



US Army Corps
of Engineers®
New England District

Engineering/Planning
696 Virginia Road
Concord, MA 01742

PUBLIC NOTICE

Date: 18 June, 2008
Comment Period Ends: 18 July, 2008
In Reply Refer To: Robert Russo
Or by e-mail: robert.s.russo@usace.army.mil

30-DAY PUBLIC NOTICE

Nashawannuck Pond Restoration Easthampton, Massachusetts

Interested parties are hereby notified that the city of Easthampton, and the U.S. Army Corps of Engineers, New England District (Corps), plan to restore the aquatic habitat of Nashawannuck Pond located in Easthampton, Massachusetts. The project will involve work in the navigable waters of the United States. 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. 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 1-1/8 miles from the pond. The restoration of Nashawannuck Pond in Easthampton, Massachusetts is authorized by the Continuing Authorities Program for Aquatic Ecosystem Restoration, Section 206 of the Water Resources Development Act of 1996 (P.L. 104-303). Attachment No.1 lists pertinent laws, regulations, and directives.

Project Description: 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 (Figure 1). The pond has an area of 31± acres with a shoreline length of 2.3± miles. The project's purpose is to restore the degraded aquatic habitat which has resulted from sedimentation.

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 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 Nashawannuck Pond. In addition to the issues noted above, the overgrowth of weeds is aesthetically unappealing and inhibits the use of Nashawannuck Pond as a recreational resource for the city of Easthampton.

The proposed restoration approach would remove approximately 55,000 cubic yards (CY) of fine-grained sediment from Nashawannuck Pond while the pond is fully drained. 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. 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.

The recommended method for sediment removal at Nashawannuck Pond is complete drainage of the pond with mechanical excavation (using land based excavation equipment) of the exposed sediments. The sediments would be loaded onto trucks at a staging area located on the southwest side of the pond near the inflow of White Brook, and then hauled to a city owned upland (non-wetland) disposal area located approximately 1-1/8 miles (mi) to the southwest (See Figure 2). Initially the pond would be drawn down to a depth of approximately 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 (See Map, Figure 1). The weir would maintain the pond's flow into Nashawannuck Pond, while preventing the bottom sediment migrating from Rubber Thread Pond. The outflow from this pond would also be diverted away from the excavation area as described above.

During construction the sluice gates will 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. 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 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 of Engineers will conduct the work.

Project Alternatives:

Based on the opportunities presented by the site and the design constraints pertaining to it, several restoration alternatives were developed. These alternatives included:

A. No Action: Under the No Action Alternative, the pond would continue to fill in with the progressive growth of aquatic vegetation fueled by the existing nutrient rich sediments. There would be no fisheries habitat improvements, but rather an expected decline in the quality of the fisheries habitat due to associated water quality impacts. Therefore this alternative was not selected.

B. Weed Harvesting: This would be done periodically throughout the summer using a mechanical weed harvester; however it would only result in temporarily reducing the weed cover, without removing the sediment which is helping to promote the excessive weed growth. This would also not address the loss of deeper water habitat which has resulted from the ongoing sedimentation. Therefore this alternative was not selected.

C. Seasonal Drawdown for Weed Control: In this alternative, the water in the pond would be drawdown each winter in order to expose the plants and their roots to desiccation and freezing. This would aid with their control, but would not remove the sediment which is helping to promote the excessive weed growth in the pond. As with the weed harvesting, it would need to be done each year in order to maintain effective control. In addition it would not address the loss of the deeper water habitat which has resulted from the sedimentation. Therefore this alternative was not selected.

D. Water Level Increase: Under this alternative, the intent would be to alter the dam structure such that the water level of Nashawannuck Pond would be elevated, deepening the pond and placing more pond bottom beyond the depth of the photic zone (the depth zone to which sunlight penetrates allowing plants to grow). However, existing shoreline development with residential properties and the configuration of the dam limit the potential modification of the water level to only about 1 foot above existing elevations, which would only provide an increase of approximately 1.5 acres of improvement (i.e. water deep enough to prevent the weed growth). Also this alternative would not remove the sediments which are helping to promote the excessive weed growth. Therefore this alternative was not selected.

E. Herbicide Treatment: Under this alternative, habitat restoration within Nashawannuck Pond would be attempted via reduction of excessive aquatic macrophyte growth by use of annual herbicide treatments. This process would cause partial die-off of the vegetation, adjusting the concentration of herbicides to the level that would reduce aquatic weeds between 70 and 90% of existing densities. The area of effect would be virtually the entire pond, except where the depth of the pond currently limits aquatic macrophyte growth. However, this alternative does not address the sedimentation which is responsible for the shallower depths and increased nutrients which are contributing to the production of the excessive weed growth. In addition, this treatment would also need to be done on either an annual or bi-annual basis. Therefore this alternative was not selected.

