

Appendix A- Coordination Done for 2005 EA
(Letters Sent)

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April 5, 2002

Engineering/Planning Division
Planning Branch

Name:
Agency
Address:
City/State:

Dear :

The U.S. Army Corps of Engineers, New England District (Corps) would like to invite a member of your staff to a Coordinated Site Visit for the Milford Pond Ecosystem Restoration Project in Milford, Massachusetts, on Tuesday, May 7, 2002, at 10:00 A.M. We will meet at the Italian American Veteran's Hall, Hayward Park, off East Main Street (Route 16), first to introduce the project's parameters, and then view the project and conduct an onsite discussion.

The Board of Selectmen, in a letter dated April 19, 2001, requested that the Corps initiate a Water Resources Development Act of 1996, Section 206 Aquatic Ecosystem Restoration project for the Milford Pond. The project would investigate and identify appropriate alternative(s) to restore the ecology and health of the 120-acre degraded freshwater pond. The maximum depth of the pond has decreased to approximately two (2) feet resulting in the eutrophication of the pond and extensive growth of emergent vegetation. The emergent vegetation is decreasing the open water habitat, and the pond is slowly reverting to a marsh. The purpose of this letter is to initiate study coordination on the proposed project. A map and Preliminary Restoration Plan are included to assist you with your work.

The pond is impounded by a small low-head masonry dam which was constructed in 1938 for flood control. The pond surface area is approximately 120 acres and inflows come from Louisa Lake and eighteen storm overflow pipes located around the pond. The pond has a watershed area of approximately 5,100 acres, comprised of urban and light residential developments and wooded areas. Numerous parks surround Milford Pond, and Clark Island is located in the middle of the pond. The Milford Water Company operates a series of water supply wells in the northern section of the pond.

The goals of the study are to characterize existing conditions and identify alternatives for ecosystem restoration of Milford Pond. Restoration of the pond may be accomplished by the removal of accumulated sediment from about 45 acres of the pond. The complete project will restore deep-water habitat (12 feet deep), shallow littoral areas, and emergent wetlands. The project will result in the restoration of habitat suitable to support warm water fish species.

We look forward to your contribution towards the development of an appropriate alternative(s) for this aquatic restoration project. Any questions or comments can be directed to Mr. Ken Levitt, Environmental Resources Section, at (978) 318-8114 or the study manager, Mr. Michael Tuttle, at (978) 318-8677.

Sincerely,

David L. Dulong, P.E.
Chief, Engineering/Planning Division

Enclosures

CF:

Dr. Lias
✓ Mr. Tuttle
Mr. Levitt
Eng/Plng Files

Same Letter Sent To:

Ms. Christine Player
Department of Environmental Management,
Waterways Division
349 Lincoln Street, Building 45
Hingham, MA 02043

Mr. Michael Stroman, Program Chief
Division of Watershed Management
Massachusetts Department of Environmental Protection
627 Main Street
Worcester, MA 01608

Ms. Marielle Stone, Wetland Program Coordinator
Massachusetts Department of Environmental Protection
Central Regional Office
627 Main Street
Worcester, MA 01608

Mr. Robert A. Durand, Secretary
Executive Office of Environmental Affairs
MEPA Office
100 Cambridge Street
Boston, MA 02202

Ms. Linda Murphy, Director
Massachusetts Office of Ecosystem Protection
EPA – New England, Region 1
One Congress Street, Suite 1100
Boston, MA 02114-2023

Ms. Cynthia Giles, Director
Bureau of Resource Protection
Massachusetts Department of Environmental Protection
One Winter Street, Floor 5
Boston, MA 02108

Mr. Robert Zimmerman, Jr., Executive Director
Charles River Watershed Association
2391 Commonwealth Avenue
Auburndale, MA 02466-1773



**BAYSTATE
ENVIRONMENTAL
CONSULTANTS
INC.**

Civil Engineers
Environmental
Scientists

February 27, 2003

Ms. Brona Simon
State Archaeologist
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

Dear Ms. Simon:

The Town of Milford, Massachusetts is proposing a project to restore aquatic habitat in Milford Pond. Baystate Environmental Consultants, Inc. is currently preparing a draft Environmental Assessment, funded by the US Army Corps of Engineers, presenting several restoration options, including dredging of the pond bottom and dam removal. The preferred alternative is hydraulically dredging approximately 45 acres of the pond, which has never been previously subject to hydraulic dredging.

In September of 2000, MHC was contacted regarding the presence of historic and archaeological resources in the vicinity of Milford Pond in the Town of Milford, Massachusetts, as research for the Environmental Notification Form (ENF) process. The response to the September, 2000 letter, dated October 27, 2000, as well as the response to the ENF (December 8, 2000), stated that the project area is located in the vicinity of a recorded archaeological site (MIL-HA-2), the structural foundation remains of the Louisa Lake Ice Company located on the northwest side of Dilla Street, adjacent to Louisa Lake; and Pine Grove Cemetery (MIL.801). MHC requested that further information regarding the proposed dewatering site be submitted when available for the evaluation of the presence of any significant historic or archaeological resources there.

Enclosed is a section of the USGS quadrangle map and larger-scale project plans, which describes the proposed dewatering site. An aerial photograph is also included. Any written input the Massachusetts Historical Commission could provide regarding historical or archaeological resources within the project area would be greatly appreciated. Should you have any questions regarding this project, please feel free to contact our office at your earliest convenience.

Very truly yours,

BEC, Inc.

Rosalie T. Fauteux
Environmental Engineer

Enclosures

Cc: Michael Tuttle, US ACOE

296 North Main Street
Longmeadow, MA 01028
Tel (413) 525-3822
Fax (413) 525-8348

Other Office:
East Hartford, CT



March 22, 2005

Tuttle/emm/677

Engineering/Planning Division
Evaluation Branch

Mr. Matthew Schweisberg, Wetlands Protection Unit
U.S. Environmental Protection Agency, Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Dear Mr. Schweisberg:

This letter is in response to your agency's concerns of the proposed aquatic habitat restoration efforts for Milford Pond, Milford, Massachusetts, as outlined in your letter dated January 7, 2005. We share your concern for the quality of habitats in the Charles River watershed and our responses are provided in that context.

Our responses are as follows:

- Alteration of the Charles River – The existing dam was constructed circa 1938 as a Public Works Administration Project in response to the 1936 and 1938 flood events. The natural river ecosystem was altered by this construction activity creating a warm water pond species habitat. Although the construction of this dam artificially raised the water level of Milford Pond, the area had historically been impounded due to the presence of a natural bedrock waterfall in the same location as the existing dam. This shallow impoundment supported the growth of wetland vegetation including Atlantic white cedar in its most upstream area, from which the pond's former name, Cedar Swamp Pond, was derived. Therefore, the habitat of Milford Pond historically existed as an area of shallow slower moving water rather than swifter flowing riverine habitat more typical of its downstream sections along the Charles River. As soon as fish passage is unimpaired to the base of the dam, the town of Milford has indicated a willingness to evaluate future ecological restoration efforts to restore a natural population of riverine fish species to the pond, and upstream areas of the Charles River, which may lead to the construction of a fish ladder at the dam. The present project does not preclude further ecological restoration in the future. Since there is no proposal to remove the dam, we have assessed the improvements to ecosystem quality relative to the existing degraded pond habitat.
- Flow Alteration – Our investigation showed that there are no flow altering operation procedures at the dam. Exercising the gate valves or the installation/removal of flashboards has not been performed for many years. As a result, the discharge is equal to inflow, except during floods when there's a small moderation of peak flows similar to the effects one would expect from an area of wetlands. Therefore, the dam does not significantly alter downstream flow. There would be no alteration of flow during the

construction phase. The proposed dredging methodology, hydraulic dredging, will not affect the surface water levels.

- Proposed 12-foot Depth – After completion of the dam in 1938, several sections of the pond had maximum depths ranging from 10 to 12 feet. These deep areas were located immediately upstream of the dam and east of Clark Island. The proposed dredging limit incorporates these historical areas, which we estimate to have covered 13 acres \pm . The proposed project encompasses an area of about 45 acres \pm . Approximately 28 acres \pm will have proposed depths in the range of 10 to 12 feet, which creates a larger area of open water habitat than historical records indicate by 15 acres \pm . We believe this increase in area of deepwater habitat is justified by the increase in fisheries habitat value it generates.
- Phosphorus – Under existing conditions, hydraulic residence times in Milford Pond are high during the summer months, ranging from 2 to 3 weeks during average monthly flows and approaching complete stagnation during very low flows. Consequently, hydraulic flushing is not the controlling factor regulating phytoplankton growth. As a result, the increases in hydraulic residence time due to dredging will have minimal effects. We agree that increasing depth without controlling phosphorus inflows will mean increased risks of phytoplankton blooms. However, our experience at some projects, such as Hop Brook Lake in Connecticut, which had chronic problems with algal blooms, was that removing nutrient-rich sediments, even without reducing high phosphorus loadings in inflowing streams, produced a marked reduction in the frequency and severity of algal blooms. Occasional algal blooms would not prevent the establishment and sustenance of a warm water fisheries habitat. Implementation of Best Management Practices (BMP) will reduce phosphorus levels in streams that flow into the pond and dredging will reduce existing and future accumulation of phosphorus in sediments at Milford Pond. We welcome any additional information that your agency has available on this issue.
- Best Management Practice – We agree that the Best Management Practices would only reduce the phosphorus input by 5 percent, however, any reduction in TP will increase the overall quality of all aquatic habitats existing within Milford Pond.
- Natural Heritage and Endangered Species Issue – Stated in your letter and identified in our report, the Massachusetts Natural Heritage and Endangered Species Program has identified habitat for four state-listed bird species in the project area: Common Moorhen, Least Bittern, Pied-billed Grebe and King Rail. We believe that the proposed project will improve the habitat for all these species. The Pied-billed Grebe, specifically, require open water for feeding as well as emergent marsh for nesting. The proposed dredging alternative will reduce the conditions favorable for the proliferation of the extremely thick mat of vegetation, which covers the pond during summer months. The dense vegetation reduces the open water habitat, and may interfere with the ability for these aquatic birds to swim and dive. The reduction

of this excessive vegetation as well as the deepening of the pond is expected to improve the overall habitat for these listed bird species and other avian species, which require open water as well as emergent wetland marsh habitat. The dredging will be limited to the area of the open water, which has become overgrown with vegetation (with the exception of a small area adjacent to the Town swimming pool) in order to maintain the emergent cattail marsh and near shore habitat. The proposed project creates a balanced diversity between open water (45 acres \pm), dense aquatic weed beds (42 acres \pm), emergent marsh wetland (37% \pm) and floating vegetated island (< 1.0 acres). Currently, the dense aquatic weed beds habitat covers about 80 acres \pm of the pond. The proposed dredging plans include gradual contours extending from the shallow areas to the maximum depths, in order to maximize the habitat potential for resident fish species while maintaining habitat for waterfowl and other water birds, many of which require shallower areas for feeding. The detailed Plans and Specifications will depict a buffer zone between the existing cattail dominated wetland habitat and the proposed dredging limits. The project would be constructed with gradual slopes and adequate setbacks in order to avoid slumping of the emergent marsh. In addition, provisions to prevent the disturbance of the floating vegetated islands will be incorporated into the detailed Plans and Specifications.

If you or your staff have any questions in regards to this letter or the Report findings, please feel free to contact the Project Manager, Mr. Michael Tuttle of my staff at (978) 318-8677.

Sincerely,

John R. Kennelly
Chief of Planning

Cc:
Mr. Levitt
✓ Mr. Tuttle
Reading File

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Ch
C/EP-VE
C/EP-V RR
C/EP-P JH

Appendix B

2005 EA Pertinent Correspondence

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087



November 19, 2004

Reference: Project Location
 Aquatic Habitat Restoration of Milford Pond Milford, MA

David Dulong
Engineering/Planning Division
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. Dulong:

This is in response to your letter requesting a final Fish and Wildlife Coordination Act report, as well as information on the presence of federally-listed and/or proposed endangered or threatened species, in relation to the proposed subject project.

Endangered Species Comments

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area. Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes our review of listed species and critical habitat in the project location and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Fish and Wildlife Coordination Act Comments

We have reviewed the Draft Environmental Assessment (DEA) for the Aquatic Habitat Restoration of Milford Pond. While the Service does not oppose the project, our preferred course of action would have been to remove the dam and restore the area to its historic cedar swamp condition, or to allow the wetland successional process to occur, which would have eventually resulted in the conversion of Milford Pond to an emergent wetland community.

We understand those alternatives were considered during the project planning process, and we accept the reasons why they could not be implemented. Therefore, the Service concurs with your Finding of No Significant Impact.

This concludes our Final Fish and Wildlife Coordination Act Report. These comments do not preclude future evaluation and recommendations by the U.S. Fish and Wildlife Service, pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 et seq.), should project specifics change.

Thank you for your coordination. Please contact us at 603-223-2541 if we can be of further assistance.

Sincerely yours,



William J. Neidermyer
Acting Supervisor
New England Field Office



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

March 5, 2003

Rosalie T. Fauteux
Environmental Engineer
Baystate Environmental Consultants, Inc.
296 North Main Street
East Longmeadow, MA 01028

RE: Milford Pond Restoration Project, Milford, MA. MHC #RC.27205. EOEA #12369.

Dear Ms. Fauteux:

Thank you for your inquiry to the Massachusetts Historical Commission (MHC) requesting information concerning the proposed project referenced above. The MHC has reviewed our files and the information that you submitted, including the location of the two sediment disposal areas.

After review of these materials, MHC has determined that the project as presently proposed is unlikely to affect any significant historic or archaeological resources. No further MHC review is required of the proposed project as planned.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), MGL c. 9, ss. 26-27C (950 CMR 71), and MEPA (301 CMR 11). Please contact me if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward L. Bell", written over a horizontal line.

Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission

xc:
Secretary Ellen Roy Hertzfelder, EOEA/MEPA Unit
DEP-CERO
Crystal Gardner, USACOE-NED-Regulatory
Kate Atwood, USACOE-NED
Milford Historical Commission

220 Morrissey Boulevard, Boston, Massachusetts 02125
(617) 727-8470 • Fax: (617) 727-5128
www.state.ma.us/sec/mhc



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

RE: Milford Pond Ecosystem Restoration
Milford, Massachusetts

May 13, 2002

David L. Dulong
Engineering/Planning Division
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. Dulong:

This responds to your April 5, 2002 letter requesting information on the presence of federally-listed and proposed, endangered or threatened species in relation to the proposal to conduct an Aquatic Ecosystem Restoration project for Milford Pond in Milford, Massachusetts. Our comments are provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

Based on information currently available to us, no federally-listed or proposed threatened or endangered species under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area. Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required. Should project plans change, or additional information on listed or proposed species becomes available, this determination may be reconsidered.

Thank you for your cooperation. Please contact me at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Philip Morrison
Wildlife Biologist
New England Field Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

January 7, 2005

John R. Kennelly
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Dear Mr. Kennelly:

We reviewed the draft *Detailed Project Report/Environmental Assessment For The Aquatic Habitat Restoration of Milford Pond*. We previously commented on this project in a May 29, 2002 letter to the Corps of Engineers.

The U.S. Environmental Protection Agency (EPA) has long worked with the state, local communities, and a variety of non-governmental organizations to restore the ecological integrity of the Charles River. Though we appreciate that the local sponsor, the town of Milford, wishes to re-create the open water impoundment principally to restore and enhance the town's recreation area, we remain concerned that the proposed project may in fact preclude future ecological restoration efforts designed to restore a natural population of riverine fish species. Our concerns are explained briefly below.

The natural river ecosystem was altered when the previous dam was constructed creating a five-foot deep impoundment. This alteration shifted the habitat in favor of warm water pond species and away from the natural fluvial species of fish which are consistent with the designated use goal for the Charles River as defined in the Massachusetts Surface Water Quality Standards. Headwaters and tributaries, when unimpaired, are dominated by fluvial fish, even in relatively low gradient reaches. The Milford Pond dam causes two direct degradations to river habitat. First, it causes a direct loss of physical river habitat; second it causes changes to the flow regime downstream. These changes include alterations to the frequency, duration, timing, magnitude, and duration of flows. All these flow characteristics are necessary to maintain a healthy downstream ecosystem. Restoration of headwater streams (returning them to their free-flowing condition as well as other land use improvements) can make a difference locally and downstream. The proposed project, with dredging up to a depth of 12 feet, would create a much deeper artificial pond within the river system and a further shift towards an unnatural dominance of warm water pond species in a riverine system.

The identified benefits of the project assume that eutrophication will not continue to be a significant problem in Milford Pond but a comprehensive analysis of the phosphorus-driven eutrophication has not been conducted. Current phosphorus loadings and ambient concentrations are well in excess of levels that will result in cultural eutrophication. While dredging would help

to reduce sediment sources of phosphorus and reduce macrophyte growth, it also would significantly increase the residence time. Without extensive reductions of phosphorus inputs, dredging would likely result in a shift from a macrophyte dominated system to a phytoplankton dominated system. The Best Management Practices identified for 10 of the 21 storm water outfalls discharging to Milford Pond are anticipated to result in only a 5% reduction of the annual load of phosphorus and there is no funding identified for even this small improvement.

Based on discussions with the Natural Heritage and Endangered Species Program, there appears to be a need for further assessment of the potential impact of the proposed project on the four state listed rare and endangered bird species that use the emergent vegetation that would be dredged in the 45-acre project area. For instance, the loss of floating emergent vegetation would likely decrease the foraging habitat available for the Pied-billed Grebe. The dredging of a 12-foot deep area adjacent to the cattail dominated wetlands could lead to slumping and erosion of the remaining wetlands. The current proposal also includes removal of the persistent emergent and floating leaved wetland near the swimming pool facility. The loss of this wetland area may also be detrimental for the listed bird species. The potential for detrimental impacts to the state listed species as a result of increased human recreation should also be assessed in the final report.

In addition, the final detailed project report should include an improved legible vegetation map (Figure 2-1), perhaps using a folded page or match line to avoid photo reduction which created a difficult to read vegetation key.

In conclusion, we believe that a more appropriate ecosystem restoration project might involve the following aspects: dredging to the original depth of five feet; provisions for maintaining flows downstream of the dam that mimic the natural hydrograph (for example, seasonal ABF recommendations of .5 cfs in the summer, 1.0 cfs in the fall/winter, and 4.0 cfs in the spring); and using a portion of the project funds to restore an amount of river habitat downstream that equates to the amount of habitat lost within the impoundment.

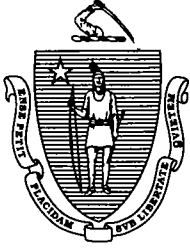
If you have any questions regarding our comments or wish to discuss our recommendations, please contact me at (617) 918-1628 or David Pincumbe at (617) 918-1695.

Sincerely,



Matthew Schweisberg
Manager, Wetlands Protection Unit

cc: Cynthia Giles, MADEP
Michael Stroman, MADEP
Lealdon Langley, MADEP
Yvonne Unger, MADEP
Dan Nein, MADFW - NHESP



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
251 Causeway Street, Suite 900
Boston, Massachusetts 02114-2119

BOARD OF
UNDERWATER
ARCHAEOLOGICAL
RESOURCES

Tel. (617) 626-1000
Fax (617) 626-1181

December 27, 2004

<http://www.magnet.state.ma.us/envir>

Colonel Thomas L. Koning
Engineering/Planning Division
US Army Corp of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

RE: Milford Pond Aquatic Ecosystem Restoration Project, Milford, Massachusetts

Dear Colonel Koning:

The staff of the Massachusetts Board of Underwater Archaeological Resources has completed its review of the above referenced project including a preliminary review of its files and secondary literature sources. The review was unable to identify any known or potential submerged cultural resources in the proposed project area of Milford Pond. However, in consideration of the recent discovery of three dugout canoes of possible Native American origin in a similar freshwater setting, the Board takes this opportunity to express its concern that heretofore-unknown cultural resources might be encountered during the course of work. The Board requests that the project's sponsor take steps to limit adverse affects and notify the Board, as well as other appropriate agencies, should historical or archaeological resources be encountered.

The Board appreciates the opportunity to review and comment on this proposed project. If you have any questions regarding this letter, please do not hesitate to contact me at the address above, by email at victor.mastone@state.ma.us or by telephone at (617) 626-1141.

Sincerely,

A handwritten signature in black ink, appearing to read "Victor T. Mastone".

Victor T. Mastone
Director

Cc: Brona Simon, MHC
Marcos Paiva





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

April 25, 2005

John R. Kennelly
Chief of Planning
Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Dear Mr. Kennelly:

Thank you for your March 22, 2005 letter responding to our concerns with the proposed Milford Pond dredging project that we outlined in our January 7, 2005 letter. Though we appreciate the additional insight relative to a number of issues, we remain concerned that this project would not result in restoration of the natural riverine habitat consistent with the goals of the Clean Water Act. Rather, the project would restore, and create new, artificial pond habitat in a riverine system. If dam removal is not an option at this time, we believe that the no action alternative should be given further consideration. The no action alternative would allow this system to continue the process of returning to a marshy riverine system similar to what existed prior to construction of the dam.

We are working with the Corps of Engineers (Corps) on a number of important riverine restoration projects, such as the Assabet River project, and it is our understanding that federal funds for these types of projects do not meet the existing demand. The limited federal funds for these types of projects make it imperative that the resource agencies coordinate efforts in order to maximize progress towards achieving the Clean Water Act goals. We look forward to continuing to work with the Corps of Engineers to identify and implement sound ecosystem restoration projects that will restore natural habitats.

Our detailed comments are outlined below:

1. The effects of dams on aquatic habitats is much greater than simply an issue of anadromous fish passage as suggested in the March 22, 2005 letter. Dams often result in the displacement of the natural riverine species of fish protected under the Clean Water Act with pond species of fish. It is unlikely that the natural bedrock waterfall that existed prior to construction of the dam represented a barrier to fish passage nearly as complete as the dam does. Removal of dams, and therefore restoration of riverine habitat, is crucial to restoring fishery resources.
2. While reference is made to the Corps experience with Hop Brook Lake in Connecticut and the water quality improvement that occurred after dredging, not enough waterbody and watershed information is provided to determine if this is an appropriate analogy. We continue to believe

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that, with only a 5% reduction in external loadings of phosphorus, partial dredging of the sediments that recycle phosphorus into the water column, and the increased hydraulic residence time that will result from the project, there is little basis for assuming that there will be a significant reduction in the frequency and severity of algal blooms.

3. Natural flow regimes in the Upper Charles River have been significantly altered due to water withdrawals, impervious surfaces, and the impoundment of surface waters. These alterations, which result in higher peak flows and reduced low flows, have a significant effect on the fishery resource. While we understand that there will be no flow altering operational procedures at the dam, increasing the hydraulic residence time of Milford Pond will increase evapo-transpiration and further reduce the low flows. The near stagnant conditions that occur in the system now during low flow periods will increase in frequency and duration. While the Corps indicates that the change in the hydraulic residence time is "minimal" compared to the existing hydraulic residence time, it is the accumulation of many small changes that has resulted in the current impaired system.

4. Our concern relative to the increased recreation that may occur as a result of this project and the effect it may have on the state listed species was not addressed in the Corps letter. We trust that this issue, as well as other issues related to the project's effects on the listed species, will be addressed by the Massachusetts Endangered Species and Natural Heritage Program.

If you have any questions regarding our comments or wish to discuss our recommendations, please contact me at (617) 918-1628 or David Pincumbe at (617) 918-1695.

Sincerely,



Matthew Schweisberg
Manager, Wetlands Protection Unit

cc: Michael Stroman, MADEP
Lealdon Langley, MADEP
Yvonne Unger, MADEP
Dan Nein, MADFW - NHESP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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BOSTON, MASSACHUSETTS 02114-2023

January 7, 2005

John R. Kennelly
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Dear Mr. Kennelly:

We reviewed the draft *Detailed Project Report/Environmental Assessment For The Aquatic Habitat Restoration of Milford Pond*. We previously commented on this project in a May 29, 2002 letter to the Corps of Engineers.

The U.S. Environmental Protection Agency (EPA) has long worked with the state, local communities, and a variety of non-governmental organizations to restore the ecological integrity of the Charles River. Though we appreciate that the local sponsor, the town of Milford, wishes to re-create the open water impoundment principally to restore and enhance the town's recreation area, we remain concerned that the proposed project may in fact preclude future ecological restoration efforts designed to restore a natural population of riverine fish species. Our concerns are explained briefly below.

The natural river ecosystem was altered when the previous dam was constructed creating a five-foot deep impoundment. This alteration shifted the habitat in favor of warm water pond species and away from the natural fluvial species of fish which are consistent with the designated use goal for the Charles River as defined in the Massachusetts Surface Water Quality Standards. Headwaters and tributaries, when unimpaired, are dominated by fluvial fish, even in relatively low gradient reaches. The Milford Pond dam causes two direct degradations to river habitat. First, it causes a direct loss of physical river habitat; second it causes changes to the flow regime downstream. These changes include alterations to the frequency, duration, timing, magnitude, and duration of flows. All these flow characteristics are necessary to maintain a healthy downstream ecosystem. Restoration of headwater streams (returning them to their free-flowing condition as well as other land use improvements) can make a difference locally and downstream. The proposed project, with dredging up to a depth of 12 feet, would create a much deeper artificial pond within the river system and a further shift towards an unnatural dominance of warm water pond species in a riverine system.

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In addition, the final detailed project report should include an improved legible vegetation map (Figure 2-1), perhaps using a folded page or match line to avoid photo reduction which created a difficult to read vegetation key.

In conclusion, we believe that a more appropriate ecosystem restoration project might involve the following aspects: dredging to the original depth of five feet; provisions for maintaining flows downstream of the dam that mimic the natural hydrograph (for example, seasonal ABF recommendations of .5 cfs in the summer, 1.0 cfs in the fall/winter, and 4.0 cfs in the spring); and using a portion of the project funds to restore an amount of river habitat downstream that equates to the amount of habitat lost within the impoundment.

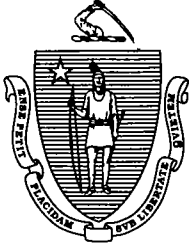
If you have any questions regarding our comments or wish to discuss our recommendations, please contact me at (617) 918-1628 or David Pincumbe at (617) 918-1695.

Sincerely,



Matthew Schweisberg
Manager, Wetlands Protection Unit

cc: Cynthia Giles, MADEP
Michael Stroman, MADEP
Lealdon Langley, MADEP
Yvonne Unger, MADEP
Dan Nein, MADFW - NHESP



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
251 Causeway Street, Suite 900
Boston, Massachusetts 02114-2119

BOARD OF
UNDERWATER
ARCHAEOLOGICAL
RESOURCES

Tel. (617) 626-1000
Fax (617) 626-1181

December 27, 2004

<http://www.magnet.state.ma.us/envir>

Colonel Thomas L. Koning
Engineering/Planning Division
US Army Corp of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

RE: Milford Pond Aquatic Ecosystem Restoration Project, Milford, Massachusetts

Dear Colonel Koning:

The staff of the Massachusetts Board of Underwater Archaeological Resources has completed its review of the above referenced project including a preliminary review of its files and secondary literature sources. The review was unable to identify any known or potential submerged cultural resources in the proposed project area of Milford Pond. However, in consideration of the recent discovery of three dugout canoes of possible Native American origin in a similar freshwater setting, the Board takes this opportunity to express its concern that heretofore-unknown cultural resources might be encountered during the course of work. The Board requests that the project's sponsor take steps to limit adverse affects and notify the Board, as well as other appropriate agencies, should historical or archaeological resources be encountered.

The Board appreciates the opportunity to review and comment on this proposed project. If you have any questions regarding this letter, please do not hesitate to contact me at the address above, by email at victor.mastone@state.ma.us or by telephone at (617) 626-1141.

Sincerely,

A handwritten signature in black ink, appearing to read "Victor T. Mastone".

Victor T. Mastone
Director

Cc: Brona Simon, MHC
Marcos Paiva



MassWildlife

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

January 5, 2005

Thomas Koning
U.S. Army Corps of Engineers
New England District
Attn: Engineering/Planning Division
696 Virginia Road
Concord, MA 01742-2751

RE: Milford Pond Habitat Restoration Project
NHESP File No. 02-10344

Dear Mr. Koning,

The Natural Heritage & Endangered Species Program (NHESP) of the MA Division of Fisheries and Wildlife has reviewed the Draft Detailed Project Report/Environmental Assessment (EA) for the Aquatic Habitat Restoration of Milford Pond, Milford, MA (dated December 2004) and would like to make the following comments regarding rare species and their habitats.

Review of the NHESP database, indicates that the Pie-billed Grebe (*Podilymbus podiceps*), Least Bittern (*Ixobrychus exilis*), Common Moorhen (*Gallinula chloropus*), and King Rail (*Rallus elegans*) are documented to occur within Milford Pond. Milford Pond, which is delineated as Priority/Estimated Habitat PH 983/WH 3090, provides suitable habitat for each of these state-listed bird species. The Pie-billed Grebe and Least Bittern, both "Endangered" species, Common Moorhen, a species of "Special Concern," and King Rail, a "Threatened" species are each protected pursuant to the MA Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). These species' habitats are additionally protected under provisions of the MA Wetlands Protection Act (WPA) (M.G.L. c.131, s. 40) and its implementing regulations (310 CMR 10.00). As a result, we anticipate continuing our review of this restoration project through our reviews of a Notice of Intent (NOI) under the WPA and additional filings under regulations of the MA Environmental Policy Act (MEPA) (301 CMR 11.00).

The following are specific questions/areas of additional information that relate to the Draft EA, before NHESP can fully evaluate the "preferred alternative" for potential adverse effects to state-listed rare species and their habitats.

1. How will the project be accomplished without adversely affecting aquatic beds/feeding waters of the Pie-billed Grebe?
2. How will existing emergent vegetation be affected by slumping or other erosion of peat or other substrates that occur along the interface between dredged areas and emergent vegetation?
3. How will the proposed dredging affect water levels, and in turn, vegetation patterns, in the emergent vegetation that provides habitat for these state-listed birds. Specifically, how will the project be designed so as not to reduce water levels within emergent marsh vegetation?
4. How will the proposed work be accomplished without creating significant disturbance to these species during breeding and pre-migration periods (April 1- September 30)?

If you have any questions regarding this letter, please contact Dan Nein at (508) 792-7270 ext. 151.

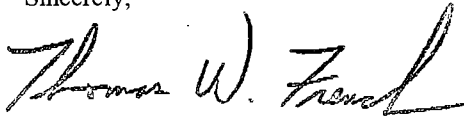
www.masswildlife.org

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275

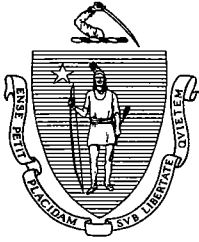
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

Sincerely,

A handwritten signature in cursive script that reads "Thomas W. French". The signature is written in black ink and is positioned above the typed name.

Thomas W. French, Ph.D.
Assistant Director

cc: MEPA Office, Executive Office Of Environmental Affairs
Milford Board of Selectmen
Milford Conservation Commission
Milford Planning Board
DEP Central Regional Office, Wetlands Program



The Commonwealth of Massachusetts

HOUSE OF REPRESENTATIVES
STATE HOUSE, BOSTON 02133-1020

MARIE J. PARENTE

10TH WORCESTER DISTRICT
13 REAGAN ROAD
MILFORD, MA 01757
TEL. (508) 473-5884
ROOM 466, STATE HOUSE
TEL. (617) 722-2017
FAX (617) 722-2813

E-Mail: Rep.MarieParente@hou.state.ma.us

Web Site: <http://home.fiam.net/repmarie>

Committees on:
Long Term Debt and
Capital Expenditures
Chair
Foster Care
Chair
Medicaid

December 28, 2004

Col. Thomas L. Koning
U.S. Army Corps of Engineers New England District
696 Virginia Road
Concord, MA 01742-2751
Attn: Engineering/Planning Division
RE: Milford Pond Aquatic Ecosystem Restoration Project

Dear Colonel Koning:

I am writing to offer my unqualified support on behalf of the Milford Pond restoration project in Milford, MA. This project will have a positive impact on both the pond and the neighborhood residents who have waited decades for this project to commence.

Residents and local officials have worked tirelessly to document the need for this project, and to secure state and federal support to move forward. The town of Milford recently acquired a site near the Milford Pond which will facilitate success of the dredging process, and is preparing to share the cost of completing the work.

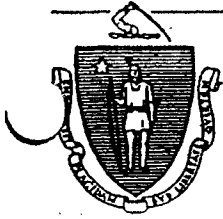
I believe that the project to restore Milford Pond is clearly within the public interest because it will improve the quality of life for local residents who each spring and summer are subjected to the odors which accompanies eutrophication. Furthermore, the restoration of the Pond may improve environmental conditions both locally and downstream along the Charles River.

The restoration of Milford Pond will serve as a testimonial to the work of the U.S. Army Corps of Engineers, local residents and officials who have worked many years to see this project come to fruition. I ask that every effort be made to commence the project as soon as possible.

Sincerely,

A handwritten signature in black ink that reads "Marie J. Parente".

Rep. Marie J. Parente, Chair
House Committee on Long-Term Debt and Capital Expenditures



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

April 12, 2002

David L. Dulong
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Re: Milford Pond Ecosystem Restoration Project
Milford, MA
NHESP File: 02-10344

Dear Mr. Dulong,

Thank you for contacting the Natural Heritage and Endangered Species Program for information regarding state-protected rare species in the vicinity of the above referenced site. I have reviewed the site and would like to offer the following comments.

Our database indicates that the site is within Priority/Estimated Habitat PH 983/WH 3090, which has been delineated for the Common Moorhen (*Gallinula chloropus*), a species of special concern, the Pied-billed Grebe (*Podilymbus podiceps*), an endangered species, the Least Bittern (*Ixobrychus exilis*), an endangered species, and the King Rail (*Rallus elegans*), a threatened species. These species are protected under the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00) as well as the state's Wetlands Protection Act (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for these species can be found on our website at www.state.ma.us/dfwele/dfw. If you are required to submit a Notice of Intent to the local conservation commission, please forward a copy of the filing to our office at the same time for review.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. Should your site plans change, or new rare species information become available, this evaluation may be reconsidered.

Please do not hesitate to call me at (508)792-7270 x154 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Christine Vaccaro".

Christine Vaccaro
Environmental Review Assistant



Natural Heritage & Endangered Species Program

Route 135, Westborough, MA 01581 Tel: (508) 792-7270 x 200 • Fax: (508) 792-7821

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

<http://www.state.ma.us/dfwele/dfw/nhesp>



12-07-00000318

DV

The Commonwealth of Massachusetts

December 8, 2000 William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

Secretary Bob Durand
Executive Office of Environmental Affairs
Attn.: Doug Vigneau, MEPA Unit EOE A #12369
251 Causeway Street, Suite 900
Boston, MA 02114

RECEIVED

DEC 12 2000

MEPA

RE: Milford Pond Restoration Plan, Milford. MHC #RC.27205. EOE A #12369.

Dear Secretary Durand:

Staff of the Massachusetts Historical Commission have reviewed the Environmental Notification Form submitted for the project referenced above. Review of MHC's files indicates that we recently commented on the project, and a copy of MHC's letter (10/27/200) was included with the ENF within Attachment 1.

Review of the Inventory of Historic and Archaeological Assets of the Commonwealth indicates that the project area is located in the vicinity of a recorded historical archaeological site (MIL-HA-2), the structural foundation remains of the Louisa Lake Ice Company that appear to be located on the northwest side of Dilla Street, adjacent to Louisa Lake. The project area is also located in the vicinity of Pine Grove Cemetery (MIL.801) at Cedar and Dilla Streets. Based on the favorable environmental setting of the project area, unrecorded archaeological sites may be present in the project area. In New England, archaeological sites are usually buried and thus require systematic archaeological investigation to be located and identified. The archaeological sensitivity of the project area is principally defined by the project area's location in proximity to wetlands resources associated with the Charles River drainage and the discovery of ancient Native American archaeological sites in the project area vicinity, and within identical environmental settings within the Charles River drainage. Because the locations of several aspects of the project have not yet been described, presently the MHC cannot determine if any of Milford's previously identified historic and archaeological resources are in proposed project impact areas.

Additional information is required by the MHC to evaluate the proposed project. Depending on the location and design of aspects of the project that have not yet been selected or described, the project has the potential to affect historic and archaeological resources. Activities that could affect cultural resources include site preparation and placement of mechanical dewatering equipment at an upland dewatering site; the restoration of the dewatering site following the project for an improved boat launch and area of public access; and stormwater management facilities. As early as possible, and well in advance of implementing the project, detailed project plans and original, representative photographs of the project locations should be submitted to the MHC for our review and comment to determine whether or not an intensive (locational) archaeological survey (950 CMR 70) should be conducted in project impact areas. The goal of the survey, if necessary, is to locate, identify, and evaluate any significant historic or archaeological resources that could be affected by the project, and to provide information so that MHC can

220 Morrissey Boulevard, Boston, Massachusetts 02125 · (617) 727-8470

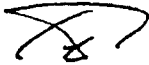
Fax: (617) 727-5128 · TTY: (617) 878-3889

www.state.ma.us/sec/mhc

consult with project planners to avoid, minimize, or mitigate impacts to significant cultural resources, prior to implementing the project. The ENF indicates that the project planners will coordinate with the MHC to assist in this regard.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), MGL c. 9, ss. 26-27C (950 CMR 71), and MEPA (301 CMR 11). Please contact me if you have any questions or need additional information.

Sincerely,



Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission

xc:

Paul G. Davis, Baystate Environmental Consultants, Inc.
Michael Santora, Milford Town Engineer
Milford Historical Commission
DEP-CERO-Wetlands
DEP-DWWR
Karen Kirk Adams, USACOE-NED-Regulatory
Kate Atwood, USACOE-NED



MILFORD BOARD OF SELECTMEN

Room 11, Town Hall, 52 Main St. (Route 16), Milford, Massachusetts 01757-2679
508-634-2303 Fax 508-634-2324

John W. Seaver, Chairman
Dino B. DeBartolomeis
Brian W. Murray, Esq.

Louis J. Celozzi
Town Administrator

December 13, 2004

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, MA 01742-2751

Attn: Engineering/Planning Division

RE: Milford Pond Aquatic Ecosystem Restoration Project - Milford, MA


Dear Colonel Koning:

Please be advised that at the December 13, 2004 meeting the Milford Board of Selectmen unanimously voted to continue support for the Milford Pond Aquatic Ecosystem Restoration Project. The restoration is consistent with numerous Town goals and objectives, as well as the 2003 Comprehensive Plan and the 2002 Open Space and Recreation Plan.

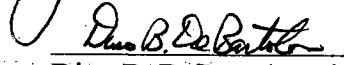
The project is designed to restore the open water aquatic ecosystem in Milford Pond, maintain the vegetated wetlands, provide habitat for fish and waterfowl, and increase recreational opportunities. Specifically, the Board maintains its preference for Alternative 3, the recommended plan identified through the incremental analysis process.

Approaching the culmination of many years work, the Board pledges continued Town support for this important project and urges expeditious completion of the Milford Pond Restoration.

Respectfully,
Milford Board of Selectmen



John W. Seaver, Chairman



Dino B. DeBartolomeis



Brian W. Murray, Esq.



PLANNING BOARD OF MILFORD, MASS.

TOWN HALL, 52 MAIN STREET
634-2317

Joseph Calagione
John H. Cook
James D. Griffith
Patrick J. Kennelly
Lena McCarthy

December 14, 2004

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, MA 01742-2751

Attn: Engineering/Planning Division

RE: Milford Pond Aquatic Ecosystem Restoration Project - Milford, MA

Dear Colonel Koning:

The Milford Planning Board, at its December 14, 2004 meeting, unanimously expressed its support for the Milford Pond Aquatic Ecosystem Restoration Project.

Restoring Milford Pond is consistent with the recently adopted 2003 Milford Comprehensive Plan, both in an environmental context and in a recreation/open space context as well.

The project will restore the open water aquatic ecosystem in Milford Pond while maintaining the existing vegetated wetlands, will provide habitat for fish and waterfowl, and will increase recreational opportunities.

The Milford Planning Board urges completion of the Milford Pond Restoration Project.

Respectfully,

James D. Griffith, Chairman
Milford Planning Board



MILFORD BOARD OF SELECTMEN

Room 11, Town Hall, 52 Main St. (Route 16), Milford, Massachusetts 01757-2679
508-634-2303 Fax 508-634-2324

John W. Seaver, Chairman
Dino B. DeBartolomeis
Brian W. Murray, Esq.

Louis J. Celozzi
Town Administrator

December 6, 2004

U.S. Army Corps of Engineers
Colonel Thomas L. Koning, District Engineer
New England District
696 Virginia Road
Concord, MA 01742-2751

Attn: Engineering/Planning Division

RE: MILFORD POND AQUATIC ECOSYSTEM RESTORATION PROJECT
MILFORD, MA

Dear Colonel Koning:

I am writing this letter on behalf of the Milford Board of Selectmen to request your support for the above project. As you know, this restoration project is consistent with the Town of Milford's goals and objectives, as well as the 2003 Comprehensive Plan and the 2002 Open Space and Recreation Plan.

The project is designed to restore the open water aquatic ecosystem in Milford Pond, maintained vegetated wetlands, provide habitat for fish and waterfowl, and increase recreational opportunities. Specifically, the Board maintains its preference for Alternative 3, the recommended plan identified through the incremental analysis process.

On a personal note, I have lived in the Town of Milford my entire life and I have many fond memories of Milford Pond. As a child, I spent many hours both fishing and ice skating at Milford Pond. Unfortunately, as the years have gone by, fishing at this location is impossible and ice skating is becoming more difficult. I strongly believe that this former public treasure should be rehabilitated for the future generations.

As you know, the former Cedar Swamp area, including the former landfill, has been capped and rehabilitated and the new Plains Park has proven to be very popular and is used constantly. The restoration of the adjacent Milford Pond would be a fitting complement to this project.



MILFORD FIRE DEPARTMENT

21 BIRCH STREET
MILFORD, MASSACHUSETTS 01757

JOHN P. TOUHEY, CHIEF
WILLIAM J. TOUHEY, JR., DEPUTY

Telephone: 508-473-1214 • Fax: 508-473-4858 • Inspections: 508-473-2256

U.S. Army Corps of Engineers – N.E. District
Attn: Engineering / Planning Division
696 Virginia Road
Concord, Massachusetts 01742-2751

December 13, 2004

RE: Milford Pond – Milford, Massachusetts
Aquatic Ecosystem Restoration Project

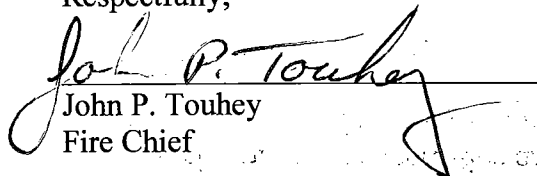
To Whom It May Concern:

I am writing you to express my support for the Milford Pond Aquatic Ecosystem Restoration Project. This project has been in the planning stage for several years. The project will provide positive result to our community. The restoration of approximately 45 acres to deep water will provide habitat for fish and waterfowl, while maintaining nesting areas in the remaining 75 acres.

It also provides a recreation area that is anchored by Fino Field and the Town Pool to the south and Plains Park to the east. When the project is completed citizen will have access to the pond for fishing and boating. These are activities that were common to the pond before the sedimentation and aquatic growth choked off the usable area of the pond.

In closing, I believe that this project will only bring positive outcomes to the Town of Milford and its citizens. I strongly support this project and hope to see its completion in the near future.

Respectfully,


John P. Touhey
Fire Chief



Town of Milford

Highway Department

Shelly A. Leclaire, Highway Surveyor

December 13, 2004

U.S. Army Corps of the Engineers
New England District
696 Virginia Road
Concord, MA 01742

Attn: Thomas L. Koning
Colonel, Corps of Engineers
District Engineer

Re: Milford Pond Project

Dear Mr. Koning:

On behalf of the Town of Milford Highway Department, I would like to take this opportunity to express my support for the above referenced project.

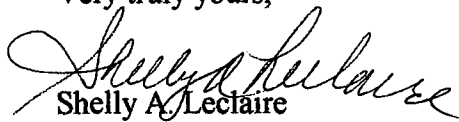
Periodically, debris collects at the northerly outlet dam, resulting in a lack of natural flow. For many years the Town of Milford has tried to maintain Milford Pond with limited resources. On many occasions, local organizations have volunteered their time to help the Town of Milford maintain Milford Pond (specifically, the area near Hayward Field).

Unfortunately, recent budget and staff reductions have made it impossible for the Milford Highway Department to monitor the status of the outlet dam. The accumulation of debris will continue until the pond is dredged and the water is allowed to flow accordingly.

Therefore, I urge your consideration regarding this very important project.

Thank you.

Very truly yours,


Shelly A. Leclaire
Highway Surveyor



TOWN OF MILFORD

52 MAIN STREET, MILFORD, MASSACHUSETTS 01757
508-634-2317 Fax 508-473-2394
ldunkin@townofmilford.com

OFFICE OF PLANNING
AND ENGINEERING

Larry L. Dunkin, AICP
Town Planner

December 9, 2004

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, MA 01742-2751

Attn: Engineering/Planning Division

RE: Milford Pond Aquatic Ecosystem Restoration Project - Milford, MA

Dear Colonel Koning:

I am writing to express my support for the Milford Pond Aquatic Ecosystem Restoration Project.

This project is warranted for the following reasons:

- It is consistent with the 2003 Milford Comprehensive Plan
- It is consistent with the 2002 Milford Open Space and Recreation Plan
- It will restore the open water aquatic ecosystem in Milford Pond
- It will maintain the existing vegetated wetlands
- It will provide habitat for fish and waterfowl
- It will increase recreational opportunities

I strongly recommend the Milford Pond Restoration Project.

Respectfully,

Larry L. Dunkin, AICP
Milford Town Planner



TOWN OF MILFORD
52 MAIN STREET, MILFORD, MASSACHUSETTS 01757
508-634-2317 FAX 508-473-2394

OFFICE OF PLANNING
AND ENGINEERING

Michael Santora, P.E.
Town Engineer

December 9, 2004

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, MA 01752-2751

ATTN: Engineering/Planning Division

RE: Milford Pond Aquatic Ecosystem Restorations Project - Milford, MA

Dear Colonel Koning:

This letter is in support of the Milford Pond Restoration Project. I have been the Town Engineer in Milford since 1984 and have been involved with this project since then.

Others have worked on this even longer and their commitment has not wavered. This project is long overdue but it appears that with assistance from the Federal Government through the Army Corps of Engineers, we can finally reach our goal of restoring this valuable resource.

Thank you and the Army Corps of Engineers for all you have contributed to this project.

Sincerely,

Michael Santora, P.E.
Town Engineer

MS/tmc

December 10, 2004

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, MA 01742-2751

Attn: Engineering/Planning Division

RE: Milford Pond Restoration Project
Milford, Massachusetts

Dear Colonel Koning:

I write this letter in support of the Milford Pond Restoration Project.

As a lifelong resident of the Town of Milford and as an avid outdoorsman, I can say that Milford Pond has played a major role in my life. Not only have I lived in Milford for the past 65 years but also most of my Mother and Father's family have lived in Milford since the early 1900's. My paternal grandfather and his 3 sons (my uncles) were also avid outdoorsmen who spent much of their leisure time both hunting and fishing. Milford pond was one of their favorite spots to fish for bass, pickerel, yellow perch and horned pout. My maternal grandparents lived on Columbus Avenue which is in close proximity to Milford Pond. As a young boy, I spent many pleasurable days on or around Milford Pond exploring the shoreline, fishing and boating in the summer and ice fishing and skating in the winter. It was a real treat for me to spend a few days at my grandmother's house on Columbus Avenue because of the ready access to the pond.

The character of the pond 50 years ago was quite different than it is today. There was ample open water area where one could develop boating and fishing skills and enjoy the esthetic beauty of this water body. Over time the pond has become highly eutrophic and much of what was so inviting in the early years has become a blight on Milford's landscape.

In addition to being a lifelong resident in Milford, I have also been involved in municipal affairs for more than 30 years serving as an elected Town Meeting Member (1972 – present), Planning Board Member (1969), Member of the Board of Selectmen (1970), Conservation Commission Member (1973 – 1979) and Chairman, Milford Pond Restoration Committee Member, Milford Upper Charles Trail Committee Chairman (1996 – present), Town Land Use Committee Chairman (1990) and member (1999 – 2001). I also served as Milford Town Planner for 5.5 years (1996-2001). I mention my background because in all of these positions I have been involved, in varying degrees, with the issue of Milford Pond reclamation. During my tenure on the Conservation Commission a study was commissioned to explore reclamation options. This study and other studies were never pursued because of fiscal constraints and other more pressing community needs and priorities.



MILFORD POLICE DEPARTMENT

Thomas J. O'Loughlin
Chief of Police

*250 Main Street * Milford, MA 01757 * Tel. (508) 473-1113 * Fax (508) 473-5087*

December 9, 2004

Colonel Thomas Koning
U.S. Army Corp of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Dear Colonel Koning:

As a member of the Milford community, I would like to take this opportunity to express my support of the plans to restore the aquatic ecosystem at the Milford Pond in Milford, Massachusetts.

The Town of Milford is deeply interested in the availability of habitats that will preserve the many species of wildlife and vegetation that is found in areas such as the Milford Pond. In addition to this most important environmental position, the Milford Pond is also an area that is enjoyed by people who visit from the greater Milford and MetroWest communities.

If there is anything that the Milford Police Department can do to assist you with this most important community and environmental project, please do not hesitate to call upon me.

Sincerely yours,

A handwritten signature in black ink, appearing to be "TJO", written over a horizontal line.

Thomas J. O'Loughlin
Chief of Police

LETTER OF SUPPORT FOR MILFORD POND

To: Phyllis Ahearn
John Pyne
Jean Detore
Liz Fernandes
Paul Mazzuchelli
Donna Horrigan Clancy
Joseph Arcudi
Police Chief ✓
Lena McCarthy
Robert Andreano
Fire Chief Touhey
Ernest Pettinari
John Fernandes
Shelley LeClaire

John Pilla
Mary Martin
Louis Celozzi
Gerald Moody
Michael Giampietro
Joseph DiAntonio c/o Italian Vets
Anthony Deluca
Vickie Dowdell
John Tennaro
John Beccia
Aldo Cecchi
John Brynes
Annette Packard
John Taddei

From: Dino DeBartolomeis

Date: 12-6-04

RE: Letter of Support for the Milford Pond Project

I am writing to all of you for assistance and for a letter of support for the pond project. I have enclosed the 30 day Public Notice Announcement issued by the U.S. Army Corps of Engineers for the project dated 12-6-04

** The letters of support and positive comments should be mailed to the address located on PAGE 4. (Please mail your letter by December 31, 2004.)

Your letters of support will be very important in order for this project to proceed to the next level, obtaining the necessary Federal funding.

Thank you very much. If you have any questions, please call me.



Town Clerk's Office,
Town Hall, Main Street



Milford, Mass. Dec. 7, 2004

JOSEPH ARCUDI, TOWN CLERK
MARY MARTIN, ASST. TOWN CLERK
634-2307

Thomas L. Koning
Colonel, Corp Of Engineers
U.S. Army Corp Of Engineers
New England District
Concord, Ma 01742-2751

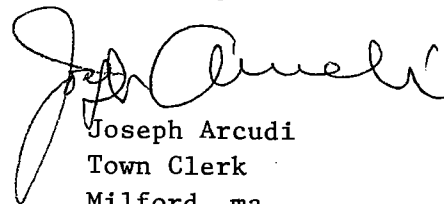
Dear Colonel Koning:

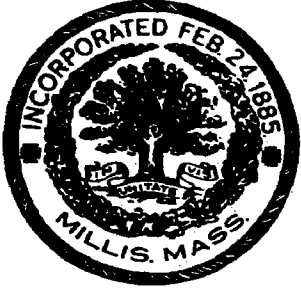
I am writing in response to the "Milford Pond Project". The restoration of the Milford Pond, would of great value to our town, both enviornmentally and for recreational purposes.

I can remember, in my younger days, we were able to swim, fish and picnic by the pond. Now the pond is in dire need of restoration, in order for it to be available for recreational purposes.

Your help in this matter would be greatly appreciated by all our Towns' people.

