McPHAIL ASSOCIATES, LLC

NOTICE OF INTENT FOR DISCHARGE UNDER MASSACHUSETTS DEWATERING GENERAL PERMIT MAG070000

F.A. DAY MIDDLE SCHOOL

NEWTON MASSACHUSETTS

to

U.S. Environmental Protection Agency,
Massachusetts Department of
Environmental Protection

August 16, 2012

Project No. 5318

GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERS
2269 Massachusetts Avenue
Cambridge, Massachusetts 02140
617 / 868-1420

McPHAIL ASSOCIATES, LLC

August 16, 2012

U.S Environmental Protection Agency
Office of Ecosytem Protection (OEP06-3)
5 Post Office Square
Boston, MA 02109-3912

Attention: Dewatering GP Processing

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street
Worcester, MA 01608

Attention: Mr. Robert D. Kubit

Reference: F.A. Day Middle School; 21 Minot Place, Newton, Massachusetts
Notice of Intent for Construction Dewatering Discharge Under Massachusetts General Discharge MAG070000

Ladies and Gentlemen:

On behalf of the City of Newton Public Buildings Department, McPhail Associates, LLC has prepared the attached Notice of Intent for coverage under the Massachusetts Dewatering General Permit MAG070000 (DGP) for the temporary discharge of groundwater into the Cheese Cake Brook, which is part of the Charles River Watershed, via a storm drain system during foundation construction activities at the above referenced site. Refer to **Figure 1** entitled Project Location Plan for the general site locus.

These services were performed and this permit application was prepared in accordance with our proposal dated January 18, 2012, and the subsequent authorization of HMFH Architects, Inc. who represents City of Newton Public Buildings Department. These services are subject to the limitations contained in **Attachment A**.

Fronting onto Minot Place to the southeast, the subject site is bounded by Walnut Street to the north, Linwood Park playing fields and pool to the west, and residential properties to the northeast and south. The subject site consists of a 373,413 square foot irregular-shaped parcel. Currently, the two to three-story F.A. Day Middle School occupies the southeastern portion of the subject site. Asphalt paved parking lots are located along the southeastern, eastern, northern and western portions of the subject site building and landscaped margins are present throughout the site.

The proposed construction will generally consist of a two-story addition along the southeastern side of the existing building, which is located in the area of an abandoned 10,000-gallon capacity No. 2 fuel oil underground storage tank (UST). The proposed addition will not have a basement. The 10,000-gallon capacity UST will be removed as part of the proposed construction. The approximate limits of the subject site are shown on the attached **Figure 2**, Subsurface Exploration plan.

It is anticipated that dewatering will be required for the removal of the UST and backfilling of tank grave. In addition, rainwater is anticipated to accumulate within the UST excavation after periods of heavy precipitation. It is anticipated that dewatering by means of strategically located sumps and trenches should suffice during UST removal and backfilling of tank grave.

On July, 27, 2012, a groundwater sample was obtained from monitoring well B-2(OW) and tested for the presence of compounds required under the EPA Dewatering General Permit (DGP) application, including pH, total chloride, and total recoverable metals (antimony, arsenic, cadmium, chromium, hexavalent chromium, copper, iron, mercury, nickel, silver, and zinc). The results of the analysis are summarized in **Attachment B and on Table 1**. The tested sample exhibited a pH level of 6.5 Standard Units (S.U.) which is within the DGP effluent parameters for discharge into a freshwater body. The results of the analysis indicated the presence of chloride at a concentration of 540 milligrams per liter (mg/l). In addition, the analysis detected arsenic, copper, iron, nickel, silver and zinc at concentrations of 0.7 micrograms per liter (ug/l), 2.0 ug/l, 340 ug/l, 2.5 ug/l, 0.4 ug/l, and 11.1 ug/l, respectively. The remaining metals were not detected at concentrations above the laboratory method detection limits which are set below the DGP detection limits. Concentrations of the tested compounds are below the minimum levels included in Appendix VIII of the DGP and effluent limits included in the Remedial General Permit (RGP) for fresh water. TSS reduction measures to the groundwater will be implemented prior to discharge to reduce the concentration TSS in the effluent.

Given that the proposed scope of construction includes excavation for the removal of the 10,000-gallon UST, a sedimentation tank, 20,000-gallons in capacity, will be incorporated into the discharge system in order to meet allowable discharge limits for total suspended solids (TSS) established by the DGP. It is estimated that continuous and intermittent groundwater discharge required during the UST removal and foundation construction will be on the order of 30 to 50 gallons per minute (gpm). This estimate of discharge does not include surface runoff which will be removed from the excavation during the limited duration of a rain storm and shortly thereafter. A schematic of the treatment system is shown on **Figure 3**.

A review of available plans at the City of Newton Engineering Department indicates that dedicated storm drains are located in the parking lot southeast of the school building. Specifically, a 42-inch diameter dedicated storm drain located beneath the school parking lot flows west connecting to a 30-inch storm drain located beneath Linwood Park. The 30-inch diameter storm drain crosses beneath Linwood Park from east to west and discharges into the Cheese Cake Brook, a Class B water body. The location of the relevant catch basins with relation to the site are indicated on **Figure 2**. The flow path of the discharge is shown in plans provided by the City of Newton Engineering Department which are included as **Figure 4**.