F. Hydraulic Dredging: In this alternative the pond would be dredged using a hydraulic dredge. The hydraulic dredging process would not require the draw down of the pond's water level, but would utilize a barge mounted moveable boom with a cutter head and suction line attached. The cutter head would be lowered to the pond's bottom, and a sediment water slurry (which is approximately 90% water) would be drawn by a series of pumps through the suction line and pumped to either a belt filter press dewatering facility, or a sediment dewatering containment area a distance from the pond. In all variations of this form of dredging, the extremely fine consistency of the sediments precluded a practical means of dewatering them

by either mechanical dewatering equipment, or construction of an adequate dewatering/containment facility. Due to the lack of cost effectiveness, this alternative was dropped from further consideration.

G. Partial Drawdown with Mechanical Excavation: In this alternative, the pond would be drawn down to maintain a pool approximately 6 foot deep. The exposed sediments would be removed using mechanical excavators, then loaded onto trucks and hauled to a City owned upland disposal area located approximately 1-1/8 miles (mi) to the southwest. The approximately 6 foot deep pond would comprise an area of approximately four acres in the north end of the pond (near the outflow) which would provide a temporary fish holding area. Initially the pond would be drawn down to a depth of approximately 8 feet by lowering the bascule gate at the spillway, and then to a depth of approximately 6 feet by opening one or more of the sluice gates at the sides of the dam. Water would be diverted from the inflows of Broad and White Brooks, as well as from Wilton Brook (which is the inflow to Rubber Thread Pond), by the construction of temporary weirs at their inflows to Nashawannuck Pond, and channeling their flows through flexible piping and into the temporary holding pond. The sluice gates at the dam discharge would be adjusted to maintain the temporary level of the holding pond, while still allowing downstream flow from the inflows.

Disadvantages of this alternative include the difficulty in maintaining the level of the temporary holding pool with the existing sluice gates, as well as the potential for fish stress due to oxygen depletion and excessive warming in the smaller pool during the summer months. In addition, there would be a high cost associated with installing weirs and pipes at the upstream inflows in order to divert the flows around the work area into the pond. Due to these reasons, this alternative was not selected.

All of the above alternatives were screened for effectiveness, practicability, general engineering and cost feasibility, and acceptability. After considering these alternatives and comparing them with the overall environmental benefits, impacts and practicality of all the alternatives, the plan to drain the pond and mechanically excavate the sediments was selected.

Purpose and Need for Work: The purpose of the project is to improve aquatic habitat by removing the fine sediment that has accumulated in the pond, reduced the average depth, and contributed to increased aquatic vegetation. The excessive aquatic vegetation is impacting water quality and reducing open and deep water fish habitat. If the work is not done, it is expected that the pond will continue to fill in with resulting degradation of water quality and fish habitat.

Additional Information: Additional information may be obtained from the Engineering/Planning Division of the U.S. Army Corps of Engineers, Mr. Kenneth Levitt, Biologist, and Mr. Robert Russo, Project Manager, at the return address shown, telephone numbers (978) 318-8114/8553, respectively. Collect calls will be accepted weekdays between 9:00 a.m. and 3:00 p.m.

Coordination:

The proposed work is being coordinated with the following Federal, State, and local agencies.

Federal

U.S. Fish and Wildlife Service
U. S. Environmental Protection Agency

Commonwealth of Massachusetts

Division of Fisheries and Wildlife
Department of Environmental Protection
State Historical Preservation Office (MA SHPO)

Local

City of Easthampton

Other Information: Local sponsor(s): The city of Easthampton is the local sponsor for the proposed project.

Endangered Species: 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. The U.S. Fish and Wildlife Service states that there are no federally-listed or proposed threatened or endangered species within the project area. The Massachusetts Division of Fisheries and Wildlife have concurred that, no state listed threatened or endangered species are expected to occur in the project area. A preliminary determination indicates that the proposed activity will not affect any endangered species or critical habitat designated as endangered or threatened pursuant to the Endangered Species Act of 1973 (83 Stat. 844), therefore, no impacts to such species are anticipated.