Sincerely:


Joseph Arcudi
Town Clerk
Milford, ma



TOWN OF MILLIS

**Millis Building Department
Building Commissioner
Michael A. Giampietro, C.B.O.
900 Main Street
Millis, Mass. 02054**

1-508-376-7044

inspect@millis.net

December 10, 2004

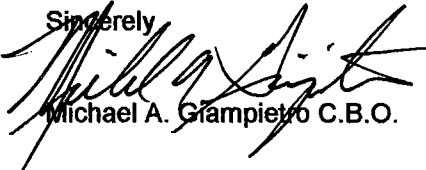
U.S. Army Corps of the Engineers,
New England District
District Engineer
Colonel, Thomas L. Koning
696 - Virginia Road
Concord, Massachusetts 01742-2751

Dear Colonel Koning,

I am writing to you to support the Milford Pond Aquatic Ecosystem Restoration Project. I currently serve the towns of Millis and Millville as Building Commissioner. I am a life long resident in the town of Milford and a member of the Milford Conservation Commission for the past 8 years. I have also served the community of Boxborough Mass as the Conservation Agent.

I feel that this project is overdue and will impact the town of Milford and Milford Pond in a positive way.

Sincerely,


Michael A. Giampietro C.B.O.

Ms. Annette Packard
67 E St. Ext.
Milford, MA 01757-3683

Colonel Thomas L. Koning
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

December 11, 2004

Dear Colonel Koning,

I am writing in support of the restoration of the Milford Pond in Milford, Massachusetts. I am a life-long resident of Milford and I wish to voice my interest in plans to restore this aquatic ecosystem which is so very important to our community and has been for many years. It concerns me that the water quality in this pond is deteriorating. It would be a great loss to have this pond lose its potential as a habitat for fisheries and waterfowl, for recreational activities and for wetland vegetation. I am hoping that the Town of Milford will sponsor this project and receive the necessary resources to see it to completion.

Respectfully yours,



Annette Packard, Concerned Citizen

Italian-American War Veterans of the U. S., Inc.

Post No. 40

HAYWARD FIELD—MILFORD, MASSACHUSETTS

473-9798

Meetings 2nd and 4th Tuesdays every Month



December 23, 2004

U.S. Army Corps of the Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

ATTN: Thomas L. Koning
Colonel, Corps of Engineers
District Engineer

Dear Sir:

We are writing to express our support restoration of the Milford Pond as contained in your public notice dated December 6, 2004.

This project is important to the Town of Milford and the surrounding area. As our Post is located within one hundred feet of the pond we have witnessed the degradation of this site from one of multiple recreational uses enjoyed by all the townspeople to one that presents a hazard to the health of the neighboring families.

The removal of the excess sediment and the resulting dense leaf vegetation found floating in the water, will restore the pond and greatly improve the water quality and the ecosystem surrounding it.

We endorse your efforts and support this undertaking. If we could provide some assistance, please do not hesitate to call upon us.

Sincerely,

Edward J. Rizoli
Quartermaster

JOHN V. FERNANDES
ATTORNEY AT LAW
12 MAIN STREET
P. O. BOX 436
MILFORD, MASSACHUSETTS 01757

(508) 473-1070
FAX (508) 478-4420

December 28, 2004

Thomas L. Koning
Colonel, Corps of Engineers
District Engineers
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Dear Colonel Koning:

I am attorney licensed to practice in the Commonwealth of Massachusetts with an office in Milford where I was born and also make my residence today. I have engaged in the practice of law for the last 22 years. I have served as a member of the Milford School Committee for nine years. Prior to that, I served as a member of a regional school committee for seven years, and the Board of Selectmen for three years. I am also the parent of two children, a son 15 and a daughter 13.

I am writing in response to a 30 Day Public Notice issued regarding the Milford Pond Restoration Project in Milford, Massachusetts. I am writing to offer to you my strongest encouragement that the project is allowed to move forward as quickly as possible.

The restoration of the Milford Pond is a critical part of the Town of Milford's plan to restore and protect Milford's environment. The Pond is a centerpiece of the Milford community. The Town has worked diligently to bring about its restoration as a part of a larger plan to create a beautiful community passive and active recreation area inclusive of the Plains Park area built upon the former Town dump, the restored Louisa Lake, the Town Forest and the recently acquired Consigli property.

Mary Martin
14 Sunnyside Lane,
Milford MA 01757
December 30, 2004

Thomas L Koning
Colonel, Corps of Engineers, District Engineer
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751
Attn: Engineering/Planning Division

Sir:

I support the Milford Pond Aquatic Ecosystem Restoration Project in Milford, MA.

The benefits that will accrue to the watershed and to the Town of Milford are the slowing of the sedimentation rate and decrease of the nutrient loading of the pond. The water quality is decreasing and the burgeoning vegetation is converting the pond to a choked aquatic habitat. The end result of this continued process will be stagnation.

The protection of the four rare birds either endangered or threatened as outlined by the Massachusetts Natural Heritage and Endangered Species Program (pied-billed grebe, least bittern, king rail & common moorhen) would be preferable to their loss from the area and perhaps their species survival.

The advantage of the soil being placed in the dewatering site, for which there is no noted danger to species, is superior. The fill for the land there will increase the use of that site for purposes positive for land use and potential utilization by the citizens of Milford, MA.

I support the Milford Pond Aquatic Ecosystem Restoration Project in Milford, MA.

Sincerely,



Mary E. Martin

1 Tufts Drive
Milford, MA 01757
January 1, 2005

Colonel Thomas L. Koning
U.S. Army Corps of Engineers
Attention: Engineering/Planning Division
New England District Engineer
696 Virginia Road
Concord, MA 01742-2751
January 1, 2005

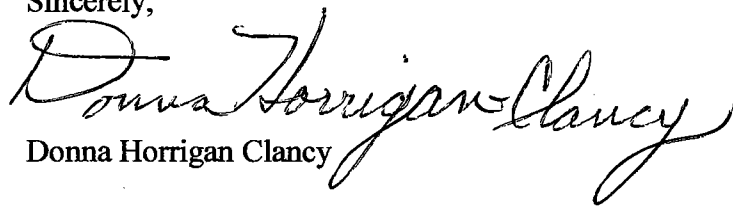
Dear Colonel Koning:

This letter is written to indicate my interest in, and support of the Milford Pond Aquatic Ecosystem Restoration Project.

I have been a member of the Milford Pond Restoration Committee since its inception. I have learned of the value of the Pond and the importance of the restoration efforts for both aquatic life and recreational opportunities.

I encourage you to do what you can to see that this project goes forward. Thank you.

Sincerely,


Donna Horrigan Clancy

12-28-04

at
Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, Ma 01742-2751

ATTN: Engineering/Planning Dept.

Re: Milford Pond Restoration Project

Dear Colonel Koning,

I am writing to strongly support the Milford Pond Aquatic Ecosystem Restoration Project.

I have lived in Milford for many years. We need to protect our waterways and provide for the open water ecosystem for fishing, boating, etc.

I have two children and I believe that it is most important to protect our wells and great lakes, like Milford Pond.

I want my children and their children to have a clean environment. We must clean up Milford Pond before it is cost prohibitive.

Thank you,

Louisa Giokas
Louisa Giokas
21 Sherwood Drive
Milford, Ma. 01757

William E. Kingkade Jr.
50 Woodridge Road
Milford, MA 01757
(508) 473-0020
willkingkade@verizon.net

December 29, 2004

U.S. Army Corps of the Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751
Attn: Engineering / Planning Division

RE: Milford Pond Aquatic Ecosystem Restoration Project

To Whom It May Concern:

I am writing to you today as a resident of the town of Milford, Massachusetts in response to the 30-Day Public Notice regarding the restoration of Milford Pond.

I wanted to take this time to express my overwhelming support of the proposed project that Selectman Dino DeBartolomeis, Chairman, and a determined group of committee members have been working on for many years on the behalf of the town of Milford and specifically on the much-needed restoration of Milford Pond.

Growing up in Milford, I have been fortunate enough to hear the stories and to see the pictures of the times enjoyed on and around Milford Pond. In the future, I look forward to the opportunity to personally experience that with my own children. I believe this to be a very worthy project and one that is beneficial to the entire community.

I am confident that many people in town feel as I do regarding Milford Pond and would very much like to see this project come to fruition. Thank you for your time and your attention to this letter is greatly appreciated.

Sincerely,


William E. Kingkade Jr.

December 6, 2004

U.S. Army Corps of Engineers
Colonel Thomas L. Koning, District Engineer
New England District
696 Virginia Road
Concord, MA 01742-2751

ATTN: ENGINEERING/PLANNING DIVISION

**RE: MILFORD POND AQUATIC ECOSYSTEM RESTORATION
PROJECT – MILFORD, MA**

Dear Colonel Koning:

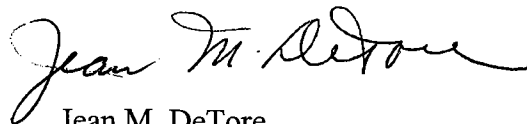
The purpose of this letter is to request support for the above project.

As a lifelong resident of the town, it would mean a great deal to me, and the townspeople to see Milford Pond restored.

Several years ago, my sons and I, under the direction of Boy Scout Troop 2, were all part of "Milford Pond Clean Up Day". It consisted of cleaning rubbish, leaves and debris from the perimeter of the pond. This turned out to be a very rewarding project. However, as time goes on, the over grown vegetation makes it difficult for its true charm and beauty to shine through.

I have memories of this beautiful pond where as a little girl I learned how to ice skate. The restoration of this pond would serve as a true picture to Milford's environmental restoration of not only a historical landmark to its residents but as a place that represents a quiet and beautiful spot to "ponder" in the town of Milford.

Sincerely,



Jean M. DeTore
2 Whip-o-Will Lane
Milford, MA 01757

December 15, 2004

Joseph Donegan
148 Cedar Street
Milford, MA 01757

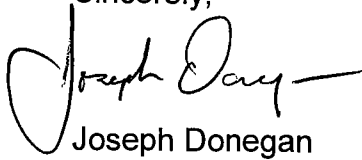
Col. Thomas L. Koning
U.S. Army Corps of Engineers
New England District
Attn: Engineering/Planning Division.
696 Virginia Road
Concord, MA 01742

Re: Milford Pond Restoration

Dear Col. Koning,

I am in support of the Milford Pond Restoration Project. Please do whatever is possible to help the Town of Milford get this project completed.

Sincerely,


Joseph Donegan

12-14-04

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, Ma 01742-2751

ATTN: Engineering/Planning Dept.

Re: Milford Pond Restoration Project

Dear Colonel Koning,

I am writing to strongly support the Milford Pond Aquatic Ecosystem Restoration Project.

I have lived in Milford for many years. We need to protect our waterways and provide for the open water ecosystem for fishing, boating, etc.

I am an avid sportsman and environmentalist. We must protect our environment and waterways for our children.

I look forward for your support and advocacy regarding this most important project.

Thank you,



Steve Matos
28 Prospect Street
Milford, Ma. 01757

12-13-04

Colonel Thomas L. Koning, District Engineer
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, Ma 01742-2751

ATTN: Engineering/planning Dept.

Re: Milford Pond Restoration Project

Dear Sir,

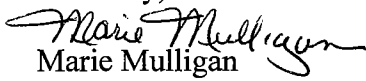
I am writing to strongly recommend and to support the Milford Pond Aquatic Ecosystem Restoration Project.

My family and I lived in Milford for many years. We need to protect our waterways and provide for the open water ecosystem for fishing, boating and to protect our aquifer.

My family and the residents of the area will benefit greatly by this wonderful project once completed.

I look forward for your support and advocacy regarding this endeavor.

Sincerely,


Marie Mulligan
105 King Street
Uxbridge, Ma 01569



TOWN OF MILFORD
DEPARTMENT of VETERANS' SERVICES

Town Hall • Milford, Massachusetts 01757

John A. Pilla, Director
Veterans' Services

Telephone 508-634-2311
Office Hours: 9-5

December 7, 2004

Thomas L. Koning, Colonel
U.S. Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Dear Col. Koning,

I am writing in support of the Milford Pond Aquatic Ecosystem Restoration Project as outlined in your Public Notice dated December 6, 2004.

My support is in harmony with the **Purpose and Need for Work** as outlined on page 3 of your report namely to restore the open water aquatic ecosystem in the pond, provide habitat for fisheries and waterfowl and increase the recreational opportunities.

Your favorable recommendation would be appreciated.

Sincerely,

John A. Pilla, Director
Veterans Services

PHYLLIS A. AHEARN
39 GODFREY LANE
MILFORD MA 01757-4035
(508)-473-6212
phylahearn@110.net

December 9, 2004

Thomas L. Koning, Colonel
U.S. Army Corps. of the Engineers
Atn: Engineering/Planning Division
New England District
696 Virginia Road
Concord MA 01742-2751

Re: Milford MA Pond Aquatic
Ecosystem Restoration Project

Dear Colonel Koning:

I am writing to you in support of the above-captioned project.

Milford Pond has always played a significant part in the history of our town. I first learned about our "Great Cedar Swamp" in fourth grade geography class. And during my childhood, I fished on the pond with my father and grandfather. We tossed back the few fish we caught, but listening to my dad's stories about growing up in Milford, and my grandfather's tales of arriving in America as a young immigrant created valuable and enduring memories. As I watched the pond deteriorate, I regretted my sons would not have the opportunity to enjoy the pond as I had done.

Later, as the Board of Selectmen's administrator, I saw, first-hand, how important the pond was to so many Milford citizens, especially those residents who lived along its perimeter. I recall a much earlier plan to develop recreational facilities on the pond, including opportunities for fishing and sailing. Unfortunately, to my dismay, the plan never led to fruition.

Now I look forward to the completion of the Milford Pond Restoration Project, and to the day when school children will walk its shores to study its flora and fauna, when families will spend days on its waters, fishing, sailing and creating memories for future generations, and when Milford Pond will be restored to its rightful place in the history and development of our community.

I wish you every success in this endeavor.

Yours truly,



Phyllis A. Ahearn

December 8, 2004

Colonel Thomas L. Koning
Corps of Engineers
New England District
696 Virginia Road
Concord, MA

Dear Colonel Koning:

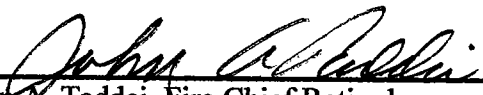
As a lifelong resident of the Town of Milford, Ma and retired Fire Chief, I would like to comment on the proposal to restore Milford Pond to its former state.

As a youngster, I remember Milford Pond as a viable and central part of our community that was utilized for fishing and boating. This was the place that many a young boy first held a fishing rod in his hand and caught his first fish. Even if it was a small blue gill, the thrill would last forever.

Restoring this pond, even if it is a partial restoration, will add to the beauty of the immediate area and allow the residents of our town the opportunity to utilize this waterway as it once was.

Thank you for your attention in this matter.

Very Truly yours



John A. Taddei, Fire Chief Retired
295 Central Street
Milford, MA
01757

CC: Dino

Appendix C

Coordination 2011 (Letters Sent)

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DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Tom Chapman
U.S. Fish and Wildlife Service
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

Dear Mr. Chapman:

The U.S. Army Corps of Engineers, New England District (Corps), is finalizing a plan to restore the ecological health of Milford Pond in Milford Massachusetts. The work is being conducted under Section 206 of the Water Resources Development Act of 1996, which authorizes the Corps to restore degraded aquatic habitats in partnership with the local sponsor, the town of Milford, Massachusetts. The purpose of this letter is to obtain your comments on a revised proposal for this project pursuant to the Fish and Wildlife Coordination Act, as amended, and to request a list of endangered and threatened species for the project area pursuant to Section 7 (c) of the Endangered Species Act of 1973, as amended. The Corps has recently revised the proposed restoration plan to include construction of deep-water habitat in combination with using dredged materials and to restore wetlands in portions of the impounded area. A location map is enclosed to aid you in your review.

The Corps will be amending the environmental assessment and 404(b)(1) evaluation and obtaining a water quality certificate to address the revised proposal. The environmental assessment and detailed project report were originally completed in June 2005 for a proposal to dredge the pond and dispose of the dewatered dredged material at an upland site near the pond.

Milford Pond is located in the center of the town of Milford, in Worcester County, Massachusetts. (See enclosed Information Sheet). The 120-acre pond is formed by the impoundment of the Charles River, with inflow from Huckleberry Brook, Louisa Lake, an intermittent stream, and 17 stormwater outfalls. The pond outlet water flows over a small masonry dam and continues as the main channel of the Charles River through the town of Milford and eventually flows to Boston Harbor.

The revised proposed plan is to re-establish deepwater habitat in the southern portion of the pond and restore wetland habitat in the northern portion of the pond. Roughly 33 acres have been identified as restorable wetland, and 22 acres have been identified as restorable deep water habitat. The project will enhance the overall value of Milford Pond by addressing the decline in water quality, the proliferation of aquatic weed species and degradation of the aquatic habitat in

Milford Pond, and restoration of a variety of wetland habitats lost by impoundment of the area. The major feature of the proposed project would be dredging the southern portion of Milford Pond, and pumping the dredged sediment to the northern portion of the pond where the sediment will accumulate to approximately the height of the surrounding marsh. The accumulated sediment would be reshaped as necessary to restore wetland conditions and replanted with various wetland species.

The Corps is planning a coordinated site visit with interested state and federal agencies, town officials and non-governmental organizations on Tuesday, August 23, at 10:00 a.m. The purpose of the meeting will be to explain the proposed project and to elicit agency concerns and suggestions. Your agency's participation at this meeting would be appreciated. We will meet at the Milford Town Hall (52 Main Street, Milford, Massachusetts) at 10:00 am. The hall has been reserved for a study briefing. Immediately following this briefing, a site visit will be conducted.

We look forward to your contribution towards this project. Any questions can be directed to Mr. Adam Burnett, project manager, at (978) 318-8547 (Adam.W.Burnett@usace.army.mil); or Mr. Kenneth Levitt, biologist, at (978) 318-8114 (Kenneth.M.Levitt@usace.army.mil).

Sincerely,



John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):

Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Peter Colosi
Assistant Regional Administrator
For Habitat Conservation
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Dear Mr. Colosi:

The U.S. Army Corps of Engineers, New England District (Corps), is finalizing a plan to restore the ecological health of Milford Pond in Milford Massachusetts. The work is being conducted under Section 206 of the Water Resources Development Act of 1996, which authorizes the Corps to restore degraded aquatic habitats in partnership with the local sponsor, the town of Milford, Massachusetts. The purpose of this letter is to obtain your comments on a revised proposal for this project pursuant to the Fish and Wildlife Coordination Act, as amended, and to request a list of endangered and threatened species for the project area pursuant to Section 7 (c) of the Endangered Species Act of 1973, as amended. The Corps has recently revised the proposed restoration plan to include construction of deep-water habitat in combination with using dredged materials and to restore wetlands in portions of the impounded area. A location map is enclosed to aid you in your review.

The Corps will be amending the environmental assessment and 404(b)(1) evaluation and obtaining a water quality certificate to address the revised proposal. The environmental assessment and detailed project report were originally completed in June 2005 for a proposal to dredge the pond and dispose of the dewatered dredged material at an upland site near the pond.

Milford Pond is located in the center of the town of Milford, in Worcester County, Massachusetts. (See enclosed Information Sheet). The 120-acre pond is formed by the impoundment of the Charles River, with inflow from Huckleberry Brook, Louisa Lake, an intermittent stream, and 17 stormwater outfalls. The pond outlet water flows over a small masonry dam and continues as the main channel of the Charles River through the town of Milford and eventually flows to Boston Harbor.

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Milford Pond, and restoration of a variety of wetland habitats lost by impoundment of the area. The major feature of the proposed project would be dredging the southern portion of Milford Pond, and pumping the dredged sediment to the northern portion of the pond where the sediment will accumulate to approximately the height of the surrounding marsh. The accumulated sediment would be reshaped as necessary to restore wetland conditions and replanted with various wetland species.

The Corps is planning a coordinated site visit with interested state and federal agencies, town officials and non-governmental organizations on Tuesday, August 23, at 10:00 a.m. The purpose of the meeting will be to explain the proposed project and to elicit agency concerns and suggestions. Your agency's participation at this meeting would be appreciated. We will meet at the Milford Town Hall (52 Main Street, Milford, Massachusetts) at 10:00 am. The hall has been reserved for a study briefing. Immediately following this briefing, a site visit will be conducted.

We look forward to your contribution towards this project. Any questions can be directed to Mr. Adam Burnett, project manager, at (978) 318-8547 (Adam.W.Burnett@usace.army.mil); or Mr. Kenneth Levitt, biologist, at (978) 318-8114 (Kenneth.M.Levitt@usace.army.mil).

Sincerely,


John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):

Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757



REPLY TO
ATTENTION DF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Matt Schweisberg
Wetlands Protection Unit
U.S EPA New England, Region 1
5 Post Office Square - Suite 100
Boston, Massachusetts 02109-3912

Dear Mr. Schweisberg:

The U.S. Army Corps of Engineers, New England District (Corps), is finalizing a plan to restore the ecological health of Milford Pond in Milford Massachusetts. The work is being conducted under Section 206 of the Water Resources Development Act of 1996, which authorizes the Corps to restore degraded aquatic habitats in partnership with the local sponsor, the town of Milford, Massachusetts. The purpose of this letter is to obtain your comments on a revised proposal for this project. The Corps has recently revised the proposed restoration plan to include construction of deep-water habitat in combination with using dredged materials to restore wetlands in portions of the impounded area. A location map is enclosed to aid you in your review.

The Corps will be amending the environmental assessment and 404(b)(1) evaluation and obtaining a water quality certificate to address the revised proposal. The environmental assessment and detailed project report were originally completed in June 2005 for a proposal to dredge the pond and dispose of the dewatered dredged material at an upland site near the pond.

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Pond, and pumping the dredged sediment to the northern portion of the pond where the sediment will accumulate to approximately the height of the surrounding marsh. The accumulated sediment would be reshaped as necessary to restore wetland conditions and replanted with various wetland species.

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We look forward to your contribution towards this project. Any questions can be directed to Mr. Adam Burnett, project manager, at (978) 318-8547 (Adam.W.Burnett@usace.army.mil); or Mr. Kenneth Levitt, biologist, at (978) 318-8114 (Kenneth.M.Levitt@usace.army.mil).

Sincerely,


John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):
Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Mel Cote
U. S EPA New England, Region 1
5 Post Office Square
Mail Code: OEP06-1
Boston, Massachusetts 02109-3912

Dear Mr. Cote:

The U.S. Army Corps of Engineers, New England District (Corps), is finalizing a plan to restore the ecological health of Milford Pond in Milford Massachusetts. The work is being conducted under Section 206 of the Water Resources Development Act of 1996, which authorizes the Corps to restore degraded aquatic habitats in partnership with the local sponsor, the town of Milford, Massachusetts. The purpose of this letter is to obtain your comments on a revised proposal for this project. The Corps has recently revised the proposed restoration plan to include construction of deep-water habitat in combination with using dredged materials to restore wetlands in portions of the impounded area. A location map is enclosed to aid you in your review.

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Sincerely,



John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):
Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Ed Reiner
U.S EPA New England, Region 1
5 Post Office Square
Mail Code: OEP06-1
Boston, Massachusetts 02109-3912

Dear Mr. Reiner:

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Chief of Planning

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Town of Milford
Office of Planning and Engineering
52 Main Street
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696 VIRGINIA ROAD
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July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. James Sprague
Massachusetts Department
of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Dear Mr. Sprague:

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Town of Milford
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52 Main Street
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NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
686 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Ken Chin
Massachusetts Department
of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Dear Mr. Chin:

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Chief of Planning

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Town of Milford
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NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
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July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Martin Suuberg, Regional Director
Massachusetts Department
of Environmental Protection
Central Regional Office
627 Main Street
Worcester, Massachusetts 01608

Dear Mr. Suuberg:

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Sincerely,



John R. Kennelly
Chief of Planning

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July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Kenneth L. Kimmell, Commissioner
Massachusetts Department
of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Dear Mr. Kimmell:

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Town of Milford
Office of Planning and Engineering
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July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mark Tisa Ph.D
Massachusetts Division of Fisheries and Wildlife
One Rabbit Hill Road
Westborough, Massachusetts 01581

Dear Dr. Tisa:

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John R. Kennelly
Chief of Planning

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July 28, 2011

Engineering/Planning Division
Evaluation Branch

Thomas French Ph.D.
Natural Heritage and Endangered Species Program
Massachusetts Division of Fisheries and Wildlife
One Rabbit Hill Road
Westborough, Massachusetts 01581

Dear Dr. French:

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Sincerely,


John R. Kennelly
Chief of Planning

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Town of Milford
Office of Planning and Engineering
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NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Rob Deblinger Ph.D.
Massachusetts Division of Fisheries and Wildlife
One Rabbit Hill Road
Westborough, Massachusetts 01581

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We look forward to your contribution towards this project. Any questions can be directed to Mr. Adam Burnett, project manager, at (978) 318-8547 (Adam.W.Burnett@usace.army.mil); or Mr. Kenneth Levitt, biologist, at (978) 318-8114 (Kenneth.M.Levitt@usace.army.mil).

Sincerely,



John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):

Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Richard Hartley
Massachusetts Division of Fisheries & Wildlife
Field Headquarters
1 Rabbit Hill Road
Westborough, Massachusetts 01581

Dear Mr. Hartley:

The U.S. Army Corps of Engineers, New England District (Corps), is finalizing a plan to restore the ecological health of Milford Pond in Milford Massachusetts. The work is being conducted under Section 206 of the Water Resources Development Act of 1996, which authorizes the Corps to restore degraded aquatic habitats in partnership with the local sponsor, the town of Milford, Massachusetts. The purpose of this letter is to obtain your comments on a revised proposal for this project pursuant to the Fish and Wildlife Coordination Act, as amended, and to request any information you may have concerning occurrence of state listed rare, threatened or endangered species and/or exemplary natural communities in the project area. The Corps has recently revised the proposed restoration plan to include construction of deep-water habitat in combination with using dredged materials and to restore wetlands in portions of the impounded area. A location map is enclosed to aid you in your review.

The Corps will be amending the environmental assessment and 404(b)(1) evaluation and obtaining a water quality certificate to address the revised proposal. The environmental assessment and detailed project report were originally completed in June 2005 for a proposal to dredge the pond and dispose of the dewatered dredged material at an upland site near the pond.

Milford Pond is located in the center of the town of Milford, in Worcester County, Massachusetts. (See enclosed Information Sheet). The 120-acre pond is formed by the impoundment of the Charles River, with inflow from Huckleberry Brook, Louisa Lake, an intermittent stream, and 17 stormwater outfalls. The pond outlet water flows over a small masonry dam and continues as the main channel of the Charles River through the town of Milford and eventually flows to Boston Harbor.

The revised proposed plan is to re-establish deepwater habitat in the southern portion of the pond and restore wetland habitat in the northern portion of the pond. Roughly 33 acres have been identified as restorable wetland, and 22 acres have been identified as restorable deep water habitat. The project will enhance the overall value of Milford Pond by addressing the decline in water quality, the proliferation of aquatic weed species and degradation of the aquatic habitat in

Milford Pond, and restoration of a variety of wetland habitats lost by impoundment of the area. The major feature of the proposed project would be dredging the southern portion of Milford Pond, and pumping the dredged sediment to the northern portion of the pond where the sediment will accumulate to approximately the height of the surrounding marsh. The accumulated sediment would be reshaped as necessary to restore wetland conditions and replanted with various wetland species.

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We look forward to your contribution towards this project. Any questions can be directed to Mr. Adam Burnett, project manager, at (978) 318-8547 (Adam.W.Burnett@usace.army.mil); or Mr. Kenneth Levitt, biologist, at (978) 318-8114 (Kenneth.M.Levitt@usace.army.mil).

Sincerely,


John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):

Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 28, 2011

Engineering/Planning Division
Evaluation Branch

Mr. Bill Davis
Central District
Massachusetts Division of Fisheries & Wildlife
211 Temple Street
West Boylston, Massachusetts 01583

Dear Mr. Davis:

The U.S. Army Corps of Engineers, New England District (Corps), is finalizing a plan to restore the ecological health of Milford Pond in Milford Massachusetts. The work is being conducted under Section 206 of the Water Resources Development Act of 1996, which authorizes the Corps to restore degraded aquatic habitats in partnership with the local sponsor, the town of Milford, Massachusetts. The purpose of this letter is to obtain your comments on a revised proposal for this project pursuant to the Fish and Wildlife Coordination Act, as amended, and to request any information you may have concerning occurrence of state listed rare, threatened or endangered species and/or exemplary natural communities in the project area. The Corps has recently revised the proposed restoration plan to include construction of deep-water habitat in combination with using dredged materials and to restore wetlands in portions of the impounded area. A location map is enclosed to aid you in your review.

The Corps will be amending the environmental assessment and 404(b)(1) evaluation and obtaining a water quality certificate to address the revised proposal. The environmental assessment and detailed project report were originally completed in June 2005 for a proposal to dredge the pond and dispose of the dewatered dredged material at an upland site near the pond.

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We look forward to your contribution towards this project. Any questions can be directed to Mr. Adam Burnett, project manager, at (978) 318-8547 (Adam.W.Burnett@usace.army.mil); or Mr. Kenneth Levitt, biologist, at (978) 318-8114 (Kenneth.M.Levitt@usace.army.mil).

Sincerely,



John R. Kennelly
Chief of Planning

Enclosure

Copy Furnished (w/enclosure):

Mr. Michael S. Santora, P.E.
Town of Milford
Office of Planning and Engineering
52 Main Street
Milford, Massachusetts 01757

Appendix D

Coordination 2011 (Letters/Comments Received)

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United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

January 7, 2014

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office



MassWildlife

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

August 23, 2011

John R. Kennelly
Chief of Planning
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

RE: Applicant: Town of Milford
 Project Location: **Milford Pond**
 Description: Proposal to increase deepwater habitat in the southern portion of the
 pond and wetland habitat in the northern portion of the pond.
NHESP Tracking No. **11-29905**

Dear Mr. Kennelly:

The Natural Heritage and Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife is responsible for the regulatory protection of imperiled species and their habitats as codified under the Massachusetts Endangered Species Act (M.G.L. c.131A). The Massachusetts Endangered Species Act (MESA) was enacted in December 1990. Implementing regulations (321 CMR 10.00) were promulgated in 1992 and most recently revised in 2010. The MESA provides a framework for review of projects or activities that occur within mapped area of the state, called *Priority Habitat*, and published in the Natural Heritage Atlas. The NHESP also reviews certain project pursuant to the rare species provisions of the MA Wetlands Protection Act (M.G.L. 131§40) and implementing regulations (310 CMR 10.00).

STATE-LISTED RARE SPECIES

The NHESP reviewed the information provided in your letter dated July 28, 2011 and wanted to take this opportunity to provide you with additional information about the state-listed species in the vicinity of the proposed project. **The proposed restoration and dredging areas are mapped as habitat for the following state-listed bird species:**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Gallinula chloropus</i>	Common Moorhen	Vertebrate Animal	Special Concern
<i>Ixobrychus exilis</i>	Least Bittern	Vertebrate Animal	Endangered
<i>Podilymbus podiceps</i>	Pied-Billed Grebe	Vertebrate Animal	Endangered
<i>Rallus elegans</i>	King Rail	Vertebrate Animal	Threatened

These four bird species and their habitat are protected pursuant to the MA Endangered Species Act (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00).

www.masswildlife.org

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

The information provided in the July 29, 2011 letter is insufficient to determine the full range of potential impacts associated with the proposed project, in general, the NHESP feels that carefully designed and executed restoration project may be compatible with the four (4) state-listed birds present.

Milford Pond in Milford Massachusetts represents a unique habitat for these state-listed birds. The area is urbanized and yet these notoriously shy, disturbance-sensitive birds seem to persist at this site. Any area of the pond that presently contains cattails and water of sufficient depth during the breeding period of 15 March through 30 September would presently be providing breeding habitat. Open water areas of the pond provide foraging habitat. This raises a number of questions about the proposed plan:

1. Will any dredging or filling occur within potential breeding habitat? The plans provided were general, but both restoration and dredging appears to be proposed in several cattail marshes.
2. During work and the resulting change in the pond ecosystem, will the areas not altered that presently provide habitat for the birds, remain as such? Will there be sufficient water elevation to sustain these habitats (i.e., vegetation, structure and water depth)?
3. The plan for the restoration shall be submitted. The restored marsh should include extensive areas of shallow, somewhat emergent areas with sufficient depth to offer breeding habitat for the rare birds.
4. Work is proposed to occur outside the breeding season for the listed birds. Does this provide a realistic time window in which to accomplish all the work?
5. What is the timeline for work? How many seasons will the work take to accomplish? Will the work be phased?
6. Has a habitat assessment been conducted specifically for the listed birds? If not, then an assessment should be conducted by a qualified biologist with extensive expertise with the listed bird species. If so, please provide the NHESP with the relevant report(s).

NHESP standard habitat assessment guidance can be found on our website. Please see:
http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/pdf/wildlifeassessment.pdf

Given the complex nature of the project, we strongly recommend that you arrange for a consultation with our staff to discuss state-listed species concerns associated with the proposed project.

FISHERIES

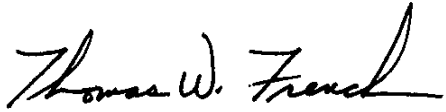
Dredging of the pond does have the potential to increase and improve fisheries habitat overall. In order for dredging to be effective in the long-term, however, external sources of sediment and nutrient input **must be addressed**. As stated in the overview of the Dredging section of the 2004 *Eutrophication and Aquatic Plant Management in Massachusetts Final Generic Environmental Impact Report*, The release of algae-stimulating nutrients from lake sediments can be controlled by removing layers of enriched materials. This may produce significantly lower in-lake nutrient concentrations and algal production, *assuming that there has been adequate diversion or treatment of incoming nutrient, organic and sediment loads from external sources*" and in the Effectiveness section: "However, for this technique to have long-term effectiveness, *methods for control of nutrients entering the lake from external sources must be implemented*".

To minimize potential impacts to fisheries resources, and create the improved habitat for fisheries which the proponent is seeking, we recommend the proponent follow the guidelines outlined in the Dredging section of the 2004 *Eutrophication and Aquatic Plant Management in Massachusetts Final Generic Environmental Impact Report*. In particular, the GEIR states that all sources of sediment and nutrients to the pond need to be addressed and methods proposed to minimize their inputs prior to further dredging. As for the control of excessive aquatic vegetation in Milford Pond, the

proposed increased depth (which is not stated) would likely not have a significant long-term effect on the growth of any existing invasive aquatic plants. While the dredging may provide a short-term reduction due to the removal of existing plant material, re-growth is highly likely.

Filing requirements are described in 321 CMR 10.20. For additional information about the MESA filing process, please see our website, www.nhesp.org (Regulatory Review tab). If you have any questions about this letter, please contact Misty-Anne R. Marold, Endangered Species Review Biologist at 508-389-6356 (misty-anne.marold@state.ma.us).

Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is written in a cursive style with a large, sweeping flourish at the end.

Thomas W. French, Ph.D.
Assistant Director

CC: Michael Santora, Town of Milford Office of Planning and Engineering (msantora@townofmilford.com)
DEP Central Regional Office, Wetlands Program
Milford Conservation Commission
Bill Davis, DFW Central Regional Office



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

John R. Kennelly, Chief
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751
Attn: Engineering /Planning Division
Evaluation Branch

AUG —4 2011

Re: Milford Pond

Dear Mr. Kennelly,

This is in response to your letter dated July 28, 2011, requesting information on the presence of species listed by NOAA's National Marine Fisheries Service (NMFS) in the vicinity Milford Pond, located in the Town of Milford, Worcester County, Massachusetts.

No federally listed or proposed threatened or endangered species and/or designated critical habitat for listed species under the jurisdiction of NMFS are known to exist in the vicinity of the proposed project site. As such, NMFS Protected Resources Division does not intend to offer additional comments on this proposal. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact Danielle Palmer at (978) 282-8468.

Sincerely,

Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

EC: Palmer
File Code: Sec 7 No Species Present 2011



From: [Reiner, Edward](#)
To: [Burnett, Adam W NAE](#)
Cc: [Levitt, Kenneth M NAE](#); [Pincumbe, David](#); [LeClair, Jacqueline](#)
Subject: [EXTERNAL] RE: Milford pond
Date: Thursday, February 20, 2014 4:15:24 PM

Thank you. When it is available send it to both David Pincumbe and myself.

Edward Reiner
Senior Wetland Scientist
USEPA
5 Post Office Square.
Suite 100 (OEP05-2)
Boston, MA 02109-3912

Ph. (617) 918-1692
Fx. (617) 918-0692
e. Reiner.Ed@epa.gov

-----Original Message-----

From: Burnett, Adam W NAE [<mailto:Adam.W.Burnett@usace.army.mil>]
Sent: Thursday, February 20, 2014 4:11 PM
To: Reiner, Edward
Cc: Levitt, Kenneth M NAE
Subject: RE: Milford pond

Hi Ed,

We are updating the EA to reflect the water disposal wetland creation, and that is what the recent public notice refers to. In the updated EA, we plan to address the comments made in EPA's rebuttal response letter dated April 25 2005.

Thanks. Adam

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Reiner, Edward [<mailto:reiner.ed@epa.gov>]
Sent: Thursday, February 20, 2014 2:25 PM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] RE: Milford pond

Thank you. I thought the Corps was updating the EA to reflect the water disposal wetland creation component. If so, in that process, will the Corps reply to EPA's rebuttal response letter in any manner either directly or in the document?

Edward Reiner
Senior Wetland Scientist
USEPA
5 Post Office Square.
Suite 100 (OEP05-2)
Boston, MA 02109-3912

Ph. (617) 918-1692
Fx. (617) 918-0692

e. Reiner.Ed@epa.gov

-----Original Message-----

From: Burnett, Adam W NAE [<mailto:Adam.W.Burnett@usace.army.mil>]
Sent: Tuesday, February 11, 2014 1:15 PM
To: Reiner, Edward
Cc: Levitt, Kenneth M NAE
Subject: RE: Milford pond

Hi Ed,

I made a copy of the 2005 EA and burned it on a disc for you. I also included the appendices, which included USACE response to EPA letters. As we agreed, I left them at the front desk for you to pick up today.

Thanks. Adam

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Reiner, Edward [<mailto:reiner.ed@epa.gov>]
Sent: Tuesday, February 11, 2014 8:54 AM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] RE: Milford pond

Both would be great. Thanks.

Edward Reiner
Senior Wetland Scientist
USEPA
5 Post Office Square.
Suite 100 (OEP05-2)
Boston, MA 02109-3912

Ph. (617) 918-1692
Fx. (617) 918-0692
e. Reiner.Ed@epa.gov

-----Original Message-----

From: Burnett, Adam W NAE [<mailto:Adam.W.Burnett@usace.army.mil>]
Sent: Tuesday, February 11, 2014 8:53 AM
To: Reiner, Edward; Levitt, Kenneth M NAE
Subject: RE: Milford pond

We'll have documents for you to pick up. Do you want hard copy or disc or both?
Adam

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Reiner, Edward [<mailto:reiner.ed@epa.gov>]
Sent: Tuesday, February 11, 2014 8:26 AM
To: Burnett, Adam W NAE; Levitt, Kenneth M NAE
Subject: [EXTERNAL] RE: Milford pond

Hi,

I have a meeting with Regulatory at 2 pm today. Let me know If you found a copy of the EA or other correspondence which addressed EPA comment, make me a copy, and I will bring it back to the office and discuss it with Dave Pincumbe. My cell is 978-376-4449

Edward Reiner

Senior Wetland Scientist

USEPA

5 Post Office Square.

Suite 100 (OEP05-2)

Boston, MA 02109-3912

Ph. (617) 918-1692

Fx. (617) 918-0692

e. Reiner.Ed@epa.gov <<mailto:Reiner.Ed@epa.gov>>

From: Reiner, Edward

Sent: Wednesday, January 22, 2014 9:37 AM

To: 'Adam.w.Burnett@usace.army.mil'; 'Kenneth.m.levitt@usace.army.mil'

Subject: Milford pond

I noticed EPA had sent you comments in 2002 suggesting dam removal. I think there was an EA in 2004 or so, that addressed the alternatives including dam removal. Can you provide me with that documentation so I can answer this question for my supervisor.

Edward Reiner

Senior Wetland Scientist

USEPA

5 Post Office Square.

Suite 100 (OEP05-2)

Boston, MA 02109-3912

Ph. (617) 918-1692

Fx. (617) 918-0692

e. Reiner.Ed@epa.gov

From: [Knowles, Kathleen](#)
To: [Levitt, Kenneth M.NAE](#)
Cc: [Stevens, Sue](#)
Subject: [EXTERNAL] MILFORD POND - AQUATIC ECOSYSTEM RESTORATION PROJECT - MILFORD, MA
Date: Wednesday, January 22, 2014 3:59:34 PM

Mr. Kenneth Levitt
U.S. Army Corps of Engineers
New England District
696 Virginia Rd.
Concord, MA 01742

Re: MILFORD POND
AQUATIC ECOSYSTEM RESTORATION PROJECT
MILFORD, MA

Based on a review of the information provided, “the proposed restoration project is not expected to impact any structures or sites of historic, architectural or archaeological significance as defined by the NHPA of 1966 as amended,” there does not appear to be any impact to potentially significant religious and cultural resources for the Mashantucket Pequot Tribe. The Mashantucket Pequot Tribe appreciates the opportunity to review and comment on this proposed project.

Kathleen Knowles
Tribal Historic Preservation Officer
Natural Resources Protection & Regulatory Affairs

Mashantucket Pequot Tribal Nation
[550 Trolley Line Blvd., P.O. Box 3202, Mashantucket, CT 06338-3202](#)
TEL: 860-396-6887 FAX: 860-396-6914
kknowles@mptn-nsn.gov

From: [Elizabeth James-Perry](#)
To: [Levitt, Kenneth M NAE](#)
Cc: [Bettina Washington](#)
Subject: [EXTERNAL] RE: Public Notice for Milford Pond, Milford MA (UNCLASSIFIED)
Date: Tuesday, January 21, 2014 3:03:15 PM

Good afternoon Kenneth,

I am interested in a pre-dredge site walk at Milford Pond, and any other affected areas. To verify location, is this right off the highway? The tribe had previously conducted a site walk of the nearby quarry and associated cultural features; the area was slated for an office park. What is the timeline for this project?

I look forward to hearing from you.

Regards,
Elizabeth James-Perry
Senior Cultural Resource Monitor
WTGH-Aquinnah
508-560-9016

From: Levitt, Kenneth M NAE [Kenneth.M.Levitt@usace.army.mil]
Sent: Tuesday, January 21, 2014 12:34 PM
Subject: Public Notice for Milford Pond, Milford MA (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Attached is a public notice for the Milford Pond Habitat Restoration Project. If you need any additional information please contact Adam Burnett at 978-318-8547 (Adam.w.Burnett@usace.army.mil) or Kenneth Levitt at 978-318-8114 (Kenneth.m.levitt@usace.army.mil).

Kenneth Levitt
U.S. Army Corps of Engineers
New England District
696 Virginia Rd.
Concord, MA 01742
978-318-8114

Classification: UNCLASSIFIED
Caveats: NONE

From: [Elizabeth James-Perry](#)
To: [Levitt, Kenneth M NAE](#)
Cc: [Bettina Washington](#)
Subject: [EXTERNAL] RE: Public Notice for Milford Pond, Milford MA (UNCLASSIFIED)
Date: Tuesday, January 21, 2014 3:03:15 PM

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I look forward to hearing from you.

Regards,
Elizabeth James-Perry
Senior Cultural Resource Monitor
WTGH-Aquinnah
508-560-9016

From: Levitt, Kenneth M NAE [Kenneth.M.Levitt@usace.army.mil]
Sent: Tuesday, January 21, 2014 12:34 PM
Subject: Public Notice for Milford Pond, Milford MA (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

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Kenneth Levitt
U.S. Army Corps of Engineers
New England District
696 Virginia Rd.
Concord, MA 01742
978-318-8114

Classification: UNCLASSIFIED
Caveats: NONE

From: [Burnett, Adam W NAE](#)
To: [Levitt, Kenneth M NAE](#)
Subject: FW: [EXTERNAL] Milford Pond
Date: Tuesday, February 18, 2014 11:58:04 AM

Public review comment - see below

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Marcy Setter [<mailto:marcy.setter@gmail.com>]
Sent: Thursday, February 13, 2014 8:09 PM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] Milford Pond

Good Morning,

This sounds like a very long over due project and very good in the long term for wildlife in the area. Is this a project that is going to start this year or is it still in the planning stages?

Marcy Setter

Milford, MA

From: [Knowles, Kathleen](#)
To: [Levitt, Kenneth M.NAE](#)
Cc: [Stevens, Sue](#)
Subject: [EXTERNAL] MILFORD POND - AQUATIC ECOSYSTEM RESTORATION PROJECT - MILFORD, MA
Date: Wednesday, January 22, 2014 3:59:34 PM

Mr. Kenneth Levitt
U.S. Army Corps of Engineers
New England District
696 Virginia Rd.
Concord, MA 01742

Re: MILFORD POND
AQUATIC ECOSYSTEM RESTORATION PROJECT
MILFORD, MA

Based on a review of the information provided, “the proposed restoration project is not expected to impact any structures or sites of historic, architectural or archaeological significance as defined by the NHPA of 1966 as amended,” there does not appear to be any impact to potentially significant religious and cultural resources for the Mashantucket Pequot Tribe. The Mashantucket Pequot Tribe appreciates the opportunity to review and comment on this proposed project.

Kathleen Knowles
Tribal Historic Preservation Officer
Natural Resources Protection & Regulatory Affairs

Mashantucket Pequot Tribal Nation
[550 Trolley Line Blvd., P.O. Box 3202, Mashantucket, CT 06338-3202](#)
TEL: 860-396-6887 FAX: 860-396-6914
kknowles@mptn-nsn.gov

From: [Burnett, Adam W NAE](#)
To: [Levitt, Kenneth M NAE](#)
Subject: FW: [EXTERNAL] ref. Milford pond dredging
Date: Wednesday, January 29, 2014 7:43:40 AM

I can respond by email.
Adam

-----Original Message-----

From: Edward Eck [mailto:edward_eck@yahoo.com]
Sent: Tuesday, January 28, 2014 8:23 PM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] ref. milford pond dredging

I live on the shore of Milford Pond a few hundred feet from the southern edge of the dam and am interested in the upcoming dredging project.

- 1) The picture of the pond is unreadable. Could you please provide me with a clearer picture or, better, a drawing?
- 2) As my house is within a hundred feet of the shore, can you estimate how much noise the dredging operation might generate? Do you anticipate much odor from the dredged materials?
- 3) Will anything be done to clear the channel running into the Charles? Will anything be done to eliminate the invasive weeds alongside the path and in the channel?
- 4) Will this affect the current flood control zones?

I have been anticipating the dredging and renewal of the pond since I moved in a quarter century ago and hope my neighbors will likewise enjoy it in the future.

Edward R Eck
8 Meade St
Milford MA 01757

From: [Burnett, Adam W NAE](#)
To: [Levitt, Kenneth M NAE](#)
Subject: FW: [EXTERNAL] Public Comments for Milford Pond Restoration Project...
Date: Monday, February 24, 2014 8:17:02 AM

Ken,

Another comment. The current plan layout does connect the dredged area to the deeper area north of the boat ramp.

Adam W. Burnett, PG

Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: housejohnson@comcast.net [<mailto:housejohnson@comcast.net>]
Sent: Saturday, February 22, 2014 3:43 AM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] Public Comments for Milford Pond Restoration Project...

Hello Mr. Burnett,

I am writing in regards to the Milford Pond Restoration Project (Milford, MA)...

During one of the meetings of the Milford Pond Restoration Committee, I raised an issue which I want to make sure that the USACE is also aware of and fully considering; namely, my committee [i.e., Milford's Capital Improvement Cmte.] was told that, currently, there is a naturally occurring deep water area of Milford Pond at (or slightly to the north of) the current boat landing (located by Plains Park). It may not be all that large or deep, relative to the scope of the pending restoration work, but it already exists within the pond.

Since the current restoration project plans to focus the dredging efforts on the southern region of Milford Pond, it was unclear if the Corps.' efforts will reach this existing deep water area.

I pointed out that there would be significant marginal returns if the pending dredging can just reach the southern-most portion of this existing deep water... it would also open up accessibility to those deep waters (from the newly dredged portion), significantly increasing the overall area for boating usage, while simultaneously realizing the full potential of the Town's current boat landing. This latter factor could be achieved at no additional cost, simply because the boat landing would then be surrounded by the deeper waters on all sides.

If the USACE efforts don't reach the relative deep waters in the current pond topography, it would result in two separate deep water areas of the pond, which may in fact be sufficiently isolated from each other in a manner that would prohibit safe boating between these areas for larger crafts or for other recreational uses... not to mention that the existing boat landing might not be fully accessible (for larger crafts) to the newly dredged area.

Of course, if this isn't actually part of the planned scope of work (and 'additional' dredging is deemed too costly), perhaps dredging a slightly less-deep channel (say 8'-11', instead of the full 12+') might still be possible to 'connect' all the deep waters of Milford Pond for less cost/effort (than dredging at full depth all the way to the existing deep waters).

If you have any questions/comments about the above remarks, please feel free to contact me further...

Regards,

Gregg Johnson,

Chairman, Capital Improvement Committee (Town of Milford)

Town Meeting Member (Town of Milford)

U.S. Army Reservist (retired)

PHONE: 508-381-33732

MAIL: 20 Howard St., Milford, MA 01757-3617

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Edward R Eck
8 Meade St
Milford MA 01757

From: [Burnett, Adam W NAE](mailto:Burnett.Adam.W.NAE)
To: [Reiner, Edward](mailto:Reiner.Edward)
Cc: [Levitt, Kenneth M NAE](mailto:Levitt.Kenneth.M.NAE)
Subject: RE: Milford pond
Date: Thursday, February 20, 2014 4:11:21 PM

Hi Ed,

We are updating the EA to reflect the water disposal wetland creation, and that is what the recent public notice refers to. In the updated EA, we plan to address the comments made in EPA's rebuttal response letter dated April 25 2005.

Thanks. Adam

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Reiner, Edward [<mailto:reiner.ed@epa.gov>]
Sent: Thursday, February 20, 2014 2:25 PM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] RE: Milford pond

Thank you. I thought the Corps was updating the EA to reflect the water disposal wetland creation component. If so, in that process, will the Corps reply to EPA's rebuttal response letter in any manner either directly or in the document?

Edward Reiner
Senior Wetland Scientist
USEPA
5 Post Office Square.
Suite 100 (OEP05-2)
Boston, MA 02109-3912

Ph. (617) 918-1692
Fx. (617) 918-0692
e. Reiner.Ed@epa.gov

-----Original Message-----

From: Burnett, Adam W NAE [<mailto:Adam.W.Burnett@usace.army.mil>]
Sent: Tuesday, February 11, 2014 1:15 PM
To: Reiner, Edward
Cc: Levitt, Kenneth M NAE
Subject: RE: Milford pond

Hi Ed,

I made a copy of the 2005 EA and burned it on a disc for you. I also included the appendices, which included USACE response to EPA letters. As we agreed, I left them at the front desk for you to pick up today.

Thanks. Adam

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Reiner, Edward [<mailto:reiner.ed@epa.gov>]
Sent: Tuesday, February 11, 2014 8:54 AM
To: Burnett, Adam W NAE
Subject: [EXTERNAL] RE: Milford pond

Both would be great. Thanks.

Edward Reiner
Senior Wetland Scientist
USEPA
5 Post Office Square.
Suite 100 (OEP05-2)
Boston, MA 02109-3912

Ph. (617) 918-1692
Fx. (617) 918-0692
e. Reiner.Ed@epa.gov

-----Original Message-----

From: Burnett, Adam W NAE [<mailto:Adam.W.Burnett@usace.army.mil>]
Sent: Tuesday, February 11, 2014 8:53 AM
To: Reiner, Edward; Levitt, Kenneth M NAE
Subject: RE: Milford pond

We'll have documents for you to pick up. Do you want hard copy or disc or both?
Adam

Adam W. Burnett, PG
Project Manager, Planning Branch, New England District , U.S. Army Corps of Engineers, 696 Virginia
Road , Concord , MA 01742 -2751 ph 978-318-8547, fax 978-318-8080 www.nae.usace.army.mil

-----Original Message-----

From: Reiner, Edward [<mailto:reiner.ed@epa.gov>]
Sent: Tuesday, February 11, 2014 8:26 AM
To: Burnett, Adam W NAE; Levitt, Kenneth M NAE
Subject: [EXTERNAL] RE: Milford pond

Hi,

I have a meeting with Regulatory at 2 pm today. Let me know If you found a copy of the EA or other
correspondence which addressed EPA comment, make me a copy, and I will bring it back to the office
and discuss it with Dave Pincumbe. My cell is 978-376-4449

Edward Reiner
Senior Wetland Scientist
USEPA
5 Post Office Square.
Suite 100 (OEP05-2)
Boston, MA 02109-3912

Ph. (617) 918-1692

Fx. (617) 918-0692

e. Reiner.Ed@epa.gov <<mailto:Reiner.Ed@epa.gov>>

From: Reiner, Edward

Sent: Wednesday, January 22, 2014 9:37 AM

To: 'Adam.w.Burnett@usace.army.mil'; 'Kenneth.m.levitt@usace.army.mil'

Subject: Milford pond

I noticed EPA had sent you comments in 2002 suggesting dam removal. I think there was an EA in 2004 or so, that addressed the alternatives including dam removal. Can you provide me with that documentation so I can answer this question for my supervisor.

