve the goal of restoring the native salt marsh. This goal has been eliminated from consideration because it would not improve the ecological functions and values of Pond Creek.

Invasive Species Control (Chemical)

The invasive species control through chemicals alternative involves aerial application of glyphosphate-based herbicide in the fall, followed by a prescribed burn and then another aerial application. This alternative typically eliminates Phragmites for 5 to 10 years. This alternative was eliminated from consideration because it does not provide long-term ecological improvement within the Pond Creek wetlands.

Invasive Species Control (Freshwater Flooding)

The invasive species control through freshwater flooding involves inundating the areas with 4 to 6 inches of water for the majority of the year. This alternative was eliminated from consideration due to engineering concerns and concerns of adverse impacts to adjacent property owners.

Invasive Species Control (Tidal Flooding – full inundation with earthen berms)

This alternative involves enlargement of the existing creek channel to a bottom width of 10 feet and lowering the bottom elevation 4 feet below existing grade to increase the volume of water entering the marsh. It also involves the construction of an approximately 4,200 foot long dike across the back portion of the marsh. This alternative was not considered due to the high cost of bringing in large volumes of suitable fill and necessary preparation of the foundation and the environmental impacts.

Tidal Inundation with water control structure (existing channel)

This alternative involves enlarging the existing creek channel over a length of 1,600 feet to a bottom width of 20 feet and lowering the bottom elevation by 4 feet to increase the volume of flow. It would also involve the construction of a water control structure at the junction of the existing channel. This alternative is not preferred because the potential of breaching the existing dunes near the current inlet is a concern. If these northern dunes breach, the new water control structure would be flanked and the residents would have limited protection from the Delaware Bay storms. This alternative was also not chosen due to erosion concerns of the north dunes and the winding nature of the existing channel alignment.

Tidal inundation with a water control structure (new channel)

Tidal inundation through a water control structure and new channel alignment is the preferred alternative. This alternative has been discussed above in the Project Description portion of this Federal Consistency. The benefits of the proposed alternative include increasing the diversity and value of vegetation so as to enhance fish and wildlife habitat and eliminate spraying of insecticides by the Cape May County Mosquito Commission in and around the marsh and residential areas. The proposed project will also improve water quality within Pond Creek by improving tidal flushing of the marsh, decrease the risk of a wildfire occurring and alleviate some of the current flooding problems by removing Phragmites that currently block outlet structures and impede upland drainage. The existing Phragmites will be replaced by natural growth of estuarine species such as smooth cordgrass, salt hay grass and spike grass. The remaining forested freshwater wetlands in the headwater areas of Pond Creek will be protected through the installation of the hydraulic structure limiting tidal flow in these areas.

This Federal Consistency Determination is consistent with New Jersey's Coastal Zone Management Rules (N.J.A.C. 7:7E-1.1) provided the following conditions are met:

- **Inundation must stay within the extent of the proposed tidal inundation as shown on the photo provided and agreed upon by the Department and the ACOE. A long-term monitoring program must be developed in order to insure inundation does not exceed its proposed limits and does not have adverse impacts to woodland areas around the perimeter of the marsh. During the next phase of design for this project a three to five year proposed and post-project monitoring plan must be developed and submitted to the Program for review and approval. The monitoring plan must include provisions for corrective measures if the inundation exceeds the extent expected.**

Endangered or Threatened Wildlife Species Habitat (N.J.A.C. 7:7E-3.38) and Critical Wildlife Habitat (N.J.A.C. 7:7E-3.39)

Areas known to be inhabited on a seasonal or permanent basis by or to be critical at any stage in the life cycle of any wildlife or vegetation identified as "endangered" or "threatened" species on official Federal or State lists of endangered or threatened species or under active consideration for State or Federal listing, are considered Special Areas. Development of this area is prohibited unless it can be demonstrated that the endangered or threatened wildlife or vegetation species habitats would not directly or through secondary impacts on the relevant site or in the surrounding area be adversely affected.

"Critical wildlife habitats" are specific areas known to serve an essential role in maintaining wildlife, particularly in wintering, breeding, and migrating. Development that would directly or through secondary impacts on the relevant site or in the surrounding region adversely affect critical wildlife habitats is discouraged.