Cultural Resources: The work will be coordinated with the Massachusetts Historical Preservation Officer (MA SHPO) in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. An archaeological survey of the proposed disposal site together with a walkover of the pond area was conducted by our contractor, The Public Archaeology Laboratory, during April and May, 2008. No significant archaeological resources were identified during these investigations. Currently we are awaiting a draft report of the results which, when finalized, will be submitted to the MA SHPO and Tribes for review and concurrence. At this time, no further work is anticipated. We expect the MA SHPO to concur with this determination that no further archaeological investigation is required.

Federal Permit Requirements: An application will be submitted to the Commonwealth of Massachusetts Department of Environmental Protection under Section 401 of the Clean Water Act of 1977 (P.L. 95-217). A Section 404(b)(1) evaluation, pursuant to the Clean Water Act will be provided as an Attachment to the draft Environmental Assessment.

Floodplain Management: In accordance with Executive Order 11988, the Corps of Engineers has determined that the proposed project will not contribute to negative impacts or damages caused by floods.

Additional Requirements: None

Environmental Impacts: The principal environmental effects of the proposed habitat restoration project at Nashawannuck Pond will be beneficial to the water body itself and to the surrounding ecosystem. The existing loss of water depth within the pond is due to sediment infilling and organic accumulation and excessive aquatic macrophyte growth that has choked the remaining open water and has diminished aquatic habitat values, but not added comparable wetland wildlife habitat value. The objectives of the habitat restoration for the Nashawannuck Pond ecosystem are to:

1. Restore areas of open water aquatic habitat with a depth sufficient to discourage dense aquatic weed growth;
2. Enhance total aquatic habitat for finfish species;

The mechanical excavation project will achieve project goals, yielding increased pond depths, with much of the dredged portions with the bottom below the photic zone. This reduction of the pond bottom within the photic zone will lessen the ongoing excessive aquatic macrophyte infestation, which degrades the aquatic habitat. The removal of the surficial sediments will also remove an internal nutrient source that fuels the growth of the aquatic macrophytes. An increase in pond depth throughout selected areas will provide open, deeper water habitat essential for improving the diversity of fisheries.

The long-term environmental effects of dredging are positive and in agreement with State and Federal water quality acts. However, there will be short-term environmental impacts during the construction phase of the project. These include temporary drying of the adjacent wetland vegetation along the shallower areas near the inflows of Broad and White Brooks. The proposed work is not expected to have any long-term adverse impacts on the general environment of Nashawannuck Pond. During the project the existing flows from Broad, White and Wilton Brooks will be diverted around the construction area to the dam's discharge, maintaining downstream flows in Broad Brook. Upon completion of the project, the sluice gates will be closed (while still allowing downstream flow) and the pond will be allowed to refill. The pond will then be restocked with trout and (other fish species). Local runoff will also be managed in order to prevent downstream water quality impacts. Affected emergent wetland vegetation near the inflows of Broad and White Brooks is expected to recover once the water level has been restored.

An Environmental Assessment of the proposed work is being prepared and will be available for public review. Copies of the Environmental Assessment may be obtained by calling Mr. Robert Russo at the number given above. I have made a preliminary determination that an Environmental Impact Statement for the proposed pond restoration is not required under the provisions of the National Environmental Policy Act of 1969. This determination will be reviewed in light of facts submitted in response to this notice, and if appropriate, a Finding of No Significant Impact (FONSI) will be developed.

The decision whether to perform the work will be based on an evaluation of the probable impact(s) of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits that reasonably may be expected to accrue from the proposal will be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered; among these are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use classification, and the public welfare.

Comments: Any person who has an interest that may be affected by the proposed Nashawannuck Pond Restoration project may request a public hearing. The request must be submitted in writing to me within 30 days of the date of this notice and must clearly set forth the interest that may be affected and the manner in which the interest may be affected by this activity.

Please bring this notice to the attention of anyone you know to be interested in this project. Comments are invited from all interested parties and should be directed to me at, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts, 01742-2751, ATTN: Engineering/Planning Division, Robert Russo within 30 days of this notice.

16 Jun 08
Date

For  LTC, ER Deputy commander
Curtis L. Thalken
Colonel Corps of Engineers
District Engineer

Attachments

ATTACHMENT NO. 1

PERTINENT LAWS, REGULATIONS AND DIRECTIVES

American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996.

Archaeological Resources Protection Act of 1979, as amended, 16 U.S.C. 470 et seq.

Clean Air Act, as amended, 42 U.S.C. 7401 et seq.

Clean Water Act of 1977 (Federal Water Pollution Control Act Amendments of 1972)
33 U.S.C. 1251 et seq.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.