Edward Reiner

Senior Wetland Scientist

USEPA

5 Post Office Square.

Suite 100 (OEP05-2)

Boston, MA 02109-3912

Ph. (617) 918-1692

Fx. (617) 918-0692

e. Reiner.Ed@epa.gov

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Appendix E

Sediment Chemistry for 2005 EA

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**Milford Pond
Sediment Analysis**

Table 1 - General Chemical and Physical Characteristics.

	Sample Date: January 11, 1999				Sample Date: May 30, 2002														
	SS-1	SS-2	SS-3	SS-4	COE-1	COE-2	COE-3	COE-4	COE-5	COE-6	COE-7	COE-8	COE-9	COE-10	COE-11	COE-12	COE-13	COE-14	COE-15
Solids, Total (%)	8.3	8.6	8.6	10	11	8.8	8.6	9.8	9.9	9.7	10	12	29	24	11	9.6	10	9.4	10
Solids, Total Volatile (%)	80	76	58	58	64	80	80	64	67	56	76	60	12	23	58	55	75	52	55
pH (SU)	6.3	5.9	5.9	6.7															
Buffer pH (SU)	5.89	5.94	6.23	5.93															
Exchangeable Acidity (meq/100g)	47	55	39	48															
Nitrogen, Ammonia (mg/kg)	290	180	190	330															
Nitrogen, Nitrite (mg/kg)	ND	ND	ND	ND															
Nitrogen, Nitrate (mg/kg)	ND	ND	ND	ND															
Nitrogen, Total Kjeldahl (mg/kg)	21000	16000	11000	14000															
Phosphorus, Total (mg/kg)	380	170	370	590															
Hydrocarbons, Total (IR) (mg/kg)	ND	ND	ND	ND															
Moisture (%)	92	91	91	90															
Total Organic Carbon (%)					15.5	19.6	17.1	15.4	17.0	14.6	17.5	27.5	6.45	8.42	18.0	23.9	30.8	22.2	26.3
Particle Size (% passing) -- By Sieve																			
Sieve, 1 inch (%)	100	100	100	100															
Sieve, #4 (%)	93.8	86	82	95.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sieve, #10 (%)	89	83	78	91	100	100	98.6	100	100	100	100	100	99.8	99.3	100	99.9	99.0	100	100
Sieve, #20 (%)	81	71	70	83															
Sieve, #40 (%)	74	66	62	79	94.4	100	97.5	98.9	99.8	99.7	99.8	92.8	54	91.6	100	99.6	98.4	99.9	99.9
Sieve, #60 (%)	71	62	58	76															
Sieve, #140 (%)	63	57	50	66															
Sieve, #200 (%)	60	56	48	63	79	97.0	93.3	91.0	96.2	94.9	98.7	61	18	47	84	79	76	98.9	98.5
Particle Size --By Hydrometer																			
Sand+ (>53um) (%)	59	62	48	40	38	30	30	19	15	23	29	45	81	54	30	38	28	21	19
Coarse Silt (20-53um) (%)	21	18	25	33	8.3	19	14	9.9	16	4.1	15	17	6.7	30	21	8.7	14	3.1	11
Medium Silt (5-20um) (%)	15	15	23	23	22	21	22	40	30	24	28	19	5.7	12	20	31	29	37	25
Fine Silt (2-5um) (%)	4.8	4.4	4.3	4	21	25	18	24	28	34	24	9.8	3.8	2.1	18	13	13	31	32
Clay (<2um) (%)	ND	ND	ND	ND	10	4.6	16	7.1	11	15	3.9	8.6	2.3	2.2	10	9.0	16	7.2	12
Organic Matter, Total (%)	6.7	6.5	5	5.8															

*Blank shaded cells indicate parameter was not measured for this sample date.

ND= Not detected - indicates the constituent was not present in quantities above the Method Detection Limit (MDL)

**Milford Pond
Sediment Analysis
Table 2 - Polynuclear Aromatic Hydrocarbons (PAHs).**
(All Measurements are in ug/kg (ppb))

PAH by GC/MS SIM 8270M	Sample Date: January 11, 1999				Sample Date: May 29-30, 2002															310CMR40 Mass. Contingency Plan		
	SS-1	SS-2	SS-3	SS-4	COE-1	COE-2	COE-3	COE-4	COE-5	COE-6	COE-7	COE-8	COE-9	COE-10	COE-11	COE-12	COE-13	COE-14	COE-15	S-1	S-2	
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20,000	20,000
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	—	—
Fluoranthene	ND	ND	ND	ND	630	280	ND	ND	ND	ND	ND	ND	130	ND	ND	110	170	ND	ND	ND	1,000,000	2,000,000
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	—	4,000
Benzo (a) anthracene	ND	ND	ND	ND	230	82	ND	ND	ND	ND	ND	ND	46	ND	ND	ND	ND	ND	ND	ND	700	1,000
Benzo (a) pyrene	ND	ND	ND	1700	89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	700	700
Benzo (b) fluoranthene	ND	ND	ND	1400	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	700	1,000
Benzo (k) fluoranthene	ND	ND	ND	1500	230	ND	ND	ND	ND	ND	ND	ND	46	ND	ND	ND	ND	ND	ND	ND	7,000	10,000
Chrysene	ND	ND	ND	ND	380	150	ND	ND	ND	ND	ND	ND	64	ND	ND	ND	77	ND	ND	ND	7,000	10,000
Acenaphthylene	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100,000	100,000
Anthracene	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,000,000	2,500,000
Benzo (ghi) perylene	ND	ND	ND	ND	270	ND	ND	ND	ND	ND	ND	ND	74	ND	ND	ND	ND	ND	ND	ND	1,000,000	2,500,000
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	400,000	400,000
Phenanthrene	ND	ND	ND	ND	430	200	ND	ND	ND	ND	ND	ND	52	ND	ND	ND	68	ND	ND	ND	700,000	700,000
Dibenzo (a,h) anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	700	700
Indeno (1,2,3-cd) Pyrene	ND	ND	ND	ND	210	ND	ND	ND	ND	ND	ND	ND	56	ND	ND	ND	ND	ND	ND	ND	700	1,000
Pyrene	ND	ND	ND	ND	690	280	ND	ND	ND	ND	ND	ND	120	ND	ND	97	150	ND	ND	ND	700,000	1,000,000
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	—	—
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,000	4,000
Perylene	7200	3400	3800	3200	630	1000	1700	520	630	300	310	2000	130	ND	670	650	2200	450	900	—	—	
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,000	1,000
2,6-dimethylnaphthalene	ND	ND	ND	ND																—	—	
1-Methylphenanthrene	ND	ND	ND	ND																—	—	
Benzo (e) Pyrene					210	83	ND	ND	ND	ND	ND	ND	40	ND	ND	ND	ND	ND	ND	ND	—	—
Total PAHs	7200	3400	3800	7800	4359	2075	1700	520	630	300	310	2000	758	ND	670	857	2665	450	900			

* Blank shaded cells indicate parameter was not measured for this sample date. Shaded cells with values indicate exceedence of MCP S-1 for GW-1 for soils for the parameter.
ND= Not detected - indicates the constituent was not present in quantities above the Method Detection Limit (MDL)

**Milford Pond
Sediment Analysis
Table 3 - Metals.**

	Sample Date: January 11, 2001				Sample Date: May 30, 2002															310CMR40 Mass. Contingency Plan		MADEP Background Soil Concentrations ¹	
	SS-1	SS-2	SS-3	SS-4	COE-1	COE-2	COE-3	COE-4	COE-5	COE-6	COE-7	COE-8	COE-9	COE-10	COE-11	COE-12	COE-13	COE-14	COE-15	S-1	S-2		
Total Metals (mg/kg)																							
Arsenic, Total	2.58	1.15	5.79	5.4	3.6	3.0	3.9	1.4	1.4	1.2	1.6	3.6	0.92	2.6	0.98	2.0	1.9	1.1	1.3		30	30	17
Barium, Total					84	84	68	57	69	49	48	44	27	40	45	86	82	55	63		1,000	2,500	45
Cadmium, Total	0.91	0.36	1.2	4.7	1.5	0.79	ND	0.27	0.13	0.15	ND	0.35	0.24	0.15	0.12	0.38	0.26	0.13	0.13		30	80	2
Calcium, Total	13,000	6,100	7,300	6,700																			
Chromium, Total	4.33	3.09	8.4	8.1	4.1	2.7	1.8	2.0	2.1	2.0	1.8	4.8	5.6	5.2	1.3	3.4	1.8	1.7	2.5		1,000	2,500	29
Copper, Total	12	6.1	14	23																			38
Lead, Total	31	24	38	91	52	27	1.2	6.5	3.5	14	4.8	1.7	15	4.5	5.4	23	11	6.4	5.9		300	600	99
Magnesium, Total	1,200	640	1,100	880																			4,900
Mercury, Total	ND	ND	ND	0.4	0.110	0.074	0.029	0.042	0.041	0.034	0.034	0.053	0.038	0.02	0.032	0.085	0.050	0.044	0.049		20	60	0.3
Nickel, Total	5.07	2.58	8	12																	300	700	17
Potassium, Total	ND	ND	ND	ND																			
Selenium, Total					ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND		400	2,500	0.5
Silver, Total					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		100	200	0.6
Zinc, Total	77	44	100	260																	2,500	2,500	116
TCLP Metals (mg/L) -- TCLP Extraction																							
Arsenic, TCLP	ND	ND	ND	ND																			
Cadmium, TCLP	ND	ND	ND	ND																			
Chromium, TCLP	ND	ND	ND	ND																			
Copper, TCLP	ND	ND	ND	ND																			
Lead, TCLP	ND	ND	ND	ND																			
Mercury, TCLP	ND	ND	ND	ND																			
Nickel, TCLP	ND	ND	ND	ND																			
Zinc, TCLP	ND	ND	ND	ND																			

* Blank shaded cells indicate parameter was not measured for this sample date. Shaded cells with values indicate exceedence of MA DEP Background Levels for soils for the parameter

ND= Not detected - indicates the constituent was not present in quantities above the Method Detection Limit (MDL)

¹ Source: Massachusetts DEP. 1995. Guidance for Disposal Site Risk Characterization. Interim Final Policy WSC/ORS-95-141.

TCLP was required for both sample sets. For the second sampling event (May 2002) TCLP was only required when the concentration of metals or organic compounds were equal to or greater than the theoretical concentration at which TCLP criteria may be exceeded (as follows)

If:

- As>100 mg/kg
- Ba> 2000mg/kg
- Cd> 20 mg/kg
- Cr> 100 mg/kg
- Pb> 100 mg/kg
- Hg> 4 mg/kg
- Se> 20 mg/kg
- Ag> 100 mg/kg

AS LISTED ABOVE

**Milford Pond
Sediment Analysis**
Table 5 - TCLP Volatile Organics.
(All Measurements are in ug/kg (ppb))

	SS-1	SS-2	SS-3	SS-4	310CMR40 Mass. Contingency Plan	
TCLP Volatile Organics -- TCLP Extraction					S-1	S-2
Chloroform (ug/L)	ND	ND	ND	ND	100	10,000
Carbon Tetrachloride (ug/L)	ND	ND	ND	ND	1,000	4,000
Tetrachloroethene (ug/L)	ND	ND	ND	ND	—	—
Chlorobenzene (ug/L)	ND	ND	ND	ND	8,000	40,000
1,2-Dichloroethane (ug/L)	ND	ND	ND	ND	50	200
Benzene (ug/L)	ND	ND	ND	ND	10,000	60,000
Vinyl Chloride (ug/L)	ND	ND	ND	ND	300	400
1,1-Dichloroethene (ug/L)	ND	ND	ND	ND	100	100
Trichloroethene (ug/L)	ND	ND	ND	ND	400	20,000
1,4-Dichlorobenzene (ug/L)	ND	ND	ND	ND	2,000	60,000
2-Butanone	ND	ND	ND	ND	300	40,000

Milford Pond
Sediment Analysis
Table 6 - Volatile Organics -- 8260 Scan.
 (All Measurements are in ug/kg (ppb))

	COE-1	COE-2	COE-3	COE-4	COE-5	COE-6	COE-7	COE-8	COE-9	COE-10	COE-11	COE-12	COE-13	COE-14	COE-15
Volatile Organics -- 8260 Scan															
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1 - Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tertiary butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p/m-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobutane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl methacrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	640	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*sample dates: May 29-30, 2002

ND= Not detected - indicates the constituent was not present in quantities above the Method Detection Limit (MDL)

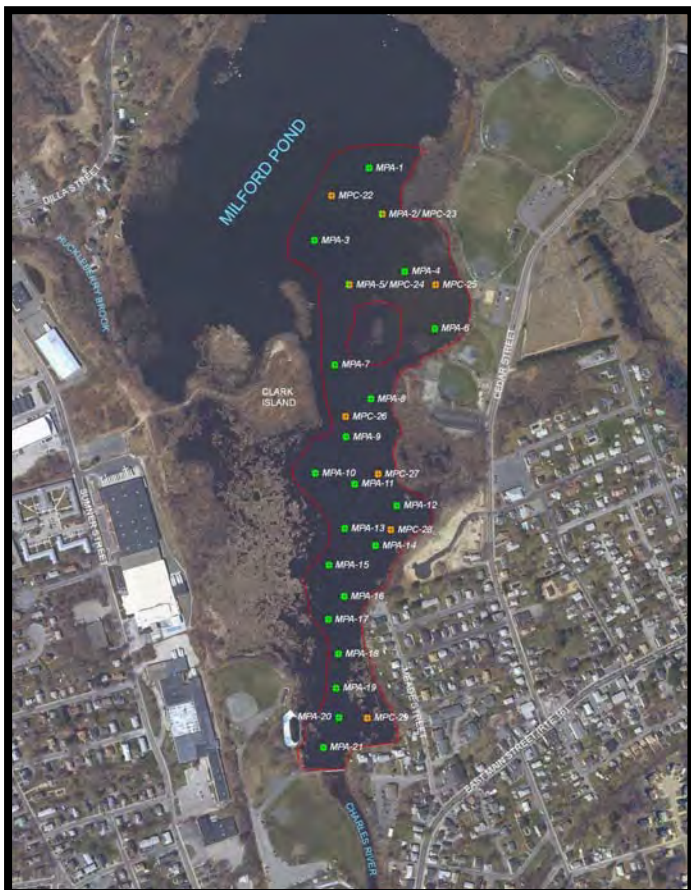
Appendix F

Sediment Analysis for 2014 EA

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FIELD REPORT FOR MILFORD POND RESTORATION PROJECT: CORING AND GEOTECHNICAL ANALYSES, MILFORD, MASSACHUSETTS

Contract No. W912WJ-09-D-0001-0003



Prepared For:

United States Army Corp of Engineers
New England District
696 Virginia Road
Concord, MA 01742

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East Falmouth, MA 02536

May 2009

**FIELD REPORT
FOR
MILFORD POND RESTORATION PROJECT:
CORING AND GEOTECHNICAL ANALYSES,
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1.0 INTRODUCTION

The objectives of this field work was three-fold: 1) to acquire data to support design and permitting efforts for proposed dredging of sediments within selected areas of Milford Pond and disposal at an upland location; 2) acquire data to select, design and cost out dewatering technologies; and 3) acquire data to comprehensively characterize pond sediments (percent solids) to support dewatering design efforts. Results will ultimately be made available to contractors bidding on the construction phase of work.

2.0 SAMPLING AND SAMPLE HANDLING

Field sampling occurred at Milford Pond between April 7 and April 15, 2009. The proposed work consists of taking sediment cores to project depth (-12 feet) from 29 locations within Milford Pond, Milford, MA (Figure 1). The sediments from these cores was described and sampled for physical and chemical analysis in support permitting efforts. Field activities were supervised by James J. Bajek of Woods Hole Group, who also served as the Site Safety Officer. Core samples were collected by TG&B Marine Services on board a 24-ft Carolina Skiff specifically designed for coring operations. An inflatable outboard powered raft was used to shuttle collected samples from the sampling vessel to shore. Woods Hole Group conducted on-site processing of the collected sediment samples.

The sample coring equipment consisted of a pneumatic vibracoring device as well as a manual hammer push corer. Most of the sample locations were sampled using the vibracorer. Navigation to sample locations was accomplished using a Leica MX 420 DGPS unit. All samples were collected as close as possible to their designated locations.

The sediment sample locations were separated into three groups: A-Series (Figure 2), B-Series (Figure 3), and C-Series (Figure 4). The C-Series cores were collected first (April 7) with the purpose to physically characterize the sediments of the pond, collect geotechnical data from substrata, and to provide samples for analysis that would assist in the design of the dewatering process (Table 1). The A-Series cores were collected second (April 8–9), following the collection of the C-Series (Table 2). The A-Series cores were collected for physical and chemical analysis of the substrata. The B-Series cores were collected last (April 10, 13-15); these cores were collected to provide a large volume of sample for laboratory dewatering tests (Table 3). The observations made from the C-series core descriptions were used to determine the locations of the B-Series cores. Water was also collected from the pond using a 12-volt pump and garden hose.



Figure 1. Basemap of Milford Pond and USACE specified sampling locations. Figure illustrates approximate sample locations, as-built sample locations coordinates are tabulated in Tables 1, 2, and 3.



Figure 2. Basemap of Milford Pond and USACE specified sampling locations. Figure illustrates sample locations for the A-Series Cores.



Figure 3. Basemap of Milford Pond and USACE specified sampling locations. Figure illustrates sample locations for the B-Series Cores.



Figure 4. Basemap of Milford Pond and USACE specified sampling locations. Figure illustrates sample locations for the C-Series Cores.

Table 1. C-Series cores, as-built coordinates and sample collection results. Cores collected for characterization of sediment properties for dewatering process.

Sample ID	Date	Time	Longitude (WGS84)	Latitude (WGS84)	Water Depth (ft)	Penetration (ft)	Recovery (ft)
MPC-22	4/7/2009	12:43	71 30.8260	42 9.3736	4.0	7.5	7.0
MPC-23	4/7/2009	13:06	71 30.7630	42 9.3556	4.0	10.0	9.4
MPC-24	4/7/2009	14:19	71 30.8044	42 9.2889	3.5	6.0	2.8
MPC-25	4/7/2009	14:46	71 30.6999	42 9.2922	5.9	10.0	9.5
MPC-26	4/7/2009	09:05	71 30.8090	42 9.1732	3.7	9.0	8.7
MPC-27	4/7/2009	09:37	71 30.7701	42 9.1196	3.2	10.0	8.6
MPC-28	4/7/2009	11:21	71 30.7553	42 9.0700	2.8	10.3	7.1
MPC-29	4/7/2009	10:22	71 30.7874	42 8.8949	2.7	10.0	9.0

Table 2. A-Series cores, as-built coordinates and sample collection results. Cores collected for physical and chemical analysis

Sample ID	Date	Time	Longitude (WGS84)	Latitude (WGS84)	Water Depth (ft)	Penetration (ft)	Recovery (ft)
MPA-1	4/8/2009	11:28	71 30.7786	42 9.3981	3.4	10.0	9.3
MPA-2	4/8/2009	11:55	71 30.7644	42 9.3555	3.8	10.0	9.0
MPA-3	4/8/2009	12:13	71 30.8501	42 9.3316	3.3	9.9	5.5
MPA-4	4/8/2009	13:57	71 30.7353	42 9.3034	3.8	10.0	8.6
MPA-5	4/8/2009	12:33	71 30.8031	42 9.2938	3.4	10.0	4.2
MPA-6	4/8/2009	13:33	71 30.7019	42 9.2506	4.0	10.0	8.5
MPA-7	4/8/2009	08:15	71 30.8227	42 9.2127	3.0	10.0	5.5
MPA-8	4/8/2009	09:01	71 30.7757	42 9.1877	3.5	10.1	7.0
MPA-9	4/8/2009	09:21	71 30.8077	42 9.1536	3.0	10.0	9.5
MPA-10	4/8/2009	09:48	71 30.8461	42 9.1203	3.0	10.0	9.6
MPA-11	4/8/2009	10:10	71 30.7971	42 9.1102	4.1	10.0	9.6
MPA-12	4/9/2009	12:01	71 30.7463	42 9.0909	2.8	10.0	9.0
MPA-13	4/8/2009	14:37	71 30.8087	42 9.0710	3.1	10.0	9.8
MPA-14	4/9/2009	08:40	71 30.7682	42 9.0535	2.9	10.0	9.5
MPA-15	4/8/2009	15:02	71 30.8280	42 9.0375	2.8	10.0	9.3
MPA-16	4/9/2009	09:16	71 30.8113	42 9.0088	3.0	10.0	5.0

MPA-17	4/8/2009	15:22	71 30.8291	42 8.9881	4.5	10.0	9.3
MPA-18	4/9/2009	12:35	71 30.8167	42 8.9557	3.6	10.0	8.8
MPA-19	4/9/2009	09:45	71 30.8208	42 8.9240	4.2	9.0	8.1
MPA-20	4/9/2009	10:11	71 30.8181	42 8.8985	4.8	10.0	9.5
MPA-21	4/9/2009	10:32	71 30.8358	42 8.8699	3.5	10.0	9.1

Table 3. B-Series cores, as-built coordinates and sample collection results. Cores collected for laboratory based sediment dewatering tests.

Sample ID	Date	Time	Longitude (WGS84)	Latitude (WGS84)	Water Depth (ft)	Penetration (ft)	Recovery (ft)
MPB-9	4/10/2009	08:42	71 30.8048	42 9.1529	3.1	9.5	9.0
MPB-20	4/10/2009	11:09	71 30.8172	42 8.8969	3.2	9.8	9.5
MPB-25	4/10/2009	08:18	71 30.7006	42 9.2916	5.5	10.0	9.0
MPB-27	4/10/2009	10:49	71 30.7698	42 9.1195	3.2	9.5	9.3

2.1 SAMPLING CHRONOLOGY

The following table lists the sampling sequence of events for the coring activities conducted at Milford Pond.

Table 4. Sampling Activities at Milford Pond

Milford Pond Sampling Activities	
Date	Activity
April 7, 2009	Collected and processed C-Series sediment cores
April 8 - 9, 2009	Collected A-Series sediment cores; delivered samples to Alpha Lab at end of each day; delivered A and C-Series samples to Geotesting Express
April 10, 2009	Began collection of B-Series sediment cores
April 14, 2009	Continued collection of B-Series sediment cores
April 15, 2009	Completed collection of B-Series sediment cores; collected pond water; delivered sediment samples to Geotesting Express
April 16, 2009	Processed A-Series sediment cores at Alpha Lab; delivered A-Series sediment samples to Geotesting Express
April 17, 2009	Delivered B-Series sediment and pond water to Severson Environmental Services, Inc.
April 21, 2009	Processing Services, LLC picked up B-Series sediment and pond water samples

2.2 FIELD ACTIVITIES AND PROBLEMS ENCOUNTERED

Table 5 provides summary of the coring activities and provides a brief synopsis of problems encountered. In general, there were areas within Milford Pond that presented challenges to obtaining the cores. There were areas of dense vegetation with roots that prevented the core from penetrating the bottom. There were other areas within the pond that had stumps and old trees that prevented the core from penetrating to the intended depth. The cores were obtained by moving the core location systematically around the intended core coordinates until core penetration could be obtained. Every attempt was made to make sure the location of the core was as close as possible to the original location specified in the Statement of Work.

Table 5 Synopsis for coring activities at Milford Pond

Series Cores	Station	Date	Time	Water Depth	Pen.	Recov.	latitude north	longitude west	Comments
"C"	26	4/7/2009	905	3.7	9.0	8.5	42 9.1732	71 30.8090	4' peat over 4' sand
"C"	27	4/7/2009	937	3.2	10.0	8.0	9.1196	30.7701	4' peat over 4' sand
"C"	29	4/7/2009	1022	2.7	10.0	9.0	8.8949	30.7874	target coords put the station in weed patch, we moved 26' to the NE. had to probe to avoid roots
"C"	28	4/7/2009	1121	2.8	10.3	7.8	9.0700	30.7553	
"C"	22	4/7/2009	1243	4.0	7.5		9.3736	30.8260	very soft bottom, difficult to determine bottom
"C"	23	4/7/2009	1306	4.0	10.0	9.8	9.3556	30.7630	
"C"	24	4/7/2009	1419	3.5	6.0	2.8	9.2889	30.8044	tree roots on or near bottom. Moved 100' to west and 250' to south while probing, found same results. Went back to original stations
"C"	25	4/7/2009	1446	5.9	10.0	10.0	9.2922	30.6999	soft
"A"	7a	4/8/2009	815	3.0	10.0	5.5	9.2127	30.8227	rooty, low recovery.
"A"	7b	4/8/2009	847	3.0	10.0	9.0	9.2179	30.8238	had to probe area to find location with no roots
"A"	8a	4/8/2009	901	3.5	10.1	7.0	9.1877	30.7757	rooty, low recovery.
"A"	8b	4/8/2009	913	3.5	10.1	6.2	9.1876	30.7760	rooty, low recovery, kept 8a
"A"	9	4/8/2009	921	3.0	10.0	9.5	9.1536	30.8077	all sand
"A"	10	4/8/2009	948	3.0	10.0	9.6	9.1203	30.8461	some roots on surface, peat over sand
"A"	11	4/8/2009	1010	4.1	10.0	9.6	9.1102	30.7971	all peat
"A"	12	4/8/2009	1025	2.8	11.0	7.5	9.0903	30.7469	2 attempts
"A"	1	4/8/2009	1128	3.4	10.0	9.3	9.3981	30.7786	rooty
"A"	2	4/8/2009	1155	3.8	10.0	9.0	9.3555	30.7644	soft, push core
"A"	3	4/8/2009	1213	3.3	9.9	5.5	9.3316	30.8501	rooty, had to probe to find good spot to core
"A"	5	4/8/2009	1233	3.4	10.0	4.2	9.2938	30.8031	same location as sta 24
"A"	6	4/8/2009	1333	4.0	10.0	8.5	9.2506	30.7019	soft, push core

Series Cores	Station	Date	Time	Water Depth	Pen.	Recov.	latitude north	longitude west	Comments
"A"	4	4/8/2009	1357	3.8	10.0	8.6	9.3034	30.7353	soft, push core had to probe to find spot to core
"A"	13	4/8/2009	1437	3.1	10.0	9.8	9.0710	30.8087	
"A"	15	4/8/2009	1502	2.8	10.0	9.3	9.0375	30.8280	had to probe area to find location with no roots
"A"	17	4/8/2009	1522	4.5	10.0	9.3	8.9881	30.8291	
"A"	18	4/8/2009	1541	3.8	9.7	7.3	8.9545	30.8170	2 attempts. Push/hammer core
"A"	16	4/8/2009	1607	3.0	na	na	na	na	multiple attempts no sample
"A"									
"A"	14	4/9/2009	840	2.9	10.0	9.5	9.0535	30.7682	
"A"	16	4/9/2009	916	3.0	10.0	5.0	9.0088	30.8113	heavy veg roots, 2 attempts
"A"	19	4/9/2009	945	4.2	9.0	8.1	8.9240	30.8208	2 attempts
"A"	20	4/9/2009	1011	4.8	10.0	9.5	8.8985	30.8181	
"A"	21	4/9/2009	1032	3.5	10.0	9.1	8.8699	30.8358	
"A"	16	4/9/2009	1102	3.4	10.0	6.3	9.0123	30.8102	
"A"	12	4/9/2009	1201	2.8	10.0	9.0	9.0909	30.7463	2 attempts
"A"	18	4/9/2009	1235	3.6	10.0	8.8	8.9557	30.8167	2 vc attempts, took good push core
"B"	25	4/10/2009	818	5.5	10.0	9.0	9.2916	30.7006	muck over peat push core
"B"	9	4/10/2009	842	3.1	9.5	9.0	9.1529	30.8048	1st attempt refusal at 2' good core on 2nd attempt
"B"	29	4/10/2009	903	3.3	na	na	na	na	no sample, multiple attempts. Ben and Jim on board. Probed large area an hit shallow veg roots everywhere. Decide to eliminate this as a station
"B"	27	4/10/2009	1049	3.2	9.5	9.3	9.1195	30.7698	muck over orange sand
"B"	20	4/10/2009	1109	3.2	9.8	9.5	8.8969	30.8172	muck over peat.

2.3 C-SERIES CORE PROCESSING

All C-Series sediment samples were processed shortly after sampling at a temporary shore station established at boat launch site. The sample processing involved first measuring the overall sediment core length, then carefully draining the surface water from each core tube of sediment. Care was given to retaining the upper portion of sediment at the water interface. The core tube was then placed into a clean plastic trough in a near horizontal position and the core tube sliced in two locations, 180 degree apart, with power shears to expose the collected sediment. The core was split in half with the assistance of stainless steel wire to provide a clean separation cut between halves. After the two halves of the core were placed side by side, a ruled stadia rod was set adjacent to the cores to provide a metric for the core's length and substrata. The depth below the core's surface (sediment-water interface) and thickness of each layer was measured and characterized for physical type, color, odor, and the presence of vegetation or other notable features. All sediment texture descriptions were characterized according to the ASTM D2488 – 06 criteria. A descriptive log sheet was developed from the field notes for each collected sample, and is presented in Appendix A.

Geotechnical field tests of shear strength and compressive strength were performed on the freshly split C-series cores after the descriptions were complete. A Torvane® was used to determine shear strength, and a Pocket Penetrometer was used to determine compressive strength. During shear strength measurements the Torvane® was fitted with the standard 1.0 kg/cm² Vane Adapter. The Pocket Penetrometer was used both with and without the 1" diameter Penetrometer Adapter Foot fitted onto the instrument's piston. The results of the geotechnical field tests are presented in Table 6.

Clean stainless steel pans and spoons were used for sample compositing and processing. Upon removal from the core barrel, the samples were placed into clean labeled Whirlpak bags. The samples were maintained in coolers for temporary storage and transport to the laboratory. All samples, accompanied with completed chain-of-custody records, were delivered by automobile to the laboratory.

The sediment cores were sub-sampled and the samples were sent to Geotesting for the following analyses:

- Grain size analysis (wet sieve and hydrometer),
- Atterberg Limits (ASTM D 4318), and
- Laboratory Soil Classification (ASTM 2487).

Additionally the samples will be analyzed for the following:

- Moisture Content, w_c (m_w/m_s), (ASTM D 2216), also converted and reported as Percent Solids (% m_s/m_T).
- Moisture, Ash, and Organic Matter Content (ASTM 2974) for Peat samples
 - Moisture Content – Method A, using the alternative calculation method, for geotechnical purposes. Percent Solids (% m_s/m_T) shall also be reported, converted from moisture content.
 - Ash Content – Method C

- Laboratory Determination of Fiber Content of Peat Samples by Dry Mass (ASTM D 1997).
- Specific Gravity of Solids (ASTM D 854, Test Method A or B, as appropriate)
- Bulk Density of Peat and Peat Products (ASTM D 4531)
- Bulk density of wet sediment (lbs/cf) using either a common tared laboratory container (EM 1110-2-1906), or mud balance if available and appropriate (ASTM D 4380)
-

Table 6. Geotechnical field test results for the C-series cores.

CORE ID	Top Depth (ft)	Bottom Depth (ft)	Torvane® Shear Strength (T/ft²)	Pocket Penetrometer Compression Strength (T/ft²)
MPC-26	0.0	1.8	No Reading (NR)	0.02
MPC-26	2.0	3.0	NR	0.1
MPC-26	5.0	5.5	1.1	0.8
MPC-26	5.5	6.4	1.2	1.2
MPC-26	6.4	8.7	0.3	0.4
MPC-27	0.0	2.6	1.4	0.06
MPC-27	2.6	4.6	0.5	0.07
MPC-27	5.5	6.7	0.4	0.03
MPC-27	6.7	8.6	0.4	0.4
MPC-29	0.8	5.3	0.8	0.05
MPC-29	5.3	9.0	0.4	0.01
MPC-28	0.0	3.4	0.2	0.01
MPC-28	3.4	4.0	0.8	0.03
MPC-28	4.0	7.1	0.4	0.02
MPC-23	0.0	2.7	0.5	NR
MPC-23	2.7	7.2	0.3	NR
MPC-23	7.2	9.4	0.3	NR
MPC-22	1.3	3.6	NR	NR
MPC-22	3.6	5.6	0.4	0.01
MPC-22	5.6	7.0	0.3	0.01
MPC-25	1.9	3.3	NR	NR
MPC-25	3.3	7.0	0.1	NR
MPC-25	7.0	9.5	0.1	NR
MPC-24	0.0	2.8	0.3	0.01

2.4 A-SERIES CORE PROCESSING

The A-Series sediment samples were collected on April 8 and 9, 2009. All A-Series sediment samples were initially brought to the shore-based processing station shortly after sampling for preparation for transport to the testing laboratory. Each core sample was maintained in a stationary upright position for a minimum of 15 minutes to allow for any fine grained material in water suspension near the top of the sample to settle. Any excess water was carefully drained off of the top after the settling period. Each core sample was then sectioned using a saw and the subsections for each sample were capped,

labeled and taped together and temporarily stored in trash barrels under iced conditions. The samples were driven with completed chain-of-custody records to the analytical laboratory where they were refrigerated at 4 degrees Centigrade until the samples were processed.

Sample processing was conducted on April 16, 2009 in the presence of the NAE technical manager. The sample processing involved first measuring the overall sediment core length, then carefully draining the remaining surface water from each core tube of sediment. Care was given to retaining the upper portion of sediment at the water interface. The core tube was then placed into a clean plastic trough in a near horizontal position and the core tube sliced in two locations, 180 degree apart, with power shears to expose the collected sediment. The core was split in half with the assistance of stainless steel wire to provide a clean separation cut between halves. After the two halves of the core were placed side by side, a ruled stadia rod was set adjacent to the cores to provide a metric for the core's length and substrata. The depth below the core's surface (sediment-water interface) and thickness of each major layer was measured and characterized for physical type, color, odor, and the presence of vegetation or other notable features. A descriptive log sheet was developed from the field notes for each collected sample, and is presented in Appendix B.

Clean stainless steel pans and spoons were used for sample compositing and processing. Upon removal from the core barrel, the samples were placed into clean labeled plastic zipper bags. Sample processing followed the expected compositing scheme described in Table 1 of the project Scope of Work with the following exceptions which were directed by the NAE technical manager:

- 1) Composite Group D does not include the 0-5.9' layer of organic peat from sample MPA-7; this layer is being treated as a separate sample.
- 2) Instead of MPA-8 being sample E it was sectioned in 3 separate layers 0-2.2', 2.2-5.1' and 5.1-7.1' for possible analyses.
- 3) Sample MPA-9 was also subsampled with the 0-4.8' section and the 4.8-7.75' section being archived separately for possible analyses.
- 4) Instead of MPA-21 being sample O it was sectioned into 2 separate layers 0-4.4' (to be analyzed) and 4.4-9.5' (to be archived for possible analysis).

A rinsate blank was also collected in the laboratory using a randomly selected unused core sampling tube (obtained during the field collection effort) and clean sample processing pan and spoon by passing deionized water through these devices.

The A-Series sediment core/samples were transported to Alpha Analytical Laboratory. The cores were split and sub-sampled. The subsamples obtained for physical analysis were sent to Geotesting Laboratory for the following physical tests:

- Grain size analysis (wet sieve and hydrometer),
- total solids,
- percent moisture,
- specific gravity,
- bulk density, and

- Atterberg Limits.

The A – Series Cores were further sub sampled and analyzed by Alpha Analytical laboratory for the analyses shown in Tables 7 & 8.

Table 7. Bulk testing parameters performed on the A-Series Cores

TABLE 3 : BULK SEDIMENT TESTING PARAMETERS

BULK SEDIMENT TESTING PARAMETERS

Parameter	Analytical Method	Reporting Limit (ppm)
Metals		
Arsenic	6010B, 6020, 7060, 7061	0.5
Cadmium	6010B, 6020, 7130, 7131	0.1
Chromium	6010B, 6020, 7190, 7191	1.0
Copper	6010B, 6020, 7210	1.0
Lead	6010B, 6020, 7420, 7421	1.0
Mercury	7471	0.02
Nickel	6010B, 6020, 7520	1.0
Zinc	6010B, 6020, 7950	1.0
Polyaromatic Hydrocarbons (PAHs)		
Acenaphthene	Chrysene	
Acenaphthylene	Dibenzo(a,h)anthracene	
Anthracene	Fluoranthene	
Benzo(a)anthracene	Fluorene	
Benzo(a)pyrene	Indeno(1, 2, 3-cd)pyrene	
Benzo(b)fluoranthene	Naphthalene	
Benzo(k)fluoranthene	Phenanthrene	
Benzo(g, h, i)perylene	Pyrene	
Polychlorinated Biphenyls (PCBs) See next page	NOAA (1993), 8082A	0.001
Extractable Petroleum Hydrocarbons (EPHs)	MADEP (1998)	25
Total Organic Carbon	Plumb (1981), APHA (1995)	0.1%
Percent Water	(1981), EPA (1992), PSEP (1986)	1.0%
Grain Size Distribution	Wet Sieve (#4, 10, 40, 200) Sieve Nos. 4, 10,40,60,200	
Specific Gravity	Plumb (1981), ASTM (1998b), ALPHA (1995)	0.01
Bulk Density	Klute (1986), DOA (1980)	0.01g/cm ³
Atterberg Limits	ASTM (1998c)	

Table 8. PCB Congener analysis to be performed on the A-Series cores

TABLE 3 (Continued):**PCB CONGENERS**

Analytical Method: NOAA (1993), 8082A

Reporting Limit: 1 ppb

Congeners:

8 ^a	2,4' diCB
18 ^a	2,2',5 triCB
28 ^a	2,4,4' triCB
44 ^a	2,2',3,5' tetraCB
49	2,2',4',5 tetraCB
52 ^a	2,2',5,5' tetraCB
66 ^a	2,3',4,4' tetraCB
87	2,2',3,4,5' pentaCB
101 ^a	2,2',4,5,5' pentaCB
105 ^a	2,3,3',4,4' pentaCB
118 ^a	2,3',4,4',5 pentaCB
128 ^a	2,3,3',4,4' hexaCB
138 ^a	2,2',3,4,4',5' hexaCB
153 ^a	2,2',4,4',5,5' hexaCB
170 ^a	2,2',3,3',4,4',5 heptaCB
180 ^a	2,2',3,4,4',5,5' heptaCB
183	2,2',3,4,4',5,6 heptaCB
184	2,2',3,4,4',6,6' heptaCB
187 ^a	2,2',3,4',5,5',6 heptaCB
195 ^a	2,2',3,3',4,4',5,6 octaCB
206 ^a	2,2',3,3',4,4',5,5',6 nonaCB
209 ^a	2,2',3,3',4,4',5,5',6,6' decaCB

^a denotes a congener to be used in estimating Total PCB. To calculate Total PCB, sum the concentrations of all eighteen congeners marked with a "a" and multiply by 2.

The specified methods are recommendations only. Other acceptable methodologies capable of meeting the Reporting Limits can be used. Sample preparation methodologies (e.g. extraction and cleanup) and sample size may need to be modified to achieve the required Reporting Limits.

2.5 B-SERIES CORE PROCESSING

The B-Series sediment samples were collected on April 10, 14 and 15, 2009. One representative core from each of the four B-Series stations was brought to shore in the sampling liner for processing. Each core sample was maintained in a stationary upright position for a minimum of 15 minutes to allow for any fine grained material in water suspension near the top of the sample to settle. Any excess water was carefully drained off of the top after the settling period.

Sample processing was conducted in the presence of the NAE technical manager. The sample processing involved first measuring the overall sediment core length, then carefully draining the remaining surface water from each core tube of sediment. Care was given to retaining the upper portion of sediment at the water interface. The core tube was then placed into a clean plastic trough in a near horizontal position and the core tube sliced in two locations, 180 degree apart, with power shears to expose the collected sediment. The core was split in half with the assistance of stainless steel wire to provide a clean separation cut between halves. After the two halves of the core were placed side by side, a ruled stadia rod was set adjacent to the cores to provide a metric for the core's length and substrata. The depth below the core's surface (sediment-water interface) and thickness of each major layer was measured and characterized for physical type, color, odor, and the presence of vegetation or other notable features. A descriptive log sheet was developed from the field notes for each collected sample, and is presented in Appendix C.

The NAE technical manager provided direction to the sampling personnel on what layers to target for the bulk quantity samples that were to be obtained for the bench-scale testing. The goal was to obtain a sufficient amount of what was termed Type 1 (high peat-fibrous content), Type 2 (degraded peat-decomposed organic matter) and sand for 3 separate sediment types. It was later determined that the sand layer wasn't uniform or of sufficient thickness. Therefore, the NAE manager decided to abandon any further collection of the sand component. A sufficient amount of the Type 1 and 2 sediments were collected and transported with completed chain-of-custody records to the 2 testing facilities.

The sediment cores were sub-sampled and the samples were sent to Geotesting for the following analyses:

- Grain size analysis (wet sieve and hydrometer),
- Atterberg Limits (ASTM D 4318), and
- Laboratory Soil Classification (ASTM 2487).

Additionally the samples will be analyzed for the following:

- Moisture Content, w_c (m_w/m_s), (ASTM D 2216), also converted and reported as Percent Solids (% m_s/m_T).
- Moisture, Ash, and Organic Matter Content (ASTM 2974) for Peat samples
 - Moisture Content – Method A, using the alternative calculation method, for geotechnical purposes. Percent Solids (% m_s/m_T) shall also be reported, converted from moisture content.
 - Ash Content – Method C

- Laboratory Determination of Fiber Content of Peat Samples by Dry Mass (ASTM D 1997).
- Specific Gravity of Solids (ASTM D 854, Test Method A or B, as appropriate)
- Bulk Density of Peat and Peat Products (ASTM D 4531)
- Bulk density of wet sediment (lbs/cf) using either a common tared laboratory container (EM 1110-2-1906), or mud balance if available and appropriate (ASTM D 4380)

One facility, Mineral Processing Services, LLC (MPS) was provided 40 gallons of Type 1/Type 2 mixture (equal parts) and 10 gallons of sand. The other facility, Severson Environmental Services, Inc. was provided 40 gallons each of Type 1 and 2 sediments. Additionally, MPS was provided 150 gallons of pond water; Severson was provided 50 gallons of pond water. These facilities were furnished the sediments and water to complete the following desanding and dewatering tests on the sediment samples:

- Filter Cake Testing
- Filtrate Testing
- Polymer Testing
- Dewatering Bench Tests – Belt press
- Dewatering Tests – Plate and Frame Press, Recessed Plate
- Geotube rapid Dewatering Test (RDT)

**APPENDIX A ENVIRONMENTAL SAMPLING LOGS FOR THE
C-SERIES CORES**

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-26
TIME: 0905

SAMPLER TYPE: VC

SOUNDING: 3.7'

MLW: NA

COORDINATES: 71.30.8090, 42.9.1732

PENETRATION 9.0' RECOVERY 8.5'

NO. OF ATTEMPTS

SAMPLE DESCRIPTION:

Length = 8.7' (feet)

- 0 – 1.8' Dark reddish brown peat (PT); high organic content; a root-like material mass at 1.5'-1.8'.
- 1.8 – 2.0' Peat with medium grained sand mixed into peat matrix. (PT with SP).
- 2.0 – 3.0' Muddy peat (PT or organic soil with clay, OH), dark grayish brown in color.
- 3.0 – 3.8' GAP IN CORE BARREL
- 3.8 – 4.6' Loosely consolidated peat (PT), likely disturbed from coring process.
- 4.6 – 5.0' Loosely consolidated, well sorted, poorly graded fine sand with <15% clay (SP-SC or SC).
- 5.0 – 5.1' Organic detritus (PT)
- 5.1 – 5.5' Clayey silt matrix, some organic fragments and gravel (ML/CL).
- 5.5 – 6.4' Fine to medium grained sand, <15% gravel, <15% fines, well sorted, poorly graded (SP-SC).
- 6.4 – 8.7' Gravel with sand. Sand matrix, medium to coarse grained with >15% gravel (GW). Gravel is -1 to -4 phi in size. Fluvial deposit.

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-27
TIME: 0937

SAMPLER TYPE: VC

SOUNDING: 3.2'

MLW: NA

COORDINATES: 71.30.7701, 42.9.1196

PENETRATION 10.0' RECOVERY 8.0'

NO. OF ATTEMPTS _____

SAMPLE DESCRIPTION:

Length = 8.6' (feet)

- | | |
|------------|---|
| 0 – 0.3' | Loosely consolidated organic detritus and silts, fluid organic mud (OH). |
| 0.3 – 2.6' | High organic content peat with large fragments of plant material (PT).
Reddish dark brown to light grayish brown in color. |
| 2.6 – 4.6' | Peat (PT). Fine organic and plant material, more decomposed than
overlying layer, and increased decomposition (decreasing size of plant
matter) down-core. Clay content increasing down-core. |
| 4.1 – 4.6' | High organic content peat with >15% clay (OH), organic clay. |
| 4.6 – 5.1' | GAP IN CORE BARREL |
| 5.1 – 5.2' | Unconsolidated to loosely consolidated clay (CH), dark grayish brown
color. Likely disturbed during coring process. |
| 5.2 – 5.4' | Clay (CH), loosely to moderately consolidated, light grayish brown in
color. Plant detritus and leafy material and a blue-green metallic decay
deposit (corroded copper metal) at 5.3'. |
| 5.4 – 5.5' | Clay with leafy plant material and sand, sandy clay (CL). |
| 5.5 – 6.7' | Sand and gravel, poorly sorted, well graded, light grayish brown color
(GW). |
| 6.7 – 8.6' | Sand and gravel, moderate to poorly sorted, moderate to well graded
(GW). Some larger gravel (than in overlying layer). Color is yellowish
brown. Gravel at core barrel bottom. |

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-29
TIME: 1022

SAMPLER TYPE: VC

SOUNDING: 2.7'

MLW: NA

COORDINATES: 71.30.7874, 42.8.8949

PENETRATION 10.0' RECOVERY 9.0'

NO. OF ATTEMPTS _____

SAMPLE DESCRIPTION:

Length = 9.0' (feet)

Description:

- 0 – 1.8' Peat with silts and clays, and some sand (PT/OH). Organic material composed of fresh roots and rhizomes with oxygenated fine-grained sediment matrix.
- 1.8 – 5.3' Peat (PT), reddish brown in color. Large plant and root fragments between 1.8' and 2.8', fragments decrease in size down-core, more decay. Low clay content (<15%).
- 5.3 – 9.0' Peat (PT), decomposition has created a detrital composition. Two layers of peat are distinguishable: a dark reddish brown layer with larger plant fragments between 5.3 – 7.8', and a dark greenish brown layer with more decomposed plant matter between 7.8' and 9.0'. The peat can be completely broken by rubbing between fingers- detrital matter, not woody or grainy.

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-28
TIME: 1121

SAMPLER TYPE: VC

SOUNDING: 2.8'

MLW: NA

COORDINATES: 71.30.7553, 42.9.0700

PENETRATION 10.3' RECOVERY 7.8'

NO. OF ATTEMPTS

SAMPLE DESCRIPTION:

Length = 7.1' (feet)

Description:

- 0 – 0.3' Black organic mud, loosely consolidated fresh plant roots and rhizomes (OH).
- 0.3 – 1.9' Peat (PT) with dense root matter and low clay content. Color is reddish brown.
- 1.9 – 3.4' Peat (PT) with dense root matter and low clay content. Color is dark brown to dark reddish brown.
- 3.4 – 4.0' Peat with low clay content and plant debris, mottled texture and color (light colored plant matter in darker matrix) (PT). Color is dark reddish brown.
- 4.0 – 5.8' Peat with low clay content – detrital texture (PT). Organic material is more decayed down core. Color is greenish brown.
- 5.8 – 7.1' Peat with low clay content – detrital texture (PT). Organic material is more decayed down core. Color is dark greenish brown.

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-23
TIME: 1306

SAMPLER TYPE: VC

SOUNDING: 4.0'

MLW: NA

COORDINATES: 71.30.7630, 42.9.3556

PENETRATION 10.0' RECOVERY 9.8'

NO. OF ATTEMPTS _____

SAMPLE DESCRIPTION:

Length = 9.4' (feet)

Description:

- 0 – 0.5' Organic mud, unconsolidated to loosely consolidated. Overlays dense root matter and peat (OH).
- 0.5 – 2.7' Peat (PT), low clay content, low sand and gravel content, with large plant fragments. Color is dark brown to reddish brown.
- 2.7 – 7.2' Peat (PT), low clay content, with plant and detrital material. Color is dark brown.
- 7.2 – 9.4' Peat (PT), low clay content with mainly detrital material composition. Color is greenish brown to dark greenish brown.

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-22
TIME: 1243

SAMPLER TYPE: VC

SOUNDING: 4.0'

MLW: NA

COORDINATES: 71.30.8260, 42.9.3736

PENETRATION 7.5' RECOVERY 7.0'

NO. OF ATTEMPTS _____

SAMPLE DESCRIPTION:

Length = 7.0' (feet) *7.0' is the recovery length; core is too liquefied or "soupy" to measure the length while core is split and on its side.

Description:

- 0 – 1.3' Unconsolidated mud and decaying organic debris (OH/PT). Color is dark reddish brown.
- 1.3 – 3.6' Loosely consolidated mud and decaying organic debris, large twigs, leaves, woody matter/branches (OH/PT). Color is dark brown.
- 3.6 – 5.6' Highly organic peat, some small percentage of clay (PT). Mottled greenish brown matrix with light brown organic fragments. Consolidated.
- 5.6 – 7.0' Highly organic and decayed peat (PT) and detritus. Organic matter is more decayed than in overlaying layer. Color is dark reddish brown.

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-25
TIME: 1446

SAMPLER TYPE: VC

SOUNDING: 5.9'

MLW: NA

COORDINATES: 71.30.6999, 42.9.2922

PENETRATION 10.0' RECOVERY 10.0' NO. OF ATTEMPTS _____

SAMPLE DESCRIPTION:

Length = 9.5' (feet) *9.5' is the recovery length; core is too liquefied or "soupy" (unconsolidated) to measure the length while core is split and on its side.

Description:

- 0 – 0.9' Unconsolidated black mud and decaying organic debris (OH-CH). No noticeable plant fragments. Color is black to very dark brown.
- 0.9 – 1.9' Loosely consolidated decaying organic debris (PT). Color is dark greenish brown.
- 1.9 – 3.3' Loosely consolidated decaying organic debris (PT), contains high percentage of woody matter. Color is dark brown.
- 3.3 – 7.0' Moderately consolidated decaying organic debris-detritus (PT). Color is reddish brown.
- 7.0 – 9.5' Moderately consolidated decaying organic debris-detritus (PT). Color is greenish brown to brown. Peat is more decayed down core.

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond Restoration
SAMPLING PERSONNEL: DRW
SEA STATE: Calm
LOCATION METHOD: DGPS

DATE: April 7, 2009
WEATHER CODE: NA

SAMPLE NUMBER: MPC-24
TIME: 1419

SAMPLER TYPE: VC

SOUNDING: 3.5'

MLW: NA

COORDINATES: 71.30.8044, 42.9.2889

PENETRATION 6.0' RECOVERY 2.8'

NO. OF ATTEMPTS _____

SAMPLE DESCRIPTION:

Length = 2.8' (feet)

Description:

0 – 2.8'

Core is entirely organic debris, plant root matter, woody matter. Some fine sediments (mud) in matrix; sediment classified as OH/PT. Fresh plant matter towards top of core. Color is dark brown to dark reddish brown. Core collected in flooded cedar grove (stumps). Core penetrated until refusal. Multiple attempts made spatially.