The project proposes to enhance the overall habitat for threatened and endangered species and fish and wildlife that inhabit the site by replacing the existing Phragmites with the growth of estuarine species such as smooth cordgrass, salt hay grass and spike grass. In turn, this will improve foraging opportunities as well as habitat. The proposed project will not adversely affect the threatened and endangered species and/or habitat in the surrounding adjacent freshwater wetlands and upland areas. The excavation of existing Phragmites and the reoccurrence of tidal flow into the salt marsh will have a positive effect on the project area because it will improve the diversity and value of vegetation so as to enhance fish and wildlife habitat.

This Federal Consistency Determination is consistent with New Jersey's Coastal Zone Management Rules (N.J.A.C. 7:7E-1.1) provided the following conditions are met:

- **Inundation must stay within the extent of the proposed tidal inundation as shown on the photo provided and agreed upon by the Department and the ACOE. A long-term monitoring program must be developed in order to insure inundation does not exceed its proposed limits and does not have adverse impacts to woodland areas around the perimeter of the marsh. During the next phase of design for this project a three to five year proposed and post-project monitoring plan must be developed and submitted to the Program for review and approval. The monitoring plan must include provisions for corrective measures if the inundation exceeds the extent expected.**

Dunes (N.J.A.C. 7:7E-3.16) & Vegetation (N.J.A.C. 7:7E-8.8) & Beaches (N.J.A.C. 7:7E-3.22)

Development is prohibited on dunes, except for development that has no practical or feasible alternative in an area other than a dune, and that will not cause significant adverse long-term impacts on the natural functioning of the beach and dune system, either individually or in combination with other existing or proposed structures, land disturbances or activities.

Vegetation is the plant life or total plant cover that is found on a specific area, whether indigenous or introduced by humans. Coastal development shall preserve, to the maximum extent practicable, existing vegetation within a development site. Coastal development shall plant new vegetation, particularly appropriate native coastal species, to the maximum extent practicable.

Development is prohibited on beaches, except for development that has no prudent or feasible alternative in an area other than a beach, and that will not cause significant adverse long-term impacts to the natural functioning of the beach and dune system, either individually or in combination with other existing or proposed structures, land disturbances or activities.

The Pond Creek Salt Marsh restoration project has no other practical alternative other than to disturb the existing dune and dune vegetation. However, the proposed disturbance is the minimum necessary for the project. The new channel alignment will be more in alignment with the historic alignment of Pond Creek and provide for the restoration of the marsh. The proposed project involves the creation of a new beach and dune where the existing channel flows into the Delaware Bay. Dredged material taken from the new inlet will be used to create the new beach and the new dune will be created using material removed from the existing dune where the new inlet will be located. The excavation of the new inlet through the beach / dune system will involve the loss of 0.9 acres of beach and dune. The project will create 1.2 acres of new beach / dune system at the existing inlet. As a result, there will be a net increase of 0.3 acres of beach/dune system created by this project. In addition, native vegetation will be planted on newly constructed dunes and sand fencing will be installed on the dunes in accordance N.J.A.C. 7:7E-3A.

The proposed beach fill at the existing inlet must have a comparable berm width and height as the surrounding beaches. The proposed jetties are to be constructed at grade with the existing beach height so as not to interfere with the longshore drift and current of the Delaware Bay.

This Federal Consistency Determination is consistent with New Jersey's Coastal Zone Management Rules (N.J.A.C. 7:7E-1.1) provided the following conditions are met:

- **All newly created dune areas must be vegetated with appropriate coastal species to stabilize the area. A site-specific vegetative restoration plan must be submitted to the Program for review and approval.**

- **The proposed beach fill at the existing inlet must have a comparable berm width and height as the adjacent surrounding beaches. A design plan must be submitted to the Program for review and approval.**

- **The proposed jetties are to be constructed at grade with the existing beach height so as not to interfere with the longshore drift and current of the Delaware Bay. A design plan must be submitted to the Program for review and approval.**

- **Prior to final design, all required documents must be provided for Program concurrence to demonstrate that the project remains consistent with New Jersey's Coastal Zone Management Rules N.J.A.C. 7:7E-1.1 et seq, as amended to March 3, 2003.**

If you have any questions regarding this letter please do not hesitate to call Meg Cuccuini of our staff at (609) 984-0288.

Sincerely,

Mark N. Mauriello, Director
Land Use Regulation Program

12/1/2005
Date

cc: Kim Springer, NJDEP, Office of Coastal Planning