Federal Water Project Recreation Act, as amended, 16 U.S.C. 4601-12 et seq.

Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661 et seq.

Land and Water Conservation Fund Act of 1965, as amended, 16 U.S.C. 4601-1

National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321 et seq.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq.

Preservation of Historic and Archaeological Data Act of 1974, as amended, 16 U.S.C. 469 et seq.
This amends the Reservoir Salvage Act of 1960 (16 U.S.C. 469).

Watershed Protection and Flood Prevention Act, as amended, 16 U.S.C. 1001 et seq.

Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271 et seq.

Executive Order 11988, Floodplain Management, May 24, 1977 amended by Executive
Order 12148, July 20, 1979

Executive Order 11990, Protection of Wetlands, May 24, 1977

Executive Order 11593, Protection and Enhancement of the Cultural Environment,
13 May 1971 (36 FR 8921, May 15, 1971).

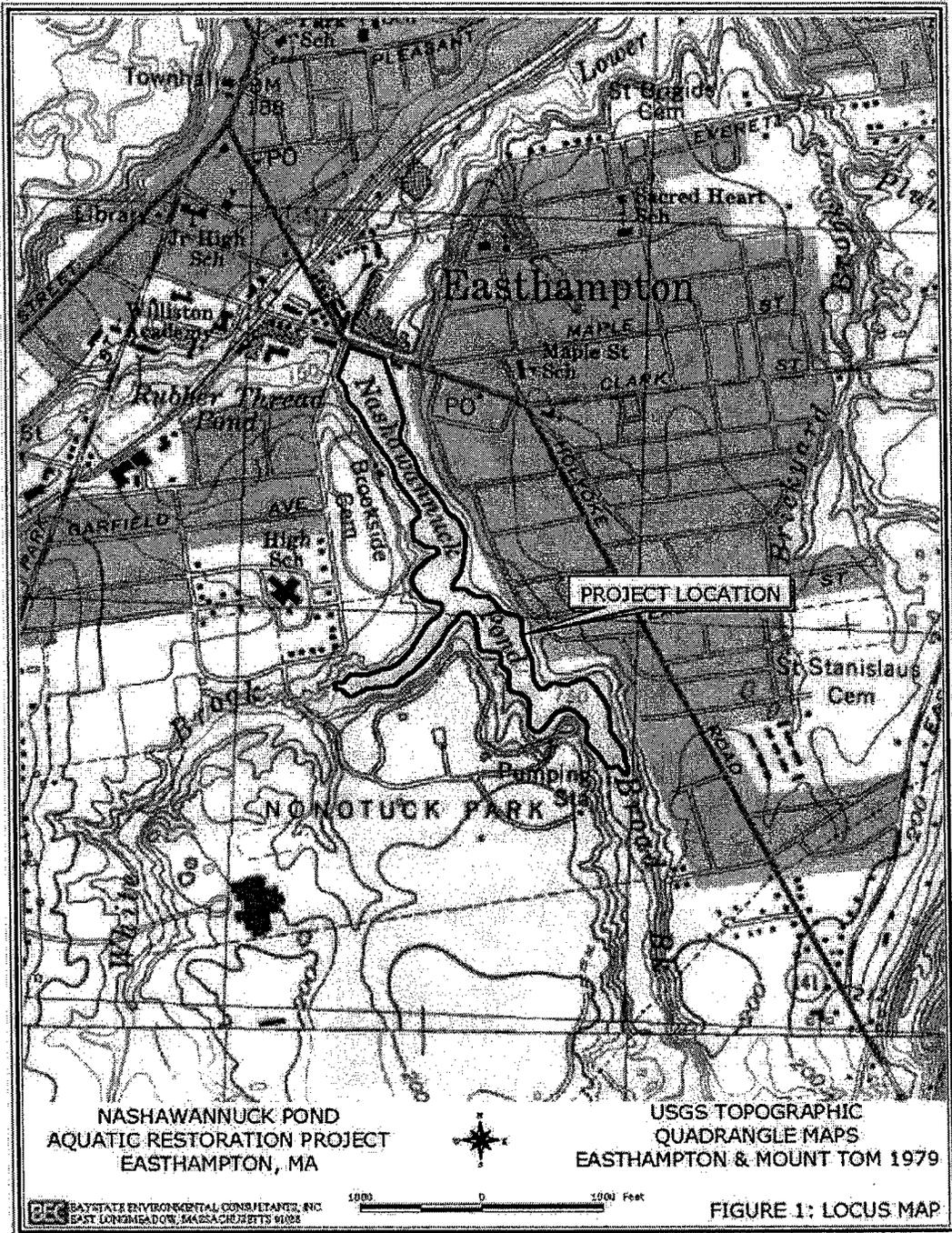
Executive Order 13007, Accommodations of Sacred Sites, May 24, 1996.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority
Populations and Low-Income Populations, February 11, 1994.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety
Risks, April 21, 1997.