APPENDIX B C-SERIES CORE PHOTOS

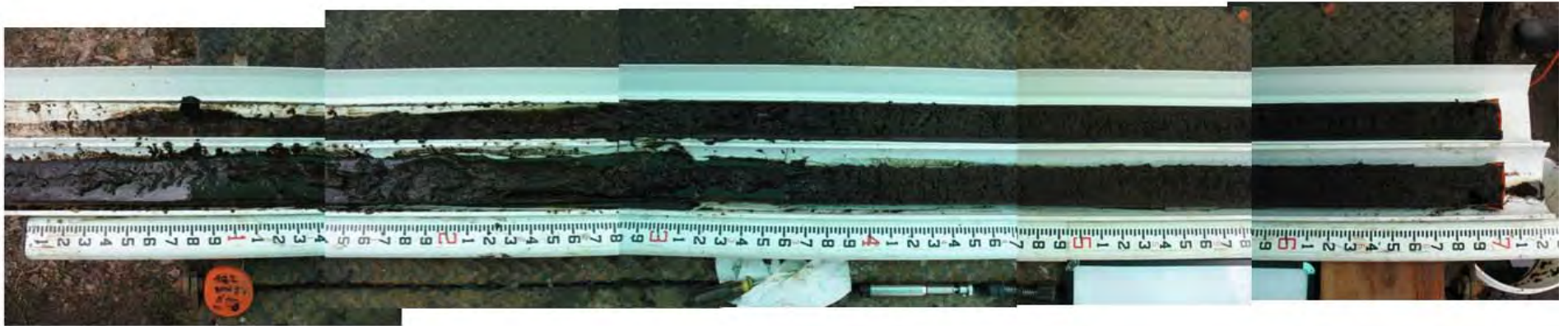


Figure B1. Core MPC-22



Figure B2. Core MPC-23



Figure B3. Core MPC-24



Figure B4. Core MPC-25

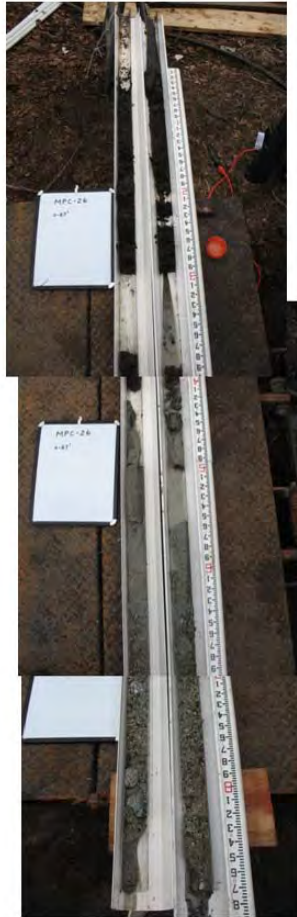


Figure B5. Core MPC-26



Figure B6. Core MPC-27



Figure B7. Core MPC-28

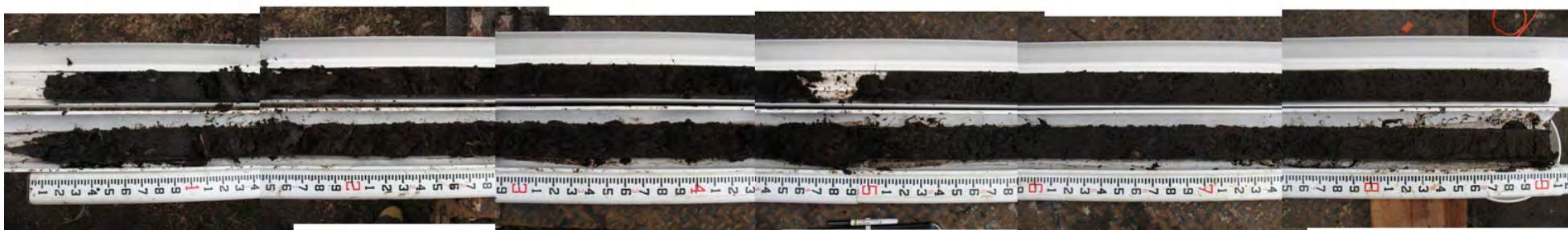


Figure B8. Core MPC-29

**APPENDIX C ENVIRONMENTAL SAMPLING LOGS FOR THE
A-SERIES CORES**

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 1

SAMPLER TYPE: VC

TIME: 1128

SOUNDING: 3.4'

MLW: N/A

COORDINATES: N: 42 9.3981

W: 71 30.7786

PENETRATION 10.0' RECOVERY 9.3'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 9.3' Mud and peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 2

SAMPLER TYPE: VC

TIME: 1155

SOUNDING: 3.8'

MLW: N/A

COORDINATES: N: 42 9.3555

W: 71 30.7644

PENETRATION 10.0' RECOVERY 9.0'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 9.0' Mud and peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 3

SAMPLER TYPE: VC

TIME: 1213

SOUNDING: 3.3'

MLW: N/A

COORDINATES: N: 42 9.3316

W: 71 30.8501

PENETRATION 9.9' RECOVERY 5.2'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 5.2' Mud and peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 4
TIME: 1357
SOUNDING: 3.8'
COORDINATES: N: 42 9.3034
PENETRATION 10.0' RECOVERY 8.7'
SAMPLE DESCRIPTION:
0 - 8.7' Brown peat and mud

SAMPLER TYPE: VC
MLW: N/A
W: 71 30.7353
NO. OF ATTEMPTS 1

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 5

SAMPLER TYPE: VC

TIME: 1233

SOUNDING: 3.4'

MLW: N/A

COORDINATES: N: 42 9.2938

W: 71 30.8031

PENETRATION 10.0' RECOVERY 4.5'

NO. OF ATTEMPTS several

SAMPLE DESCRIPTION:

0 - 4.5' Watery mud and peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 6

SAMPLER TYPE: VC

TIME: 1333

SOUNDING: 4.0'

MLW: N/A

COORDINATES: N: 42 9.2506

W: 71 30.7019

PENETRATION 10.0' RECOVERY 8.9'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 8.9' Brown mud

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 7

SAMPLER TYPE: VC

TIME: 0847

SOUNDING: 3.0'

MLW: N/A

COORDINATES: N: 42 9.2179

W: 71 30.8238

PENETRATION 10.0' RECOVERY 9.0'

NO. OF ATTEMPTS 2

SAMPLE DESCRIPTION:

0 - 5.0' Organic
5.0 - 6.0' Fine sand
6.0 - 9.0' Sand and gravel

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 8
TIME: 0901

SAMPLER TYPE: VC

SOUNDING: 3.5'
COORDINATES: N: 42 9.1877
PENETRATION 10.1' RECOVERY 7.0'

MLW: N/A
W: 71 30.7757
NO. OF ATTEMPTS 2

SAMPLE DESCRIPTION:

0 - 2.2' Organic mud, sand and gravel
2.2 - 5.1' Brown peat
5.1 - 7.0' Gray fine sand

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 9
TIME: 0921
SOUNDING: 3.0'
COORDINATES: N: 42 9.1536
PENETRATION 10.0' RECOVERY 9.24'

SAMPLER TYPE: VC
MLW: N/A
W: 71 30.8077
NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:
0 - 4.8' Organic mud, sand and gravel
4.8 - 7.75' Fine sand
7.75 - 9.24' Medium-coarse sand w/gravel

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 10

SAMPLER TYPE: VC

TIME: 0948

SOUNDING: 3.0'

MLW: N/A

COORDINATES: N: 42 9.1203

W: 71 30.8461

PENETRATION 10.0' RECOVERY 8.7'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 6.0' Peat
6.0 - 8.7' Sand

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 11

SAMPLER TYPE: VC

TIME: 1010

SOUNDING: 4.1'

MLW: N/A

COORDINATES: N: 42 9.1102

W: 71 30.7971

PENETRATION 10.0' RECOVERY 10.0'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 10.0' Peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 12

SAMPLER TYPE: VC

TIME: 1201

SOUNDING: 2.8'

MLW: N/A

COORDINATES: N: 42 9.0909

W: 71 30.7463

PENETRATION 10.0' RECOVERY 9.3'

NO. OF ATTEMPTS 4

SAMPLE DESCRIPTION:

0 - 9.3' Peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 13

SAMPLER TYPE: VC

TIME: 1437

SOUNDING: 3.1'

MLW: N/A

COORDINATES: N: 42 9.0710

W: 71 30.8087

PENETRATION 10.0' RECOVERY 8.3'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 8.3' Peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 14

SAMPLER TYPE: VC

TIME: 0840

SOUNDING: 2.9'

MLW: N/A

COORDINATES: N: 42 9.0535

W: 71 30.7682

PENETRATION 10.0' RECOVERY 9.3'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 9.3' Peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 15

SAMPLER TYPE: VC

TIME: 1502

SOUNDING: 2.8'

MLW: N/A

COORDINATES: N: 42 9.0375

W: 71 30.8280

PENETRATION 10.0' RECOVERY 10.0'

NO. OF ATTEMPTS several

SAMPLE DESCRIPTION:

0 - 10.0' Peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 16

SAMPLER TYPE: VC

TIME: 0916

SOUNDING: 3.0'

MLW: N/A

COORDINATES: N: 42 9.0088

W: 71 30.8113

PENETRATION 10.0' RECOVERY 6.3'

NO. OF ATTEMPTS several

SAMPLE DESCRIPTION:

0 - 6.3' Peat and mud

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 8, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 17

SAMPLER TYPE: VC

TIME: 1522

SOUNDING: 4.5'

MLW: N/A

COORDINATES: N: 42 8.9881

W: 71 30.8291

PENETRATION 10.0' RECOVERY 9.3'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 9.3' Peat and mud

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 18

SAMPLER TYPE: VC

TIME: 1235

SOUNDING: 3.6'

MLW: N/A

COORDINATES: N: 42 8.9557

W: 71 30.8167

PENETRATION 10.0' RECOVERY 7.0'

NO. OF ATTEMPTS 4

SAMPLE DESCRIPTION:

0 - 7.0' Peat and mud

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 19

SAMPLER TYPE: VC

TIME: 0945

SOUNDING: 4.2'

MLW: N/A

COORDINATES: N: 42 8.9240

W: 71 30.8208

PENETRATION 9.0' RECOVERY 8.25'

NO. OF ATTEMPTS 2

SAMPLE DESCRIPTION:

0 - 8.25' Peat and mud

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 20

SAMPLER TYPE: VC

TIME: 1011

SOUNDING: 4.8'

MLW: N/A

COORDINATES: N: 42 8.8985

W: 71 30.8181

PENETRATION 10.0' RECOVERY 9.7'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 9.7' Peat and mud

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 9, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPA - 21

SAMPLER TYPE: VC

TIME: 1032

SOUNDING: 3.5'

MLW: N/A

COORDINATES: N: 42 8.8699

W: 71 30.8358

PENETRATION 10.0' RECOVERY 9.5'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 4.4' Peat and mud

4.4 - 9.5' gray-light brown medium-coarse sand w/some gravel

APPENDIX D PHOTOGRAPHS FOR THE A-SERIES CORES

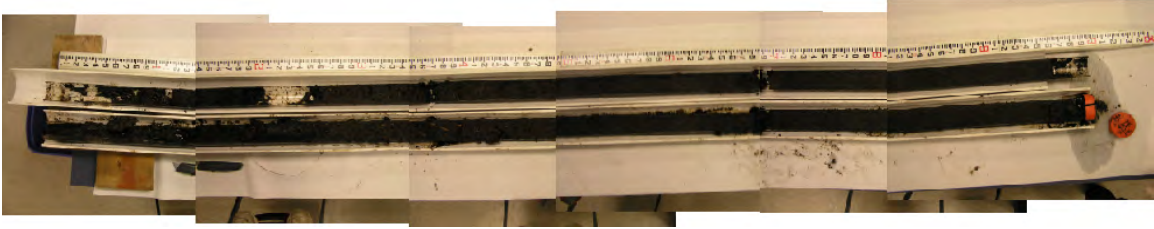


Figure D1 Core MPA-1

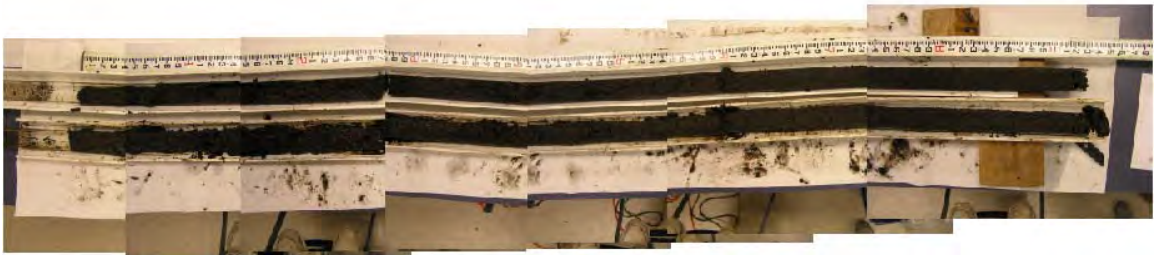


Figure D2 Core MPA-2

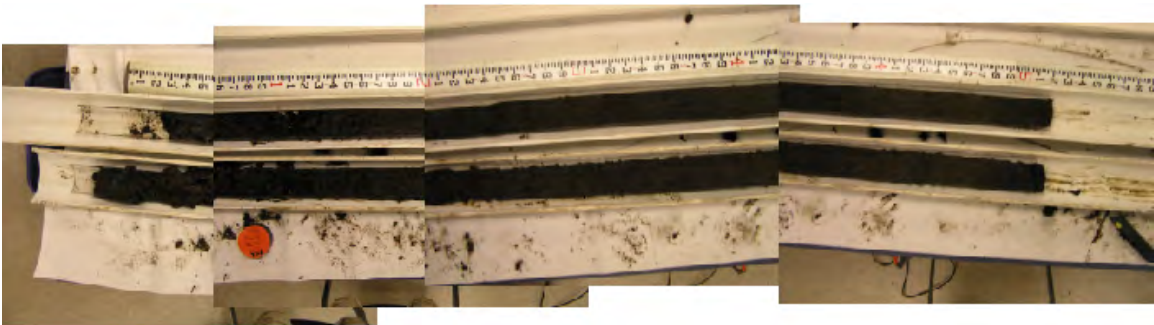


Figure D3 Core MPA-3

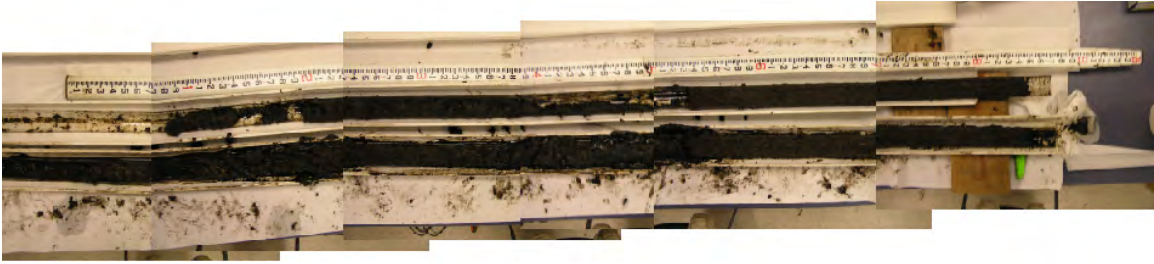


Figure D4 Core MPA-4

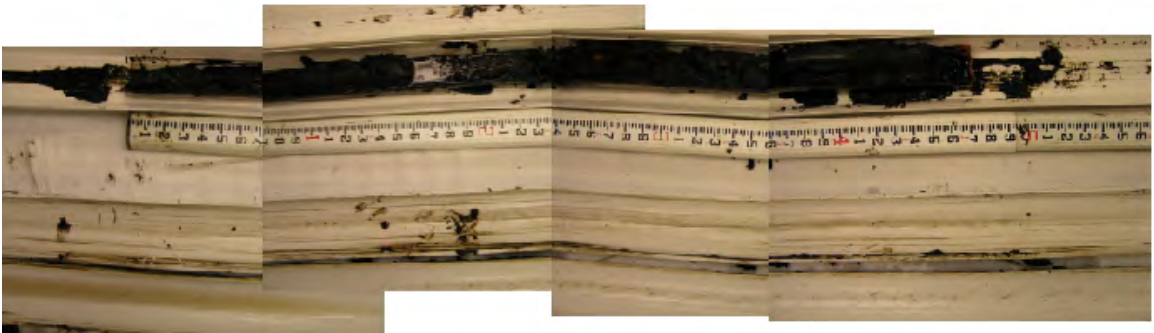


Figure D5 Core MPA-5

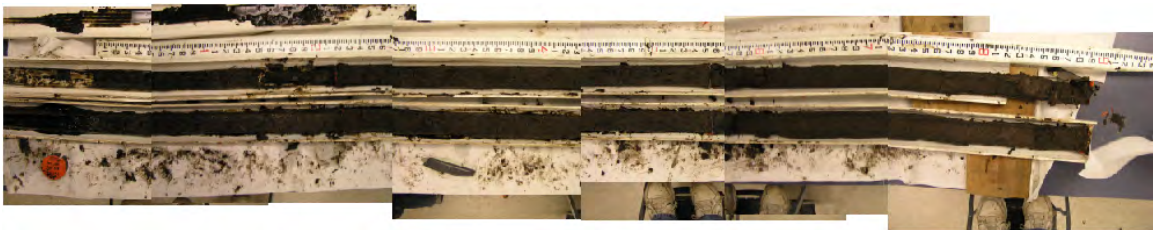


Figure D6 Core MPA-6



Figure D7 Core MPA-7

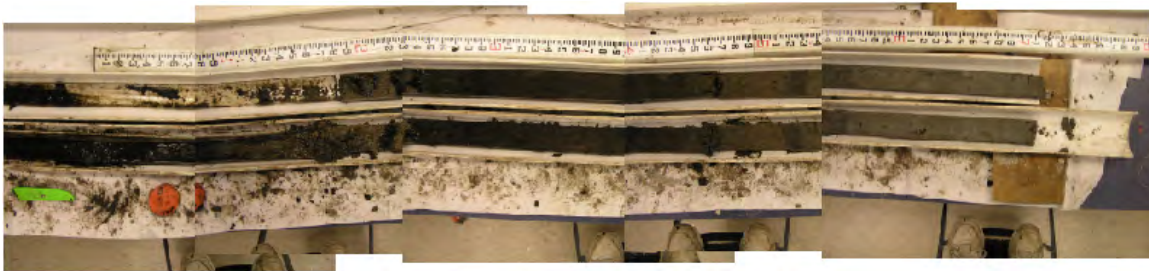


Figure D8 Core MPA-8



Figure D9 Core MPA-9

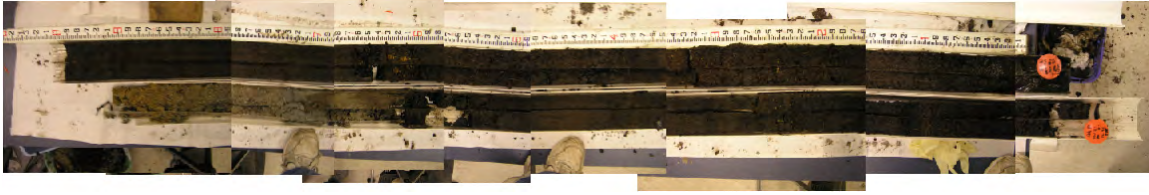


Figure D10 Cores MPA-10 & 11



Figure D11 Core MPA-12



Figure D12 Cores MPA-13 & 15



Figure D13 Core MPA-14

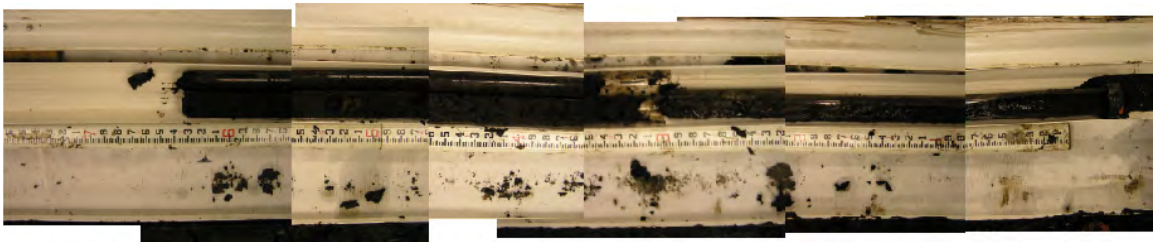


Figure D14 Core MPA-16

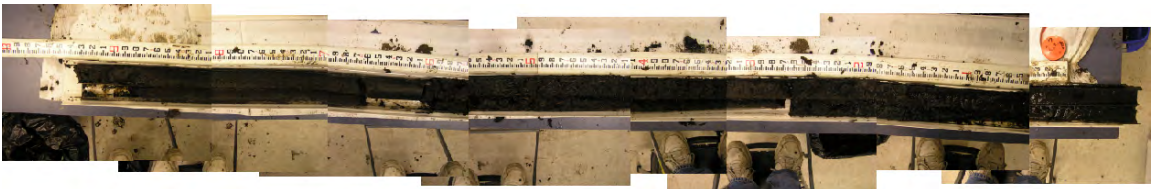


Figure D15 Core MPA-17



Figure D16 Core MPA-18



Figure D17 Core MPA-19



Figure D18 Core MPA-20

**APPENDIX E ENVIRONMENTAL SAMPLING LOGS FOR THE
B-SERIES CORES**

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 10, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPB-9
TIME: 0842

SAMPLER TYPE: VC

SOUNDING: 3.1'

MLW: N/A

COORDINATES: N: 42 9.1529

W: 71 30.8048

PENETRATION 9.5' RECOVERY 8.4'

NO. OF ATTEMPTS 2

SAMPLE DESCRIPTION:

0 - 0.6' Organic mud
0.6 - 1.0' Organic sand and silt
1.0 - 2.5' Medium - coarse brown sand
2.5 - 2.88' Peat
2.88 - 4.9' Graded coarse to medium sand
4.9 - 6.5' Graded medium to fine sand w/some clay
6.5 - 8.4' Graded coarse sand and gravel w/cobble-pebble size clasts

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 10, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPB - 20

SAMPLER TYPE: VC

TIME: 1109

SOUNDING: 3.2'

MLW: N/A

COORDINATES: N: 42 8.8969

W: 71 30.8172

PENETRATION 9.8' RECOVERY 9.7'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 0.9' Organic mud
0.9 - 5.2' Highly organic peat
5.2 - 7.2' Dark reddish-brown decomposed peat
7.2 - 9.7' Greenish-brown highly decomposed peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 10, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPB - 25

SAMPLER TYPE: VC

TIME: 0818

SOUNDING: 5.5'

MLW: N/A

COORDINATES: N: 42 9.2916

W: 71 30.7006

PENETRATION 10.0' RECOVERY 9.2'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 1.48' Organic mud
1.48 - 3.3' Highly organic peat fibers
3.3 - 9.2' Dark decomposed peat

ENVIRONMENTAL SAMPLING LOG

PROJECT: Milford Pond
SAMPLING PERSONNEL: JJB
POND STATE: Calm
LOCATION METHOD: DGPS

DATE: April 10, 2009
WEATHER CODE: N/A

SAMPLE NUMBER: MPB - 27

SAMPLER TYPE: VC

TIME: 1049

SOUNDING: 3.2'

MLW: N/A

COORDINATES: N: 42 9.1195

W: 71 30.7698

PENETRATION 9.5' RECOVERY 9.3'

NO. OF ATTEMPTS 1

SAMPLE DESCRIPTION:

0 - 4.48' Highly organic peat fibers
4.48 - 6.6' Dark decomposed peat
6.6 - 7.64' Graded medium-coarse brown sand
7.64 - 8.1' Very fine sand w/some gray clay
8.1 - 9.3' Graded medium-coarse tanish-brown sand and gravel w/some cobble and pebbles

APPENDIX F CHAIN OF CUSTODY FORMS



CHAIN OF CUSTODY

PAGE 1 OF 3

Westerborough, MA
 TEL: 508-899-9220
 FAX: 508-898-8183

Project Name: Milford Pond
 Project Location:

Client: Woods Hole Group
 Address: 81 Technology Park Drive
 East Falmouth, MA 02536
 Phone: 508-495-6262
 Fax: 508-540-1001

Project #:
 Project Manager:
 ALPHA Quote #:
 Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)
 Due Date: _____ Time: _____
 Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab

ALPHA Job #: **0905117**

Report Information Data Deliverables
 FAX EMAIL
 ADEX Add'l Deliverables

Billing Information
 Same as Client Info
 PO #:

Regulatory Requirements/Report Limits
 Standard Program
 Criteria

MCP PRESUMPTIVE CERTAINITY-CT REASONABLE CONFIDENCE PROTOCOLS
 Yes No
 Yes No
 Are MCP Analytical Methods Required?
 Are CT RCP (Reasonable Confidence Protocols) Required?

SAMPLE HANDLING
 Filtration
 Dose
 Not needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials
--------------------------------	-----------	-----------------	------	---------------	--------------------

0905117-1	MPA 1,2,3 Comp Sample A	4/18/09		SED	
2	MPA 4, 5 Comp Sample B	4/18/09		SED	
3	MPA 6 Sample C	4/18/09		SED	
4	MPA 7 0-5'g'	4/18/09		SED	
5	MPA 7+9 COMP (D)	4/18/09		SED	
6	MPA 9 0-4.8'	4/18/09		SED	
7	MPA 9 4.8-7.75'	4/18/09		SED	
8	MPA 8 0-2.2'	4/18/09		SED	
9	MPA 8 2.2-5.1'	4/18/09		SED	
10	MPA 8 5.1-7.1'	4/18/09		SED	

Metals, PAH, EPH, Pcb Cong, TOC	Archive -																		
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PLEASE ANSWER QUESTIONS ABOVE!
IS YOUR PROJECT MA MCP OR CT RCP?

Relinquished By: *Jana Boyd*

Date/Time: 4/18/09 08:25

Received By: *[Signature]*
 Date/Time: 4/18/09 10:25

Please print clearly, legibly, and in black ink. All samples must be logged in and returned into stock via our chain-of-custody. All samples are returned to the client in Alpha's Payment Terms.



CHAIN OF CUSTODY

PAGE 2 OF 3

Westerborough, MA
 TEL: 508-508-0220
 FAX: 508-508-0193

MA
 WESTERBOROUGH, MA
 TEL: 508-508-0220
 FAX: 508-508-0220

Client: Woods Hole Group

Project Name: Milford Pond

Address: B1 Technology Park Drive

Project Location:

East Falmouth, MA 02836

Project #:

Phone: 508-495-5262

Project Manager:

Fax: 508-540-1001

ALPHA Quote #:

Email:

Turn-Around Time

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)

Sample ID

Collection Date Time

Sample Matrix

Sampler's Initials

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	Metals, PAH, EPH, Pcb Cong, TOC
20905117-11	MPA 10+11 Comp F	4/16/09		SED		<input checked="" type="checkbox"/>
12	MPA 10 6-E-7'	4/16/09		SED		<input checked="" type="checkbox"/>
13	MPA 12 0-9.3' Comp G	4/16/09		SED		<input checked="" type="checkbox"/>
14	MPA 13+15 Comp H	4/16/09		SED		<input checked="" type="checkbox"/>
15	MPA 14 0-9.3' Sample I	4/16/09		SED		<input checked="" type="checkbox"/>
16	MPA 16 0-9.3' Sample J	4/16/09		SED		<input checked="" type="checkbox"/>
17	MPA 17 0-9.3' Sample K	4/16/09		SED		<input checked="" type="checkbox"/>
18	MPA 18 0-7' Sample L	4/16/09		SED		<input checked="" type="checkbox"/>
19	MPA 19 0-8.25' Sample M	4/16/09		SED		<input checked="" type="checkbox"/>
20	MPA 20 Sample N	4/16/09		SED		<input checked="" type="checkbox"/>

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Requisitioned By: *Quinn Bayzell*

Date/Time: 4/16/09 1825

Received By: *[Signature]*

Date/Time: 4/16/09 1825

Container Type: Preservative

Sample Specific Comments

DATE RECD IN LAB: 4/16/09 1825

ALPHA Job #: 20905117

Report Information Data Deliverables: FAX, EMAIL, Add'l Deliverables

Billing Information: Same as Client Info

PO #:

Regulatory Requirements/Report Limits: Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

ANALYSIS: Yes, No, Are MCP Analytical Methods Required?, Are CT RCP (Reasonable Confidence Protocol) Required?

SAMPLE HANDLING: Filtered, Done, Not Needed, L&S to do, Preservation, L&S to do, (Please specify below)

Please print clearly, legibly, and completely. Samples can be returned to the lab if not returned within 30 days of receipt. All samples submitted are subject to Alpha's Payment Terms.

Sevenson Samples

CHAIN OF CUSTODY

PAGE _____ OF _____

ALPHA
 WESTBORO, MA MANSFIELD, MA
 TEL: 508-898-9200 TEL: 508-822-3900
 FAX: 508-898-9190 FAX: 508-822-3288

Project Information
 Project Name: *Milford Pond*
 Project Location: *Milford, MA*

Client Information
 Client: *Milford State College*
 Project #: _____
 Project Manager: *Laura Webster*
 ALPHA Quote #: _____

Turn-Around Time
 Standard RUSH (only confirmed if pre-approved)
 Date Due: _____ Time: _____

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

Regulatory Requirements/Report Limits
 State/Fed Program: _____ Criteria: _____

ALPHA Job #: _____
Billing Information
 Same as Client Info PO #: _____

MAMCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

Sample Specific Comments

SAMPLE HANDLING
 Filtration
 Done
 Not needed
 Lab to do
 Preservation
 Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
MFB-20	Type 1	4/15/09				⑧ 5-gal buckets
MFB-20	Type 2	↓				⑦ 5-gal buckets
MFB-27	Type 1	4/14/09				③ 5-gal buckets
MFB-27	Type 2	↓				① 5-gal bucket
MFB-25	Type 2	4/10/09				③ 5-gal buckets
MFB-27/20	Type 1	4/14/09				① 5-gal bucket
MFB-27/20	Type 2	4/14/4/15/09				② 5-gal buckets
Milford Pond Water		4/15/09				① 55-gal drum

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By: _____ **Date/Time:** _____

Received By: _____ **Date/Time:** _____

Container Type: _____ **Preservative:** _____

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

FORM NO: 01-01 (rev. 30 JUL 07)

Sevenson Samples

ALPHA
WESTBORO, MA
TEL: 508-898-9120
FAX: 508-898-9120

MANSHFIELD, MA
TEL: 508-822-3900
FAX: 508-822-3288

CHAIN OF CUSTODY PAGE ____ OF ____

Project Information

Project Name: *Milford Pond*

Project Location: *Milford, MA*

Project #: _____

Project Manager: *Laura Webster*

ALPHA Quote #: _____

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: _____ Time: _____

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: _____

Report Information - Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program: _____ Criteria: _____

ALPHA Job #: _____

Billing Information

Same as Client info PO #: _____

ANALYSIS

Yes No Are MCP Analytical Methods Required?

Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

SAMPLE HANDLING

Filtration

Done

Not needed

Lab to do

Preservation Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
MPB-20	Type 1	4/15/09				⑧ 5-gal buckets
MPB-20	Type 2	↓				⑦ 5-gal buckets
MPB-27	Type 1	4/14/09				③ 5-gal buckets
MPB-27	Type 2	↓				① 5-gal bucket
MPB-25	Type 2	4/10/09				③ 5-gal buckets
MPB-27/20	Type 1	4/14/09				① 5-gal bucket
MPB-27/20	Type 2	4/14/4/15/09				② 5-gal buckets
Milford Pond Water		4/15/09				① 55-gal drum

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT

MA MCP or CT RCP?

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: _____

Container Type: _____

Preservative: _____

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

FORM NO: 01-01 (Rev. 30 JUL 07)

APPENDIX G DAILY SAFETY BRIEFING LOGS

WEEKLY SAFETY MEETING

Date Held: 4-7-09
Time: 0730

CONTRACTOR: Woods Hole Group Contract No. DACW33- W912WJ-09-D-0001-0003
PERSONNEL PRESENT (check): Contractor Sub. Government

SUBJECTS DISCUSSED (check items that were discussed during meeting):

- USACE EM385-1-1 _____ (Specific sections: _____)
- On-site Accident Prevention Plan (or Site Safety and Health Plan)
- Individual protective equipment (steel-toed boots, safety glasses, etc.)
- Prevention of slips/falls
- Back injury/safe lifting techniques
- Fire prevention
- First aid
- Tripping hazards
- Equipment inspection and maintenance
- Hoisting equipment, winch and crane safety
- Ropes, hooks, chains, and slings
- Water safety
- Boat safety
- HAZMAT, Toxic hazards, contaminated sediments, MSDS, respiratory, ventilation
- Biological hazards (poison ivy, ticks, wasps, mosquitoes etc)
- Staging, ladders, concrete forms, safety nets, handrails _____
- Hand tools, power tools, machinery, chain saws
- Vehicle operation safety
- Electrical grounding, temporary wiring, GFCI
- Lockouts/safe clearance procedures _____
- Welding, cutting _____
- Excavation hazards/rescue
- Loose rock/steep slopes
- Explosives _____
- Sanitation and waste disposal
- Clean-up, trash

Other safety issues of concern specific to contract that was discussed during meeting:

All persons attending meeting the meeting must sign below or on the back of the form.

Contractor Representative Signature James Bajek Date: 4-7-09
C/E Inspector/QA (if present at meeting) _____ Date: _____

Project Health and Safety Acknowledgement Form

No.	Name	Signature	Date	Company
1	Jim Bajek	James Bajek	4-7-09	WHG
2	Rob Reynolds	Rob Reynolds	4-7-09	TG&B
3	DAVID WALSH	D. Walsh	4-7-09	WHG
4	Mitch Buck	Mitchell Buck	4-7-09	WHG
5	Jim Meagher	Jim Meagher	4-7-09	MPS-Geotube
6	Mark Markian	Mark Markian	4-7-09	TG&B
7	Lew Porey	Lew Porey	4/7/09	TG+B
8	Mike Walsh	Mike Walsh	4/7/09	TG+B
9	Ben Legal	Ben Legal	4/7/09	USACE
10	Charles Perry	Charles Perry	4/9/09	TG+D
11				
12				
13				
14				
15				
16				
17				

WEEKLY SAFETY MEETING

Date Held: 4-14-09
Time: _____

CONTRACTOR: Woods Hole Group Contract No. DACW33-W912WJ-09-D-0001-0003
PERSONNEL PRESENT (check): Contractor Sub. Government

SUBJECTS DISCUSSED (check items that were discussed during meeting):

- USACE EM385-1-1 (Specific sections: _____)
- On-site Accident Prevention Plan (or Site Safety and Health Plan)
- Individual protective equipment (steel-toed boots, safety glasses, etc.)
- Prevention of slips/falls
- Back injury/safe lifting techniques
- Fire prevention
- First aid
- Tripping hazards
- Equipment inspection and maintenance
- Hoisting equipment, winch and crane/safety
- Ropes, hooks, chains, and slings
- Water safety
- Boat safety
- HAZMAT, Toxic hazards, contaminated sediments, MSDS, respiratory, ventilation _____
- Biological hazards (poison ivy, ticks, wasps, mosquitoes etc)
- Staging, ladders, concrete forms, safety nets, handrails _____
- Hand tools, power tools, machinery, chain saws
- Vehicle operation safety
- Electrical grounding, temporary wiring, GFCI _____
- Lockouts/safe clearance procedures _____
- Welding, cutting _____
- Excavation hazards/rescue _____
- Loose rock/steep slopes _____
- Explosives _____
- Sanitation and waste disposal _____
- Clean-up, trash

Other safety issues of concern specific to contract that was discussed during meeting:

weather

All persons attending meeting the meeting must sign below or on the back of the form.

Contractor Representative Signature James Bejch Date: 4-14-09
CE Inspector/QA (if present at meeting) _____ Date: _____

Milford Pond Weekly Safety Meeting 4-14-09

<u>Name</u>	<u>Signature</u>	<u>Date</u>	<u>Company</u>
Jim Bajek	James Bajek	4-14-09	WHG
Lew Perry	Lew Perry	4-14-09	TG+B
Mark Avakian	Melan	4-14-09	TG+B
Cherie Perry	CR	4-14-09	TG+B
Mitchell Buck	Mitchell Buck	4-14-09	TG+B WHG

T



ANALYTICAL REPORT

Lab Number:	L0905117
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Lee Weishar
Project Name:	MILFORD POND
Project Number:	Not Specified
Report Date:	02/02/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0905117-01	MPA 1,2,3 COMP SAMPLE A	MILFORD POND	04/16/09 00:00
L0905117-02	MPA 4,5 COMP SAMPLE B	MILFORD POND	04/16/09 00:00
L0905117-03	MPA 6 SAMPLE C	MILFORD POND	04/16/09 00:00
L0905117-04	MPA 7 0-5.9'	MILFORD POND	04/16/09 00:00
L0905117-05	MPA 7+9 COMP (D)	MILFORD POND	04/16/09 00:00
L0905117-06	MPA 9 0-4.8'	MILFORD POND	04/16/09 00:00
L0905117-07	MPA 9 4.8-7.75'	MILFORD POND	04/16/09 00:00
L0905117-08	MPA 8 0-2.2'	MILFORD POND	04/16/09 00:00
L0905117-09	MPA 8 2.2-5.1'/MPA 8 5.1-7.1'	MILFORD POND	04/16/09 00:00
L0905117-10	COMP MPA 8 2.2-5.1' & 5.1-7.1'	MILFORD POND	04/16/09 00:00
L0905117-11	MPA 10+11 COMP F	MILFORD POND	04/16/09 00:00
L0905117-12	MPA 10 6-8.7'	MILFORD POND	04/16/09 00:00
L0905117-13	MPA 12 0-9.3' COMP G	MILFORD POND	04/16/09 00:00
L0905117-14	MPA 13+15 COMP H	MILFORD POND	04/16/09 00:00
L0905117-15	MPA 14 0-9.3' SAMPLE I	MILFORD POND	04/16/09 00:00
L0905117-16	MPA 16 0-6.3' SAMPLE J	MILFORD POND	04/16/09 00:00
L0905117-17	MPA 17 0-9.3' SAMPLE K	MILFORD POND	04/16/09 00:00
L0905117-18	MPA 18 0-7' SAMPLE L	MILFORD POND	04/16/09 00:00
L0905117-19	MPA 19 0-8.25' SAMPLE M	MILFORD POND	04/16/09 00:00
L0905117-20	MPA 20 SAMPLE N	MILFORD POND	04/16/09 00:00
L0905117-21	MPA 21 0-4.4' SAMPLE O	MILFORD POND	04/16/09 00:00
L0905117-22	MPA 21 4.4-9.5' SAMPLE O	MILFORD POND	04/16/09 00:00
L0905117-23	RINSE BLANK	MILFORD POND	04/16/09 00:00

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

At the client's request, all samples were to be analyzed for all parameters, with the following exceptions:

Samples "MPA 7+9 COMP (D)", "MPA 9 0-4.8' ", "MPA 8 0-2.2' ", and "MPA 20 SAMPLE N" were held and not analyzed.

Samples "MPA 8 2.2-5.1'/MPA 8 5.1-7.1' " and "COMP MPA 8 2.2-5.1' & 5.1-7.1' " were composited to create a single sample, reported as L0905117-09.

One 250ml glass container was received cracked for each of the following samples: "MPA 4,5 COMP SAMPLE B", "MPA 17 0-9.3' SAMPLE K", "MPA 19 0-8.25' SAMPLE M", and "MPA 20 SAMPLE N". The samples were transferred to new containers upon receipt.

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Case Narrative (continued)

RIM PAHs/PCB Congeners

L0905117-01 through -04, -11, and -13 through -21 have elevated detection limits due to the extremely low solids (less than 30%) in the samples.

The WG362826-2/-3 LCS/LCSD recoveries are below the individual acceptance criteria for Anthracene (41%/48%).

The WG361186-6 Standard Reference Material is outside the QC limits for Naphthalene (30%), Anthracene (23%), C12-BZ#8 (38%), C14-BZ#44 (26%), C14-BZ#49 (31%), C14-BZ#52 (24%), and C19-BZ#206 (167%).

EPH

The WG362871-2/-3 LCS/LCSD RPDs associated with L0905117-18 are above the acceptance criteria for C9-C18 Aliphatics (29%), C19-C36 Aliphatics (27%), Nonane (C9) (38%), Decane (C10) (34%), Dodecane (C12) (27%), Tetradecane (C14) (26%), Hexadecane (C16) (27%), Octadecane (C18) (31%), Nonadecane (C19) (29%), Eicosane (C20) (27%), Hexacosane (C26) (26%), Octacosane (C28) (26%), Triacontane (C30) (26%), and Hexatriacontane (C36)(26%); however, the individual LCS/LCSD recoveries are within method limits. The results of the associated sample are reported.

Metals

The WG361181-3 Laboratory Duplicate RPD associated with L0905117-01 is outside the acceptance criteria for Cadmium (28%). The elevated RPD has been attributed to the non-homogenous nature of the sample utilized for the laboratory duplicate.

Total Organic Carbon

The WG361454-1 Method Blank, associated with L0905117-01 through -04, -07, -09, -11 through -21, has a concentration above the reporting limit. Since the associated sample concentrations are greater than 10x the blank concentration for this analyte, no corrective action is required. The results of the original analyses are reported.

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Case Narrative (continued)

The WG361454-4 MS recoveries associated with L0905117-01 were below the acceptance criteria (49% and 66%); however, the associated SRM recoveries were within criteria.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 02/02/10

ORGANICS

SEMIVOLATILES

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-01
Client ID: MPA 1,2,3 COMP SAMPLE A
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/08/09 15:17
Analyst: PS
Percent Solids: 10%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: None
Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	94.0	1
Acenaphthylene	ND		ug/kg	94.0	1
Acenaphthene	ND		ug/kg	94.0	1
Fluorene	ND		ug/kg	94.0	1
Phenanthrene	ND		ug/kg	94.0	1
Anthracene	ND		ug/kg	94.0	1
Fluoranthene	119		ug/kg	94.0	1
Pyrene	ND		ug/kg	94.0	1
Benz(a)anthracene	ND		ug/kg	94.0	1
Chrysene	ND		ug/kg	94.0	1
Benzo(b)fluoranthene	ND		ug/kg	94.0	1
Benzo(k)fluoranthene	ND		ug/kg	94.0	1
Benzo(a)pyrene	ND		ug/kg	94.0	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	94.0	1
Dibenz(a,h)anthracene	ND		ug/kg	94.0	1
Benzo(ghi)perylene	ND		ug/kg	94.0	1
Cl2-BZ#8	ND		ug/kg	9.40	1
Cl3-BZ#18	ND		ug/kg	9.40	1
Cl3-BZ#28	ND		ug/kg	9.40	1
Cl4-BZ#44	ND		ug/kg	9.40	1
Cl4-BZ#49	ND		ug/kg	9.40	1
Cl4-BZ#52	ND		ug/kg	9.40	1
Cl4-BZ#66	ND		ug/kg	9.40	1
Cl5-BZ#87	ND		ug/kg	9.40	1
Cl5-BZ#101	ND		ug/kg	9.40	1
Cl5-BZ#105	ND		ug/kg	9.40	1
Cl5-BZ#118	ND		ug/kg	9.40	1
Cl6-BZ#128	ND		ug/kg	9.40	1
Cl6-BZ#138	ND		ug/kg	9.40	1
Cl6-BZ#153	ND		ug/kg	9.40	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-01

Date Collected: 04/16/09 00:00

Client ID: MPA 1,2,3 COMP SAMPLE A

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: None

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	9.40	1
CI7-BZ#180	ND		ug/kg	9.40	1
CI7-BZ#183	ND		ug/kg	9.40	1
CI7-BZ#184	ND		ug/kg	9.40	1
CI7-BZ#187	ND		ug/kg	9.40	1
CI8-BZ#195	ND		ug/kg	9.40	1
CI9-BZ#206	ND		ug/kg	9.40	1
CI10-BZ#209	ND		ug/kg	9.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	61		30-150
Pyrene-d10	82		30-150
Benzo(b)fluoranthene-d12	68		30-150
DBOB	97		30-150
BZ 198	92		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-02
 Client ID: MPA 4,5 COMP SAMPLE B
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/08/09 15:57
 Analyst: PS
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 07:54
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	76.5	1
Acenaphthylene	ND		ug/kg	76.5	1
Acenaphthene	ND		ug/kg	76.5	1
Fluorene	ND		ug/kg	76.5	1
Phenanthrene	ND		ug/kg	76.5	1
Anthracene	ND		ug/kg	76.5	1
Fluoranthene	164		ug/kg	76.5	1
Pyrene	138		ug/kg	76.5	1
Benz(a)anthracene	ND		ug/kg	76.5	1
Chrysene	ND		ug/kg	76.5	1
Benzo(b)fluoranthene	98.2		ug/kg	76.5	1
Benzo(k)fluoranthene	ND		ug/kg	76.5	1
Benzo(a)pyrene	ND		ug/kg	76.5	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	76.5	1
Dibenz(a,h)anthracene	ND		ug/kg	76.5	1
Benzo(ghi)perylene	ND		ug/kg	76.5	1
Cl2-BZ#8	ND		ug/kg	7.65	1
Cl3-BZ#18	ND		ug/kg	7.65	1
Cl3-BZ#28	ND		ug/kg	7.65	1
Cl4-BZ#44	ND		ug/kg	7.65	1
Cl4-BZ#49	ND		ug/kg	7.65	1
Cl4-BZ#52	ND		ug/kg	7.65	1
Cl4-BZ#66	ND		ug/kg	7.65	1
Cl5-BZ#87	ND		ug/kg	7.65	1
Cl5-BZ#101	ND		ug/kg	7.65	1
Cl5-BZ#105	ND		ug/kg	7.65	1
Cl5-BZ#118	ND		ug/kg	7.65	1
Cl6-BZ#128	ND		ug/kg	7.65	1
Cl6-BZ#138	ND		ug/kg	7.65	1
Cl6-BZ#153	ND		ug/kg	7.65	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-02

Date Collected: 04/16/09 00:00

Client ID: MPA 4,5 COMP SAMPLE B

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	7.65	1
CI7-BZ#180	ND		ug/kg	7.65	1
CI7-BZ#183	ND		ug/kg	7.65	1
CI7-BZ#184	ND		ug/kg	7.65	1
CI7-BZ#187	ND		ug/kg	7.65	1
CI8-BZ#195	ND		ug/kg	7.65	1
CI9-BZ#206	ND		ug/kg	7.65	1
CI10-BZ#209	ND		ug/kg	7.65	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-150
Pyrene-d10	85		30-150
Benzo(b)fluoranthene-d12	69		30-150
DBOB	95		30-150
BZ 198	90		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-03
Client ID: MPA 6 SAMPLE C
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/08/09 16:37
Analyst: PS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	77.4	1
Acenaphthylene	ND		ug/kg	77.4	1
Acenaphthene	ND		ug/kg	77.4	1
Fluorene	ND		ug/kg	77.4	1
Phenanthrene	78.2		ug/kg	77.4	1
Anthracene	ND		ug/kg	77.4	1
Fluoranthene	251		ug/kg	77.4	1
Pyrene	196		ug/kg	77.4	1
Benz(a)anthracene	82.2		ug/kg	77.4	1
Chrysene	82.1		ug/kg	77.4	1
Benzo(b)fluoranthene	126		ug/kg	77.4	1
Benzo(k)fluoranthene	ND		ug/kg	77.4	1
Benzo(a)pyrene	ND		ug/kg	77.4	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	77.4	1
Dibenz(a,h)anthracene	ND		ug/kg	77.4	1
Benzo(ghi)perylene	ND		ug/kg	77.4	1
Cl2-BZ#8	ND		ug/kg	7.74	1
Cl3-BZ#18	ND		ug/kg	7.74	1
Cl3-BZ#28	ND		ug/kg	7.74	1
Cl4-BZ#44	ND		ug/kg	7.74	1
Cl4-BZ#49	ND		ug/kg	7.74	1
Cl4-BZ#52	ND		ug/kg	7.74	1
Cl4-BZ#66	ND		ug/kg	7.74	1
Cl5-BZ#87	ND		ug/kg	7.74	1
Cl5-BZ#101	ND		ug/kg	7.74	1
Cl5-BZ#105	ND		ug/kg	7.74	1
Cl5-BZ#118	ND		ug/kg	7.74	1
Cl6-BZ#128	ND		ug/kg	7.74	1
Cl6-BZ#138	ND		ug/kg	7.74	1
Cl6-BZ#153	ND		ug/kg	7.74	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-03
 Client ID: MPA 6 SAMPLE C
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	7.74	1
CI7-BZ#180	ND		ug/kg	7.74	1
CI7-BZ#183	ND		ug/kg	7.74	1
CI7-BZ#184	ND		ug/kg	7.74	1
CI7-BZ#187	ND		ug/kg	7.74	1
CI8-BZ#195	ND		ug/kg	7.74	1
CI9-BZ#206	ND		ug/kg	7.74	1
CI10-BZ#209	ND		ug/kg	7.74	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-150
Pyrene-d10	86		30-150
Benzo(b)fluoranthene-d12	73		30-150
DBOB	97		30-150
BZ 198	95		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-04
Client ID: MPA 7 0-5.9'
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/08/09 17:18
Analyst: PS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	77.7	1
Acenaphthylene	ND		ug/kg	77.7	1
Acenaphthene	ND		ug/kg	77.7	1
Fluorene	ND		ug/kg	77.7	1
Phenanthrene	ND		ug/kg	77.7	1
Anthracene	ND		ug/kg	77.7	1
Fluoranthene	92.4		ug/kg	77.7	1
Pyrene	79.1		ug/kg	77.7	1
Benz(a)anthracene	ND		ug/kg	77.7	1
Chrysene	ND		ug/kg	77.7	1
Benzo(b)fluoranthene	ND		ug/kg	77.7	1
Benzo(k)fluoranthene	ND		ug/kg	77.7	1
Benzo(a)pyrene	ND		ug/kg	77.7	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	77.7	1
Dibenz(a,h)anthracene	ND		ug/kg	77.7	1
Benzo(ghi)perylene	ND		ug/kg	77.7	1
Cl2-BZ#8	ND		ug/kg	7.77	1
Cl3-BZ#18	ND		ug/kg	7.77	1
Cl3-BZ#28	ND		ug/kg	7.77	1
Cl4-BZ#44	ND		ug/kg	7.77	1
Cl4-BZ#49	ND		ug/kg	7.77	1
Cl4-BZ#52	ND		ug/kg	7.77	1
Cl4-BZ#66	ND		ug/kg	7.77	1
Cl5-BZ#87	ND		ug/kg	7.77	1
Cl5-BZ#101	ND		ug/kg	7.77	1
Cl5-BZ#105	ND		ug/kg	7.77	1
Cl5-BZ#118	ND		ug/kg	7.77	1
Cl6-BZ#128	ND		ug/kg	7.77	1
Cl6-BZ#138	ND		ug/kg	7.77	1
Cl6-BZ#153	ND		ug/kg	7.77	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-04
 Client ID: MPA 7 0-5.9'
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	7.77	1
CI7-BZ#180	ND		ug/kg	7.77	1
CI7-BZ#183	ND		ug/kg	7.77	1
CI7-BZ#184	ND		ug/kg	7.77	1
CI7-BZ#187	ND		ug/kg	7.77	1
CI8-BZ#195	ND		ug/kg	7.77	1
CI9-BZ#206	ND		ug/kg	7.77	1
CI10-BZ#209	ND		ug/kg	7.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		30-150
Pyrene-d10	84		30-150
Benzo(b)fluoranthene-d12	69		30-150
DBOB	96		30-150
BZ 198	91		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-07
 Client ID: MPA 9 4.8-7.75'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/19/09 16:50
 Analyst: PS
 Percent Solids: 78%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/18/09 12:58
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/19/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	11.8	1
Acenaphthylene	ND		ug/kg	11.8	1
Acenaphthene	ND		ug/kg	11.8	1
Fluorene	ND		ug/kg	11.8	1
Phenanthrene	ND		ug/kg	11.8	1
Anthracene	ND		ug/kg	11.8	1
Fluoranthene	ND		ug/kg	11.8	1
Pyrene	ND		ug/kg	11.8	1
Benz(a)anthracene	ND		ug/kg	11.8	1
Chrysene	ND		ug/kg	11.8	1
Benzo(b)fluoranthene	ND		ug/kg	11.8	1
Benzo(k)fluoranthene	ND		ug/kg	11.8	1
Benzo(a)pyrene	ND		ug/kg	11.8	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	11.8	1
Dibenz(a,h)anthracene	ND		ug/kg	11.8	1
Benzo(ghi)perylene	ND		ug/kg	11.8	1
Cl2-BZ#8	ND		ug/kg	1.18	1
Cl3-BZ#18	ND		ug/kg	1.18	1
Cl3-BZ#28	ND		ug/kg	1.18	1
Cl4-BZ#44	ND		ug/kg	1.18	1
Cl4-BZ#49	ND		ug/kg	1.18	1
Cl4-BZ#52	ND		ug/kg	1.18	1
Cl4-BZ#66	ND		ug/kg	1.18	1
Cl5-BZ#87	ND		ug/kg	1.18	1
Cl5-BZ#101	ND		ug/kg	1.18	1
Cl5-BZ#105	ND		ug/kg	1.18	1
Cl5-BZ#118	ND		ug/kg	1.18	1
Cl6-BZ#128	ND		ug/kg	1.18	1
Cl6-BZ#138	ND		ug/kg	1.18	1
Cl6-BZ#153	ND		ug/kg	1.18	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-07
 Client ID: MPA 9 4.8-7.75'
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	1.18	1
CI7-BZ#180	ND		ug/kg	1.18	1
CI7-BZ#183	ND		ug/kg	1.18	1
CI7-BZ#184	ND		ug/kg	1.18	1
CI7-BZ#187	ND		ug/kg	1.18	1
CI8-BZ#195	ND		ug/kg	1.18	1
CI9-BZ#206	ND		ug/kg	1.18	1
CI10-BZ#209	ND		ug/kg	1.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	59		30-150
Pyrene-d10	80		30-150
Benzo(b)fluoranthene-d12	74		30-150
DBOB	73		30-150
BZ 198	79		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-09
 Client ID: MPA 8 2.2-5.1'/MPA 8 5.1-7.1'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/08/09 18:37
 Analyst: PS
 Percent Solids: 60%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 07:54
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	14.6	1
Acenaphthylene	ND		ug/kg	14.6	1
Acenaphthene	ND		ug/kg	14.6	1
Fluorene	ND		ug/kg	14.6	1
Phenanthrene	ND		ug/kg	14.6	1
Anthracene	ND		ug/kg	14.6	1
Fluoranthene	ND		ug/kg	14.6	1
Pyrene	ND		ug/kg	14.6	1
Benz(a)anthracene	ND		ug/kg	14.6	1
Chrysene	ND		ug/kg	14.6	1
Benzo(b)fluoranthene	ND		ug/kg	14.6	1
Benzo(k)fluoranthene	ND		ug/kg	14.6	1
Benzo(a)pyrene	ND		ug/kg	14.6	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	14.6	1
Dibenz(a,h)anthracene	ND		ug/kg	14.6	1
Benzo(ghi)perylene	ND		ug/kg	14.6	1
Cl2-BZ#8	ND		ug/kg	1.46	1
Cl3-BZ#18	ND		ug/kg	1.46	1
Cl3-BZ#28	ND		ug/kg	1.46	1
Cl4-BZ#44	ND		ug/kg	1.46	1
Cl4-BZ#49	ND		ug/kg	1.46	1
Cl4-BZ#52	ND		ug/kg	1.46	1
Cl4-BZ#66	ND		ug/kg	1.46	1
Cl5-BZ#87	ND		ug/kg	1.46	1
Cl5-BZ#101	ND		ug/kg	1.46	1
Cl5-BZ#105	ND		ug/kg	1.46	1
Cl5-BZ#118	ND		ug/kg	1.46	1
Cl6-BZ#128	ND		ug/kg	1.46	1
Cl6-BZ#138	ND		ug/kg	1.46	1
Cl6-BZ#153	ND		ug/kg	1.46	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-09

