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New England District

News release

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City of Easthampton, Corps of Engineers propose plan to restore Nashawannuck Pond

CONCORD, Mass. – The city of Easthampton and the U.S. Army Corps of Engineers, New England District are proposing a plan to restore the aquatic habitat of Nashawannuck Pond located in Easthampton, Mass. The proposed Nashawannuck Pond Habitat Restoration Project will involve work in navigable waters of the United States. Public comments on this proposal will be accepted by the Corps of Engineers through July 18, 2008.

“The restoration will be accomplished by removal of approximately 55,000 cubic yards of material from the pond in order to restore it to recent historic depths,” said Project Manager Robert Russo, of the Corps’ New England District, Engineering/Planning Division. “The material will be removed by dry excavation, after draining the pond, using land-based excavation equipment and then trucked to a city-owned field approximately 1.1 miles from the pond.”

Nashawannuck Pond is a man-made impoundment located in the city of Easthampton within the Connecticut River Basin, formed at the confluence of Broad Brook and White Brook. The pond has an area of approximately 31 acres with a shoreline length of approximately 2.3 miles.

“The project’s purpose is to restore the degraded aquatic habitat of Nashawannuck Pond which has resulted from sedimentation,” Russo said. The upper coves of Broad and White Brooks, which feed into Nashawannuck Pond, exhibit an advancing front of wetland expansion associated with the sedimentation in the pond that has reduced the deepwater habitat and provided a substrate favorable for excessive aquatic weed growth.

The loss of open water habitat associated with the advancing eutrophication is compromising the health of fisheries and water quality in the pond. The dense aquatic weed growth is contributing to the degradation of fish habitat. Very dense stands of aquatic weeds can

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obstruct fish movements and have been documented to cause fish kills by creating an anoxic environment at night when photosynthetic production of oxygen stops. If left unchecked, this weed growth will continue to diminish fisheries habitat in the pond. In addition, the overgrowth of weeds inhibits the use of the pond as a recreational resource for the city.

Project alternatives examined by the study team included no action, weed harvesting, seasonal drawdown for weed control, water level increase, herbicide treatment, hydraulic dredging, and partial drawdown with mechanical excavation.

“The proposed restoration approach would remove approximately 55,000 cubic yards of fine-grained sediment from the pond while the pond is fully drained,” Russo said. The limits of the excavation would be to a depth of 12 feet focusing primarily upon the White Brook and Broad Brook cove areas, extending northward to the section of the pond approximately in line with Orchard Street.

A 25-50 foot wide no dredge area around the perimeter of the pond will generally be maintained in order to preserve shallow water habitat, with the exception of the southern end of the pond where the macrophyte (large plants, as opposed to algae) growth is densest. The perimeter sections within the north portion of the pond will be dredged as well. Certain coves will be excluded from the proposed dredging due to the presence of other wildlife habitat features, which include snags, bottom structure and other desirable aquatic and wildlife habitat features.

Initially, the pond would be drawn down to a depth of about 8 feet by lowering the bascule gate at the spillway, and then completely drained by opening one or more of the sluice gates at the side of the dam.

After drawdown, the exposed sediments would be allowed to dewater for a period of up to 3 months prior to beginning the actual excavation. Existing flows from both Broad and White Brooks will either be diverted away from the sediments to be excavated by installing a temporary weir at each inflow and using flexible piping to re-direct the flows to the dam’s discharge; or by excavating a central channel through the pond prior to complete drawdown and using silt fencing to control turbidity. In addition, a temporary weir would be installed at the upstream side of the culvert connecting Nashawannuck Pond to Rubber Thread Pond on the northwest. The weir

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would maintain the pond's flow into Nashawannuck Pond, while preventing the bottom sediment from migrating from Rubber Thread Pond. The outflow from this pond would also be diverted away from the excavation area.

During construction the sluice gates would be adjusted to discharge a minimum outflow equal to the inflow of the three tributaries in order to maintain downstream aquatic life.

"The primary advantage of dredging the pond with the water level drawn down is that the material can be accessed much more easily than other dredging methods allowing a more effective removal of the fine sediments," Russo said.

In addition, the drawdown will expose large amounts of the excessive rooted aquatic vegetation to desiccation or freezing during the winter which will further aid in their control. Also with the pond de-watered, the bathymetry of the pond can be modified easily in order to provide the fish habitat features either by excavating depressions, or creating mounds of rock or cobbles along the pond bottom.

At the completion of the mechanical excavation, the sluice gates will be closed to the minimum amount possible in order to maintain a downstream flow, and the bascule gate will be raised to its normal elevation, allowing the pond to refill. It is anticipated that the refilling of the pond will take approximately three months. A private contractor under supervision of the Corps will conduct the work.

An Environmental Assessment of the proposed work is being prepared and will be available for public review. Due to the disturbed nature of the project area, no Federal or State-listed threatened, endangered, or rare species are known to inhabit the project area. No significant archeological resources were identified during these investigations.

The proposed project is being coordinated with the following Federal, state and local agencies: U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, the Massachusetts Division of Fisheries and Wildlife, the Massachusetts Department of Environmental Protection, the Massachusetts State Historical Preservation Office, and the city of Easthampton.

The public notice is available for review on the Corps website at <http://www.nae.usace.army.mil>. Select "projects" and the scroll to the Nashawannuck Pond Habitat Restoration Project.

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Public comments on this proposed project should be forwarded no later than July 18, 2008 to the U.S. Army Corps of Engineers, New England District, Engineering/Planning Division (ATTN: Mr. Robert Russo), 696 Virginia Road, Concord, MA 01742-2751.

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