White House Memo., Government-to-Government Relations with Indian Tribes, April 29, 1994.

Figure 1-1 Locus Map



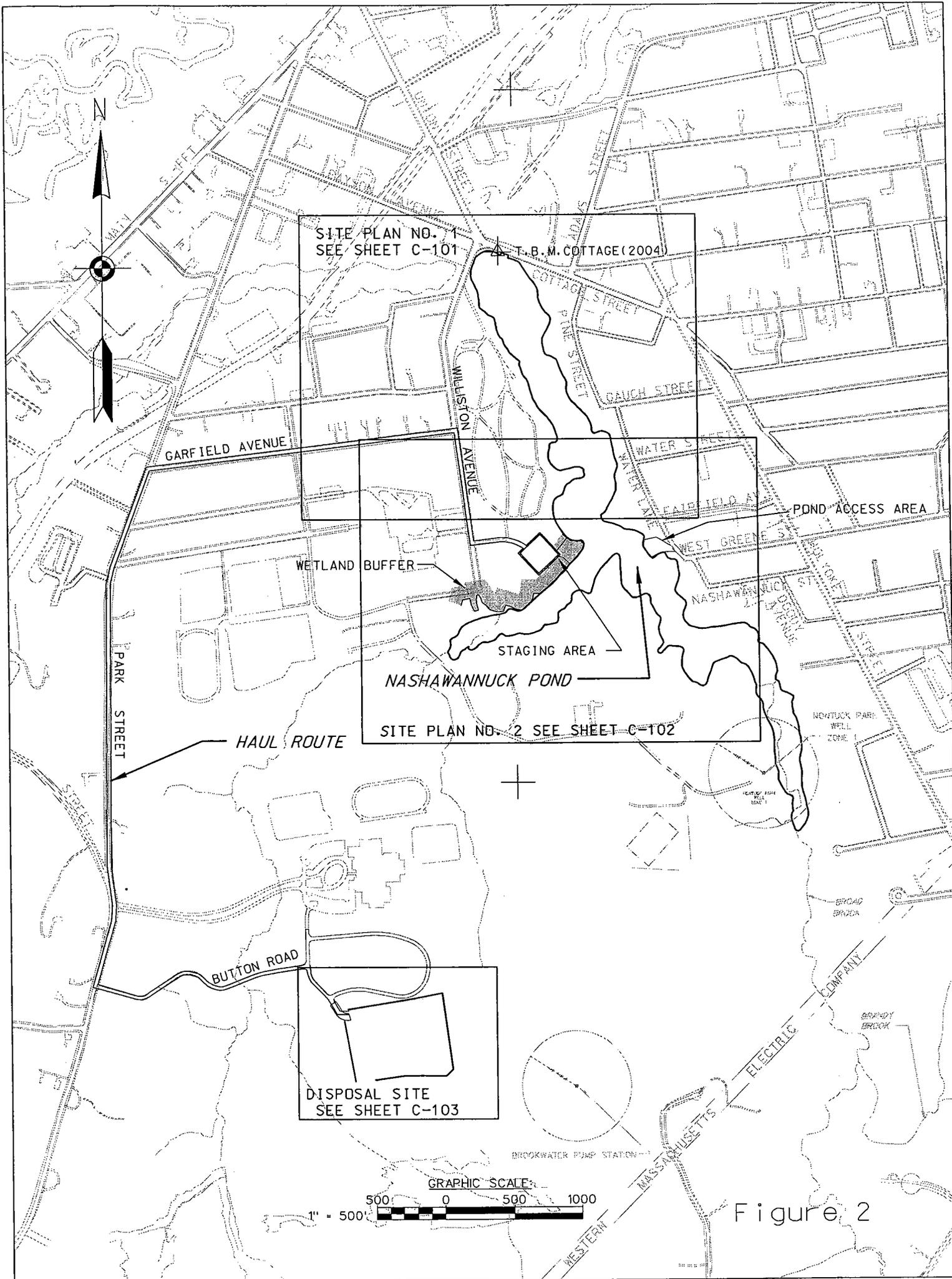


Figure 2