Date Collected: 04/16/09 00:00

Client ID: MPA 8 2.2-5.1'/MPA 8 5.1-7.1'

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	1.46	1
CI7-BZ#180	ND		ug/kg	1.46	1
CI7-BZ#183	ND		ug/kg	1.46	1
CI7-BZ#184	ND		ug/kg	1.46	1
CI7-BZ#187	ND		ug/kg	1.46	1
CI8-BZ#195	ND		ug/kg	1.46	1
CI9-BZ#206	ND		ug/kg	1.46	1
CI10-BZ#209	ND		ug/kg	1.46	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	68		30-150
Pyrene-d10	88		30-150
Benzo(b)fluoranthene-d12	75		30-150
DBOB	102		30-150
BZ 198	94		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-11
 Client ID: MPA 10+11 COMP F
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/08/09 19:18
 Analyst: PS
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 07:54
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	79.7	1
Acenaphthylene	ND		ug/kg	79.7	1
Acenaphthene	ND		ug/kg	79.7	1
Fluorene	ND		ug/kg	79.7	1
Phenanthrene	ND		ug/kg	79.7	1
Anthracene	ND		ug/kg	79.7	1
Fluoranthene	ND		ug/kg	79.7	1
Pyrene	ND		ug/kg	79.7	1
Benz(a)anthracene	ND		ug/kg	79.7	1
Chrysene	ND		ug/kg	79.7	1
Benzo(b)fluoranthene	ND		ug/kg	79.7	1
Benzo(k)fluoranthene	ND		ug/kg	79.7	1
Benzo(a)pyrene	ND		ug/kg	79.7	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	79.7	1
Dibenz(a,h)anthracene	ND		ug/kg	79.7	1
Benzo(ghi)perylene	ND		ug/kg	79.7	1
Cl2-BZ#8	ND		ug/kg	7.97	1
Cl3-BZ#18	ND		ug/kg	7.97	1
Cl3-BZ#28	ND		ug/kg	7.97	1
Cl4-BZ#44	ND		ug/kg	7.97	1
Cl4-BZ#49	ND		ug/kg	7.97	1
Cl4-BZ#52	ND		ug/kg	7.97	1
Cl4-BZ#66	ND		ug/kg	7.97	1
Cl5-BZ#87	ND		ug/kg	7.97	1
Cl5-BZ#101	ND		ug/kg	7.97	1
Cl5-BZ#105	ND		ug/kg	7.97	1
Cl5-BZ#118	ND		ug/kg	7.97	1
Cl6-BZ#128	ND		ug/kg	7.97	1
Cl6-BZ#138	ND		ug/kg	7.97	1
Cl6-BZ#153	ND		ug/kg	7.97	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-11
 Client ID: MPA 10+11 COMP F
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	7.97	1
CI7-BZ#180	ND		ug/kg	7.97	1
CI7-BZ#183	ND		ug/kg	7.97	1
CI7-BZ#184	ND		ug/kg	7.97	1
CI7-BZ#187	ND		ug/kg	7.97	1
CI8-BZ#195	ND		ug/kg	7.97	1
CI9-BZ#206	ND		ug/kg	7.97	1
CI10-BZ#209	ND		ug/kg	7.97	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	68		30-150
Pyrene-d10	83		30-150
Benzo(b)fluoranthene-d12	67		30-150
DBOB	93		30-150
BZ 198	91		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-12
 Client ID: MPA 10 6-8.7'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/08/09 19:57
 Analyst: PS
 Percent Solids: 85%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 07:54
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	10.2	1
Acenaphthylene	ND		ug/kg	10.2	1
Acenaphthene	ND		ug/kg	10.2	1
Fluorene	ND		ug/kg	10.2	1
Phenanthrene	ND		ug/kg	10.2	1
Anthracene	ND		ug/kg	10.2	1
Fluoranthene	ND		ug/kg	10.2	1
Pyrene	ND		ug/kg	10.2	1
Benz(a)anthracene	ND		ug/kg	10.2	1
Chrysene	ND		ug/kg	10.2	1
Benzo(b)fluoranthene	ND		ug/kg	10.2	1
Benzo(k)fluoranthene	ND		ug/kg	10.2	1
Benzo(a)pyrene	ND		ug/kg	10.2	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.2	1
Dibenz(a,h)anthracene	ND		ug/kg	10.2	1
Benzo(ghi)perylene	ND		ug/kg	10.2	1
Cl2-BZ#8	ND		ug/kg	1.02	1
Cl3-BZ#18	ND		ug/kg	1.02	1
Cl3-BZ#28	ND		ug/kg	1.02	1
Cl4-BZ#44	ND		ug/kg	1.02	1
Cl4-BZ#49	ND		ug/kg	1.02	1
Cl4-BZ#52	ND		ug/kg	1.02	1
Cl4-BZ#66	ND		ug/kg	1.02	1
Cl5-BZ#87	ND		ug/kg	1.02	1
Cl5-BZ#101	ND		ug/kg	1.02	1
Cl5-BZ#105	ND		ug/kg	1.02	1
Cl5-BZ#118	ND		ug/kg	1.02	1
Cl6-BZ#128	ND		ug/kg	1.02	1
Cl6-BZ#138	ND		ug/kg	1.02	1
Cl6-BZ#153	ND		ug/kg	1.02	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-12
 Client ID: MPA 10 6-8.7'
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	1.02	1
CI7-BZ#180	ND		ug/kg	1.02	1
CI7-BZ#183	ND		ug/kg	1.02	1
CI7-BZ#184	ND		ug/kg	1.02	1
CI7-BZ#187	ND		ug/kg	1.02	1
CI8-BZ#195	ND		ug/kg	1.02	1
CI9-BZ#206	ND		ug/kg	1.02	1
CI10-BZ#209	ND		ug/kg	1.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		30-150
Pyrene-d10	88		30-150
Benzo(b)fluoranthene-d12	80		30-150
DBOB	104		30-150
BZ 198	98		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-13
Client ID: MPA 12 0-9.3' COMP G
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/08/09 20:37
Analyst: PS
Percent Solids: 11%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	80.9	1
Acenaphthylene	ND		ug/kg	80.9	1
Acenaphthene	ND		ug/kg	80.9	1
Fluorene	ND		ug/kg	80.9	1
Phenanthrene	ND		ug/kg	80.9	1
Anthracene	ND		ug/kg	80.9	1
Fluoranthene	ND		ug/kg	80.9	1
Pyrene	ND		ug/kg	80.9	1
Benz(a)anthracene	ND		ug/kg	80.9	1
Chrysene	ND		ug/kg	80.9	1
Benzo(b)fluoranthene	ND		ug/kg	80.9	1
Benzo(k)fluoranthene	ND		ug/kg	80.9	1
Benzo(a)pyrene	ND		ug/kg	80.9	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	80.9	1
Dibenz(a,h)anthracene	ND		ug/kg	80.9	1
Benzo(ghi)perylene	ND		ug/kg	80.9	1
Cl2-BZ#8	ND		ug/kg	8.09	1
Cl3-BZ#18	ND		ug/kg	8.09	1
Cl3-BZ#28	ND		ug/kg	8.09	1
Cl4-BZ#44	ND		ug/kg	8.09	1
Cl4-BZ#49	ND		ug/kg	8.09	1
Cl4-BZ#52	ND		ug/kg	8.09	1
Cl4-BZ#66	ND		ug/kg	8.09	1
Cl5-BZ#87	ND		ug/kg	8.09	1
Cl5-BZ#101	ND		ug/kg	8.09	1
Cl5-BZ#105	ND		ug/kg	8.09	1
Cl5-BZ#118	ND		ug/kg	8.09	1
Cl6-BZ#128	ND		ug/kg	8.09	1
Cl6-BZ#138	ND		ug/kg	8.09	1
Cl6-BZ#153	ND		ug/kg	8.09	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-13

Date Collected: 04/16/09 00:00

Client ID: MPA 12 0-9.3' COMP G

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	8.09	1
CI7-BZ#180	ND		ug/kg	8.09	1
CI7-BZ#183	ND		ug/kg	8.09	1
CI7-BZ#184	ND		ug/kg	8.09	1
CI7-BZ#187	ND		ug/kg	8.09	1
CI8-BZ#195	ND		ug/kg	8.09	1
CI9-BZ#206	ND		ug/kg	8.09	1
CI10-BZ#209	ND		ug/kg	8.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	63		30-150
Pyrene-d10	84		30-150
Benzo(b)fluoranthene-d12	62		30-150
DBOB	98		30-150
BZ 198	91		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-14
Client ID: MPA 13+15 COMP H
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/08/09 21:17
Analyst: PS
Percent Solids: 10%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	91.3	1
Acenaphthylene	ND		ug/kg	91.3	1
Acenaphthene	ND		ug/kg	91.3	1
Fluorene	ND		ug/kg	91.3	1
Phenanthrene	ND		ug/kg	91.3	1
Anthracene	ND		ug/kg	91.3	1
Fluoranthene	ND		ug/kg	91.3	1
Pyrene	ND		ug/kg	91.3	1
Benz(a)anthracene	ND		ug/kg	91.3	1
Chrysene	ND		ug/kg	91.3	1
Benzo(b)fluoranthene	ND		ug/kg	91.3	1
Benzo(k)fluoranthene	ND		ug/kg	91.3	1
Benzo(a)pyrene	ND		ug/kg	91.3	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	91.3	1
Dibenz(a,h)anthracene	ND		ug/kg	91.3	1
Benzo(ghi)perylene	ND		ug/kg	91.3	1
Cl2-BZ#8	ND		ug/kg	9.13	1
Cl3-BZ#18	ND		ug/kg	9.13	1
Cl3-BZ#28	ND		ug/kg	9.13	1
Cl4-BZ#44	ND		ug/kg	9.13	1
Cl4-BZ#49	ND		ug/kg	9.13	1
Cl4-BZ#52	ND		ug/kg	9.13	1
Cl4-BZ#66	ND		ug/kg	9.13	1
Cl5-BZ#87	ND		ug/kg	9.13	1
Cl5-BZ#101	ND		ug/kg	9.13	1
Cl5-BZ#105	ND		ug/kg	9.13	1
Cl5-BZ#118	ND		ug/kg	9.13	1
Cl6-BZ#128	ND		ug/kg	9.13	1
Cl6-BZ#138	ND		ug/kg	9.13	1
Cl6-BZ#153	ND		ug/kg	9.13	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-14

Date Collected: 04/16/09 00:00

Client ID: MPA 13+15 COMP H

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	9.13	1
CI7-BZ#180	ND		ug/kg	9.13	1
CI7-BZ#183	ND		ug/kg	9.13	1
CI7-BZ#184	ND		ug/kg	9.13	1
CI7-BZ#187	ND		ug/kg	9.13	1
CI8-BZ#195	ND		ug/kg	9.13	1
CI9-BZ#206	ND		ug/kg	9.13	1
CI10-BZ#209	ND		ug/kg	9.13	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	42		30-150
Pyrene-d10	56		30-150
Benzo(b)fluoranthene-d12	43		30-150
DBOB	68		30-150
BZ 198	61		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-15
 Client ID: MPA 14 0-9.3' SAMPLE I
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/08/09 21:58
 Analyst: PS
 Percent Solids: 11%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 07:54
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	84.0	1
Acenaphthylene	ND		ug/kg	84.0	1
Acenaphthene	ND		ug/kg	84.0	1
Fluorene	ND		ug/kg	84.0	1
Phenanthrene	ND		ug/kg	84.0	1
Anthracene	ND		ug/kg	84.0	1
Fluoranthene	ND		ug/kg	84.0	1
Pyrene	ND		ug/kg	84.0	1
Benz(a)anthracene	ND		ug/kg	84.0	1
Chrysene	ND		ug/kg	84.0	1
Benzo(b)fluoranthene	ND		ug/kg	84.0	1
Benzo(k)fluoranthene	ND		ug/kg	84.0	1
Benzo(a)pyrene	ND		ug/kg	84.0	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	84.0	1
Dibenz(a,h)anthracene	95.1		ug/kg	84.0	1
Benzo(ghi)perylene	ND		ug/kg	84.0	1
Cl2-BZ#8	ND		ug/kg	8.40	1
Cl3-BZ#18	ND		ug/kg	8.40	1
Cl3-BZ#28	ND		ug/kg	8.40	1
Cl4-BZ#44	ND		ug/kg	8.40	1
Cl4-BZ#49	ND		ug/kg	8.40	1
Cl4-BZ#52	ND		ug/kg	8.40	1
Cl4-BZ#66	ND		ug/kg	8.40	1
Cl5-BZ#87	ND		ug/kg	8.40	1
Cl5-BZ#101	ND		ug/kg	8.40	1
Cl5-BZ#105	ND		ug/kg	8.40	1
Cl5-BZ#118	ND		ug/kg	8.40	1
Cl6-BZ#128	ND		ug/kg	8.40	1
Cl6-BZ#138	ND		ug/kg	8.40	1
Cl6-BZ#153	ND		ug/kg	8.40	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-15

Date Collected: 04/16/09 00:00

Client ID: MPA 14 0-9.3' SAMPLE I

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	8.40	1
CI7-BZ#180	ND		ug/kg	8.40	1
CI7-BZ#183	ND		ug/kg	8.40	1
CI7-BZ#184	ND		ug/kg	8.40	1
CI7-BZ#187	ND		ug/kg	8.40	1
CI8-BZ#195	ND		ug/kg	8.40	1
CI9-BZ#206	ND		ug/kg	8.40	1
CI10-BZ#209	ND		ug/kg	8.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-150
Pyrene-d10	83		30-150
Benzo(b)fluoranthene-d12	60		30-150
DBOB	102		30-150
BZ 198	90		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-16
Client ID: MPA 16 0-6.3' SAMPLE J
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/11/09 12:23
Analyst: PS
Percent Solids: 10%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	90.2	1
Acenaphthylene	ND		ug/kg	90.2	1
Acenaphthene	ND		ug/kg	90.2	1
Fluorene	ND		ug/kg	90.2	1
Phenanthrene	ND		ug/kg	90.2	1
Anthracene	ND		ug/kg	90.2	1
Fluoranthene	ND		ug/kg	90.2	1
Pyrene	ND		ug/kg	90.2	1
Benz(a)anthracene	ND		ug/kg	90.2	1
Chrysene	ND		ug/kg	90.2	1
Benzo(b)fluoranthene	ND		ug/kg	90.2	1
Benzo(k)fluoranthene	ND		ug/kg	90.2	1
Benzo(a)pyrene	ND		ug/kg	90.2	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	90.2	1
Dibenz(a,h)anthracene	ND		ug/kg	90.2	1
Benzo(ghi)perylene	ND		ug/kg	90.2	1
Cl2-BZ#8	ND		ug/kg	9.02	1
Cl3-BZ#18	ND		ug/kg	9.02	1
Cl3-BZ#28	ND		ug/kg	9.02	1
Cl4-BZ#44	ND		ug/kg	9.02	1
Cl4-BZ#49	ND		ug/kg	9.02	1
Cl4-BZ#52	ND		ug/kg	9.02	1
Cl4-BZ#66	ND		ug/kg	9.02	1
Cl5-BZ#87	ND		ug/kg	9.02	1
Cl5-BZ#101	ND		ug/kg	9.02	1
Cl5-BZ#105	21.6		ug/kg	9.02	1
Cl5-BZ#118	ND		ug/kg	9.02	1
Cl6-BZ#128	ND		ug/kg	9.02	1
Cl6-BZ#138	ND		ug/kg	9.02	1
Cl6-BZ#153	ND		ug/kg	9.02	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-16

Date Collected: 04/16/09 00:00

Client ID: MPA 16 0-6.3' SAMPLE J

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	9.02	1
CI7-BZ#180	ND		ug/kg	9.02	1
CI7-BZ#183	ND		ug/kg	9.02	1
CI7-BZ#184	ND		ug/kg	9.02	1
CI7-BZ#187	ND		ug/kg	9.02	1
CI8-BZ#195	ND		ug/kg	9.02	1
CI9-BZ#206	ND		ug/kg	9.02	1
CI10-BZ#209	ND		ug/kg	9.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-150
Pyrene-d10	78		30-150
Benzo(b)fluoranthene-d12	64		30-150
DBOB	91		30-150
BZ 198	87		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-17
Client ID: MPA 17 0-9.3' SAMPLE K
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/11/09 14:02
Analyst: PS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 09:09
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	71.3	1
Acenaphthylene	ND		ug/kg	71.3	1
Acenaphthene	ND		ug/kg	71.3	1
Fluorene	ND		ug/kg	71.3	1
Phenanthrene	144		ug/kg	71.3	1
Anthracene	ND		ug/kg	71.3	1
Fluoranthene	483		ug/kg	71.3	1
Pyrene	392		ug/kg	71.3	1
Benz(a)anthracene	225		ug/kg	71.3	1
Chrysene	208		ug/kg	71.3	1
Benzo(b)fluoranthene	293		ug/kg	71.3	1
Benzo(k)fluoranthene	119		ug/kg	71.3	1
Benzo(a)pyrene	147		ug/kg	71.3	1
Indeno(1,2,3-cd)Pyrene	163		ug/kg	71.3	1
Dibenz(a,h)anthracene	ND		ug/kg	71.3	1
Benzo(ghi)perylene	139		ug/kg	71.3	1
Cl2-BZ#8	ND		ug/kg	7.13	1
Cl3-BZ#18	ND		ug/kg	7.13	1
Cl3-BZ#28	ND		ug/kg	7.13	1
Cl4-BZ#44	ND		ug/kg	7.13	1
Cl4-BZ#49	ND		ug/kg	7.13	1
Cl4-BZ#52	ND		ug/kg	7.13	1
Cl4-BZ#66	ND		ug/kg	7.13	1
Cl5-BZ#87	ND		ug/kg	7.13	1
Cl5-BZ#101	ND		ug/kg	7.13	1
Cl5-BZ#105	ND		ug/kg	7.13	1
Cl5-BZ#118	ND		ug/kg	7.13	1
Cl6-BZ#128	ND		ug/kg	7.13	1
Cl6-BZ#138	ND		ug/kg	7.13	1
Cl6-BZ#153	ND		ug/kg	7.13	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-17

Date Collected: 04/16/09 00:00

Client ID: MPA 17 0-9.3' SAMPLE K

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	7.13	1
CI7-BZ#180	ND		ug/kg	7.13	1
CI7-BZ#183	ND		ug/kg	7.13	1
CI7-BZ#184	ND		ug/kg	7.13	1
CI7-BZ#187	ND		ug/kg	7.13	1
CI8-BZ#195	ND		ug/kg	7.13	1
CI9-BZ#206	ND		ug/kg	7.13	1
CI10-BZ#209	ND		ug/kg	7.13	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	59		30-150
Pyrene-d10	76		30-150
Benzo(b)fluoranthene-d12	68		30-150
DBOB	116		30-150
BZ 198	120		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-18
Client ID: MPA 18 0-7' SAMPLE L
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/09/09 13:54
Analyst: PS
Percent Solids: 8%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 09:11
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	120	1
Acenaphthylene	ND		ug/kg	120	1
Acenaphthene	ND		ug/kg	120	1
Fluorene	ND		ug/kg	120	1
Phenanthrene	ND		ug/kg	120	1
Anthracene	ND		ug/kg	120	1
Fluoranthene	167		ug/kg	120	1
Pyrene	132		ug/kg	120	1
Benz(a)anthracene	ND		ug/kg	120	1
Chrysene	ND		ug/kg	120	1
Benzo(b)fluoranthene	ND		ug/kg	120	1
Benzo(k)fluoranthene	ND		ug/kg	120	1
Benzo(a)pyrene	ND		ug/kg	120	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	120	1
Dibenz(a,h)anthracene	ND		ug/kg	120	1
Benzo(ghi)perylene	ND		ug/kg	120	1
Cl2-BZ#8	ND		ug/kg	12.0	1
Cl3-BZ#18	ND		ug/kg	12.0	1
Cl3-BZ#28	ND		ug/kg	12.0	1
Cl4-BZ#44	ND		ug/kg	12.0	1
Cl4-BZ#49	ND		ug/kg	12.0	1
Cl4-BZ#52	ND		ug/kg	12.0	1
Cl4-BZ#66	ND		ug/kg	12.0	1
Cl5-BZ#87	ND		ug/kg	12.0	1
Cl5-BZ#101	ND		ug/kg	12.0	1
Cl5-BZ#105	ND		ug/kg	12.0	1
Cl5-BZ#118	ND		ug/kg	12.0	1
Cl6-BZ#128	ND		ug/kg	12.0	1
Cl6-BZ#138	ND		ug/kg	12.0	1
Cl6-BZ#153	ND		ug/kg	12.0	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-18

Date Collected: 04/16/09 00:00

Client ID: MPA 18 0-7' SAMPLE L

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	12.0	1
CI7-BZ#180	ND		ug/kg	12.0	1
CI7-BZ#183	ND		ug/kg	12.0	1
CI7-BZ#184	ND		ug/kg	12.0	1
CI7-BZ#187	ND		ug/kg	12.0	1
CI8-BZ#195	ND		ug/kg	12.0	1
CI9-BZ#206	ND		ug/kg	12.0	1
CI10-BZ#209	ND		ug/kg	12.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	65		30-150
Pyrene-d10	81		30-150
Benzo(b)fluoranthene-d12	64		30-150
DBOB	91		30-150
BZ 198	85		30-150

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-19
Client ID: MPA 19 0-8.25' SAMPLE M
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 1,8270C-SIM
Analytical Date: 05/09/09 14:34
Analyst: PS
Percent Solids: 11%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3570
Extraction Date: 05/05/09 09:12
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	76.6	1
Acenaphthylene	ND		ug/kg	76.6	1
Acenaphthene	ND		ug/kg	76.6	1
Fluorene	ND		ug/kg	76.6	1
Phenanthrene	ND		ug/kg	76.6	1
Anthracene	ND		ug/kg	76.6	1
Fluoranthene	ND		ug/kg	76.6	1
Pyrene	ND		ug/kg	76.6	1
Benz(a)anthracene	ND		ug/kg	76.6	1
Chrysene	ND		ug/kg	76.6	1
Benzo(b)fluoranthene	ND		ug/kg	76.6	1
Benzo(k)fluoranthene	ND		ug/kg	76.6	1
Benzo(a)pyrene	ND		ug/kg	76.6	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	76.6	1
Dibenz(a,h)anthracene	ND		ug/kg	76.6	1
Benzo(ghi)perylene	ND		ug/kg	76.6	1
Cl2-BZ#8	ND		ug/kg	7.66	1
Cl3-BZ#18	ND		ug/kg	7.66	1
Cl3-BZ#28	ND		ug/kg	7.66	1
Cl4-BZ#44	ND		ug/kg	7.66	1
Cl4-BZ#49	ND		ug/kg	7.66	1
Cl4-BZ#52	ND		ug/kg	7.66	1
Cl4-BZ#66	ND		ug/kg	7.66	1
Cl5-BZ#87	ND		ug/kg	7.66	1
Cl5-BZ#101	ND		ug/kg	7.66	1
Cl5-BZ#105	ND		ug/kg	7.66	1
Cl5-BZ#118	ND		ug/kg	7.66	1
Cl6-BZ#128	ND		ug/kg	7.66	1
Cl6-BZ#138	ND		ug/kg	7.66	1
Cl6-BZ#153	ND		ug/kg	7.66	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-19

Date Collected: 04/16/09 00:00

Client ID: MPA 19 0-8.25' SAMPLE M

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	7.66	1
CI7-BZ#180	ND		ug/kg	7.66	1
CI7-BZ#183	ND		ug/kg	7.66	1
CI7-BZ#184	ND		ug/kg	7.66	1
CI7-BZ#187	ND		ug/kg	7.66	1
CI8-BZ#195	ND		ug/kg	7.66	1
CI9-BZ#206	ND		ug/kg	7.66	1
CI10-BZ#209	ND		ug/kg	7.66	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	58		30-150
Pyrene-d10	78		30-150
Benzo(b)fluoranthene-d12	63		30-150
DBOB	93		30-150
BZ 198	84		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-20
 Client ID: MPA 20 SAMPLE N
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/09/09 15:15
 Analyst: PS
 Percent Solids: 14%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 09:13
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	64.8	1
Acenaphthylene	ND		ug/kg	64.8	1
Acenaphthene	ND		ug/kg	64.8	1
Fluorene	ND		ug/kg	64.8	1
Phenanthrene	116		ug/kg	64.8	1
Anthracene	ND		ug/kg	64.8	1
Fluoranthene	297		ug/kg	64.8	1
Pyrene	253		ug/kg	64.8	1
Benz(a)anthracene	103		ug/kg	64.8	1
Chrysene	131		ug/kg	64.8	1
Benzo(b)fluoranthene	177		ug/kg	64.8	1
Benzo(k)fluoranthene	ND		ug/kg	64.8	1
Benzo(a)pyrene	ND		ug/kg	64.8	1
Indeno(1,2,3-cd)Pyrene	65.9		ug/kg	64.8	1
Dibenz(a,h)anthracene	ND		ug/kg	64.8	1
Benzo(ghi)perylene	68.4		ug/kg	64.8	1
Cl2-BZ#8	ND		ug/kg	6.48	1
Cl3-BZ#18	ND		ug/kg	6.48	1
Cl3-BZ#28	ND		ug/kg	6.48	1
Cl4-BZ#44	ND		ug/kg	6.48	1
Cl4-BZ#49	ND		ug/kg	6.48	1
Cl4-BZ#52	ND		ug/kg	6.48	1
Cl4-BZ#66	ND		ug/kg	6.48	1
Cl5-BZ#87	ND		ug/kg	6.48	1
Cl5-BZ#101	ND		ug/kg	6.48	1
Cl5-BZ#105	ND		ug/kg	6.48	1
Cl5-BZ#118	ND		ug/kg	6.48	1
Cl6-BZ#128	ND		ug/kg	6.48	1
Cl6-BZ#138	ND		ug/kg	6.48	1
Cl6-BZ#153	ND		ug/kg	6.48	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-20
 Client ID: MPA 20 SAMPLE N
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	6.48	1
CI7-BZ#180	ND		ug/kg	6.48	1
CI7-BZ#183	ND		ug/kg	6.48	1
CI7-BZ#184	ND		ug/kg	6.48	1
CI7-BZ#187	ND		ug/kg	6.48	1
CI8-BZ#195	ND		ug/kg	6.48	1
CI9-BZ#206	ND		ug/kg	6.48	1
CI10-BZ#209	ND		ug/kg	6.48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	58		30-150
Pyrene-d10	69		30-150
Benzo(b)fluoranthene-d12	58		30-150
DBOB	88		30-150
BZ 198	81		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-21
 Client ID: MPA 21 0-4.4' SAMPLE O
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 1,8270C-SIM
 Analytical Date: 05/09/09 15:55
 Analyst: PS
 Percent Solids: 14%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3570
 Extraction Date: 05/05/09 09:15
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - -

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ug/kg	68.0	1
Acenaphthylene	83.6		ug/kg	68.0	1
Acenaphthene	ND		ug/kg	68.0	1
Fluorene	74.1		ug/kg	68.0	1
Phenanthrene	660		ug/kg	68.0	1
Anthracene	91.4		ug/kg	68.0	1
Fluoranthene	1520		ug/kg	68.0	1
Pyrene	1340		ug/kg	68.0	1
Benz(a)anthracene	657		ug/kg	68.0	1
Chrysene	635		ug/kg	68.0	1
Benzo(b)fluoranthene	691		ug/kg	68.0	1
Benzo(k)fluoranthene	446		ug/kg	68.0	1
Benzo(a)pyrene	405		ug/kg	68.0	1
Indeno(1,2,3-cd)Pyrene	474		ug/kg	68.0	1
Dibenz(a,h)anthracene	133		ug/kg	68.0	1
Benzo(ghi)perylene	398		ug/kg	68.0	1
Cl2-BZ#8	ND		ug/kg	6.80	1
Cl3-BZ#18	ND		ug/kg	6.80	1
Cl3-BZ#28	10.2		ug/kg	6.80	1
Cl4-BZ#44	ND		ug/kg	6.80	1
Cl4-BZ#49	ND		ug/kg	6.80	1
Cl4-BZ#52	ND		ug/kg	6.80	1
Cl4-BZ#66	ND		ug/kg	6.80	1
Cl5-BZ#87	ND		ug/kg	6.80	1
Cl5-BZ#101	ND		ug/kg	6.80	1
Cl5-BZ#105	ND		ug/kg	6.80	1
Cl5-BZ#118	ND		ug/kg	6.80	1
Cl6-BZ#128	ND		ug/kg	6.80	1
Cl6-BZ#138	ND		ug/kg	6.80	1
Cl6-BZ#153	ND		ug/kg	6.80	1

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-21

Date Collected: 04/16/09 00:00

Client ID: MPA 21 0-4.4' SAMPLE O

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ug/kg	6.80	1
CI7-BZ#180	ND		ug/kg	6.80	1
CI7-BZ#183	ND		ug/kg	6.80	1
CI7-BZ#184	ND		ug/kg	6.80	1
CI7-BZ#187	ND		ug/kg	6.80	1
CI8-BZ#195	ND		ug/kg	6.80	1
CI9-BZ#206	ND		ug/kg	6.80	1
CI10-BZ#209	ND		ug/kg	6.80	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	56		30-150
Pyrene-d10	74		30-150
Benzo(b)fluoranthene-d12	64		30-150
DBOB	85		30-150
BZ 198	85		30-150

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-23
 Client ID: RINSE BLANK
 Sample Location: MILFORD POND
 Matrix: Water
 Analytical Method: 1,8270C-SIM
 Analytical Date: 04/28/09 19:53
 Analyst: JD

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 04/27/09 14:33

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
Naphthalene	ND		ng/l	10.5	1
Acenaphthylene	ND		ng/l	10.5	1
Acenaphthene	ND		ng/l	10.5	1
Fluorene	ND		ng/l	10.5	1
Phenanthrene	119		ng/l	10.5	1
Anthracene	17.7		ng/l	10.5	1
Fluoranthene	251		ng/l	10.5	1
Pyrene	208		ng/l	10.5	1
Benz(a)anthracene	70.6		ng/l	10.5	1
Chrysene	113		ng/l	10.5	1
Benzo(b)fluoranthene	105		ng/l	10.5	1
Benzo(k)fluoranthene	108		ng/l	10.5	1
Benzo(a)pyrene	88.2		ng/l	10.5	1
Indeno(1,2,3-cd)Pyrene	70.2		ng/l	10.5	1
Dibenz(a,h)anthracene	49.0		ng/l	10.5	1
Benzo(ghi)perylene	71.2		ng/l	10.5	1
Cl2-BZ#8	ND		ng/l	1.05	1
Cl3-BZ#18	ND		ng/l	1.05	1
Cl3-BZ#28	ND		ng/l	1.05	1
Cl4-BZ#44	ND		ng/l	1.05	1
Cl4-BZ#49	ND		ng/l	1.05	1
Cl4-BZ#52	ND		ng/l	1.05	1
Cl4-BZ#66	ND		ng/l	1.05	1
Cl5-BZ#87	ND		ng/l	1.05	1
Cl5-BZ#101	ND		ng/l	1.05	1
Cl5-BZ#105	ND		ng/l	1.05	1
Cl5-BZ#118	ND		ng/l	1.05	1
Cl6-BZ#128	ND		ng/l	1.05	1
Cl6-BZ#138	ND		ng/l	1.05	1
Cl6-BZ#153	ND		ng/l	1.05	1

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-23
 Client ID: RINSE BLANK
 Sample Location: MILFORD POND

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab					
CI7-BZ#170	ND		ng/l	1.05	1
CI7-BZ#180	ND		ng/l	1.05	1
CI7-BZ#183	ND		ng/l	1.05	1
CI7-BZ#184	ND		ng/l	1.05	1
CI7-BZ#187	ND		ng/l	1.05	1
CI8-BZ#195	ND		ng/l	1.05	1
CI9-BZ#206	ND		ng/l	1.05	1
CI10-BZ#209	ND		ng/l	1.05	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	68		30-150
Pyrene-d10	90		30-150
Benzo(b)fluoranthene-d12	78		30-150
DBOB	90		30-150
BZ 198	76		30-150

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 04/28/09 17:49
Analyst: JD

Extraction Method: EPA 3510C
Extraction Date: 04/27/09 14:33

Parameter	Result	Qualifier	Units	RDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 23 Batch: WG360290-1				
Naphthalene	ND		ng/l	10.0
Acenaphthylene	ND		ng/l	10.0
Acenaphthene	ND		ng/l	10.0
Fluorene	ND		ng/l	10.0
Phenanthrene	ND		ng/l	10.0
Anthracene	ND		ng/l	10.0
Fluoranthene	ND		ng/l	10.0
Pyrene	ND		ng/l	10.0
Benz(a)anthracene	ND		ng/l	10.0
Chrysene	ND		ng/l	10.0
Benzo(b)fluoranthene	ND		ng/l	10.0
Benzo(k)fluoranthene	ND		ng/l	10.0
Benzo(a)pyrene	ND		ng/l	10.0
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0
Dibenz(a,h)anthracene	ND		ng/l	10.0
Benzo(ghi)perylene	ND		ng/l	10.0
Cl2-BZ#8	ND		ng/l	1.00
Cl3-BZ#18	ND		ng/l	1.00
Cl3-BZ#28	ND		ng/l	1.00
Cl4-BZ#44	ND		ng/l	1.00
Cl4-BZ#49	ND		ng/l	1.00
Cl4-BZ#52	ND		ng/l	1.00
Cl4-BZ#66	ND		ng/l	1.00
Cl5-BZ#87	ND		ng/l	1.00
Cl5-BZ#101	ND		ng/l	1.00
Cl5-BZ#105	ND		ng/l	1.00
Cl5-BZ#118	ND		ng/l	1.00
Cl6-BZ#128	ND		ng/l	1.00
Cl6-BZ#138	ND		ng/l	1.00
Cl6-BZ#153	ND		ng/l	1.00
Cl7-BZ#170	ND		ng/l	1.00

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
 Analytical Date: 04/28/09 17:49
 Analyst: JD

Extraction Method: EPA 3510C
 Extraction Date: 04/27/09 14:33

Parameter	Result	Qualifier	Units	RDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 23 Batch: WG360290-1				
CI7-BZ#180	ND		ng/l	1.00
CI7-BZ#183	ND		ng/l	1.00
CI7-BZ#184	ND		ng/l	1.00
CI7-BZ#187	ND		ng/l	1.00
CI8-BZ#195	ND		ng/l	1.00
CI9-BZ#206	ND		ng/l	1.00
CI10-BZ#209	ND		ng/l	1.00

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	68		30-150
Pyrene-d10	104		30-150
Benzo(b)fluoranthene-d12	97		30-150
DBOB	87		30-150
BZ 198	95		30-150

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 05/08/09 11:55
Analyst: PS

Extraction Method: EPA 3570
Extraction Date: 05/05/09 07:54
Cleanup Method1: EPA 3630
Cleanup Date1: 05/07/09
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-04,09,11-21 Batch: WG361186-1				
Naphthalene	ND		ug/kg	10.0
Acenaphthylene	ND		ug/kg	10.0
Acenaphthene	ND		ug/kg	10.0
Fluorene	ND		ug/kg	10.0
Phenanthrene	ND		ug/kg	10.0
Anthracene	ND		ug/kg	10.0
Fluoranthene	ND		ug/kg	10.0
Pyrene	ND		ug/kg	10.0
Benz(a)anthracene	ND		ug/kg	10.0
Chrysene	ND		ug/kg	10.0
Benzo(b)fluoranthene	ND		ug/kg	10.0
Benzo(k)fluoranthene	ND		ug/kg	10.0
Benzo(a)pyrene	ND		ug/kg	10.0
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.0
Dibenz(a,h)anthracene	ND		ug/kg	10.0
Benzo(ghi)perylene	ND		ug/kg	10.0
Cl2-BZ#8	ND		ug/kg	1.00
Cl3-BZ#18	ND		ug/kg	1.00
Cl3-BZ#28	ND		ug/kg	1.00
Cl4-BZ#44	ND		ug/kg	1.00
Cl4-BZ#49	ND		ug/kg	1.00
Cl4-BZ#52	ND		ug/kg	1.00
Cl4-BZ#66	ND		ug/kg	1.00
Cl5-BZ#87	ND		ug/kg	1.00
Cl5-BZ#101	ND		ug/kg	1.00
Cl5-BZ#105	ND		ug/kg	1.00
Cl5-BZ#118	ND		ug/kg	1.00
Cl6-BZ#128	ND		ug/kg	1.00
Cl6-BZ#138	ND		ug/kg	1.00
Cl6-BZ#153	ND		ug/kg	1.00

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270C-SIM
 Analytical Date: 05/08/09 11:55
 Analyst: PS

Extraction Method: EPA 3570
 Extraction Date: 05/05/09 07:54
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/07/09
 Cleanup Method2: - - - -
 Cleanup Date2:

Parameter	Result	Qualifier	Units	RDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-04,09,11-21 Batch: WG361186-1				
Cl7-BZ#170	ND		ug/kg	1.00
Cl7-BZ#180	ND		ug/kg	1.00
Cl7-BZ#183	ND		ug/kg	1.00
Cl7-BZ#184	ND		ug/kg	1.00
Cl7-BZ#187	ND		ug/kg	1.00
Cl8-BZ#195	ND		ug/kg	1.00
Cl9-BZ#206	ND		ug/kg	1.00
Cl10-BZ#209	ND		ug/kg	1.00

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		30-150
Pyrene-d10	85		30-150
Benzo(b)fluoranthene-d12	85		30-150
DBOB	81		30-150
BZ 198	95		30-150

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 05/19/09 14:05
Analyst: PS

Extraction Method: EPA 3570
Extraction Date: 05/18/09 12:58
Cleanup Method1: EPA 3630
Cleanup Date1: 05/19/09
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 07 Batch: WG362826-1				
Naphthalene	ND		ug/kg	10.0
Acenaphthylene	ND		ug/kg	10.0
Acenaphthene	ND		ug/kg	10.0
Fluorene	ND		ug/kg	10.0
Phenanthrene	ND		ug/kg	10.0
Anthracene	ND		ug/kg	10.0
Fluoranthene	ND		ug/kg	10.0
Pyrene	ND		ug/kg	10.0
Benz(a)anthracene	ND		ug/kg	10.0
Chrysene	ND		ug/kg	10.0
Benzo(b)fluoranthene	ND		ug/kg	10.0
Benzo(k)fluoranthene	ND		ug/kg	10.0
Benzo(a)pyrene	ND		ug/kg	10.0
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.0
Dibenz(a,h)anthracene	ND		ug/kg	10.0
Benzo(ghi)perylene	ND		ug/kg	10.0
Cl2-BZ#8	ND		ug/kg	1.00
Cl3-BZ#18	ND		ug/kg	1.00
Cl3-BZ#28	ND		ug/kg	1.00
Cl4-BZ#44	ND		ug/kg	1.00
Cl4-BZ#49	ND		ug/kg	1.00
Cl4-BZ#52	ND		ug/kg	1.00
Cl4-BZ#66	ND		ug/kg	1.00
Cl5-BZ#87	ND		ug/kg	1.00
Cl5-BZ#101	ND		ug/kg	1.00
Cl5-BZ#105	ND		ug/kg	1.00
Cl5-BZ#118	ND		ug/kg	1.00
Cl6-BZ#128	ND		ug/kg	1.00
Cl6-BZ#138	ND		ug/kg	1.00
Cl6-BZ#153	ND		ug/kg	1.00
Cl7-BZ#170	ND		ug/kg	1.00



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270C-SIM
 Analytical Date: 05/19/09 14:05
 Analyst: PS

Extraction Method: EPA 3570
 Extraction Date: 05/18/09 12:58
 Cleanup Method1: EPA 3630
 Cleanup Date1: 05/19/09
 Cleanup Method2: - - - -
 Cleanup Date2:

Parameter	Result	Qualifier	Units	RDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 07 Batch: WG362826-1				
CI7-BZ#180	ND		ug/kg	1.00
CI7-BZ#183	ND		ug/kg	1.00
CI7-BZ#184	ND		ug/kg	1.00
CI7-BZ#187	ND		ug/kg	1.00
CI8-BZ#195	ND		ug/kg	1.00
CI9-BZ#206	ND		ug/kg	1.00
CI10-BZ#209	ND		ug/kg	1.00

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	65		30-150
Pyrene-d10	86		30-150
Benzo(b)fluoranthene-d12	77		30-150
DBOB	80		30-150
BZ 198	88		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 23 Batch: WG360290-2 WG360290-3								
Naphthalene	60		62		50-120	3		30
Acenaphthylene	61		64		50-120	5		30
Acenaphthene	63		65		50-120	3		30
Fluorene	67		68		50-120	1		30
Phenanthrene	72		73		50-120	1		30
Anthracene	61		61		50-120	0		30
Fluoranthene	78		76		50-120	3		30
Pyrene	81		80		50-120	1		30
Benz(a)anthracene	86		85		50-120	1		30
Chrysene	74		73		50-120	1		30
Benzo(b)fluoranthene	98		95		50-120	3		30
Benzo(k)fluoranthene	80		82		50-120	2		30
Benzo(a)pyrene	89		89		50-120	0		30
Indeno(1,2,3-cd)Pyrene	69		70		50-120	1		30
Dibenz(a,h)anthracene	72		73		50-120	1		30
Benzo(ghi)perylene	70		71		50-120	1		30
Cl2-BZ#8	91		93		50-120	2		30
Cl3-BZ#18	86		89		50-120	3		30
Cl3-BZ#28	99		100		50-120	1		30
Cl4-BZ#44	91		91		50-120	0		30
Cl4-BZ#49	96		95		50-120	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 23 Batch: WG360290-2 WG360290-3								
Cl4-BZ#52	104		103		50-120	1		30
Cl4-BZ#66	108		108		50-120	0		30
Cl5-BZ#87	106		104		50-120	2		30
Cl5-BZ#101	99		98		50-120	1		30
Cl5-BZ#105	108		107		50-120	1		30
Cl5-BZ#118	108		106		50-120	2		30
Cl6-BZ#128	101		101		50-120	0		30
Cl6-BZ#138	103		102		50-120	1		30
Cl6-BZ#153	106		106		50-120	0		30
Cl7-BZ#170	100		98		50-120	2		30
Cl7-BZ#180	96		96		50-120	0		30
Cl7-BZ#183	102		101		50-120	1		30
Cl7-BZ#184	106		105		50-120	1		30
Cl7-BZ#187	106		105		50-120	1		30
Cl8-BZ#195	96		93		50-120	3		30
Cl9-BZ#206	93		90		50-120	3		30
Cl10-BZ#209	95		94		50-120	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 23 Batch: WG360290-2 WG360290-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	65		66		30-150
Pyrene-d10	88		86		30-150
Benzo(b)fluoranthene-d12	90		90		30-150
DBOB	80		81		30-150
BZ 198	100		99		30-150

RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-04,09,11-21 Batch: WG361186-2 WG361186-3

Naphthalene	59		61		50-120	3	30
Acenaphthylene	60		62		50-120	3	30
Acenaphthene	65		69		50-120	6	30
Fluorene	60		62		50-120	3	30
Phenanthrene	70		73		50-120	4	30
Anthracene	52		53		50-120	2	30
Fluoranthene	78		78		50-120	0	30
Pyrene	75		74		50-120	1	30
Benz(a)anthracene	96		92		50-120	4	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-04,09,11-21 Batch: WG361186-2 WG361186-3								
Chrysene	67		65		50-120	3		30
Benzo(b)fluoranthene	89		84		50-120	6		30
Benzo(k)fluoranthene	74		71		50-120	4		30
Benzo(a)pyrene	86		83		50-120	4		30
Indeno(1,2,3-cd)Pyrene	84		81		50-120	4		30
Dibenz(a,h)anthracene	81		77		50-120	5		30
Benzo(ghi)perylene	81		78		50-120	4		30
Cl2-BZ#8	74		76		50-120	3		30
Cl3-BZ#18	75		75		50-120	0		30
Cl3-BZ#28	77		77		50-120	0		30
Cl4-BZ#44	84		88		50-120	5		30
Cl4-BZ#49	67		66		50-120	2		30
Cl4-BZ#52	89		90		50-120	1		30
Cl4-BZ#66	90		85		50-120	6		30
Cl5-BZ#87	87		84		50-120	4		30
Cl5-BZ#101	89		86		50-120	3		30
Cl5-BZ#105	92		88		50-120	4		30
Cl5-BZ#118	96		91		50-120	5		30
Cl6-BZ#128	95		93		50-120	2		30
Cl6-BZ#138	98		96		50-120	2		30
Cl6-BZ#153	97		96		50-120	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-04,09,11-21 Batch: WG361186-2 WG361186-3								
CI7-BZ#170	106		101		50-120	5		30
CI7-BZ#180	87		82		50-120	6		30
CI7-BZ#183	77		75		50-120	3		30
CI7-BZ#184	93		88		50-120	6		30
CI7-BZ#187	108		99		50-120	9		30
CI8-BZ#195	84		82		50-120	2		30
CI9-BZ#206	89		83		50-120	7		30
CI10-BZ#209	84		85		50-120	1		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Methylnaphthalene-d10	63		65		30-150
Pyrene-d10	79		77		30-150
Benzo(b)fluoranthene-d12	79		76		30-150
DBOB	74		76		30-150
BZ 198	92		86		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07 Batch: WG362826-2 WG362826-3								
Naphthalene	50		57		50-120	13		30
Acenaphthylene	52		58		50-120	11		30
Acenaphthene	55		60		50-120	9		30
Fluorene	54		59		50-120	9		30
Phenanthrene	62		65		50-120	5		30
Anthracene	41		48		50-120	16		30
Fluoranthene	58		65		50-120	11		30
Pyrene	66		73		50-120	10		30
Benz(a)anthracene	69		79		50-120	14		30
Chrysene	54		64		50-120	17		30
Benzo(b)fluoranthene	66		79		50-120	18		30
Benzo(k)fluoranthene	66		76		50-120	14		30
Benzo(a)pyrene	63		73		50-120	15		30
Indeno(1,2,3-cd)Pyrene	55		64		50-120	15		30
Dibenz(a,h)anthracene	56		64		50-120	13		30
Benzo(ghi)perylene	56		65		50-120	15		30
Cl2-BZ#8	90		85		50-120	6		30
Cl3-BZ#18	94		85		50-120	10		30
Cl3-BZ#28	92		83		50-120	10		30
Cl4-BZ#44	111		99		50-120	11		30
Cl4-BZ#49	72		71		50-120	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07 Batch: WG362826-2 WG362826-3								
CI4-BZ#52	104		97		50-120	7		30
CI4-BZ#66	96		89		50-120	8		30
CI5-BZ#87	94		89		50-120	5		30
CI5-BZ#101	95		89		50-120	7		30
CI5-BZ#105	90		86		50-120	5		30
CI5-BZ#118	95		92		50-120	3		30
CI6-BZ#128	91		86		50-120	6		30
CI6-BZ#138	90		88		50-120	2		30
CI6-BZ#153	93		92		50-120	1		30
CI7-BZ#170	92		98		50-120	6		30
CI7-BZ#180	84		80		50-120	5		30
CI7-BZ#183	85		86		50-120	1		30
CI7-BZ#184	96		91		50-120	5		30
CI7-BZ#187	99		94		50-120	5		30
CI8-BZ#195	81		78		50-120	4		30
CI9-BZ#206	74		72		50-120	3		30
CI10-BZ#209	73		78		50-120	7		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07 Batch: WG362826-2 WG362826-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	56		62		30-150
Pyrene-d10	70		77		30-150
Benzo(b)fluoranthene-d12	66		78		30-150
DBOB	73		74		30-150
BZ 198	84		84		30-150

Matrix Spike Analysis

Batch Quality Control

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-04,09,11-21 QC Batch ID: WG361186-4 WG361186-5 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
Naphthalene	ND	9420	5310	56		5240	57		50-120	1		30
Acenaphthylene	ND	9420	5550	59		5440	59		50-120	0		30
Acenaphthene	ND	9420	6530	69		6180	67		50-120	3		30
Fluorene	ND	9420	6280	67		6120	66		50-120	1		30
Phenanthrene	ND	9420	7890	84		7820	85		50-120	1		30
Anthracene	ND	9420	5180	55		5060	55		50-120	0		30
Fluoranthene	119	9420	8110	85		7640	82		50-120	4		30
Pyrene	ND	9420	7600	81		7190	78		50-120	4		30
Benz(a)anthracene	ND	9420	9470	101		8980	97		50-120	4		30
Chrysene	ND	9420	6410	68		5890	64		50-120	7		30
Benzo(b)fluoranthene	ND	9420	8360	89		7920	86		50-120	3		30
Benzo(k)fluoranthene	ND	9420	6910	73		6200	67		50-120	9		30
Benzo(a)pyrene	ND	9420	7900	84		7230	78		50-120	7		30
Indeno(1,2,3-cd)Pyrene	ND	9420	7870	84		7170	78		50-120	7		30
Dibenz(a,h)anthracene	ND	9420	8060	86		7270	79		50-120	8		30
Benzo(ghi)perylene	ND	9420	7170	76		6580	71		50-120	7		30
Cl2-BZ#8	ND	188	158	84		158	86		50-120	2		30
Cl3-BZ#18	ND	188	161	86		153	83		50-120	3		30
Cl3-BZ#28	ND	188	175	93		163	88		50-120	5		30
Cl4-BZ#44	ND	188	183	97		172	93		50-120	4		30
Cl4-BZ#49	ND	188	131	70		126	68		50-120	2		30

Matrix Spike Analysis

Batch Quality Control

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-04,09,11-21 QC Batch ID: WG361186-4 WG361186-5 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
Cl4-BZ#52	ND	188	202	107		191	104		50-120	3		30
Cl4-BZ#66	ND	188	188	100		173	94		50-120	6		30
Cl5-BZ#87	ND	188	170	90		161	87		50-120	3		30
Cl5-BZ#101	ND	188	178	95		170	92		50-120	3		30
Cl5-BZ#105	ND	188	177	94		179	97		50-120	3		30
Cl5-BZ#118	ND	188	192	102		173	94		50-120	8		30
Cl6-BZ#128	ND	188	195	104		178	97		50-120	7		30
Cl6-BZ#138	ND	188	202	107		185	100		50-120	7		30
Cl6-BZ#153	ND	188	196	104		183	99		50-120	5		30
Cl7-BZ#170	ND	188	220	117		203	110		50-120	6		30
Cl7-BZ#180	ND	188	172	91		158	86		50-120	6		30
Cl7-BZ#183	ND	188	166	88		153	83		50-120	6		30
Cl7-BZ#184	ND	188	188	100		175	95		50-120	5		30
Cl7-BZ#187	ND	188	207	110		191	104		50-120	6		30
Cl8-BZ#195	ND	188	173	92		158	86		50-120	7		30
Cl9-BZ#206	ND	188	174	92		158	86		50-120	8		30
Cl10-BZ#209	ND	188	178	95		165	89		50-120	6		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	62		61		30-150

Matrix Spike Analysis

Batch Quality Control

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-04,09,11-21 QC Batch ID: WG361186-4 WG361186-5 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	98		90		30-150
Benzo(b)fluoranthene-d12	79		75		30-150
DBOB	87		85		30-150
Pyrene-d10	85		81		30-150

Lab Duplicate Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG362826-4 QC Sample: L0905117-07 Client ID: MPA 9 4.8-7.75'						
Naphthalene	ND	ND	ug/kg	NC		30
Acenaphthylene	ND	ND	ug/kg	NC		30
Acenaphthene	ND	ND	ug/kg	NC		30
Fluorene	ND	ND	ug/kg	NC		30
Phenanthrene	ND	ND	ug/kg	NC		30
Anthracene	ND	ND	ug/kg	NC		30
Fluoranthene	ND	ND	ug/kg	NC		30
Pyrene	ND	ND	ug/kg	NC		30
Benz(a)anthracene	ND	ND	ug/kg	NC		30
Chrysene	ND	ND	ug/kg	NC		30
Benzo(b)fluoranthene	ND	ND	ug/kg	NC		30
Benzo(k)fluoranthene	ND	ND	ug/kg	NC		30
Benzo(a)pyrene	ND	ND	ug/kg	NC		30
Indeno(1,2,3-cd)Pyrene	ND	ND	ug/kg	NC		30
Dibenz(a,h)anthracene	ND	ND	ug/kg	NC		30
Benzo(ghi)perylene	ND	ND	ug/kg	NC		30
Cl2-BZ#8	ND	ND	ug/kg	NC		30
Cl3-BZ#18	ND	ND	ug/kg	NC		30
Cl3-BZ#28	ND	ND	ug/kg	NC		30

Lab Duplicate Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG362826-4 QC Sample: L0905117-07 Client ID: MPA 9 4.8-7.75'					
Cl4-BZ#44	ND	ND	ug/kg	NC	30
Cl4-BZ#49	ND	ND	ug/kg	NC	30
Cl4-BZ#52	ND	ND	ug/kg	NC	30
Cl4-BZ#66	ND	ND	ug/kg	NC	30
Cl5-BZ#87	ND	ND	ug/kg	NC	30
Cl5-BZ#101	ND	ND	ug/kg	NC	30
Cl5-BZ#105	ND	ND	ug/kg	NC	30
Cl5-BZ#118	ND	ND	ug/kg	NC	30
Cl6-BZ#128	ND	ND	ug/kg	NC	30
Cl6-BZ#138	ND	ND	ug/kg	NC	30
Cl6-BZ#153	ND	ND	ug/kg	NC	30
Cl7-BZ#170	ND	ND	ug/kg	NC	30
Cl7-BZ#180	ND	ND	ug/kg	NC	30
Cl7-BZ#183	ND	ND	ug/kg	NC	30
Cl7-BZ#184	ND	ND	ug/kg	NC	30
Cl7-BZ#187	ND	ND	ug/kg	NC	30
Cl8-BZ#195	ND	ND	ug/kg	NC	30
Cl9-BZ#206	ND	ND	ug/kg	NC	30
Cl10-BZ#209	ND	ND	ug/kg	NC	30

Lab Duplicate Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG362826-4 QC Sample: L0905117-07 Client ID: MPA 9 4.8-7.75'					

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	59		62		30-150
Pyrene-d10	80		81		30-150
Benzo(b)fluoranthene-d12	74		74		30-150
DBOB	73		77		30-150
BZ 198	79		81		30-150

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG361186-6

Parameter	% Recovery	Qual	QC Criteria
Naphthalene	30		40-140
Phenanthrene	67		40-140
Anthracene	23		40-140
Fluoranthene	77		40-140
Pyrene	55		40-140
Benz(a)anthracene	73		40-140
Chrysene	61		40-140
Benzo(b)fluoranthene	89		40-140
Benzo(k)fluoranthene	76		40-140
Benzo(a)pyrene	52		40-140
Indeno(1,2,3-cd)Pyrene	55		40-140
Dibenz(a,h)anthracene	118		40-140
Benzo(ghi)perylene	63		40-140
Cl2-BZ#8	38		40-140
Cl3-BZ#18	128		40-140
Cl3-BZ#28	130		40-140
Cl4-BZ#44	26		40-140
Cl4-BZ#49	31		40-140
Cl4-BZ#52	24		40-140
Cl4-BZ#66	41		40-140
Cl5-BZ#87	40		40-140
Cl5-BZ#101	112		40-140
Cl5-BZ#105	60		40-140
Cl5-BZ#118	58		40-140
Cl6-BZ#138	70		40-140
Cl6-BZ#153	44		40-140
Cl7-BZ#170	69		40-140
Cl7-BZ#180	59		40-140
Cl7-BZ#183	50		40-140
Cl7-BZ#187	84		40-140
Cl9-BZ#206	167		40-140
2-Methylnaphthalene-d10 (Surrogate)	55		30-150
Pyrene-d10 (Surrogate)	69		30-150
Benzo(b)fluoranthene-d12 (Surrogate)	72		30-150
DBOB (Surrogate)	76		30-150
BZ 198 (Surrogate)	107		30-150

PETROLEUM HYDROCARBONS

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-01
Client ID: MPA 1,2,3 COMP SAMPLE A
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 13:28
Analyst: AS
Percent Solids: 10%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: None
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	66.8	1
C19-C36 Aliphatics	109		mg/kg	66.8	1
C11-C22 Aromatics, Unadjusted	95.2		mg/kg	66.8	1
C11-C22 Aromatics, Adjusted	95.2		mg/kg	66.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	98		40-140
2-Bromonaphthalene	98		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-02
Client ID: MPA 4,5 COMP SAMPLE B
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 14:13
Analyst: AS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	56.0	1
C19-C36 Aliphatics	65.5		mg/kg	56.0	1
C11-C22 Aromatics, Unadjusted	114		mg/kg	56.0	1
C11-C22 Aromatics, Adjusted	110		mg/kg	56.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	95		40-140
2-Bromonaphthalene	95		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-03
Client ID: MPA 6 SAMPLE C
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 15:00
Analyst: AS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	57.0	1
C19-C36 Aliphatics	ND		mg/kg	57.0	1
C11-C22 Aromatics, Unadjusted	ND		mg/kg	57.0	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	57.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	79		40-140
2-Fluorobiphenyl	104		40-140
2-Bromonaphthalene	103		40-140

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-04
 Client ID: MPA 7 0-5.9'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 61,EPH-04-1
 Analytical Date: 05/18/09 10:16
 Analyst: AS
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 05/15/09 14:51
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	56.5	1
C19-C36 Aliphatics	58.5		mg/kg	56.5	1
C11-C22 Aromatics, Unadjusted	64.0		mg/kg	56.5	1
C11-C22 Aromatics, Adjusted	64.0		mg/kg	56.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	90		40-140

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-07
 Client ID: MPA 9 4.8-7.75'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 61,EPH-04-1
 Analytical Date: 05/18/09 10:48
 Analyst: AS
 Percent Solids: 78%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 05/15/09 14:51
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	8.54	1
C19-C36 Aliphatics	ND		mg/kg	8.54	1
C11-C22 Aromatics, Unadjusted	ND		mg/kg	8.54	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	75		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	88		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-09
Client ID: MPA 8 2.2-5.1'/MPA 8 5.1-7.1'
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/14/09 12:37
Analyst: AS
Percent Solids: 60%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 04/30/09 20:30
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/14/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	11.1	1
C19-C36 Aliphatics	ND		mg/kg	11.1	1
C11-C22 Aromatics, Unadjusted	ND		mg/kg	11.1	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	11.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	92		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-11
Client ID: MPA 10+11 COMP F
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 11:20
Analyst: AS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	57.5	1
C19-C36 Aliphatics	65.7		mg/kg	57.5	1
C11-C22 Aromatics, Unadjusted	76.9		mg/kg	57.5	1
C11-C22 Aromatics, Adjusted	76.9		mg/kg	57.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	67		40-140
o-Terphenyl	80		40-140
2-Fluorobiphenyl	92		40-140
2-Bromonaphthalene	95		40-140

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-12
 Client ID: MPA 10 6-8.7'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Analytical Method: 61,EPH-04-1
 Analytical Date: 05/18/09 12:10
 Analyst: AS
 Percent Solids: 85%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 05/15/09 14:51
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	7.86	1
C19-C36 Aliphatics	ND		mg/kg	7.86	1
C11-C22 Aromatics, Unadjusted	ND		mg/kg	7.86	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.86	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	76		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	90		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-13
Client ID: MPA 12 0-9.3' COMP G
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 12:57
Analyst: AS
Percent Solids: 11%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	59.5	1
C19-C36 Aliphatics	176		mg/kg	59.5	1
C11-C22 Aromatics, Unadjusted	230		mg/kg	59.5	1
C11-C22 Aromatics, Adjusted	230		mg/kg	59.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	68		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	100		40-140
2-Bromonaphthalene	101		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-14
Client ID: MPA 13+15 COMP H
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 14:03
Analyst: AS
Percent Solids: 10%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	66.0	1
C19-C36 Aliphatics	106		mg/kg	66.0	1
C11-C22 Aromatics, Unadjusted	281		mg/kg	66.0	1
C11-C22 Aromatics, Adjusted	272		mg/kg	66.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	101		40-140
2-Fluorobiphenyl	100		40-140
2-Bromonaphthalene	102		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-15
Client ID: MPA 14 0-9.3' SAMPLE I
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/19/09 14:45
Analyst: AS
Percent Solids: 11%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/18/09 16:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/19/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	60.6	1
C19-C36 Aliphatics	65.4		mg/kg	60.6	1
C11-C22 Aromatics, Unadjusted	87.6		mg/kg	60.6	1
C11-C22 Aromatics, Adjusted	87.6		mg/kg	60.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	56		40-140
2-Fluorobiphenyl	95		40-140
2-Bromonaphthalene	97		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID:	L0905117-16	Date Collected:	04/16/09 00:00
Client ID:	MPA 16 0-6.3' SAMPLE J	Date Received:	04/16/09
Sample Location:	MILFORD POND	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	61,EPH-04-1	Extraction Date:	05/15/09 14:51
Analytical Date:	05/18/09 15:38	Cleanup Method1:	EPH-04-1
Analyst:	AS	Cleanup Date1:	05/18/09
Percent Solids:	10%		

Quality Control Information

Condition of sample received:	Satisfactory
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	68.4	1
C19-C36 Aliphatics	ND		mg/kg	68.4	1
C11-C22 Aromatics, Unadjusted	172		mg/kg	68.4	1
C11-C22 Aromatics, Adjusted	172		mg/kg	68.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	50		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	99		40-140
2-Bromonaphthalene	101		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-17
Client ID: MPA 17 0-9.3' SAMPLE K
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 15:06
Analyst: AS
Percent Solids: 12%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	54.2	1
C19-C36 Aliphatics	ND		mg/kg	54.2	1
C11-C22 Aromatics, Unadjusted	ND		mg/kg	54.2	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	54.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	60		40-140
o-Terphenyl	62		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	78		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-18
Client ID: MPA 18 0-7' SAMPLE L
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/19/09 15:15
Analyst: AS
Percent Solids: 8%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/18/09 16:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/19/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	87.0	1
C19-C36 Aliphatics	128		mg/kg	87.0	1
C11-C22 Aromatics, Unadjusted	260		mg/kg	87.0	1
C11-C22 Aromatics, Adjusted	252		mg/kg	87.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	87		40-140
2-Bromonaphthalene	88		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-19
Client ID: MPA 19 0-8.25' SAMPLE M
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 13:20
Analyst: AS
Percent Solids: 11%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	59.0	1
C19-C36 Aliphatics	149		mg/kg	59.0	1
C11-C22 Aromatics, Unadjusted	220		mg/kg	59.0	1
C11-C22 Aromatics, Adjusted	220		mg/kg	59.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	77		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-20
Client ID: MPA 20 SAMPLE N
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 12:42
Analyst: AS
Percent Solids: 14%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	47.6	1
C19-C36 Aliphatics	ND		mg/kg	47.6	1
C11-C22 Aromatics, Unadjusted	66.1		mg/kg	47.6	1
C11-C22 Aromatics, Adjusted	66.1		mg/kg	47.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	40		40-140
o-Terphenyl	48		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	66		40-140

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-21
Client ID: MPA 21 0-4.4' SAMPLE O
Sample Location: MILFORD POND
Matrix: Sediment
Analytical Method: 61,EPH-04-1
Analytical Date: 05/18/09 13:58
Analyst: AS
Percent Solids: 14%

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 05/15/09 14:51
Cleanup Method1: EPH-04-1
Cleanup Date1: 05/18/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	49.0	1
C19-C36 Aliphatics	68.7		mg/kg	49.0	1
C11-C22 Aromatics, Unadjusted	138		mg/kg	49.0	1
C11-C22 Aromatics, Adjusted	138		mg/kg	49.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	77		40-140

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 61,EPH-04-1
 Analytical Date: 05/04/09 11:20
 Analyst: AS

Extraction Method: EPA 3540C
 Extraction Date: 04/30/09 20:30
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 05/04/09

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 09 Batch: WG360809-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics, Unadjusted	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	89		40-140

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 61,EPH-04-1
 Analytical Date: 05/18/09 10:15
 Analyst: AS

Extraction Method: EPA 3540C
 Extraction Date: 05/15/09 14:51
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 05/18/09

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-04,07,11-14,16-17,19-21 Batch: WG362607-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics, Unadjusted	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	44		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	91		40-140
2-Bromonaphthalene	91		40-140

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 61,EPH-04-1
 Analytical Date: 05/19/09 13:49
 Analyst: AS

Extraction Method: EPA 3540C
 Extraction Date: 05/18/09 16:51
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 05/19/09

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 15,18 Batch: WG362871-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics, Unadjusted	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	85		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	92		40-140
2-Bromonaphthalene	96		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 09 Batch: WG360809-2 WG360809-3								
C9-C18 Aliphatics	50		42		40-140	17		25
C19-C36 Aliphatics	72		68		40-140	6		25
C11-C22 Aromatics	83		78		40-140	6		25
Naphthalene	67		61		40-140	9		25
2-Methylnaphthalene	71		65		40-140	9		25
Acenaphthylene	69		64		40-140	8		25
Acenaphthene	68		64		40-140	6		25
Fluorene	71		67		40-140	6		25
Phenanthrene	85		79		40-140	7		25
Anthracene	84		80		40-140	5		25
Fluoranthene	88		82		40-140	7		25
Pyrene	89		82		40-140	8		25
Benzo(a)anthracene	88		80		40-140	10		25
Chrysene	88		81		40-140	8		25
Benzo(b)fluoranthene	89		83		40-140	7		25
Benzo(k)fluoranthene	89		81		40-140	9		25
Benzo(a)pyrene	83		76		40-140	9		25
Indeno(1,2,3-cd)Pyrene	84		77		40-140	9		25
Dibenzo(a,h)anthracene	83		76		40-140	9		25
Benzo(ghi)perylene	81		74		40-140	9		25
Nonane (C9)	52		43		30-140	19		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 09 Batch: WG360809-2 WG360809-3								
Decane (C10)	60		50		40-140	18		25
Dodecane (C12)	64		54		40-140	17		25
Tetradecane (C14)	64		55		40-140	15		25
Hexadecane (C16)	64		56		40-140	13		25
Octadecane (C18)	67		60		40-140	11		25
Nonadecane (C19)	70		63		40-140	11		25
Eicosane (C20)	71		64		40-140	10		25
Docosane (C22)	73		68		40-140	7		25
Tetracosane (C24)	74		70		40-140	6		25
Hexacosane (C26)	74		70		40-140	6		25
Octacosane (C28)	72		69		40-140	4		25
Triacontane (C30)	74		72		40-140	3		25
Hexatriacontane (C36)	74		72		40-140	3		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	70		64		40-140
o-Terphenyl	84		83		40-140
2-Fluorobiphenyl	80		80		40-140
2-Bromonaphthalene	83		82		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,07,11-14,16-17,19-21 Batch: WG362607-2 WG362607-3								
C9-C18 Aliphatics	54		54		40-140	0		25
C19-C36 Aliphatics	62		64		40-140	3		25
C11-C22 Aromatics	84		78		40-140	7		25
Naphthalene	91		76		40-140	18		25
2-Methylnaphthalene	93		79		40-140	16		25
Acenaphthylene	86		75		40-140	14		25
Acenaphthene	85		75		40-140	13		25
Fluorene	85		77		40-140	10		25
Phenanthrene	92		86		40-140	7		25
Anthracene	86		80		40-140	7		25
Fluoranthene	86		81		40-140	6		25
Pyrene	86		82		40-140	5		25
Benzo(a)anthracene	80		77		40-140	4		25
Chrysene	81		78		40-140	4		25
Benzo(b)fluoranthene	79		76		40-140	4		25
Benzo(k)fluoranthene	79		76		40-140	4		25
Benzo(a)pyrene	72		70		40-140	3		25
Indeno(1,2,3-cd)Pyrene	77		73		40-140	5		25
Dibenzo(a,h)anthracene	75		72		40-140	4		25
Benzo(ghi)perylene	76		71		40-140	7		25
Nonane (C9)	48		48		30-140	0		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,07,11-14,16-17,19-21 Batch: WG362607-2 WG362607-3								
Decane (C10)	55		54		40-140	2		25
Dodecane (C12)	58		57		40-140	2		25
Tetradecane (C14)	57		58		40-140	2		25
Hexadecane (C16)	56		59		40-140	5		25
Octadecane (C18)	58		60		40-140	3		25
Nonadecane (C19)	60		63		40-140	5		25
Eicosane (C20)	62		64		40-140	3		25
Docosane (C22)	65		68		40-140	5		25
Tetracosane (C24)	67		70		40-140	4		25
Hexacosane (C26)	68		71		40-140	4		25
Octacosane (C28)	67		71		40-140	6		25
Triacontane (C30)	71		74		40-140	4		25
Hexatriacontane (C36)	75		79		40-140	5		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	58		58		40-140
o-Terphenyl	83		81		40-140
2-Fluorobiphenyl	91		87		40-140
2-Bromonaphthalene	92		88		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 15,18 Batch: WG362871-2 WG362871-3								
C9-C18 Aliphatics	55		74		40-140	29		25
C19-C36 Aliphatics	66		87		40-140	27		25
C11-C22 Aromatics	78		86		40-140	10		25
Naphthalene	68		79		40-140	15		25
2-Methylnaphthalene	72		83		40-140	14		25
Acenaphthylene	68		80		40-140	16		25
Acenaphthene	70		81		40-140	15		25
Fluorene	72		83		40-140	14		25
Phenanthrene	82		90		40-140	9		25
Anthracene	80		87		40-140	8		25
Fluoranthene	80		88		40-140	10		25
Pyrene	81		89		40-140	9		25
Benzo(a)anthracene	78		85		40-140	9		25
Chrysene	79		86		40-140	8		25
Benzo(b)fluoranthene	78		88		40-140	12		25
Benzo(k)fluoranthene	76		83		40-140	9		25
Benzo(a)pyrene	72		80		40-140	11		25
Indeno(1,2,3-cd)Pyrene	72		81		40-140	12		25
Dibenzo(a,h)anthracene	71		78		40-140	9		25
Benzo(ghi)perylene	71		80		40-140	12		25
Nonane (C9)	45		66		30-140	38		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 15,18 Batch: WG362871-2 WG362871-3								
Decane (C10)	54		76		40-140	34		25
Dodecane (C12)	60		79		40-140	27		25
Tetradecane (C14)	61		79		40-140	26		25
Hexadecane (C16)	61		80		40-140	27		25
Octadecane (C18)	61		83		40-140	31		25
Nonadecane (C19)	63		84		40-140	29		25
Eicosane (C20)	65		85		40-140	27		25
Docosane (C22)	68		87		40-140	25		25
Tetracosane (C24)	69		88		40-140	24		25
Hexacosane (C26)	68		88		40-140	26		25
Octacosane (C28)	66		86		40-140	26		25
Triacontane (C30)	68		88		40-140	26		25
Hexatriacontane (C36)	68		88		40-140	26		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	59		80		40-140
o-Terphenyl	92		94		40-140
2-Fluorobiphenyl	79		91		40-140
2-Bromonaphthalene	80		94		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Matrix Spike Analysis

Batch Quality Control

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,07,11-14,16-17,19-21 QC Batch ID: WG362607-4 WG362607-5 QC												
Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
C9-C18 Aliphatics	ND	401	184	46		210	52		40-140	12		50
C19-C36 Aliphatics	109	534	360	47		437	61		40-140	26		50
C11-C22 Aromatics	95.2	1140	960	76		1100	88		40-140	15		50
Naphthalene	ND	66.8	45.9	69		55.3	83		40-140	18		50
2-Methylnaphthalene	ND	66.8	48.2	72		60.4	90		40-140	22		50
Acenaphthylene	ND	66.8	49.1	74		60.7	91		40-140	21		50
Acenaphthene	ND	66.8	48.6	73		59.8	90		40-140	21		50
Fluorene	ND	66.8	52.8	79		61.8	92		40-140	15		50
Phenanthrene	ND	66.8	59.4	89		66.3	99		40-140	11		50
Anthracene	ND	66.8	56.8	85		62.7	94		40-140	10		50
Fluoranthene	ND	66.8	57.0	85		63.0	94		40-140	10		50
Pyrene	ND	66.8	56.5	84		62.2	93		40-140	10		50
Benzo(a)anthracene	ND	66.8	53.3	80		58.7	88		40-140	10		50
Chrysene	ND	66.8	53.4	80		58.4	87		40-140	8		50
Benzo(b)fluoranthene	ND	66.8	52.2	78		56.5	84		40-140	7		50
Benzo(k)fluoranthene	ND	66.8	51.9	78		57.0	85		40-140	9		50
Benzo(a)pyrene	ND	66.8	49.9	75		54.1	81		40-140	8		50
Indeno(1,2,3-cd)Pyrene	ND	66.8	51.8	78		55.8	84		40-140	7		50
Dibenzo(a,h)anthracene	ND	66.8	53.8	80		59.4	89		40-140	11		50
Benzo(ghi)perylene	ND	66.8	53.2	80		58.3	87		40-140	8		50
Nonane (C9)	ND	66.8	24.0	36		25.0	37		30-140	3		50

Matrix Spike Analysis

Batch Quality Control

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,07,11-14,16-17,19-21 QC Batch ID: WG362607-4 WG362607-5 QC												
Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
Decane (C10)	ND	66.8	27.8	42		30.5	46		40-140	9		50
Dodecane (C12)	ND	66.8	29.6	44		35.2	53		40-140	19		50
Tetradecane (C14)	ND	66.8	30.4	46		37.5	56		40-140	20		50
Hexadecane (C16)	ND	66.8	33.1	50		38.8	58		40-140	15		50
Octadecane (C18)	ND	66.8	35.8	54		41.0	61		40-140	12		50
Nonadecane (C19)	ND	66.8	38.2	57		43.8	66		40-140	15		50
Eicosane (C20)	ND	66.8	39.2	59		44.6	67		40-140	13		50
Docosane (C22)	ND	66.8	41.1	62		46.5	70		40-140	12		50
Tetracosane (C24)	ND	66.8	45.7	68		60.4	90		40-140	28		50
Hexacosane (C26)	ND	66.8	42.9	64		48.6	73		40-140	13		50
Octacosane (C28)	ND	66.8	43.5	65		50.2	75		40-140	14		50
Triacontane (C30)	ND	66.8	44.7	67		50.8	76		40-140	13		50
Hexatriacontane (C36)	ND	66.8	45.8	68		52.6	79		40-140	15		50

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
2-Bromonaphthalene	90		107		40-140
2-Fluorobiphenyl	89		107		40-140
Chloro-Octadecane	55		65		40-140
o-Terphenyl	82		95		40-140

Lab Duplicate Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-04,07,11-14,16-17,19-21 QC Batch ID: WG362607-6 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A						
C9-C18 Aliphatics	ND	ND	mg/kg	NC		50
C19-C36 Aliphatics	109	ND	mg/kg	NC		50
C11-C22 Aromatics, Unadjusted	95.2	88.8	mg/kg	7		50
C11-C22 Aromatics, Adjusted	95.2	88.8	mg/kg	7		50

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		50		40-140
o-Terphenyl	74		76		40-140
2-Fluorobiphenyl	98		99		40-140
2-Bromonaphthalene	98		99		40-140

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Parameter	% Recovery	QC Criteria
C9-C18 Aliphatics	77	40-140
C19-C36 Aliphatics	76	40-140
C11-C22 Aromatics	86	40-140
Naphthalene	82	40-140
2-Methylnaphthalene	78	40-140
Acenaphthylene	76	40-140
Acenaphthene	80	40-140
Fluorene	79	40-140
Phenanthrene	78	40-140
Anthracene	82	40-140
Fluoranthene	84	40-140
Pyrene	84	40-140
Benzo(a)anthracene	82	40-140
Chrysene	88	40-140
Benzo(b)fluoranthene	81	40-140
Benzo(k)fluoranthene	97	40-140
Benzo(a)pyrene	78	40-140
Indeno(1,2,3-cd)Pyrene	76	40-140
Dibenzo(a,h)anthracene	83	40-140
Benzo(g,h,i)perylene	82	40-140
Nonane	72	30-140
Decane	77	40-140
Dodecane	80	40-140
Tetradecane	76	40-140
Hexadecane	78	40-140
Octadecane	76	40-140
Nonadecane	75	40-140
Eicosane	77	40-140
Docosane	79	40-140
Tetracosane	83	40-140
Hexacosane	78	40-140
Octacosane	77	40-140
triacontane	76	40-140
Hexatriacontane	75	40-140
% Naphthalene Breakthrough	0	0-5
% 2-Methylnaphthalene Breakthrough	0	0-5

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Surrogate	% Recovery	QC Criteria
Chloro-Octadecane	66	40-140
o-Terphenyl	83	40-140
2-Fluorobiphenyl	75	40-140
2-Bromonaphthalene	76	40-140

METALS

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-01

Date Collected: 04/16/09 00:00

Client ID: MPA 1,2,3 COMP SAMPLE A

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: None

Matrix: Sediment

Percent Solids: 10%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	1.84		mg/kg	0.304	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR
Cadmium, Total	0.460		mg/kg	0.121	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR
Chromium, Total	4.33		mg/kg	1.21	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR
Copper, Total	8.98		mg/kg	0.607	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR
Lead, Total	10.4		mg/kg	0.304	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.112	5	05/05/09 13:00	05/13/09 12:34	EPA 7474	1,7474	LR
Nickel, Total	4.00		mg/kg	0.607	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR
Zinc, Total	32.9		mg/kg	3.04	2	05/05/09 13:00	05/12/09 11:08	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-02
 Client ID: MPA 4,5 COMP SAMPLE B
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	2.18		mg/kg	0.241	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR
Cadmium, Total	0.585		mg/kg	0.097	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR
Chromium, Total	4.45		mg/kg	0.966	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR
Copper, Total	8.69		mg/kg	0.483	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR
Lead, Total	21.2		mg/kg	0.241	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.093	5	05/05/09 13:00	05/13/09 12:45	EPA 7474	1,7474	LR
Nickel, Total	4.71		mg/kg	0.483	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR
Zinc, Total	70.9		mg/kg	2.41	2	05/05/09 13:00	05/12/09 11:14	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-03
 Client ID: MPA 6 SAMPLE C
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	1.92		mg/kg	0.231	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR
Cadmium, Total	0.380		mg/kg	0.092	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR
Chromium, Total	4.86		mg/kg	0.924	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR
Copper, Total	8.77		mg/kg	0.462	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR
Lead, Total	16.9		mg/kg	0.231	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.092	5	05/05/09 13:00	05/13/09 12:48	EPA 7474	1,7474	LR
Nickel, Total	4.35		mg/kg	0.462	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR
Zinc, Total	44.0		mg/kg	2.31	2	05/05/09 13:00	05/12/09 11:15	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-04
 Client ID: MPA 7 0-5.9'
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	17.7		mg/kg	0.262	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR
Cadmium, Total	0.756		mg/kg	0.105	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR
Chromium, Total	12.1		mg/kg	1.05	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR
Copper, Total	15.4		mg/kg	0.523	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR
Lead, Total	13.0		mg/kg	0.262	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.098	5	05/05/09 13:00	05/13/09 12:50	EPA 7474	1,7474	LR
Nickel, Total	11.0		mg/kg	0.523	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR
Zinc, Total	45.8		mg/kg	2.62	2	05/05/09 13:00	05/12/09 11:16	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-07

Date Collected: 04/16/09 00:00

Client ID: MPA 9 4.8-7.75'

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 78%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	3.23		mg/kg	0.037	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR
Cadmium, Total	0.096		mg/kg	0.015	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR
Chromium, Total	9.92		mg/kg	0.148	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR
Copper, Total	9.03		mg/kg	0.074	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR
Lead, Total	2.79		mg/kg	0.037	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.014	5	05/05/09 13:00	05/13/09 12:53	EPA 7474	1,7474	LR
Nickel, Total	8.70		mg/kg	0.074	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR
Zinc, Total	30.0		mg/kg	0.370	2	05/05/09 13:00	05/12/09 11:17	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-09

Date Collected: 04/16/09 00:00

Client ID: MPA 8 2.2-5.1'/MPA 8 5.1-7.1'

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 60%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	4.22		mg/kg	0.047	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR
Cadmium, Total	0.182		mg/kg	0.019	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR
Chromium, Total	10.1		mg/kg	0.188	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR
Copper, Total	10.9		mg/kg	0.094	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR
Lead, Total	2.79		mg/kg	0.047	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.020	5	05/05/09 13:00	05/13/09 13:02	EPA 7474	1,7474	LR
Nickel, Total	9.43		mg/kg	0.094	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR
Zinc, Total	38.4		mg/kg	0.470	2	05/05/09 13:00	05/12/09 11:39	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-11

Date Collected: 04/16/09 00:00

Client ID: MPA 10+11 COMP F

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 12%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	4.44		mg/kg	0.258	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR
Cadmium, Total	0.682		mg/kg	0.103	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR
Chromium, Total	6.66		mg/kg	1.03	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR
Copper, Total	11.0		mg/kg	0.516	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR
Lead, Total	3.52		mg/kg	0.258	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.097	5	05/05/09 13:00	05/13/09 13:04	EPA 7474	1,7474	LR
Nickel, Total	6.35		mg/kg	0.516	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR
Zinc, Total	36.4		mg/kg	2.58	2	05/05/09 13:00	05/12/09 11:19	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-12

Date Collected: 04/16/09 00:00

Client ID: MPA 10 6-8.7'

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	0.790		mg/kg	0.034	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR
Cadmium, Total	0.028		mg/kg	0.014	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR
Chromium, Total	4.10		mg/kg	0.135	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR
Copper, Total	3.95		mg/kg	0.067	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR
Lead, Total	1.57		mg/kg	0.034	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.014	5	05/05/09 13:00	05/13/09 13:07	EPA 7474	1,7474	LR
Nickel, Total	3.40		mg/kg	0.067	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR
Zinc, Total	14.5		mg/kg	0.337	2	05/05/09 13:00	05/12/09 11:20	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-13
 Client ID: MPA 12 0-9.3' COMP G
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 11%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	2.49		mg/kg	0.247	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR
Cadmium, Total	0.335		mg/kg	0.099	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR
Chromium, Total	5.80		mg/kg	0.986	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR
Copper, Total	9.91		mg/kg	0.493	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR
Lead, Total	9.13		mg/kg	0.247	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.096	5	05/05/09 13:00	05/13/09 13:09	EPA 7474	1,7474	LR
Nickel, Total	5.25		mg/kg	0.493	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR
Zinc, Total	32.1		mg/kg	2.47	2	05/05/09 13:00	05/12/09 11:21	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-14
 Client ID: MPA 13+15 COMP H
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 10%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	2.96		mg/kg	0.300	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Cadmium, Total	2.72		mg/kg	0.120	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Chromium, Total	4.81		mg/kg	1.20	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Copper, Total	9.54		mg/kg	0.600	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Lead, Total	23.3		mg/kg	0.300	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Mercury, Total	0.117		mg/kg	0.110	5	05/05/09 13:00	05/13/09 13:12	EPA 7474	1,7474	LR
Nickel, Total	13.5		mg/kg	0.600	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Zinc, Total	118		mg/kg	3.00	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-15

Date Collected: 04/16/09 00:00

Client ID: MPA 14 0-9.3' SAMPLE I

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 11%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	1.81		mg/kg	0.258	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Cadmium, Total	0.248		mg/kg	0.103	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Chromium, Total	3.69		mg/kg	1.03	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Copper, Total	7.50		mg/kg	0.516	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Lead, Total	3.12		mg/kg	0.258	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.095	5	05/05/09 13:00	05/13/09 13:14	EPA 7474	1,7474	LR
Nickel, Total	3.61		mg/kg	0.516	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR
Zinc, Total	17.3		mg/kg	2.58	2	05/05/09 13:00	05/12/09 11:22	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-16
 Client ID: MPA 16 0-6.3' SAMPLE J
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 10%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	1.58		mg/kg	0.304	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR
Cadmium, Total	0.445		mg/kg	0.122	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR
Chromium, Total	3.64		mg/kg	1.22	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR
Copper, Total	6.62		mg/kg	0.608	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR
Lead, Total	6.23		mg/kg	0.304	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.108	5	05/05/09 13:00	05/13/09 13:17	EPA 7474	1,7474	LR
Nickel, Total	3.53		mg/kg	0.608	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR
Zinc, Total	20.9		mg/kg	3.04	2	05/05/09 13:00	05/12/09 11:25	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-17
 Client ID: MPA 17 0-9.3' SAMPLE K
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 12%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	3.81		mg/kg	0.234	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR
Cadmium, Total	2.45		mg/kg	0.093	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR
Chromium, Total	6.24		mg/kg	0.934	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR
Copper, Total	13.9		mg/kg	0.467	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR
Lead, Total	48.5		mg/kg	0.234	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR
Mercury, Total	0.159		mg/kg	0.096	5	05/05/09 13:00	05/13/09 13:19	EPA 7474	1,7474	LR
Nickel, Total	10.4		mg/kg	0.467	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR
Zinc, Total	158		mg/kg	2.34	2	05/05/09 13:00	05/12/09 11:26	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-18
 Client ID: MPA 18 0-7' SAMPLE L
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 8%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	3.87		mg/kg	0.375	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR
Cadmium, Total	1.38		mg/kg	0.150	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR
Chromium, Total	4.99		mg/kg	1.50	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR
Copper, Total	14.7		mg/kg	0.750	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR
Lead, Total	23.6		mg/kg	0.375	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.148	5	05/05/09 13:00	05/13/09 13:22	EPA 7474	1,7474	LR
Nickel, Total	8.35		mg/kg	0.750	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR
Zinc, Total	78.9		mg/kg	3.75	2	05/05/09 13:00	05/12/09 11:27	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-19
 Client ID: MPA 19 0-8.25' SAMPLE M
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 11%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	1.82		mg/kg	0.270	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR
Cadmium, Total	0.775		mg/kg	0.108	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR
Chromium, Total	4.28		mg/kg	1.08	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR
Copper, Total	8.31		mg/kg	0.540	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR
Lead, Total	6.97		mg/kg	0.270	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR
Mercury, Total	ND		mg/kg	0.106	5	05/05/09 13:00	05/13/09 13:24	EPA 7474	1,7474	LR
Nickel, Total	4.30		mg/kg	0.540	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR
Zinc, Total	221		mg/kg	2.70	2	05/05/09 13:00	05/12/09 11:28	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-20
 Client ID: MPA 20 SAMPLE N
 Sample Location: MILFORD POND
 Matrix: Sediment
 Percent Solids: 14%

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	3.06		mg/kg	0.205	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR
Cadmium, Total	1.00		mg/kg	0.082	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR
Chromium, Total	7.07		mg/kg	0.821	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR
Copper, Total	13.2		mg/kg	0.410	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR
Lead, Total	35.5		mg/kg	0.205	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR
Mercury, Total	0.127		mg/kg	0.079	5	05/05/09 13:00	05/13/09 13:33	EPA 7474	1,7474	LR
Nickel, Total	7.42		mg/kg	0.410	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR
Zinc, Total	85.7		mg/kg	2.05	2	05/05/09 13:00	05/12/09 11:29	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-21

Date Collected: 04/16/09 00:00

Client ID: MPA 21 0-4.4' SAMPLE O

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Sediment

Percent Solids: 14%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	6.34		mg/kg	0.216	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR
Cadmium, Total	2.80		mg/kg	0.087	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR
Chromium, Total	7.48		mg/kg	0.865	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR
Copper, Total	20.0		mg/kg	0.432	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR
Lead, Total	109		mg/kg	0.216	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR
Mercury, Total	0.236		mg/kg	0.089	5	05/05/09 13:00	05/13/09 13:36	EPA 7474	1,7474	LR
Nickel, Total	11.7		mg/kg	0.432	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR
Zinc, Total	206		mg/kg	2.16	2	05/05/09 13:00	05/12/09 11:30	EPA 3050B	1,6020A	LR



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-23

Date Collected: 04/16/09 00:00

Client ID: RINSE BLANK

Date Received: 04/16/09

Sample Location: MILFORD POND

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab										
Arsenic, Total	ND		mg/l	0.001	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR
Cadmium, Total	ND		mg/l	0.0002	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR
Copper, Total	0.002		mg/l	0.001	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR
Mercury, Total	ND		mg/l	0.00005	1	05/08/09 13:19	05/13/09 11:15	EPA 7474	1,7474	LR
Nickel, Total	ND		mg/l	0.001	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR
Zinc, Total	0.014		mg/l	0.010	1	05/06/09 07:05	05/12/09 12:18	EPA 3020A	1,6020A	LR



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04,07,09,11-21 Batch: WG361181-1								
Arsenic, Total	ND	mg/kg	0.050	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR
Cadmium, Total	ND	mg/kg	0.020	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR
Chromium, Total	ND	mg/kg	0.200	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR
Copper, Total	ND	mg/kg	0.100	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR
Lead, Total	ND	mg/kg	0.050	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR
Nickel, Total	ND	mg/kg	0.100	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR
Zinc, Total	ND	mg/kg	0.500	2	05/05/09 13:00	05/12/09 11:38	1,6020A	LR

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04,07,09,11-21 Batch: WG361183-1								
Mercury, Total	ND	mg/kg	0.013	5	05/05/09 13:00	05/13/09 12:27	1,7474	LR

Prep Information

Digestion Method: EPA 7474

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 23 Batch: WG361265-1								
Mercury, Total	ND	mg/l	0.00005	1	05/08/09 13:19	05/13/09 11:08	1,7474	LR

Prep Information

Digestion Method: EPA 7474



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 23 Batch: WG361361-1								
Arsenic, Total	ND	mg/l	0.001	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR
Cadmium, Total	ND	mg/l	0.0002	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR
Chromium, Total	ND	mg/l	0.001	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR
Copper, Total	ND	mg/l	0.001	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR
Lead, Total	ND	mg/l	0.001	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR
Nickel, Total	ND	mg/l	0.001	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR
Zinc, Total	ND	mg/l	0.010	1	05/06/09 08:55	05/12/09 12:16	1,6020A	LR

Prep Information

Digestion Method: EPA 3020A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 Batch: WG361181-2								
Arsenic, Total	111		-		80-120	-		20
Cadmium, Total	113		-		80-120	-		20
Chromium, Total	90		-		80-120	-		20
Copper, Total	90		-		80-120	-		20
Lead, Total	100		-		80-120	-		20
Nickel, Total	90		-		80-120	-		20
Zinc, Total	110		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 Batch: WG361183-2								
Mercury, Total	101		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 23 Batch: WG361265-2								
Mercury, Total	103		-		80-120	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 23 Batch: WG361361-2					
Arsenic, Total	113	-	80-120	-	20
Cadmium, Total	114	-	80-120	-	20
Chromium, Total	88	-	80-120	-	20
Copper, Total	90	-	80-120	-	20
Lead, Total	102	-	80-120	-	20
Nickel, Total	91	-	80-120	-	20
Zinc, Total	113	-	80-120	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361181-4 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
Arsenic, Total	1.84	1220	1470	120	-	-	-	-	75-125	-	-	20
Cadmium, Total	0.460	611	701	115	-	-	-	-	75-125	-	-	20
Chromium, Total	4.33	1220	1160	94	-	-	-	-	75-125	-	-	20
Copper, Total	8.98	1220	1140	92	-	-	-	-	75-125	-	-	20
Lead, Total	10.4	1220	1200	97	-	-	-	-	75-125	-	-	20
Nickel, Total	4.00	1220	1140	93	-	-	-	-	75-125	-	-	20
Zinc, Total	32.9	1220	1410	113	-	-	-	-	75-125	-	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361183-4 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
Mercury, Total	ND	11.5	13.7	119	-	-	-	-	80-120	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361181-3 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A						
Arsenic, Total	1.84	2.13	mg/kg	15		20
Cadmium, Total	0.460	0.611	mg/kg	28		20
Chromium, Total	4.33	4.65	mg/kg	7		20
Copper, Total	8.98	9.31	mg/kg	4		20
Lead, Total	10.4	10.8	mg/kg	4		20
Nickel, Total	4.00	4.25	mg/kg	6		20
Zinc, Total	32.9	35.3	mg/kg	7		20
Total Metals - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361183-3 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A						
Mercury, Total	ND	ND	mg/kg	NC		20

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG361181-6

Parameter	% Recovery	Qual	QC Criteria
Arsenic, Total	119		70-136
Cadmium, Total	106		74-127
Chromium, Total	84		70-130
Copper, Total	85		74-124
Lead, Total	78		73-127
Nickel, Total	88		73-128
Zinc, Total	104		72-128

Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**S.R.M. Standard Quality Control**

Standard Reference Material (SRM): WG361183-6

Parameter	% Recovery	Qual	QC Criteria
Mercury, Total	104		51-149

INORGANICS & MISCELLANEOUS

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-01
 Client ID: MPA 1,2,3 COMP SAMPLE A
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: None

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	10.9		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	10.4		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	9.98		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND**Lab Number:** L0905117**Project Number:** Not Specified**Report Date:** 02/02/10**SAMPLE RESULTS**

Lab ID: L0905117-02
Client ID: MPA 4,5 COMP SAMPLE B
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	10.4		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	11.6		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.9		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-03
Client ID: MPA 6 SAMPLE C
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	6.98		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	6.97		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.7		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-04
Client ID: MPA 7 0-5.9'
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	11.2		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	8.76		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.8		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-07
Client ID: MPA 9 4.8-7.75'
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	0.434		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	0.572		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	78.1		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-09
 Client ID: MPA 8 2.2-5.1'/MPA 8 5.1-7.1'
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	1.21		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	1.03		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	60.1		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-11
Client ID: MPA 10+11 COMP F
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	12.2		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	10.8		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.6		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-12
Client ID: MPA 10 6-8.7'
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	0.303		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	0.291		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	84.8		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-13
 Client ID: MPA 12 0-9.3' COMP G
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	14.0		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	17.9		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.2		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-14
Client ID: MPA 13+15 COMP H
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	19.1		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	18.4		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	10.1		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-15
 Client ID: MPA 14 0-9.3' SAMPLE I
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	11.9		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	12.9		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.0		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-16
 Client ID: MPA 16 0-6.3' SAMPLE J
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	19.5		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	19.9		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	9.74		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-17
 Client ID: MPA 17 0-9.3' SAMPLE K
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	8.87		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	9.20		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	12.3		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-18
 Client ID: MPA 18 0-7' SAMPLE L
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	16.1		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	15.2		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	7.66		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-19
 Client ID: MPA 19 0-8.25' SAMPLE M
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	12.4		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	12.4		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	11.3		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-20
Client ID: MPA 20 SAMPLE N
Sample Location: MILFORD POND
Matrix: Sediment

Date Collected: 04/16/09 00:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	7.81		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	8.79		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	14.0		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

SAMPLE RESULTS

Lab ID: L0905117-21
 Client ID: MPA 21 0-4.4' SAMPLE O
 Sample Location: MILFORD POND
 Matrix: Sediment

Date Collected: 04/16/09 00:00
 Date Received: 04/16/09
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab									
Total Organic Carbon (Rep1)	11.0		%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	11.4		%	0.010	1	-	05/11/09 16:00	1,9060	ES
General Chemistry - Mansfield Lab									
Solids, Total	13.6		%	0.100	1	-	05/05/09 17:05	30,2540G	KJ



Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 01-04,07,09,11-21 Batch: WG361294-1								
Solids, Total	ND	%	.1	1	-	05/05/09 17:05	30,2540G	KJ
Total Organic Carbon - Mansfield Lab for sample(s): 01-04,07,09,11-21 Batch: WG361454-1								
Total Organic Carbon (Rep1)	0.014	%	0.010	1	-	05/11/09 16:00	1,9060	ES
Total Organic Carbon (Rep2)	ND	%	0.010	1	-	05/11/09 16:00	1,9060	ES

Matrix Spike Analysis
Batch Quality Control

Project Name: MILFORD POND

Lab Number: L0905117

Project Number: Not Specified

Report Date: 02/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361454-4 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A												
Total Organic Carbon (Rep1)	10.9	4.69	13.2	49		-	-		75-125	-		25
Total Organic Carbon (Rep2)	10.4	6.701	15.3	66		-	-		75-125	-		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361294-2 QC Sample: L0905117-12 Client ID: MPA 10 6-8.7'						
Solids, Total	84.8	84.5	%	0		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04,07,09,11-21 QC Batch ID: WG361454-3 QC Sample: L0905117-01 Client ID: MPA 1,2,3 COMP SAMPLE A						
Total Organic Carbon (Rep1)	10.9	10.6	%	3		25
Total Organic Carbon (Rep2)	10.4	10.4	%	0		25

Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG361454-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	88		75-125
Total Organic Carbon (Rep2)	109		75-125

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-01A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),MS/MSD(),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-01B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),MS/MSD(),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-01C	Glass 250ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-02A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-02B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-02C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-03A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-03B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-03C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-04A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-04B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-04C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-05A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-05B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-05C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-06A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-06B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-06C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-07A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-07B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-07C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-08A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-08B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-08C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-09A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-CR-6020T(180),A2-AS-6020T(180),A2-CD-6020T(180),A2-PREP-3050:2T(180),A2-CU-6020T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-09B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-CR-6020T(180),A2-AS-6020T(180),A2-CD-6020T(180),A2-PREP-3050:2T(180),A2-CU-6020T(180)
L0905117-09C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-09X	Glass 100ml unpreserved split	A	N/A	6	Y	Absent	-
L0905117-09Y	Glass 250ml unpreserved split	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-PREP-3050:1T(180)
L0905117-09Z	Glass 250ml unpreserved split	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-10A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-10B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-10C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-10D	Glass 100ml unpreserved	A	N/A	6	Y	Absent	COMP-S()
L0905117-10E	Glass 100ml unpreserved	A	N/A	6	Y	Absent	COMP-S()
L0905117-10F	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-COMPOSITING(7)
L0905117-10G	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-COMPOSITING(7)
L0905117-10H	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-COMPOSITING(7)
L0905117-10I	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-COMPOSITING(7)
L0905117-11A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses

Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-11B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-11C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-12A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-12B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-12C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-13A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-13B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-13C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-14A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-14B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-14C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-15A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-15B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-15C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-16A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-16B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-16C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-17A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-17B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-17C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-18A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-18B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-18C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-19A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-19B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-19C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-20A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)
L0905117-20B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-20C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-21A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180)

*Hold days indicated by values in parentheses



Project Name: MILFORD POND

Project Number: Not Specified

Lab Number: L0905117

Report Date: 02/02/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0905117-21B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-BA-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-SE-6020T(180),A2-TOC-9060-2REPS(28),A2-AG-6020T(180),A2-CU-6020T(180),A2-PREP-3050:1T(180),EPH-04(14)
L0905117-21C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	-
L0905117-22A	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-22B	Glass 250ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-22C	Glass 100ml unpreserved	A	N/A	6	Y	Absent	HOLD(14)
L0905117-23A	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-RIM-PAH/PCBCONG(7)
L0905117-23B	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-RIM-PAH/PCBCONG(7)
L0905117-23C	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-RIM-PAH/PCBCONG(7)
L0905117-23D	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-RIM-PAH/PCBCONG(7)
L0905117-23E	Plastic 500ml HNO3 preserved	A	N/A	6	Y	Absent	A2-PB-6020T(180),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-AS-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)

Container Comments

L0905117-09X

L0905117-09Z

L0905117-10F

L0905117-10G

L0905117-10H

L0905117-10I

L0905117-22C

*Hold days indicated by values in parentheses



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

GLOSSARY

Acronyms

- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD** - Laboratory Control Sample Duplicate: Refer to LCS.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MSD** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- ND** - Not detected at the reported detection limit for the sample.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RDL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

Report Format: Data Usability Report



Project Name: MILFORD POND
Project Number: Not Specified

Lab Number: L0905117
Report Date: 02/02/10

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 61 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH). Massachusetts Department of Environmental Protection, DEA/ORS/BWSC. May 2004, Revision 1.1.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.





Table II-1: Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
1. Was the report signed by the responsible applicant approved representative?	YES
2. Were the methods for sampling, chemical and biological testing described in the Sampling and Analysis Plan (SAP) and the Laboratory QA Plan (LQAP) followed?	YES
3. If not, were deviations documented?	N/A
4. Was the SAP approved by the New England District?	YES
5. Did the applicant use a laboratory with a LQAP on file at the New England District?	YES
6. Did the samples adequately represent the physical/chemical variability in the dredging area?	
7. Were the correct stations sampled (include the precision of the navigation method used)?	
8. Were the preservation and storage requirements in Chapter 8 of the EPA/Corps QA/QC Manual (EPA/USACE 1995) and EPA (2001d) followed?	YES
9. Were the samples properly labeled?	YES
10. Were all the requested data included?	YES
11. Were the reporting limits met?	YES
12. Were the chain-of-custody forms properly processed?	YES
13. Were the method blanks run and were the concentration below the acceptance criteria?	YES
14. Was the MDL study performed on each matrix (with this data submission) or within the last 12 months?	YES
15. Were the SRM/CRM analyses within acceptance criteria?	No – see SemiVolatile Narrative
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	YES
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	No – See Metals Narrative
18. For each analytical fraction of organic compounds, were recoveries for the internal standard within the acceptance criteria?	YES

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19. Were surrogate recoveries within the required acceptance criteria?

YES

Table II-1 (Continued): Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
20. Were corrective action forms provided for all non-conforming data?	
21. Were all the species-specific test conditions in Appendix V met?	
22. Were the test-specific age requirements met for each test species?	
23. Was the bulk physical/chemical testing performed on the sediments/composites that were biologically tested?	
24. Were the mortality acceptance criteria met for the water column and sediment toxicity tests?	
25. Were the test performance requirements in Table 11.3 of EPA (1994a) met?	

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Table II-2: Quality Control Summary for Analyses of Polycyclic Aromatic Hydrocarbons (PAHs) and other base-neutrals in Sediment and Tissue Matrices

Method Reference Number: 8270C

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USA CoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift ($\pm 15\%$ D)	No	CCV1: opening CCV for Blank, LCS, LCSD, L0905117-01M, L0905117-01S, -01, -02, -03, -04, -07, -09, -11, -12, -13, -14, -15: Benz(a)anthracene @ 16% CCV2: opening CCV for: L0905117-18, -19, -20, -21, -25: Benz(a)anthracene @ 17% CCV3: opening CCV for L0905117-16, -17: Benz(a)anthracene @ 17% Naphthalene @ 30% Anthracene @ 23%	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	No	Naphthalene @ 30% Anthracene @ 23%	In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in	Yes		In Data Package

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*QC Summary Tables
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	duplicate for each group of field samples (RPD < 30%)		
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes	In Data Package
Internal Standard Areas	Within 50 to 200% of internal standards in continuing calibration check	Yes	Retained at Lab

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.





Table II-3: Quality Control Summary for the Analyses of Pesticides in Sediment, Tissue, and Water Matrices

Method Reference Number: 8081B

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	Every 20 injections ($\pm 15\%$ D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

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Table II-4: Quality Control Summary for Analyses of Polychlorinated Biphenyls (PCB Congeners) in Sediment, Tissue, and Water Matrices

Method Reference Number: 8270C

Quality Control (QC) Element	Acceptance Criteria *	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	No	ICAL #1: C18-BZ#195 @ 76% ICAL #2: C12-BZ#8 @ 76%, C18-BZ#195 @ 72%	Retained at Lab
Continuing Calibration	Every 20 injections ($\pm 15\%$ D)	No	CCV1: opening CCV for Blank, LCS, LCSD, L0905117-01M, L0905117-01S, -01, -02, -03, -04, -07, -09, -11, -12, -13, -14, -15; C14-BZ#52 @ 18%, C17-BZ#184 @ 22%, C17-BZ#183 @ 17%	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes	C12-BZ#8 @ 38% C14-BZ#44 @ 26% C14-BZ#49 @ 31% C14-BZ#52 @ 24%	In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD <30%)	Yes		In Data Package

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*QC Summary Tables
US Army Corps of Engineers*

Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes		In Data Package
* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.				

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Table II-5: Quality Control Summary for Analyses of Metals in Sediments, Tissue, and Water Matrices

Method Reference Numbers: Various Reference Numbers

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Linear Range Determination for ICP	Performed Quarterly	Yes		Retained at Lab
Initial Calibration for AA, Hg	Performed Daily (Correlation Coefficient ≥ 0.995)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NIED
Initial Calibration Verification/ Continuing Calibration Verification	Hg: 80 to 120% recovery Other metals: 90 to 110% recovery	Yes		Retained at Lab
Initial Calibration Blank/ Continuing Calibration Blank	No target analytes > Instrument Detection Limit (IDL)	No	Results >3x IDL noted, on file at lab	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Sample Spike/ Sample Duplicate	One set per group of field samples. Must contain all target analytes. Recovery Limits (75 to 125%; RPD < 20% or < 35%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	No	RPD for cadmium was 28%	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

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Table II-6: Quality Control Summary for Analyses of other Organic Chemicals not listed in Sediment, Tissue, and Water Matrices

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	No	Yearly LOD study is performed to verify initial MDL study	Retained at Lab
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	N/A	Per EPH method, if LCSs are from a second source standard, calibration verification is not needed	Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift ($\pm 15\%$ D)	No	EPH criteria is $\pm 25\%$. All associated CCALs pass the 25% criteria	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	N/A		In Data Package
Method Blank	No target analytes > RL	yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	No	EPH method limits are 40-140%. All analytes fall in the 40-140% range.	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD <30%)	yes		In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	yes		In Data Package
Internal Standard Areas (if applicable)	Within 50 to 200% of internal standards in continuing calibration check	N/A		In Data Package

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* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-7: Quality Control Summary for Analyses of Sediment Grain Size and Total Organic Carbon

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Grain Size: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 25%)	NA		In Data Package
Total Organic Carbon: Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Total Organic Carbon: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	Yes		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

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Table II-8: Quality Control Summary for Biological Toxicity Testing only

Method Reference Numbers:					
Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)	
Test condition requirements for each species: Temperature, Salinity, pH, D.O., Ammonia (Total, Un-ionized)	Test conditions within the requirements specified for each species			In Data Package	
Test species age	Age/health within guidelines for each species (Appendix V)			In Data Package	
Bulk physical/chemical analyses (If required by the Sampling plan)	Required? If so, performed? Yes or No			In Data Package	
Water column toxicity test:				In Data Package	
Control mortality	< 10% mean < 30% mussel/oyster; < 40% clam larvae, < 30% sea urchin larvae				
Sediment toxicity test:				In Data Package	
Control mortality	< 10% mean (no chamber >20%)				
Compliance with applicable test acceptability requirements in Table 11.3 (EPA 1994a)	See EPA (1994a) Section 9; Table 11.3				

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Reference:

Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters, U.S. EPA and U.S. Army Corps of Engineers, New England District, April 2004.

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Certificate/Approval Program Summary

Last revised December 15, 2009 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Maine Department of Human Services Certificate/Lab ID: MA0030.

Wastewater (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089. NELAP Accredited.

Non-Potable Water (Organic Parameters: EPA 5030B, EPA 8260)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. NELAP Accredited via LA-DEQ.

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. NELAP Accredited.

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 3005A,3020, 6020, 245.1, 245.7, 1631E, 7470A, 7474, 9014, 120.1, 9050A, 180.1, SM4500H-B, 2320B, 2510B, 2540D,9040. Organic Parameters: EPA 3510C, 5030B, 9010B, 624, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl.

Certificate/Approval Program Summary

Last revised January 11, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. *Organic Parameters: MA-EPH, MA-VPH.***Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.*

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Utah Department of Health Certificate/Lab ID: AAMA. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: Chloride EPA 300.0)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 314, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

CHAIN OF CUSTODY

PAGE 1 OF 3



Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Name: Milford Pond

Project Location:

Client: Woods Hole Group

Address: 81 Technology Park Drive

East Falmouth, MA 02536

Phone: 508-495-8262

Fax: 508-540-1001

Email:

Project #: _____
Project Manager: _____
ALPHA Quote #: _____
Turn-Around Time: _____

Project Information

Project Location:

Project #: _____

Project Manager: _____

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA
LABORATORY

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		

MPA 1,2,3 Comp Sample A	4/16/09		SED	
MPA 4, 5 Comp Sample B	4/16/09		SED	
MPA 6 Sample C	4/16/09		SED	
MPA 7 0-5.9'	4/16/08		SED	
MPA 7+9 COMP (D)	4/16/09		SED	
MPA 9 0-4.8'	4/16/09		SED	
MPA 9 4.8-7.75'	4/16/09		SED	
MPA 8 0-2.2'	4/16/09		SED	
MPA 8 2.2-5.1'	4/16/09		SED	
MPA 8 5.1-7.1'	4/16/09		SED	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP OR CT RCP?

FORM NO: 3-0101
Rev: 3-01-07

Relinquished By:	Date/Time	Received By:	Date/Time
<i>James Bayle</i>	4/16/09 1825	<i>[Signature]</i>	4/16/09 1825

Report Information Data Deliverables

FAX EMAIL Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Billing Information

Same as Client Info

PO #:

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Are MCP Analytical Methods Required?
 Yes No

Are CT RCP (Reasonable Confidence Protocols) Required?
 Yes No

SAMPLE HANDLING

- Filtration
 - Done
 - Not Needed
 - Lab to do
 - Preservation
 - Lab to do
- (Please specify below)

Example Specific Comments

TOTAL # BOTTLES

CHAIN OF CUSTODY

PAGE 1 OF 3



Westborough, MA
 TEL: 508-498-9220
 FAX: 508-498-9193

Manchester, MA
 TEL: 508-922-9300
 FAX: 508-822-3288

Client Information

Client: Woods Hole Group

Project #:

Address: 81 Technology Park Drive

Project Manager:

East Falmouth, MA 02536

ALPHA Quote #:

Phone: 508-495-6262

Turn-Around Time

Fax: 508-540-1001

Standard

Rush (ONLY IF PRE-APPROVED)

Email:

Due Date:

Time:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Report Information Data Deliverables Billing Information PO #

FAX EMAIL
 ADEX Add'l Deliverables

Regulatory Requirements/Report Limits
 State/Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocol) Required?

ANALYSIS

Metals, PAH, EPH, Pcb Cong, TOC

SAMPLE HANDLING
 Filtration
 Done
 Not Needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		
MPA 10+11 Comp F	4/16/09		SED	
MPA 10 6-8-7'	4/16/09		SED	
MPA 12 0-9.3' Comp G	4/16/09		SED	
MPA 13+15 Comp H	4/16/09		SED	
MPA 14 0-9.3' Sample I	4/16/09		SED	
MPA 16 0-9.3' Sample J	4/16/09		SED	
MPA 17 0-9.3' Sample K	4/16/09		SED	
MPA 18 0-7' Sample L	4/16/09		SED	
MPA 19 0-8.25' Sample M	4/16/09		SED	
MPA 20 Sample N	4/16/09		SED	

Metals, PAH, EPH, Pcb Cong, TOC																			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By: *James Bayle*

Date/Time: *4/16/09 1825*

Received By: *[Signature]*

Date/Time: *4/16/09 1825*

CHAIN OF CUSTODY



Westborough, MA
 TEL: 508-898-8220
 FAX: 508-898-8183

Manassett, MA
 TEL: 508-822-8300
 FAX: 508-822-8288

Project Information

Project Name: Milford Pond

Project Location:

Client: Woods Hole Group

Project #:

Address: 81 Technology Park Drive

Project Manager:

East Falmouth, MA 02536

ALPHA Quote #:

Phone: 508-495-6262

Turn-Around Time

Fax: 508-540-1001

Standard

Rush (ONLY IF PRE-APPROVED)

Email:

Due Date:

Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information Data Deliverables

FAX

EMAIL

ADEX

Add'l Deliverables

Billing Information

Same as Client info

PO #:

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY/CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING

- Filtration
- Dose
- Not Needed
- Lab to do
- Preservation
- Lab to do (Please specify below)

TOTAL # BOTTLES

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		

Sample ID	Date	Time	Sample Matrix	Sampler's Initials	Metals, PAH, EPH, Pcb Cong. TOC	Metals, PAH, Pcb Cong.	Archive											
MPA 21 0.4.4' Sample O	4/16/08		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MPA 21 4.4-9.5' Sample O	4/16/08		SED		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rinse Blank	4/16/08		water		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Container Type: _____
 Preservative: _____

Relinquished By:

Date/Time:

Received By:

Date/Time:

**IS YOUR PROJECT
 MA MCP or CT RCP?**

Alpha Analytical
 Form: SA-CU-07

James Boyd

4/16/08 1225

[Signature]

4/16/08 1225



CHAIN OF CUSTODY

PAGE 1 OF 3

Washborough, MA
 TEL: 508-495-4223 FAX: 508-422-8300
 FAX: 508-882-9183 FAX: 508-422-3218

Washborough, MA
 TEL: 508-422-8300
 FAX: 508-882-9183 FAX: 508-422-3218

Client: Woods Hole Group

Address: 81 Technology Park Drive

East Falmouth, MA 02536

Phone: 508-495-5262

Fax: 508-540-1001

Email:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Samples for EPH frozen 4/17/09 - removed from fridge for shipping to Washboro 4/24/09

Project Information

Project Name: Milford Pond

Project Location:

Project #:

Project Manager:

ALPHA Quote #:

Turn Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Due Date: **5/7/09**

Time:

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		
MPA 1,2,3 Comp Sample A	4/18/09		SED	
MPA 4, 5 Comp Sample B	4/18/09		SED	
MPA 6 Sample C	4/18/09		SED	
MPA 7 0-5.9'	4/18/09		SED	
MPA 7+9 COMP (D)	4/18/09		SED	
MPA 9 0-4.8'	4/18/09		SED	
MPA 9 4.8-7.75'	4/18/09		SED	
MPA 8 0-2.2'	4/18/09		SED	
MPA 8 2.2-5.1'	4/18/09		SED	
MPA 8 5.1-7.1'	4/18/09		SED	

Report Information Data Deliverables

FAX EMAIL

ADR Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?

Yes No Are CT RCP Reasonable Confidence Protocols Required?

ANALYSIS

- SAMPLE HANDLING
- Filtered
 - Drip
 - Not Rinsed
 - Lab to Lab
 - Preservation
 - Lab to Lab (press specify below)

Method	MPA 1,2,3	MPA 4,5	MPA 6	MPA 7	MPA 7+9	MPA 9	MPA 8	MPA 8
Metals, PCB, EPH, PCB Congr, TOC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EPH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
 MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	4/18/09 18:25	<i>[Signature]</i>	4/18/09 18:25
<i>[Signature]</i>	4/18/09 15:30	<i>[Signature]</i>	4/18/09 15:30
<i>[Signature]</i>	4/18/09 15:00	<i>[Signature]</i>	4/18/09 15:00

CHAIN OF CUSTODY

PAGE 2 OF 3



Wachusett, MA
 TEL: 508-898-9120
 FAX: 508-898-9198

Manchester, MA
 TEL: 508-222-9930
 FAX: 508-222-9288

Client Information

Client: Woods Hole Group
 Address: 81 Technology Park Drive
 East Falmouth, MA 02536
 Phone: 508-495-6262
 Fax: 508-540-1001

Project Name: Milford Pond

Project Location:

Project #:
 Project Manager:
 ALPHA Quote #:

Turn-Around Time

Standard Rush (over 1st pre-approval)

5/14/01

Email: These samples have been previously analyzed by Alpha

Due Date: **5/14/01** Time:

Other Project Specific Requirements/Comments/Detection Limits:
See Comment p 1 of 3

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		

MPA 10-11 Comp F	4/16/08		SED	
MPA 10 6-8-7'	4/16/08		SED	
MPA 12 0-9.3' Comp G	4/16/08		SED	
MPA 13+15 Comp H	4/16/08		SED	
MPA 14 0-9.3' Sample I	4/16/08		SED	
MPA 16 0-9.3' Sample J	4/16/08		SED	
MPA 17 0-9.3' Sample K	4/16/08		SED	
MPA 18 0-7' Sample L	4/16/08		SED	
MPA 19 0-8.25' Sample M	4/16/08		SED	
MPA 20 Sample N	4/16/08		SED	

Metals, PBT, EPH, PCB Cong, TOC

ANALYSIS

Report Information	Data Deliverables	Billing Information
<input type="checkbox"/> FAX	<input type="checkbox"/> EMAIL	<input type="checkbox"/> Same as Client Info
<input type="checkbox"/> ADEX	<input type="checkbox"/> Add'l Deliverables	PO #:

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Regulatory Requirements/Report Limits

State/Fed Program

Other:

Yes No No

Are MCP Analytical Methods Required?
 Are CT RCP (Reasonable Confidence Protocols) Required?

Yes No No

CHAIN OF CUSTODY

- Filtration
- Drying
- Not Needed
- Lab to do
- Preservative
- Lab to do
- Please specify
- Lab to do

Sample Specific Comments

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT
 MA MCP OR CT RCP?**

Retriumphed By: *[Signature]*

Date/Time: 4/16/08 18:25

Received By: *[Signature]*
 Date/Time: 4/16/08 18:25

CHAIN OF CUSTODY

PAGE 3 OF 3



Warehoush, MA
 TEL: 508-498-0233
 FAX: 508-882-8133

Warehoush, MA
 TEL: 508-922-8900
 FAX: 508-922-2928

Client Information

Client: Woods Hole Group
 Address: 81 Technology Park Drive
 East Falmouth, MA 02536
 Phone: 508-495-6262
 Fax: 508-540-1001

Project Name: Milford Pond
 Project Location:
 Project #:
 Project Manager:
 ALPHA Quota #:
 Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

5/17/09

Other Project Specific Requirements/Comments/Detection Limits:
 See Comment p 1 of 3

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		
MPA 21 0-4' Sample O	4/18/09		SED	
MPA 21 4-9.5' Sample O	4/18/09		SED	
Blank	4/18/09			

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP OR CT RCP?

Relinquished By:	Container Type	Preservative	Date/Time	Received By:	Date/Time
<i>[Signature]</i>			4/18/09 18:25	<i>[Signature]</i>	4/18/09 18:25
<i>[Signature]</i>			4/19/09 15:30	<i>[Signature]</i>	4/19/09 15:30
<i>[Signature]</i>			4/19/09 15:30	<i>[Signature]</i>	4/19/09 15:30

Report Information Data Deliverables

FAX EMAIL Add'l Deliverables

Regulatory Requirements/Report Limits

Sub/Feed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes No No No

Are MCP Analytical Methods Required? Yes No

Are CT RCP (Reasonable Confidence Protocol) Required? Yes No

ANALYSIS

- Filtration
- Dose
- Hot Kestled
- Lab to do
- Preservation
- Lab to do
- Please specify below?

Sample Bottle Count: 11



CHAIN OF CUSTODY

PAGE 1 OF 3

Worcester, MA
 TEL: 508-899-9220
 FAX: 508-899-9188

Manfield, MA
 TEL: 508-822-8800
 FAX: 508-822-3288

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive
 East Falmouth, MA 02536

Phone: 508-495-6252

Fax: 508-540-1001

Email:

Project Name: Milford Pond

Project Manager:

ALPHA Quote #:

Turn-Around Time

Project #:

Due Date:

Time:

Standard

Rush (ONLY IF PRE-APPROVED)

Other Project Specific Requirements/Comments/Detection Limits:

These samples have been previously analyzed by Alpha

NEW EPH samples shipped 5/14/09 - samples were frozen 4/17/09 and remained in freezer until shipping 5/14/09 or 5/19/09

Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials
MPA 1,2,3 Comp Sample A	4/16/09		SED	
MPA 4, 5 Comp Sample B	4/16/09		SED	
MPA 6 Sample C	4/16/09		SED	
MPA 7 0-5.9'	4/16/09		SED	
MPA 7+9 COMP (D)	4/16/09		SED	
MPA 9 0-4.8'	4/16/09		SED	
MPA 9 4.8-7.75'	4/16/09		SED	
MPA 8 0-2.2'	4/16/09		SED	
MPA 8 2.2-5.1'	4/16/09		SED	
MPA 8 5.1-7.1'	4/16/09		SED	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP OR CT RCP?

STATE OF MASSACHUSETTS
 (REV. 2001/07)

Relinquished By: *[Signature]*

Container Type:
 Preservative:
 Date/Time:
 Received By:
 Date/Time:

Report Information Data Deliverables:
 FAX EMAIL Add'l Deliverables Same as Client Info PO #:

Regulatory Requirements/Report Limits:
 State/Fed Program:
 Criteria:

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Are MCP Analytical Methods Required? Yes No

Are CT RCP (Reasonable Confidence Protocols) Required? Yes No

ANALYSIS

Metal, PAH, EPH, PCB Cong, TOC

Archive

SAMPLE HANDLING

Filtration Done Not Needed

Preservation Lab to do Lab to do (Please specify below)

TOTAL # BOTTLES



CHAIN OF CUSTODY

PAGE 2 OF 3

Westborough, MA Mansfield, MA
 TEL: 508-898-9220 TEL: 508-922-9300
 FAX: 508-898-9199 FAX: 508-822-3288

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive
 East Falmouth, MA 02536

Phone: 508-495-6262

Fax: 508-540-1001

Email:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

See Comment p193

Project Information

Project Name: Milford Pond

Project Location:

Project #:

Project Manager:

ALPHA Quote #:

Turn-Around Time

Standard

Rush (ONLY IF PRE-APPROVED)

Due Date:

Time:

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		

MPA 10+11 Comp F	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 10 6-8-7	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 12 0-9-3 Comp G	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 13+15 Comp H	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 14 0-9-3 Sample I	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 16 0-9-3 Sample J	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 17 0-9-3 Sample K	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 18 0-7 Sample L	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 19 0-8-25 Sample M	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MPA 20 Sample N	4/16/09		SED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO. 01-0701 (Rev. 04/2007)

Report Information Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?

Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

Metals, PAH, EPH, PCB Cong, HOC

Billing Information

Same as Client Info

PO #:

SAMPLE HANDLING

- Filtration
- Done
- Not Needed
- Lab to do
- Preservation
- Lab to do
- (Please specify before)

TOTAL # BOTTLES

Sample specific Comments

Relinquished By:

Date/Time

Received By:

Date/Time

James Back

4/16/09 1825

James Back

4/16/09 1825

James Back

5/19/09 1200

James Back

5/19/09 1300



CHAIN OF CUSTODY

PAGE 3 OF 3

Project Information

Project Name: Milford Pond

Westborough, MA 01581
 TEL: 508-899-9220 FAX: 508-922-8300
 FAX: 508-899-9193 FAX: 508-922-8288

Project Location:

Client: Woods Hole Group

Address: 81 Technology Park Drive

East Falmouth, MA 02536

Project Manager:

Phone: 508-495-6262

Fax: 508-540-1001

Email:

Project #:

ALPHA Quote #:

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Other Project Specific Requirements/Comments/Detection Limits:

See Comment p 1 of 3

Report Information

Report Information Data Deliverables FAX EMAIL ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Are MCP Analytical Methods Required? Yes No
 Are CT RCP (Reasonable Confidence Protocols) Required? Yes No

ANALYSIS

SAMPLE HANDLING
 Filtration
 Date
 Not Hoisted
 Lab to do Preservation
 Lab to do (Please specify below)

Sample ID	Collection		Sample Matrix	Sampler's Initials
	Date	Time		
MPA 21 0-4' Sample O	4/16/09		SED	
MPA 21 4.4-9.5' Sample O	4/16/09		SED	
Rinse Blank	4/16/09		water	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM MCP-01/09
 Over School 09/10

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Sergio Bucel</i>	4/16/09 1825	<i>William...</i>	4/16/09 1825
<i>...</i>	5/14/09 1300	<i>...</i>	5/14/09 1300

Appendix G

Water Quality Data

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Milford Pond Water Quality

**Milford Pond Ecosystem Restoration Project
Water Sampling and Analysis**

Location	Depth (m)	Dissolved Oxygen (mg/L)	Temperature (°C)
Mid Pond			
	Surface	7.0	20.0
	0.5	5.0	20.0
	1	4.0	20.0
	1.5	1.4	19.0
Lower Pond			
	Surface	3.1	19.5
	0.5	3	19.0
	1	2.1	19.0
Charles River inlet	Surface	7.8	21.0
Louisa Lake outlet	Surface	8.1	22.0

Note: Samples collected September 20, 2002

Location	Depth (m)	Dissolved Oxygen (mg/L)	Temperature (°C)
Mid Pond			
	Surface	8.2	11.1
	0.5	8.0	11.1
	1	7.9	11.1
Lower Pond			
	Surface	9.2	11.1
	1.2	7.9	10.9
Charles River inlet	Surface	7.6	11.0
Louisa Lake outlet	Surface	8.8	13.0
Dilla St.	Surface	9.7	13
Sumner St.	Surface	8.9	13

Note: Samples collected October 16, 2002

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Appendix H

Endangered Species Habitat Survey, 2013-2014

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Aquatic Bird Habitat Assessment Milford Pond

January 2014



Submitted to:

Vonnie Reis, P.E., Town Engineer
Town of Milford
52 Main Street
Milford, MA 01757



Submitted by:

GZA GeoEnvironmental, Inc.
1350 Main St - Suite 1400
Springfield, MA 01103
413-726-2100



January 27, 2014
15.0166398.00

Vonnie Reis, P.E., Town Engineer
Town of Milford
52 Main Street
Milford, MA 01757



RE: Aquatic Bird Habitat Assessment
Milford Pond
Milford, Massachusetts

ONE FINANCIAL PLAZA
1350 Main Street
Suite 1400
Springfield
Massachusetts 01103
413-726-2100
FAX 413-732-1249
www.gza.com

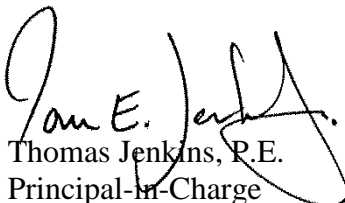
Dear Ms. Reis:

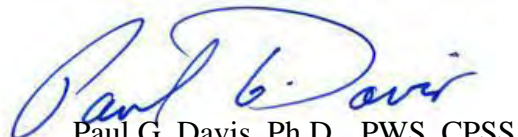
GZA GeoEnvironmental, Inc. ("GZA") is pleased to present to the Town of Milford ("Client") our completed "Aquatic Bird Habitat Assessment" for Milford Pond, dated January, 2014. This assessment was completed in accordance with GZA's proposal to the Town of Milford dated December 3, 2013, and the authorization to proceed received December 5. The fieldwork for the habitat assessment was completed on December 5, 2013. The habitat assessment is subject to the Limitations found in Appendix 4 of the report.

Thank you for this opportunity to provide these services to the Town of Milford. We are of course available to answer any questions you may have.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.


Daniel M. Nitzsche
Project Manager


Thomas E. Jenkins, P.E.
Principal-in-Charge


Paul G. Davis, Ph.D., PWS, CPSS
Consultant/Reviewer

enclosure: Four (4) copies of report; one (1) CD containing a PDF of the report and applicable ArcGIS shapefiles.

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Aquatic Bird Habitat Assessment

Milford Pond

January 2014

Contents

Introduction and Purpose of Study	Pg. 1
Methodology	Pg. 2
Results	Pg. 2
Discussion	Pg. 5
Recommendations	Pg. 6
References	Pg. 7

Figures

Figure 1. Locus map

Figure 2. Marshland Habitat Map

Figure 3. Photograph Locations

Appendices

**Appendix 1. USACE Conceptual Plan (as discussed with MEPA on 12/19/13)
and
30-Day Public Notice - Milford Pond - Milford, Massachusetts;
Aquatic Ecosystem Restoration Project (January 17, 2014)**

**Appendix 2. Email from Chris Buelow, NHESP, to Town of Milford, Vonnie
Reis on Potential Assessment Methodology.**

Appendix 3. Habitat Photographs

Appendix 4. Limitations

Introduction and Purpose of Study

The U.S. Army Corps of Engineers (USACE), in cooperation with the Town of Milford, MA, is planning, designing and permitting an aquatic ecosystem restoration project for Milford Pond (Figure 1, Locus Map). The pond is 120± acres in size, and an impoundment of the Charles River. The primary inflows to the pond are the Charles River from the north and Huckleberry Brook / Louisa Lake discharge which enters in the northwest portion of the pond. Average water depths in Milford Pond are about 2 feet, due to the extensive shallows mostly along the western side of the pond, both north and south of Clark's Island. There is extensive emergent marshland habitat associated with Milford Pond, the largest contiguous section of which is south of Clark's Island, on the west side of the pond. This wetland habitat is the preferred breeding habitat for several species of aquatic birds, many of which are state-listed rare species. The following marshland-associated, aquatic bird species (including State-listed rare species) have been recorded at Milford Pond during the breeding season by multiple avian experts over the past 20 years, and this information has been provided to MA Natural Heritage and Endangered Species Program (NHESP). Based upon these records, the known species include:

American Bittern	<i>(Botaurus lentiginosus)</i>	E = State Endangered
Least Bittern	<i>(Ixobrychus exilis)</i>	E = State Endangered
Pied-billed Grebe	<i>(Podilymbus podiceps)</i>	E = State Endangered
King Rail	<i>(Rallus elegans)</i>	T = State Threatened
Common Moorhen	<i>(Gallinula chloropus)</i>	SC = State Special Concern species.
Sora Rail	<i>(Porzana carolina)</i>	Scarce breeder, but not State Listed
Marsh Wren	<i>(Cistothorus palustris)</i>	Possible breeder (not State Listed)
Virginia Rail	<i>(Rallus limicola)</i>	Common breeder (not State Listed)

The USACE Milford Pond aquatic ecosystem restoration project is primarily focused on ecological restoration and enhancement of the aquatic resources in the pond basin by:

1. deepening and preserving an open water portion of the pond by dredging,
2. creating additional emergent wetland areas by redistributing the dredged sediment and organic deposits into shallow, vegetated open water areas north of Clark's Island, and
3. preserving and/or enhancing existing rare species habitats within the pond.

A conceptual plan for the habitat restoration project was provided to GZA by USACE (see Appendix 1 - provided by Adam Burnett, Project Manager, on December 19, 2013, and as reflected in USACE's Public Notice, January 17, 2014). To accomplish these various design goals, only limited areas of the pond will be dredged to avoid impact to important marshland habitat that is the potential breeding habitat for the aquatic waterfowl and wading birds. Therefore, the purpose and goal of this present study was to better define the important marshland habitat of the protected aquatic bird species such that final design of the project by the USACE can protect and accommodate the limits of this existing habitat. The study was designed based upon input from the NHESP. The analysis, as reported herein, generally conformed to the Wildlife Habitat Assessment Guideline (NHESP, January 2011) and to the desired survey methodology as indicated in an advisory email from NHESP (Chris Buelow, NHESP to Vonnie Reis, Town of Milford, December 2, 2013; see Appendix 2).

The survey was conducted on Thursday December 5, 2013, by Biologists from GZA GeoEnvironmental, Inc., Mr. Charles Quinlan and Mr. Daniel Nitzsche coordinating in advance of the survey with NHESP.

Aquatic Bird Habitat Assessment, Milford Pond - January 2014

Methodology

Based upon GZA's coordination with NHESP and the Wildlife Habitat Assessment Guideline (NHESP, January 2011), GZA surveyed the marshland habitats within the Milford Pond basin, determining the vegetative cover types and defining the natural communities in each area, as related to the potential for providing aquatic bird habitat. The location of habitat areas was noted on maps and geo-referenced by GIS. The vegetation descriptions were qualitative and not quantitative, with the intended purpose of documenting the specific marsh, open water, and fringe habitat types as reflected by vegetative types, growth patterns, dominant species composition, hydrology/water-level (e.g., are the marshes on floating mats or emergent, presence of open water within each marsh unit, etc.) and physical structure. The presence of emergent wetland invasive species (e.g., Phragmites) and level of infestation were noted, as well as other potential threats to the ecological/habitat stability of the particular habitat. Photographs were taken of each location (Figures 2 and 3, and Appendix 3).

Additional information was provided by Lycott, Inc. on the presence of invasive species, augmented by our own observations of the actual marshland habitats and their vegetative composition. In addition, the conceptual USACE plan for dredging and dredge spoil placement/re-use was reviewed, and recommendations for avoiding/mitigating damage to existing habitat or disruption to marsh birds are provided.

During the habitat survey, conducted on December 5, 2013, pond access was limited to a shoreline inspection because the water surface was substantially covered with thin ice. Boat access was thus not possible and the ice would not support the weight of the biologists traversing the area. However, in GZA's opinion, the shoreline survey provided sufficient site access for assessment of habitat areas due in part to the leaf-off conditions which allowed for unobstructed observations of the wetland cover types throughout the entire pond area.

Results

Overview: The results from the habitat survey are presented below. Figure 2 outlines the areas and types of marshland habitat within the Milford Pond basin and assigns a unique alpha-numeric code to each area. Each area was investigated relative to vegetation, habitat features, invasive species, and suitability as supportive habitat for the aquatic birds of interest. Figure 2 also notes the dominance of invasive species for each area, when present. Qualitative descriptions for each area are provided below. Figure 3 presents the photo locations and view vectors for each of the photographs as presented in Appendix 1. The primary emergent marshland habitat type important to the aquatic birds of interest present at Milford Pond is characterized as Palustrine Emergent Marsh (PEM), as per Cowardin et al., 1979. More specifically, the PEM habitat areas present within the Milford Pond basin that are dominated by dense stands of Common Cattail (*Typha latifolia*) and Narrow-leaved Cattail (*Typha angustifolia*) are the most desirable habitat type. Other PEM habitat types at Milford Pond, such as those containing Water-willow (*Decodon verticillatus*; Swamp loosestrife) as the dominant vegetation, are not as significant to the aquatic birds of interest as those dominated by cattail species. The other vegetation habitat type observed at Milford Pond is characterized as Palustrine Scrub/Shrub (PSS) habitat. The PSS habitat areas present within the Milford Pond basin are typically dominated by Buttonbush (*Cephalanthus occidentalis*) or Speckled Alder (*Alnus incana*), with a sparse understory herbaceous strata typically of Water-willow. The PSS habitat is significantly less common than the PEM communities.

The invasive species of concern to the marshland habitats were a limited number of species, specifically including Common Reed (*Phragmites australis*), Purple Loosestrife (*Lythrum salicaria*), and Japanese knotweed (*Fallopia japonica*). Although a native species, cattail can also be considered invasive (e.g., by the USACE), especially relative to purposes of wetland creation and enhancement. However, in the context of this study, cattail marshes are important to the suitability of the rare species habitat, and therefore are not a concern relative to their ability to dominate a marshland habitat and exclude other species. Other invasive species are also present in Milford Pond, as identified by earlier studies and documented in the 2013 Lycott study. However, these species are not of particular concern to the breeding habitat of the aquatic bird species, because they are not currently dominant, nor are they likely to become dominant, within the marshland habitat. Nevertheless, their presence may be of concern relative to ecological restoration for other areas of Milford Pond basin.

Results of the survey indicated that there were two important emergent marshland aquatic bird habitat areas potentially supportive of the State-listed waterfowl species. Both important habitats were PEM emergent marshland habitat, located on the west side of the pond in proximity to Clark's Island (W5 and W9). These two habitat areas encompass the largest expanses of PEM emergent marshland habitat present within the Milford Pond basin. Both of these wetlands contained the typical dense stands of Common Cattail and Narrow-leaved Cattail.

Habitat Assessment Descriptions: The various PEM and PSS habitat areas are described below. Their locations are referenced in Figure 2, with photographs in Appendix 1 and photo locations shown in Figure 3.

Cattail-Dominant PEM Habitat Areas (Areas: W2, W5, W7, W9, W14, W15, W16, W17, W19 and W28)

These cattail-dominated PEM habitats are located throughout the pond. They are characterized as predominantly monotypic stands of Common Cattail and Narrow-leaf Cattail with a small percentage of Purple Loosestrife. These areas typically have a narrow fringe of Water-willow.

The area designated as W5 represents the largest contiguous emergent marshland habitat at Milford Pond. This area, as well as W9, represents the preferred waterfowl habitat for the four State-listed waterfowl species in Milford Pond. These cattail-dominated PEM areas contain numerous muskrat "runways" that provide open water entrance ways into the protective interior reaches. Approximately 30% of the cattail area is open water, in part as a result of the muskrat activity. Direct evidence of muskrat activity was observed during the assessment, including active muskrat foraging and observation of muskrat feeding mounds located along the eastern margin of W5. The existing, apparently active/healthy, muskrat population present in these larger W5 and W9 marshland areas significantly improves the quality of the habitat for the overall productivity of the State-listed waterfowl. The smaller more limited areas of *Typha* stands (e.g., W2, W17) lack the size (contiguous surface area) to provide desirable habitat and protective cover for the aquatic birds, and also lack evidence of an active muskrat population that is an important enhancement of the other, more desirable *Typha* areas.

Water-willow-Dominant PEM Habitat Areas (Areas: W11, W12, W23 and W25)

These PEM areas have sparse to dense stands that are typically narrow (i.e., ≤ 4 feet wide) bands of Water-willow. These areas are relatively small and lack the favorable habitat features supportive of the State-listed aquatic birds known to frequent Milford Pond.

PSS Habitat Areas (Areas: W1, W10, W13, W20, W22E, W22W and W26)

These PSS habitat areas are dominated by woody vegetation, although less dense herbaceous species can be found within the vegetative assemblage. The predominant species most often observed is Buttonbush, typically along the pond margin or as isolated islands. Within W22E and W22W there is co-dominant woody vegetation including Speckled Alder and Winterberry (*Ilex verticillata*) shrubs.

These PSS areas typically include areas of open water with the potential presence of submerged aquatic plant species during the growing season. Although the State-listed aquatic bird species may occasionally use such PSS areas incidental to their presence in the Milford Pond basin, these habitats are not considered to be breeding habitat for these species, nor of any particular or unique value to these species.

Invasive Plant Species Associated with PEM Units

Common Reed-, Japanese Knotweed-, and Purple Loosestrife-Dominant PEM Habitat Areas (Areas: W3, W4, W6, W8, W18, W21 and W27)

During the habitat assessment, GZA Biologists noted several stands of invasive plant species within immediate proximity to the PEM areas, along the perimeter of Milford Pond (Table 1). Of these invasive species, the two most prevalent species were Common Reed and Japanese Knotweed. Less common was Purple Loosestrife, which was present but not appearing in any monotypic stands, with the exception of area W27 in a cove located north of Cedarview Circle. While the Japanese Knotweed is less of a concern to the PEM area because it is a non-wetland plant, it nevertheless is a dominant invasive plant that degrades habitat value along the immediate perimeter of some of the PEM areas.

Wetland Area	Wetland Type	Invasive Species (estimated % dominance).
W3	PEM	Japanese Knotweed (75% along perimeter of PEM)
W4	PEM	Common Reed (90%)
W6	PEM/Upland	Japanese Knotweed (85% along perimeter of PEM)
W8	PEM	Common Reed (95%)
W18	PEM	Common Reed (80%)
W21	PEM/Upland	Japanese Knotweed (85% along perimeter of PEM)
W27	PEM	Purple Loosestrife (70%)

Summary of Results: Results of the survey indicate there are two major breeding marsh bird habitats (PEM Areas W5 and W9). These are both *Typha* communities that have dense growth but areas of open water pathways within the vegetation. These habitats are critical for the following species: King Rail, Virginia Rail, Sora Rail, Least Bittern, and American Bittern. Common Moorhen and Pied-billed Grebe also utilize these habitats for breeding. The largest *Typha* community (W5) exists from Clark’s Island south to just north of the Town’s swimming pool area. Area W2, adjacent to the Town pool, is not contributory to this higher value habitat area. The other high value aquatic bird habitat *Typha* community

(W9) is adjacent to and north of Clark's Island. The value of each of these areas as aquatic bird habitat is provided by the dense *Typha* growth and large expanses, providing cover, and the muskrat-created open water channels within these expanses. The active muskrat population augments the aquatic bird habitat value by creating/providing open water access ways for the aquatic birds into the more central portions of the marsh. The dense cover, large expanses, and muskrat channels are not found in the smaller dispersed *Typha* areas elsewhere in Milford Pond, including the southern extremes of the pond near the Town swimming pool, residences, and dam (W2 and W28).

Discussion

The occurrence of so many State-listed aquatic marshland associated birds is notable for a pond the size of Milford Pond located in an urban area. The Great Meadows National Wildlife Refuge located in the Concord-Sudbury region of Massachusetts is known to provide habitat for the same marsh birds to breed as observed at Milford Pond (NHESP, pers. comm., and C. Quinlan prior observations). However, the suitable habitat at Milford Pond is significantly smaller; therefore, these more limited, suitable habitats take on important local significance for these particular species and should be considered critical to the continued presence of these species at Milford Pond. While Milford Pond contains many emergent marshland PEM habitat areas, only areas W5 and W9 appear to have significant habitat characteristics relative to the breeding success of the State-listed aquatic bird species known to frequent this area. The prior sightings of these species have also been centered almost exclusively within these same habitat areas (NHESP, pers. comm., and C. Quinlan prior observations). The other *Typha* habitat wetland areas (W2, W14, W15, W16, W17, W18, W19 and W28) all are much smaller and dispersed or somewhat isolated from each other and do not contribute significant aquatic bird habitat. These eight areas also have larger areas of open water within their areas, provide less protective cover and depth of habitat, and/or tend to have less dense stands of cattails.

The presence of invasive species near areas W5 and W9 presents some long-term concerns relative to the stability of these habitat areas. Presently, *Phragmites australis* is of greatest concern because it has the greatest potential to invade and compromise these critical aquatic bird habitats. The aquatic birds at Milford Pond will not use *Phragmites* marshes to breed. Fortunately, *Phragmites* is limited in its ability to invade the *Typha* stands due to the depth of water in the emergent habitat. However, if water levels were intermittently reduced during the growing season and the *Phragmites* was to become established, it would potentially persist and be difficult to eradicate. Future control of this invasive species would be desirable to reduce or remove this inherent threat to the habitat.

The proposed conceptual plans developed by USACE for the aquatic habitat restoration of Milford Pond do not appear to directly result in the loss of any of the important habitat for the State-listed birds. The proposed area of dredging occurs primarily in the existing non-*Typha* areas, and the sediment relocation occurs in the northerly portions of the pond basin. Therefore, the planned areas of dredging and sediment placement do not appear to affect areas W5 or W9. The proposed dredging and sediment placement is limited to other less contiguous PEM areas and, therefore, in the opinion of GZA the work described by the proposed conceptual plans is unlikely to have an adverse impact to the State-listed waterfowl species.

For the wetland creation areas using the relocated sediments, the spread of invasive species is a concern. Therefore, this aspect of the work needs close management relative to planting and the control of invasive species. The aquatic invasive species (e.g., milfoil; see Lycott 2013) are less of a concern since the habitat to be created would not be supportive of such species.

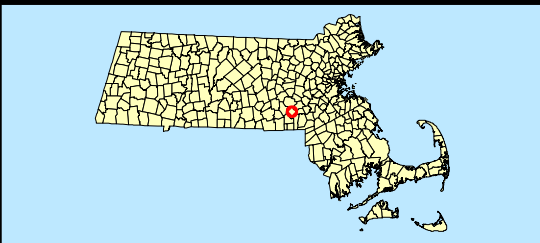
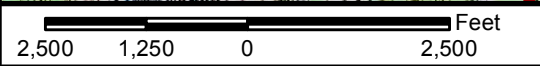
Recommendations

Several recommendations are made relative to the planned aquatic ecosystem restoration project for Milford Pond:

- The proposed dredging areas and sediment deposition areas as described by the proposed conceptual plans appear to avoid the important habitat for aquatic bird species at Milford Pond. Future plans, including temporary impact, need to continue to protect these areas.
- Construction methodology needs to also protect these areas, including limiting noise impacts during the breeding season.
- Phragmites populations throughout Milford Pond basin, but especially in proximity to areas W5 and W9, need to be controlled and eradicated if possible.
- As part of the USACE's project design, the open waters east of Clark's Island and the open coves on the north side of Clark's Island should be kept open to allow Pied-billed Grebes to access open water with their chicks when disturbed.
- It would be desirable to conduct a breeding census of the aquatic birds at Milford Pond. This effort could include trained volunteers, perhaps with members of The Forbush Bird Club of Worcester.
- Motorized boats should be excluded from the pond due to the negative effect on the breeding populations of marsh birds, which can include nesting ground abandonment.

References

- Baicich, Paul J., Harrison, Collin J.O. A Guide To The Nests, Eggs and Nestlings of North American Birds second edition. Academic Press 1997.
- Buelow, Chris (FWE) Email Sent to Vonnie Reis (Town of Milford): Monday, December 02, 2013 1:40 PM
- Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm> (Version 04DEC1998).
- Cullina, Melissa Dow, Connolly, Bryan Sorrie, Bruce and Somers, Paul The Vascular Plants of Massachusetts A County Checklist First Revision. Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries & Wildlife
- Lycott Environmental, December 12, 2013. Invasive Aquatic Vegetation of Milford Pond, Milford, Massachusetts. Report to Town of Milford.
- Mark Lynch, January 2014. Worcester, Massachusetts. Personal Communication. Independent breeding marsh bird surveys at Milford Pond over the last decade.
- U.S. Army Corps of Engineers, New England District. December 19, 2013. Conceptual Plans for Restoration of Milford Pond - worksheets.
- U.S. Army Corps of Engineers, New England District. January 17, 2014. 30-Day Public Notice - Milford Pond - Milford, Massachusetts; Aquatic Ecosystem Restoration Project.



LOCUS MAP

**MILFORD POND
AQUATIC BIRD HABITAT ASSESSMENT
MILFORD, MA**

USGS 25K:1, MILFORD 1982, HOLLISTON 1985.

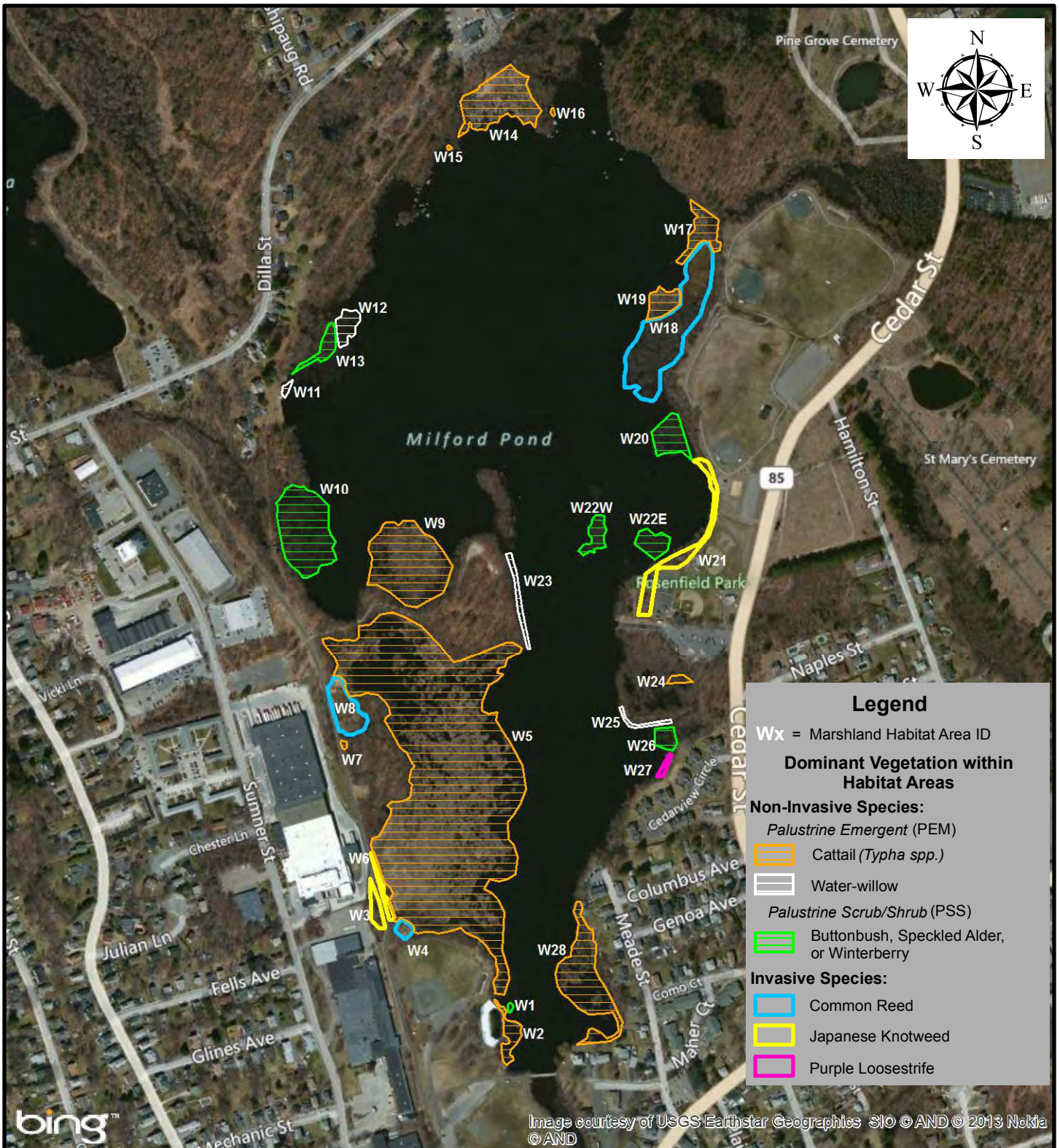
Project No:
15.0166398.00

Drawn by:
SRT

Checked by:
PGD

Date:
01/08/2014

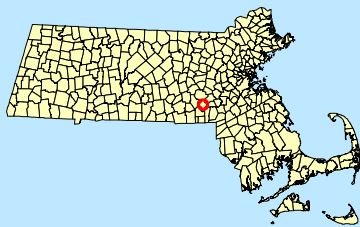
Figure No:



500 250 0 500 1,000 Feet

MARSHLAND HABITAT MAP

Project No:
15.0166398.00



**MILFORD POND
AQUATIC BIRD HABITAT ASSESSMENT
MILFORD, MA**

Drawn by:

KDC

Checked by:

TEJ

Date:

01/24/2014

BASE MAP: BING MAPS

Figure No:

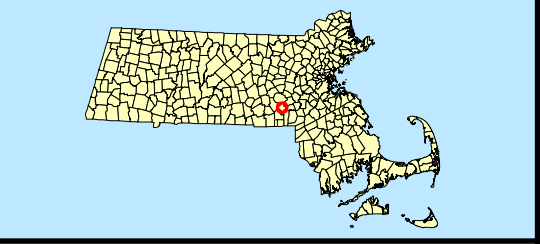
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Legend

← Photo ID (View Direction)
 - Photos taken 12/05/2013

Image courtesy of USGS Earthstar Geographics SIO © AND © 2012
 MapData Sciences Pty Ltd, PSMA © 2012 Zenrin



PHOTOGRAPH LOCATIONS

**MILFORD POND
 AQUATIC BIRD HABITAT ASSESSMENT
 MILFORD, MA**

BASE MAP: BING MAPS

Project No: 15.0166398.00
Drawn by: KDC
Checked by: PGD
Date: 01/24/2014
Figure No:

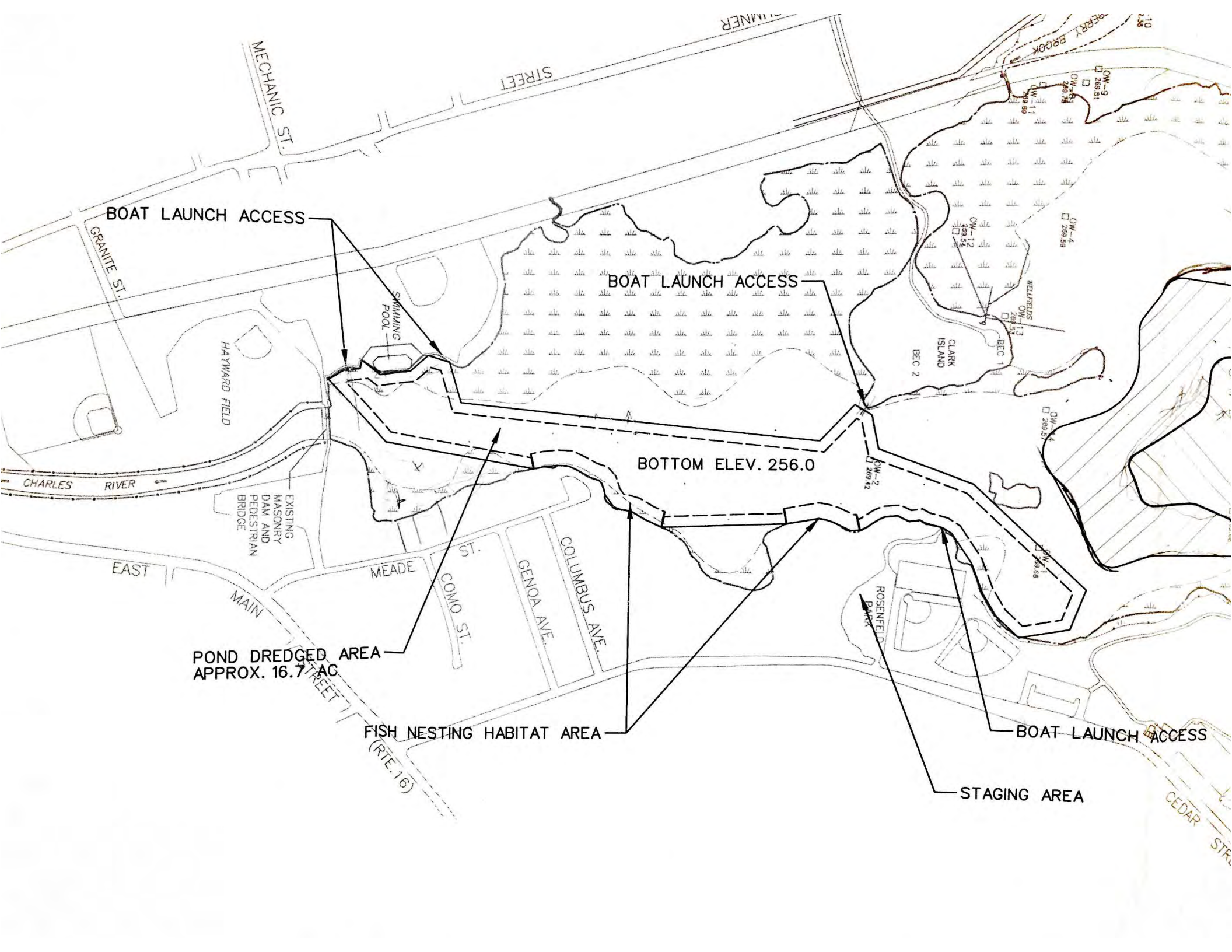
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Appendix 1

USACE Conceptual Plan (as discussed with MEPA on 12/19/13)

and

**30-Day Public Notice - Milford Pond - Milford, Massachusetts; Aquatic Ecosystem
Restoration Project (January 17, 2014)**



BOAT LAUNCH ACCESS

BOAT LAUNCH ACCESS

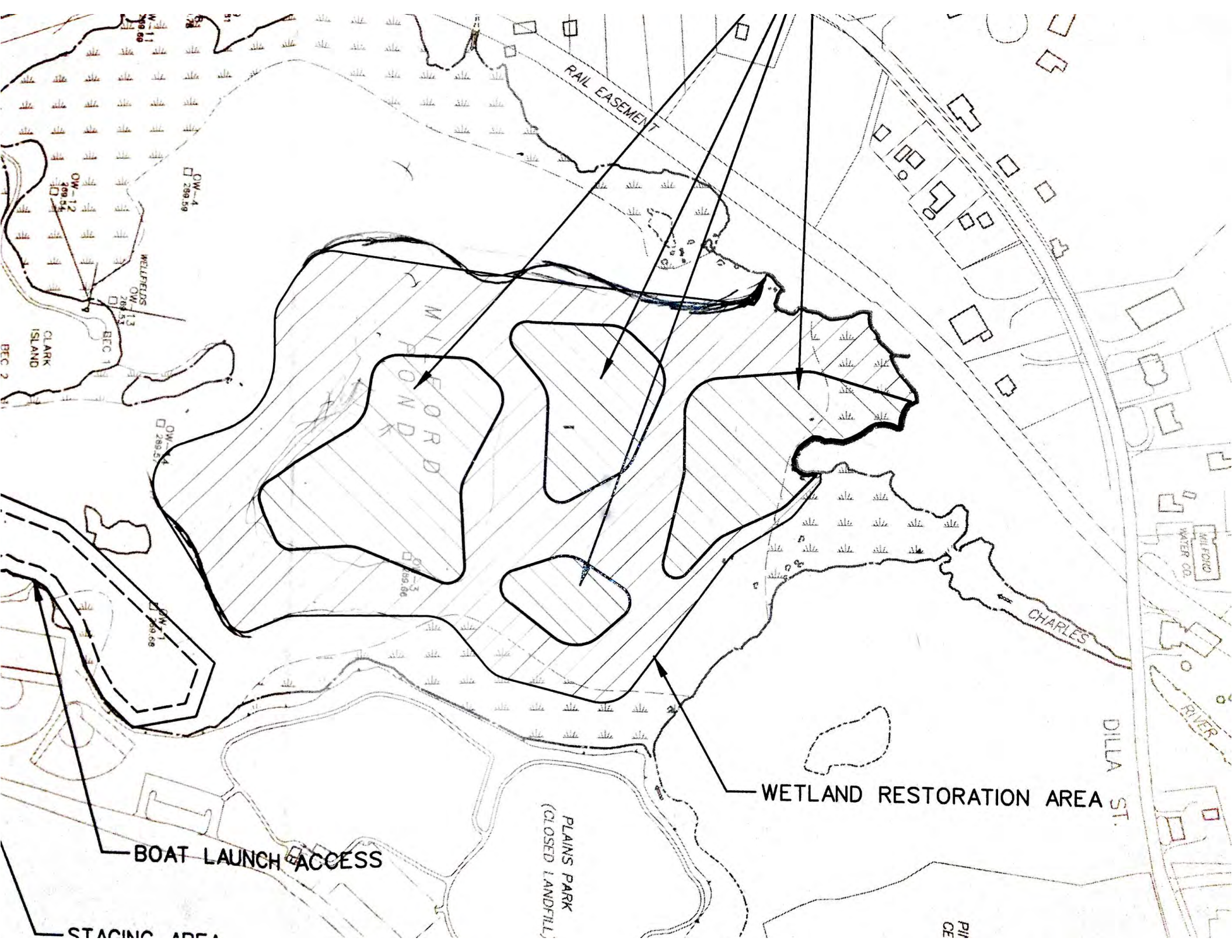
BOTTOM ELEV. 256.0

POND DREDGED AREA
APPROX. 16.7 AC

FISH NESTING HABITAT AREA

STAGING AREA

BOAT LAUNCH ACCESS



RAIL EASEMENT

MIFORD POND

CHARLES RIVER

WETLAND RESTORATION AREA

BOAT LAUNCH ACCESS

PLAINS PARK (CLOSED LANDFILL)

DILLA ST.

OW-4
288.59

OW-12
488.54

WELPFEDS
OW-13
288.53

OW-4
288.57

OW-1
289.66

OW-3
488.66

P/I
CE

STAGING AREA

WATER CO.

Appendix 2

**Email from Chris Buelow, NHESP, to Town of Milford, Vonnie Reis, 12/02/13,
re: Potential Assessment Methodology**

From: Buelow, Chris (FWE) [mailto:chris.buelow@state.ma.us] Sent: Monday, December 02, 2013 1:40 PM
To: Vonnie Reis
Cc: Burnett, Adam W NAE; Marold, Misty-Anne (FWE)
Subject: RE: Milford Pond

Hi Vonnie,

I'm sorry to hear that Lycott will not be able perform the habitat assessment. The good news is that yes, the work can be performed over the winter, provided that snow depth is reasonable (~<3"). I've attached NHESP's "Wildlife Assessment Requirements", which is a good outline. Specifically for this project, I'm actually looking for a pretty simple product: something that will capture a good baseline snapshot of current conditions. A few key points that I had talked with Joy about:

- A map of wetland vegetation cover types/natural communities. The vegetation descriptions can be somewhat coarse and will not require sampling plots. Instead, we really just need a document that can provide someone who has never been to the site the ability to understand what the baseline conditions were, what marsh types were present and where they were, and a good description of their species composition and structure. A map with corresponding text would fine, especially if accompanied by good photo representations of each delineated unit of vegetation.
- A reference to water levels in relation to the marsh, e.g. are the marshes on floating mats or emergent, is there interstitial water within each marsh unit, etc. Again, this can be qualitative and should be just a part of the vegetation descriptions above.
- Invasive species. Mapped and assessed (level of infestation and threat).
- Recommendations for avoiding/mitigating damage to existing habitat or disruption to marshbirds during the actual work.

The last two are somewhat specialized, and as I told Joy, are not necessary if they are the only skills lacking by a contractor. NHESP can make those assessments/recommendations provided that we have a good vegetation report to work from. Otherwise this is very standard work, and in fact is less rigorous than many baseline habitat assessments. I wouldn't expect this to take much more than two days in the field.

Does this help? Feel free to ask if you need any clarification.

Thanks - Chris

Appendix 3

Habitat Photographs



Photo A: A sparse area of Palustrine Emergent Marsh (PEM) habitat (W2) located near the Public Pool.

View facing: Northwest



Photo B: Isolated islands of PEM habitat (W28) in a southeastern bay of Milford Pond near the Dam.

View facing: Northeast



Photo C: Japanese Knotweed stand along eastern side of Bike Path adjacent to the largest PEM wetland area (W5).

View facing: Northeast



Photo D: Japanese Knotweed stand along eastern side of Bike Path adjacent to the largest PEM wetland area (W5).

View facing: Southeast



Photo E: A cattail dominant PEM complex (W7) is located along the eastern side of the Bike Path and south of the Clark's Island access road

A stand of Phragmites (W8) is present in the northwest corner of the PEM.

View facing: North-Northeast



Photo F: View from access drive onto Clark's Island looking into PEM habitat (W5) and open water sections.

View facing: Southeast



Photo G: From access drive onto Clark's Island, a somewhat dense buttonbush dominant Palustrine Scrub/Shrub (PSS) habitat was observed.

View facing: Northwest



Photo H: From Clark's Island looking into the cattail dominant PEM habitat (W5).

View facing: Southwest



Photo I: A duck blind was observed at southeastern tip of Clark's Island. The expansive PEM habitat (W5) is located in the distance and to the right of the view area.

View facing: South



Photo J: A narrow band of PEM (W23) habitat was observed along the eastern shore of Clark's Island.

View facing: North



Photo K: A cattail dominant PEM (W9) is located adjacent to the north side of Clark's Island.

View facing: West



Photo L: A buttonbush dominant PSS habitat (W10) is located northwest of Clark's Island and east of the Bike Path.

View facing: Northeast



Photo M: Cattail-dominant PEM habitat areas (W14, W15, and W16) are located in northern inlet (Charles River) bay of Milford Pond.

View facing: South



Photo N: A large Phragmites dominant PEM is located in the northeastern corner of Milford Pond (W18). Adjacent to this PEM are two cattail dominant PEM areas (W17 & W19).

View facing: West



Photo O: A PEM dominant with Japanese Knotweed (W21) was observed along the east side of Milford Pond, south of a PSS habitat area (W20) and north of Rosenfeld Park.

View facing: Northwest



Photo P: Isolated islands of PSS habitat (W22E & W22W) located north of the public Boat Ramp off Cedar St.

View facing: Southwest



Photo Q: A small cattail-dominant PEM (W24) was observed south of the parking area associated with the public boat ramp and south of Rosenfeld Park.

This area may be hydraulically connected to Milford Pond during periods of high flow

View facing: Southwest



Photo R: Isolated island of cattail-dominant PEM (W28) area located in the southeastern bay of Milford Pond and north of the Dam.

View facing: Southwest

Appendix 4

Limitations



NATURAL RESOURCE SURVEY AND ASSESSMENT LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) has prepared this report on behalf of, and for the exclusive use of the Town of Milford ("Client") for the stated purpose(s) and location(s) identified in the report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's risk, and without any liability to GZA.

Standard of Care

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the data gathered and observations made during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

Limits to Observations

4. Natural resource characteristics are inherently variable. Biological community composition and diversity can be affected by seasonal, annual or anthropogenic influences. In addition, soil conditions are reflective of subsurface geologic materials, the composition and distribution of which vary spatially.
5. The observations described in this report were made on the dates referenced and under the conditions stated therein. Conditions observed and reported by GZA reflect the conditions that could be reasonably observed based upon the visual observations of surface conditions and/or a limited observation of subsurface conditions at the specific time of observation. Such conditions are subject to environmental and circumstantial alteration and may not reflect conditions observable at another time.
6. The conclusions and recommendations contained in this report are based upon the data obtained from a limited number of surveys performed during the course of our work on the site, as described in the Report. There may be variations between these surveys and other past or future surveys due to inherent environmental and circumstantial variability.

Reliance on Information from Others

7. Preparation of this Report may have relied upon information made available by Federal, state and local authorities; and/or work products prepared by other professionals as specified in the report. Unless specifically stated, GZA did not attempt to independently verify the accuracy or completeness of that information.

Compliance with Regulations and Codes

8. GZA's services were performed to render an opinion on the presence and/or condition of natural resources as described in the Report. Standards used to identify or assess these resources as well as regulatory jurisdiction, if any, are stated in the Report. Standards for identification of jurisdictional resources and regulatory control over them may vary between governmental agencies at Federal, state and local levels and are subject to change over time which may affect the conclusions and findings of this report.

New Information

9. In the event that the Client or others authorized to use this report obtain information on environmental regulatory compliance issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this work, may modify the conclusions stated in this report.

Additional Services

10. GZA recommends that we be retained to provide further investigation, if necessary, which would allow GZA to (1) observe compliance with the concepts and recommendations contained herein; (2) evaluate whether the manner of implementation creates a potential new finding; and (3) evaluate whether the manner of implementation affects or changes the conditions on which our opinions were made.

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Appendix I

Invasive Species Survey, 2013

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**Invasive Aquatic Vegetation of
Milford Pond
Milford, Massachusetts**

Lycott Environmental, Inc. was contracted (Contract # 405-13) by the Town of Milford on October 9, 2013 to conduct a biological survey of invasive aquatic plant species in Milford Pond during 2013. The following sections detail the survey methods, results and additional data collected under this contract.

Methods

On October 10, 2013, Lycott performed an aquatic vegetation survey to assess the growth of invasive aquatic vegetation species in Milford Pond. During this survey, visual inspections and rake tosses were utilized to identify the invasive aquatic vegetation species present, as well as their associated distributions and relative abundances throughout the water body. Written observations and their accompanying locations were documented using a hand-held GPS unit. Following the survey, this information was inputted into a GIS program (ArcGIS 9.3.x) to produce a map depicting the extent and relative abundance of invasive aquatic vegetation species.

Cursory observations of emergent vegetation were also made and recorded during the survey. These observations and recent satellite images were used to estimate and map general distributions.

Results

It should be noted that, due to the late timing of the survey, most plants observed – both native and invasive – were compromised due to natural senescence. Many plants were partially decomposed, uprooted and floating at the surface. Low water levels (estimated at one and one-half feet below normal) may have contributed to losses in plant structure as well. Given these conditions, actual plant density is likely greater than reported; however, results presented herein are based on plants observed, regardless of life-stage.

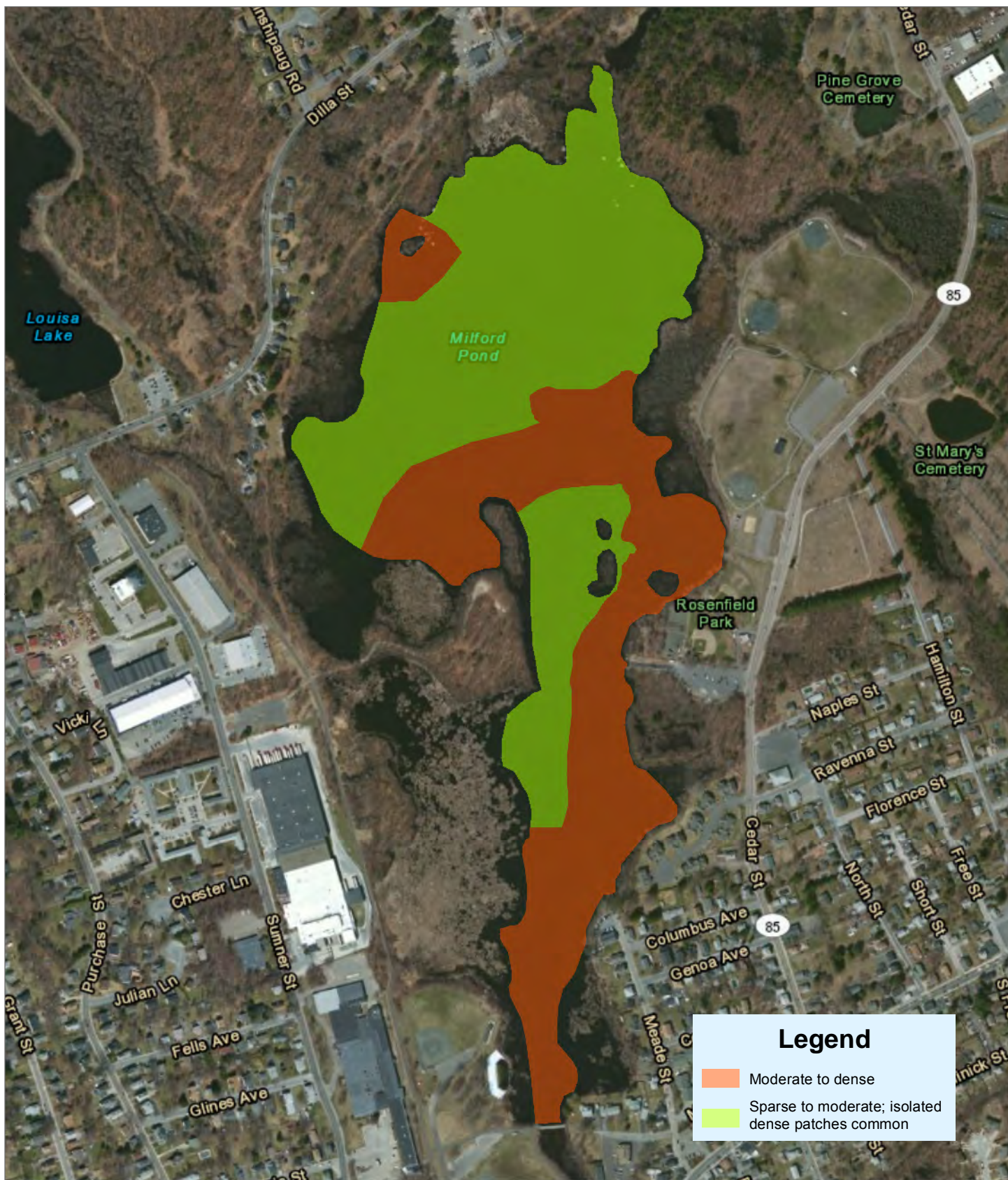
Results of the October 2013 survey indicate that a single invasive species; *Myriophyllum heterophyllum* (commonly referred to as Variable Milfoil), dominates the aquatic vegetation community of Milford Pond. As shown in the attached map, '*M. heterophyllum* Distribution and Density,' this species was observed throughout the water body in varying densities (sparse to dense) with dense beds common throughout. In areas with low water levels or large mats of filamentous algae, new, terrestrial growth of *M. heterophyllum* was observed.

Outside of the invasive aquatic vegetation survey, extensive surveys of the pond and surrounding wetlands were not conducted; however, general observations were recorded (see table below) along with images illustrating the pond's environs. Several *Typha*-dominated marshes were noted, as shown in the enclosed map, 'Distribution of Emergent and Floating-Leaf Vegetation.' This map also depicts the general locations of several invasive emergent and upland species.

Table 1: Vegetation observed in and around Milford Pond during the October 2013 survey

Scientific Name	Common Name	Type	Status	Notes
<i>Cephalanthus occidentalis</i>	Common Buttonbush	Emergent	Native	Common on shoreline and islands
<i>Decodon verticillatus</i>	False Loosestrife (Water-willow)	Emergent	Native	Common on wooded shoreline (eastern edge of Clark Island)
<i>Lythrum salicaria</i>	Purple Loosestrife	Emergent	Invasive	Common on shoreline and islands
<i>Pontederia cordata</i>	Pickerelweed	Emergent	Native	Common on shoreline and islands
<i>Sagittaria</i> sp.	Arrowhead	Emergent	Native	Common on shoreline and islands
<i>Brasenia schreberi</i>	Watershield	Floating-leaf	Native	Common (sparse to dense) throughout water body
<i>Nuphar variegata</i>	Yellow Water Lily	Floating-leaf	Native	Common (sparse to dense) throughout water body
<i>Nymphaea odorata</i>	White Water Lily	Floating-leaf	Native	Common (sparse to dense) throughout water body
<i>Ceratophyllum demersum</i>	Coontail	Submerged	Native	Isolated occurrences
<i>Elodea</i> sp.	Waterweed species	Submerged	Native	Isolated occurrences
<i>Isoetes</i> sp.	Quillwort species	Submerged	Native	Isolated occurrences
<i>Myriophyllum heterophyllum</i>	Variable Milfoil	Submerged	Invasive	Sparse to dense throughout water body
<i>Potamogeton amplifolius</i>	Big-Leaf Pondweed	Submerged	Native	Isolated occurrences
<i>Potamogeton epihydrus</i>	Ribbon-Leaf Pondweed	Submerged	Native	Isolated occurrences
<i>Utricularia</i> spp.	Bladderwort species	Submerged	Native	Isolated occurrences
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	Upland	Invasive	Isolated occurrences
<i>Fallopia japonica</i>	Japanese Knotweed	Upland	Invasive	Isolated occurrences

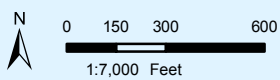
M. heterophyllum Distribution and Density



**Milford Pond
Milford, MA**



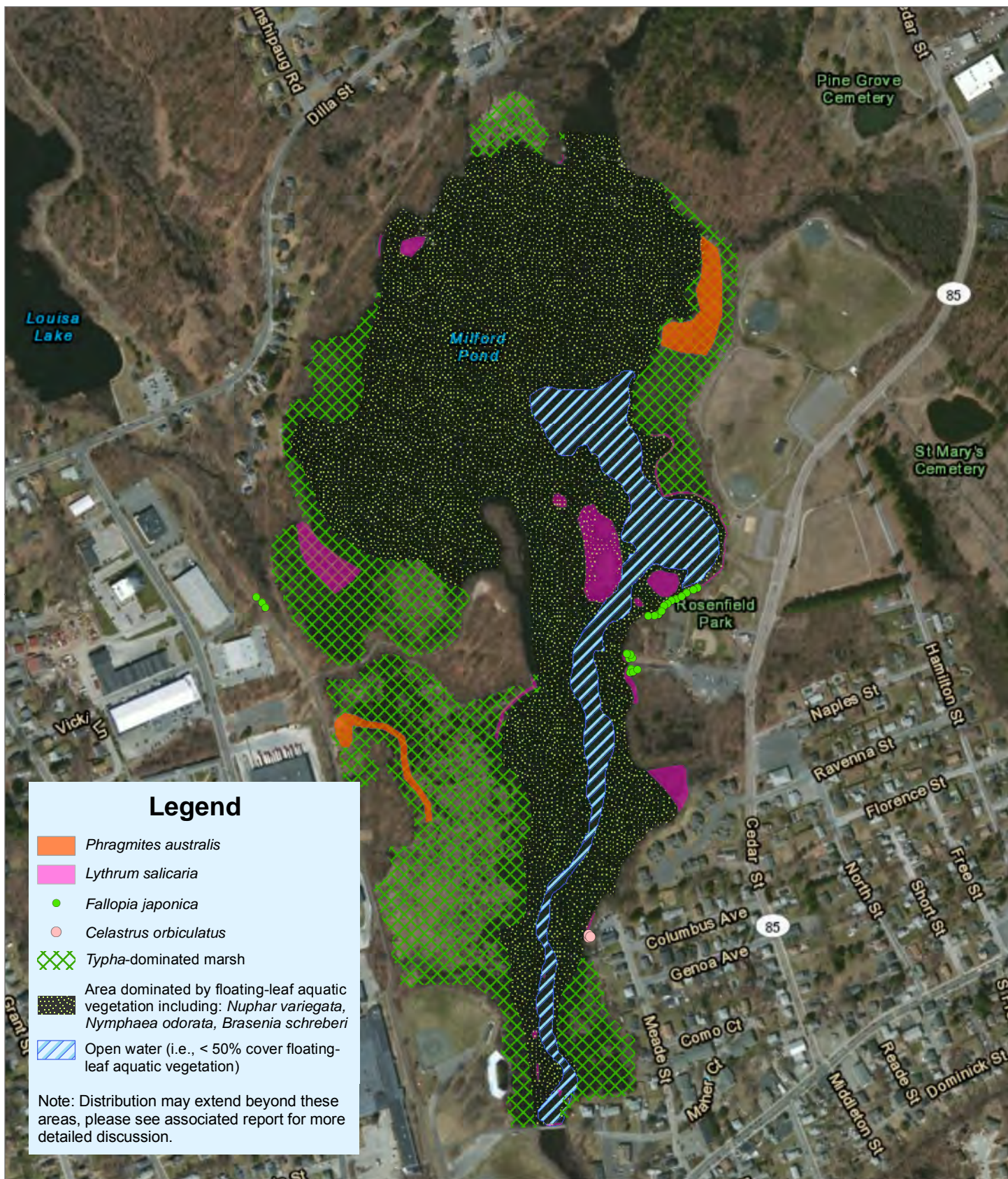
Data Collected: 10/10/2013
Map Prepared: 12/10/2013
For Town of Milford; 405-13
Basemap © 2013 Esri



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508-885-0101 • info@lycott.com

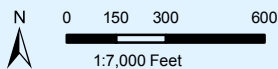
Distribution of Emergent and Floating-Leaf Vegetation



**Milford Pond
Milford, MA**



Data Collected: 10/10/2013
Map Prepared: 12/10/2013
For Town of Milford; 405-13
Basemap © 2013 Esri



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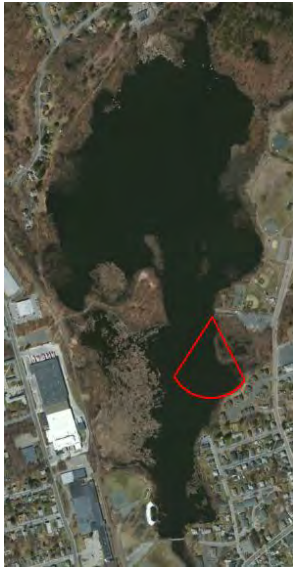


Image 1: *Lythrum salicaria*



Image 2: *Fallopia japonica*

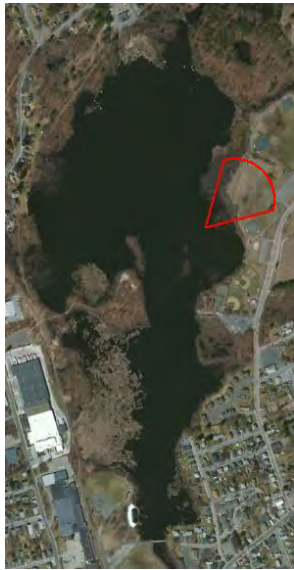


Image 3: *Myriophyllum heterophyllum* 'topped out' in foreground



Image 4: *Nymphaea odorata*, *Decodon verticillatus* on shoreline

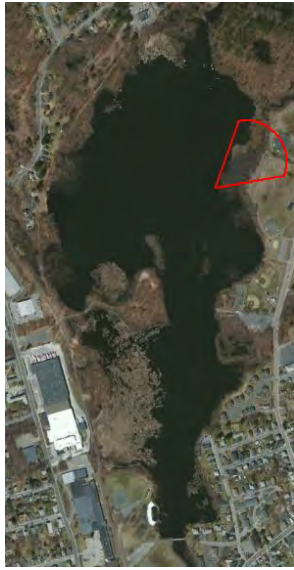


Image 5



Image 6: *Typha*-dominated wetland



Image 7: *Cephalanthus occidentalis*



Image 8



Image 9



Image 10



Image 11

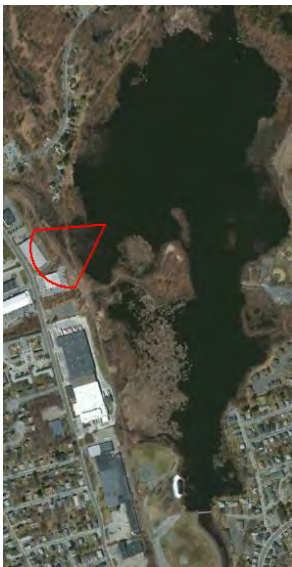


Image 12



Image 13



Image 14: *Lythrum salicaria*



Image 15



Image 16: *Typha*-dominated wetland



Image 17



Image 18



Image 19



Image 20: *Typha*-dominated wetland



Image 21: *Typha*-dominated wetland



Image 22: *Typha*-dominated wetland



Image 23: *Typha*-dominated wetland

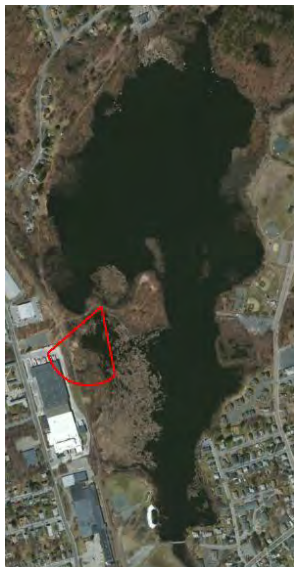


Image 24: *Typha*-dominated wetland

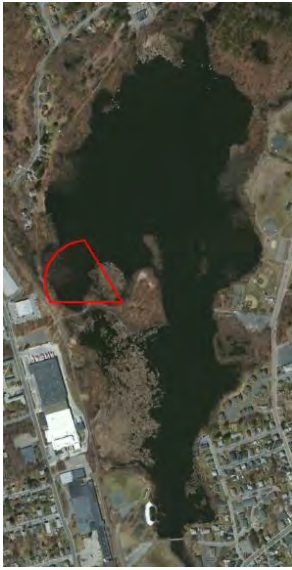


Image 25: *Typha*-dominated wetland

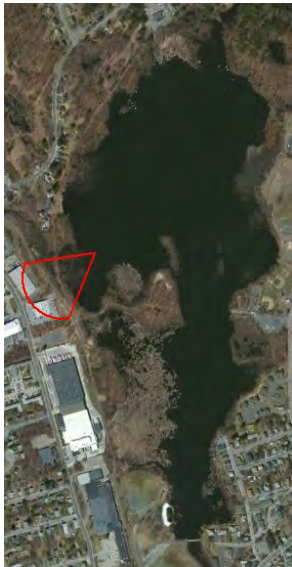


Image 26



Image 27



Image 28: *Celastrus orbiculatus*



Image 29: *Typha*-dominated wetland

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Appendix J

Public Notice

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US Army Corps
of Engineers®
New England District

Engineering/Planning
696 Virginia Road
Concord, MA 01742

PUBLIC NOTICE

Date: January 17, 2014
Comment Period Ends: February 21, 2014
In Reply, Refer to: Adam Burnett
Or by e-mail: Adam.W.Burnett@usace.army.mil

30-DAY PUBLIC NOTICE MILFORD POND MILFORD, MASSACHUSETTS AQUATIC ECOSYSTEM RESTORATION PROJECT

Interested parties are hereby notified that the U.S. Army Corps of Engineers, New England District plans an aquatic ecosystem restoration project to restore Milford Pond in Milford, Massachusetts. This work is being conducted under Section 206 of the Water Resources Development Act of 1996, P.L. 104-303, as amended. Section 206 provides programmatic authority for the U.S. Army Corps of Engineers (USACE) to carry out aquatic ecosystem restoration projects that improve environmental quality, are in the public interest, and are cost effective. The town of Milford, Massachusetts is the non-Federal sponsor of this project. Attachment 1 includes a list of pertinent laws, regulations, and directives considered in project planning. Figures 1 and 2 include maps of the project area and associated project activities.

Project Description: Milford Pond is a 120-acre pond located in the center of the town of Milford, Massachusetts (Figure 1). The pond is formed by the impoundment of the Charles River, with inflow from Huckleberry Brook, Louisa Lake, an intermittent stream, and 17 stormwater outfalls. The pond outlet water flows over a small masonry dam and continues as the main channel of the Charles River, which flows through the town of Milford and ultimately to Boston Harbor. The overall watershed is 5,440 acres (8.5 square miles) in size, and it extends beyond the municipal boundaries of the town of Milford into the towns of Hopkinton and Holliston. Milford Pond was historically a cedar swamp located in the headwaters of the Charles River. In the early 1900s, the cedar swamp was converted into a pond through the cutting of large cedar trees and construction of an impoundment across the Charles River approximately 100 feet downstream of Main Street. The present dam, reconstructed around 1938, consists of earthen embankments with a cast-in-place concrete primary spillway. This intermediate-sized dam, presently owned by the town of Milford, is approximately 200 feet in length, with a structural height of approximately eight feet.

Existing Ecological Problems: Since the late 1970s, Milford Pond has shown a decline in water quality, the proliferation of aquatic weed species, and a significant decrease in aquatic habitat value. Today, Milford Pond is shallow, with an average depth of less than two feet. Submerged and floating-leafed aquatic plants occupy most of the pond area. Emergent wetland occurs along the perimeter of Milford Pond, including a 400-foot wide band along the western shoreline south of Clark Island. In its current state, Milford Pond provides wildlife habitat for a variety of aquatic organisms living in emergent wetland and shallow pond habitats. However, the fishery habitat value of Milford Pond is greatly reduced by the shallow depths, dense weeds and the low dissolved oxygen in the water resulting from decaying aquatic vegetation. In time, wetland successional processes will result in the gradual filling of Milford Pond and its conversion to an emergent wetland community. This succession will result in further decreased areas of open water habitat, and continued loss of fish habitat. In addition, the gradual succession of Milford Pond will impact the habitat for four State-listed endangered and threatened bird species: common moorhen (*Gallinula chloropus*), least bittern (*Ixobrychus exilis*), pied-billed grebe (*Podilymbus podiceps*), and king rail (*Rallus elegans*) (Massachusetts Natural Heritage and Endangered Species Program). The pied-billed grebe, specifically, requires open water for feeding, as well as emergent marsh for nesting.

Proposed Restoration Plan: The proposed plan involves dredging approximately 200,000 cubic yards of organic rich sediment from the southern portion of the pond to a depth of 12 feet (Figure 2) and using the dredged sediment to restore emergent and forested wetlands in the northern portion of the impounded area. Dredging is proposed to extend from the outlet dam northerly, to a point slightly north of Clark Island encompassing an area of approximately 20 acres. The existing emergent vegetation areas along the westerly boundary of the dredge limits are proposed to remain unaltered except for the area immediately surrounding the Milford town swimming pool in the southeasterly corner of the pond. The proposed project creates diversity among open water, aquatic weed beds, floating vegetated islands, and emergent, shrub, and forested wetlands. The plan also avoids impacts to the Milford town water supply (Clark Island Well Fields) and critical habitat for Massachusetts-state-listed bird species that inhabit the pond and surrounding wetlands. Dredging will remove a portion of the accumulated, nutrient-rich sediments in the open-water area, thereby inhibiting excessive plant growth. The wetland restoration portion of the project will help to address phosphorous-related water quality problems in Milford Pond, in addition to enhancing fish and wildlife value.

In the proposed plan, sediments will be removed from the southern portion of the pond using a hydraulic pipeline dredge. The dredged sediment slurry will be pumped to the northern end of the pond, where a sediment retaining structure will be placed along the perimeter of the wetland restoration area to retain the dredged sediments. Dredged sediment will be pumped into the area behind the sediment retaining structure, allowing the sediment to accumulate to the height of the surrounding marsh. The area will hold approximately 200,000 cubic yards of material dredged from the southern portion of the pond. The final surface of the filled area is anticipated to encompass approximately 25 acres and will be shaped and revegetated to support a combination of emergent, shrub, and forested wetland habitats. In addition, portions of the newly constructed wetland area will be constructed with appropriate hydrology and soils for the eventual reestablishment of Atlantic white cedar (*Chamaecyparis thyoides*) to Milford Pond, a species that was historically present prior to the construction of the dam at the outflow.

A buffer zone will remain between the existing cattail-dominated wetland habitat and the proposed dredging limits. In addition, provisions to prevent the disturbance of the floating vegetated islands will be incorporated into the Plans and Specifications. The proposed work will be sequenced to avoid potential impacts during the breeding and pre-migration periods for the Massachusetts-state-listed species (April 1 through September 30).

Alternatives: Seven alternatives were analyzed in detail, including the No-Action alternative. The analysis included three alternatives for deepening either the entire 120-acre pond, or portions of it; involving hydraulic dredging of either 45 acres or 21 acres, to restore habitat for fish and other aquatic species and to improve the waterfowl habitat associated with the pond and adjoining wetlands. All of these dredging alternatives (with the exception of the proposed plan) involved pumping the dredged material to a disposal area north of Dilla Street. It has since been determined that using this disposal area north of Dilla Street would no longer be feasible. In addition, the use of the sediment for wetlands creation is expected to provide better overall habitat benefit for the pond, particularly because it creates the potential for the restoration of Atlantic white cedar to the pond. Therefore, those alternatives are not preferred, and the plan of using the dredged material to restore emergent wetlands is proposed.

Additional Information: Additional information may be obtained from the Engineering/Planning Division of the U.S. Army Corps of Engineers, Mr. Adam Burnett, the Project Manager, and/or Mr. Kenneth Levitt, of the Environmental Resources Section, at the return address shown. These individuals may also be reached by phone: for Mr. Burnett (978) 318-8547 or email at adam.w.burnett@usace.army.mil, and for Mr. Levitt at (978) 318-8114 or email at kenneth.m.levitt@usace.army.mil. 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. Environmental Protection Agency
U.S. Fish and Wildlife Service

State:

Massachusetts Department of Environmental Protection (DEP)
Massachusetts Division of Fisheries and Wildlife, Natural Heritage & Endangered Species Program
Massachusetts Historical Commission

Local:

Town of Milford, Massachusetts
Milford Conservation Commission

Environmental Consequences: A revised Environmental Assessment (EA) is being prepared for this restoration project, and comments received in response to this Notice will be addressed in this document. Upon completion, the Environmental Assessment will be available at the Milford Town Hall at 52 Main St., Milford, MA, and at the Milford Town Library, 80 Spruce Street, Milford, MA or by contacting the U.S. Army Corps of Engineers, as noted above. A preliminary determination has been made that an Environmental Impact

Statement for the proposed project is not required under the provisions of the National Environmental Policy Act of 1969.

A completed EA, FONSI, and public notice for this project were originally issued in 2004 and 2005, when the proposed plan was to hydraulically dredge approximately 45 acres of the pond and pump the material to an upland disposal area north of Dilla Street. However, the use of the disposal area north of Dilla Street is no longer feasible. Therefore, the EA and FONSI are being revised to address the environmental consequences of the new plan pursuant to the National Environmental Policy Act of 1969 (NEPA).

Purpose and Need for Work: The ecosystem of Milford Pond has been degraded from excess sedimentation and nutrient loading which has been deposited in the pond via runoff from the urban and wooded watershed. These have created eutrophic conditions and impaired water quality. Areas of extremely dense emergent and floating leafed vegetation have continued to rapidly convert open water areas to choked aquatic habitat. Effects on the pond's ecosystem include degradation of fish habitat and a proliferation of cycles of aquatic vegetation growth and organic material buildup. The purpose of this project is as follows:

- Restore the open water aquatic ecosystem in the pond, while maintaining the existing vegetated wetlands
- Create additional emergent wetlands with the potential to restore the historic Atlantic white cedar swamp habitat
- Provide habitat for fisheries and water birds
- Increase recreational opportunities

Historic and Archaeological Resources: The proposed restoration project is not expected to impact any structures or sites of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966, as amended. The Massachusetts Historical Commission has concluded that the project as presently proposed is unlikely to affect any significant historic or archaeological resources.

Endangered Species: The U.S. Fish and Wildlife Service has not identified any Federally listed threatened and endangered species in the project area. The Massachusetts Natural Heritage and Endangered Species Program has identified the occurrence of four State-listed bird species in the vicinity of the project area. These species include the pied-billed grebe (*Podilymbus podiceps*) (Endangered), least bittern (*Ixobrychus exilis*) (Endangered), king rail (*Rallus elegans*) (Threatened), and the common moorhen (*Gallinula chloropus*) (Special Concern). These State-listed species all nest in freshwater marshes with emergent vegetation communities, including cattails. Habitat requirements for all four of the identified State-listed species include large contiguous cattail-dominant emergent marsh. Suitable habitat was found to be present around much of western littoral zones of the pond. This 41.5± acre habitat will be preserved by the proposed dredging program, except for a small, 2-acre area near the municipal swimming pool at the southern end of the pond, near the dam. In this area, the Town swimming pool and baseball field directly border the western shoreline and the eastern shoreline is composed of residential development with landscaped lawns to the waters edge. The human disturbance associated with these high use areas during the breeding seasons of these very secretive and elusive birds is likely to discourage any potential nesting. Therefore, no adverse impacts to State-listed birds are anticipated as a result from the conversion of this small portion of emergent marsh to open water habitats. The newly created wetland is

expected to create additional nesting habitat for these species. Therefore, the proposed action is not expected to adversely affect any of the above listed threatened or endangered species.

Federal Permit Requirements: A Water Quality Certificate will be acquired from the Massachusetts DEP pursuant to Section 401 of the Clean Water Act. A Section 404(b)(1) evaluation, pursuant to the Clean Water Act, will be provided as an attachment to the Environmental Assessment.

Comments: Any person who has an interest that may be affected by the proposed 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 the Engineers, New England District, 696 Virginia Road, Concord, Massachusetts, 01742-2751, Attn: Engineering/Planning Division, within 30 days of this notice.

17 January 2014
Date

William J. Scully, P.E. Deputy District Engineer

Charles P. Samaris
Colonel, Corps of Engineers
District Engineer

Attachments

Attachment-1

PERTINENT LAWS, REGULATIONS AND DIRECTIVES

National Environmental Policy Act of 1969 (42U.S.C. 4321-4347)

Fish and Wildlife Coordination Act (16U.S.C. 661-666c)

National Historic Preservation Act of 1966 (16 U.S.C. 470)

Endangered Species Act of 1973 as amended (16 U.S.C. 668aa-668cc)

Clean Water Act, as amended (33 U.S.C. 1251 et. seq.)

Clean Air Act, as amended (42 U.S.C. 1221 et. seq.)

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

Land and Water Conservation Fund Act of 1965, as amended (16 U.S.C. 4601-4 et. seq.)

Executive Order 11988, Floodplain Management, 24 May 1977

Executive Order 1190, Protection of Wetlands, 24 May 1977

Executive Order 11593, Protection and Enhancement of the Cultural Environment

Fish and Wildlife Act of 1956 (16 U.S.C. 472a, et. seq.)

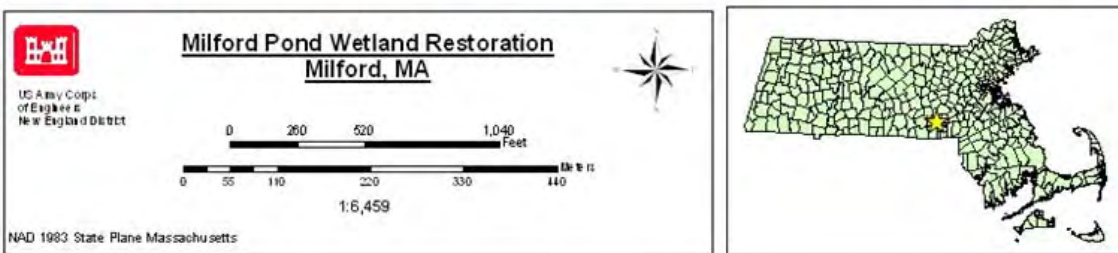


Figure 1. Milford Pond and Delineated Areas being considered for Dredging and Restoration.

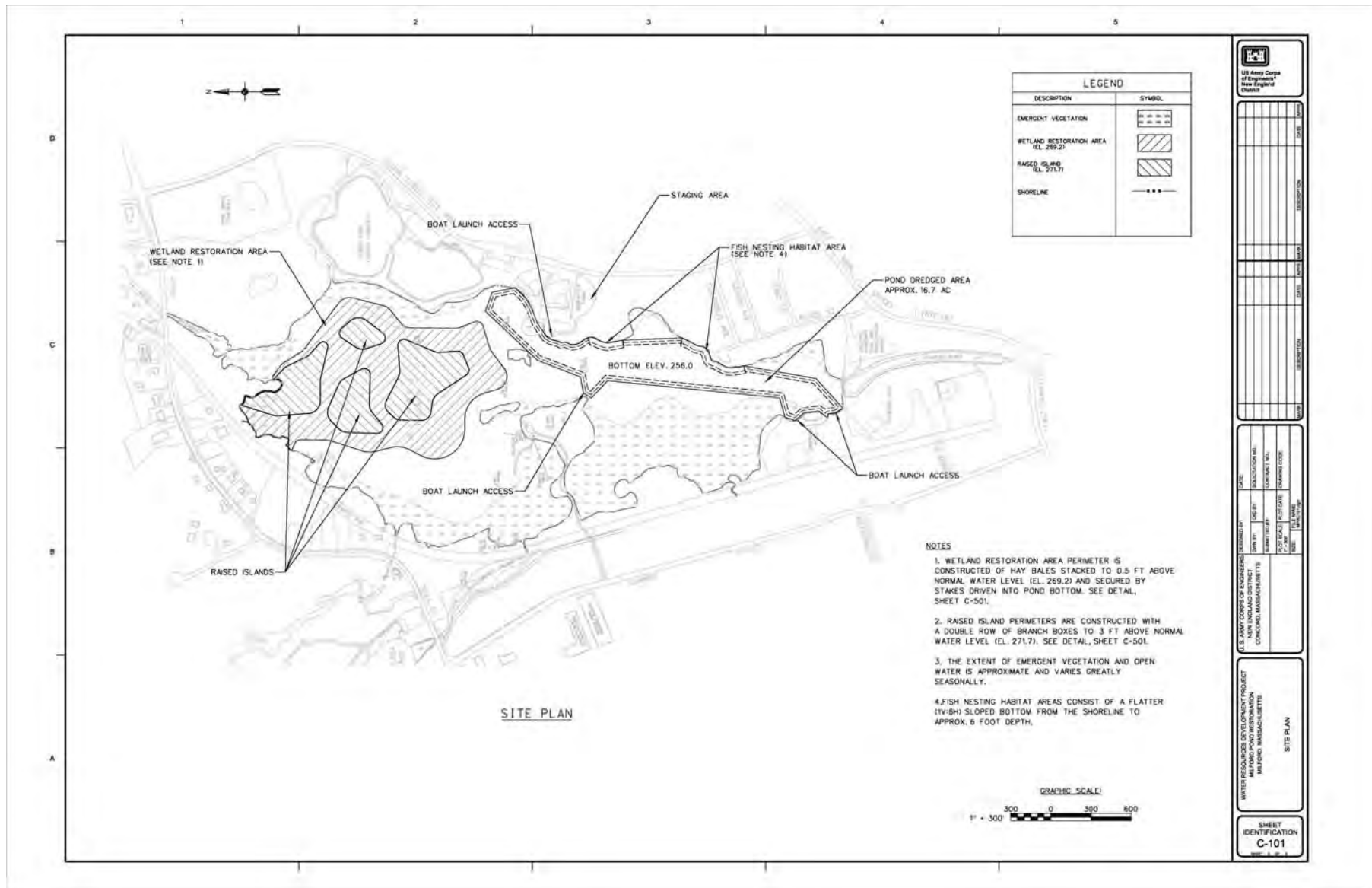


Figure 2. Proposed Dredging and Wetland Restoration Areas for Milford Pond.

Appendix K

Clean Air Act Record of Non-Applicability (RONA)

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RECORD OF NON-APPLICABILITY (RONA)

Emissions Calculations for:

Milford Pond Habitat Restoration Project
Milford Massachusetts

GENERAL CONFORMITY - RECORD OF NON-APPLICABILITY

Project/Action Name: *Milford Pond Habitat Restoration Project,
Milford Massachusetts*

**Project/Action Point of
Contact:** *Michael Tuttle, Study Manager
phone: 978-318-8677*

General Conformity under the Clean Air Act, Section 176 has been evaluated for the project described above according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this project/action because:

Total direct and indirect emission from this project/action are estimated at less than 100 tons for Ozone, and are below the conformity threshold value established at 40 CFR 93.153(b) of 100 tons/year of Ozone;

AND

The project/action is not considered regionally significant under 40 CFR 93.153(i).

Supporting documentation and emissions estimates are:

ATTACHED

APPEAR IN THE NEPA DOCUMENTATION (Section 6.8)

OTHER

SIGNED 

Jay Mackay, Chief Environmental Resources Section

General Conformity Review and Emission Inventory for the Milford Pond, Milford, Massachusetts Ecosystem Project															
(Worst Case Analysis)															
1	2	3	4	5	6	7	8	9	10	11					
Project Emission Sources and Estimated Power							NOx Emission Estimates		VOC Emission Estimates						
							NOx	NOx	VOC	VOC					
							EF	Emissions	EF	Emissions					
Equipment/Engine Category	# of Engines	hp	LF	hrs/day	Days of Operation	hp-hr	(g/hp-hr)	(tons)	(g/hp-hr)	(tons)					
Hydraulic Pipeline Dredge, 1460 HP	1	1460	1.00	12	280	4,905,600	9.200	49.75	1.300	7.03					
Generator, 370 HP	1	370	1.00	12	280	1,243,200	9.200	12.61	1.300	1.78					
Derrick Barge, 150 HP	1	150	1.00	12	280	504,000	9.200	5.11	1.300	0.72					
Work/Survey Boat, 140 HP	1	140	1.00	12	75	126,000	9.200	1.28	1.300	0.18					
Grader, 140 HP	1	140	1.00	12	35	58,800	9.200	0.60	1.300	0.08					
Weed Harvester, 75 HP	1	75	1.00	12	35	31,500	9.200	0.32	1.300	0.05					
Truck, 330 HP	1	330	1.00	12	60	237,600	9.200	2.41	1.300	0.34					
Excavator, 150 HP	1	150	1.00	12	40	72,000	9.200	0.73	1.300	0.10					
Dozer, 440 HP	1	440	1.00	12	280	1,478,400	9.200	14.99	1.300	2.12					
Total Emissions							NOx Total	87.79	VOC Total	12.41					
Horsepower Hours															
hp-hr = # of engines*hp*LF*hrs/day*days of operation															
Load Factors															
Load Factor (LF) represents the average percentage of rated horsepower used during a source's operational profile. For this worst case estimate, LF is held at 1 for all equipment. Typical is 0.4 to 0.6															
Emission Factors															
NOx Emissions Factor for Off-Road Construction Equipment is 9.20 g/hp-hr															
VOC Emissions Factor for Off-Road Construction Equipment is 1.30 g/hp-hr															
Emissions (g) = Power Demand (hp-hr) * Emission Factor (g/hp-hr)															
Emissions (tons) = Emissions (g) * (1 ton/907200 g)															
Note: Duration of project is 22 months. Calculations are broken down by construction season, and indicate total estimated emissions per construction year.															

Actual Work Days of Construction

Assumptions:

Project construction period is 22 months. Over 2 1/2 construction seasons
Project construction occurs 7 days per week.
There are 10 holidays in a calendar year.
There are 30 weather days (no work) in a year.

Actual work days = construction duration (days) - weekend days off - holidays off - weather days off.

Specify Duration	Calculated Weekend days off	Specify Holidays	Specify Weather days
660	0	0	0

Actual work days = 660 Over a period of 2.5 construction seasons, therefore broken down to 280 days/season

Equipment Horsepower List

Air Compr. 250 CFM 100 PSI	1	80	
Air Compr. 375 CFM 100 PSI	1	115	
Air Compr. 375 CFM 100 PSI	1	115	
Asph Sealcoater 200 Gal 108" W	1	20	
Compactor Rammer 11"x13" Shoe	1	4	
Conc. Paver 28' Wide Slip Form	1	325	
Conc. Vibrator 2.50D EL HI-FREQ	1	2	
Crane Hyd TRK MTD 90T/114' Boom	1	192	
Crane, Hyd S/P RT 4WD 20T/70' Boom	1	105	
Crew/Survey Workboat - Auxiliary Engine	1	40	
Crew/Survey Workboat - Prime Engine	1	100	
Derrick Barge - Auxiliary Engine	2	25	
Derrick Barge - Prime Engine	2	150	
Dewatering Pump 12" Diesel	1	32	
Dozer, Crawler	1	440	
Dragline	1	180	
Drill Auger 6" Dia 25' Depth	1	164	
Electric Generator - Prime Engine	1	370	
Floating Booster Pump - Auxiliary Engine	2	150	
Floating Booster Pump - Pump Engine	2	2000	
Grader Motor Artic Cat 12-H	1	140	
Grader Motor Artic Cat 14-H	1	215	
Hyd Excavator	1	150	
Hydraulic Pipeline Dredge - Dredge Pump	1	1460	
Hydraulic Pipeline Dredge - Prime Engine	1	2250	
LDR, BH, WH 0.80CY FE Bkt	1	60	
LDR, BH, WH 1.25CY FE Bkt	1	86	
LDR, BH, WH 1.38CY FE Bkt	1	89	
LDR, BH, WH 1.75CY FE Bkt	1	105	
Miscellaneous power equipment	1	518	Weed harvesting equip
Roller, VIB, DD, SP 12.0 T	1	300	
TRK, HWY 21,000GVW 4x2 2 Axel	1	175	
TRK, HWY 50,000GVW 6x4 3 Axel	1	330	
TRK, HWY 50,000GVW 6x4 3 Axel	1	330	
TRK, HWY 8,800GVW 4x4 3/4T-PKUP	1	137	
TRK,WTR,OF-HY, 5000 Gal W/CAT613-C	1	175	
TRK,WTR,OF-HY, 5000 Gal W/CAT613-C	1	175	
Tugboat - Auxiliary Engine	2	25	
Tugboat - Prime Engine	2	150	