To document the effectiveness of the above treatment system, samples of the discharge water will be obtained and tested for the presence of TSS prior to the start of discharge into the storm drain system. Should the pre-start up testing indicate that the levels of TSS in the effluent from the settling tank exceed the limits established under the DGP, additional filtration of the effluent will be implemented prior to discharge.

In conclusion, it is our opinion that groundwater at the site is acceptable for discharge into the storm drain system to Cheese Cake Brook and ultimately into the Charles River under a Dewatering General Permit. Sampling and analysis of the effluent will be carried out in accordance with the terms of Dewatering General Permit.

McPHAIL ASSOCIATES, LLC

Supplemental information attached to this letter in support of the DGP includes the following;

- Notice of Intent
  Transmittal Form for Permit Application and Payment
- A summary of groundwater analysis (**Attachment B, Table 1**);
- A review of adjacent and nearby DEP-listed disposal sites (**Attachment C**);
- A review of Areas of Critical Concern and Endangered and Threatened Species (**Attachment D**); and
- A review of National Historic Places (**Attachment E**).

We trust that the above satisfies your present requirements. Should you have any questions or comments concerning the above, please do not hesitate to contact us.

Very truly yours,

McPHAIL ASSOCIATES, LLC

Amy M. Falconeiri

Ambrose J. Donovan, P.E., L.S.P.

Enclosures

F:\WP5\REPORTS\5318-DGP.wpd

AMF/ajd

cc: City of Newton Buildings Department (Mr. Alejandro Valcarce)
City of Newton Department of Public Works - Utilities Division (Ms. Maria Rose)

30735

MCPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140

Cambridge Trust Company 01
CAMBRIDGE, MASS.
53-59-113

EZShield™ Check Fraud Protection for Business

8/14/2012

PAY TO THE ORDER OF Commonwealth of Mass.

$ **385.00

Three Hundred Eighty-Five and 00/100********** DOLLARS

Commonwealth of Mass.

Security features. Details on back.

MEMO RGP Permit

AUTHORIZED SIGNATURE

⑈030735⑈ ⑆011300595⑆ ⑈5055280 1⑈

MCPHAIL ASSOCIATES, LLC

30735

Commonwealth of Mass.	RGP Permit - 5318.2.C3	8/14/2012	385.00

McPhail LLC	RGP Permit	385.00

II. Suggested Notice of Intent (NOI) Form

1. General facility information. Please provide the following information about the facility.

a) Name of facility:

F.A. Day Middle School

Mailing Address for the Facility:

21 Minot Place, Newton, MA 02460

b) Location Address of the Facility (if different from mailing address):

Facility Location

longitude: 71.12
latitude: 42.21

Type of Business:

School/Construction Site

Facility SIC codes:

c) Name of facility owner: City of Newton Public Buildings Dept. **Owner's email:** acabral@newtonma.gov

Owner's Tel #: 617-796-1600 **Owner's Fax #:**

Address of owner (if different from facility address)

52 Elliot Street
Newton, MA 02464

City of Newton Public Buildings Department

Owner is (check one): 1. Federal____ 2. State _____ 3.Tribal_____ 4. Private_____ 4. Other __✓__ (Describe)

Legal name of Operator, if not owner:

Operator Contact Name: Arthur Cabral

Operator Tel Number: **Fax Number:**

Operator's email:

Operator Address (if different from owner)

d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? _✓_

e) Check Yes or No for the following:

1. **Has a prior NPDES permit been granted for the discharge? Yes ____ No _✓_ If Yes, Permit Number:**
2. **Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes_____ No _✓_**
3. **Is the facility covered by an individual NPDES permit? Yes_____ No_✓_ If Yes, Permit Number ____**
4. **Is there a pending application on file with EPA for this discharge? Yes_____ No _✓_ If Yes, date of submittal:**

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) **Name of receiving water into which discharge will occur:** Cheese Cake Brook
State Water Quality Classification: B **Freshwater:** X **Marine Water:** _____

b) **Describe the discharge activities for which the owner/applicant is seeking coverage:**
1. **Construction dewatering of groundwater intrusion and/or storm water accumulation.** See Attached Report
2. **Short-term or long-term dewatering of foundation sumps.**
3. **Other.**

c) **Number of outfalls** 1

For each outfall:

d) **Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow** 24,000 **GPD**
Average Monthly Flow 480,000 **GPD**

e) **What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH** 8.3 **Min pH** 6.5

f) **Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit.** Groundwater, See attached Report

g) **What treatment does the wastewater receive prior to discharge?** Sedimentation settling tank, see attached report.

h) **Is the discharge continuous? Yes** _____ **No** ✓ **If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B)** B
If (P), number of days or months per year of the discharge _____ **and the specific months of discharge** _____;
If (I), number of days/year there is a discharge _____
Is the discharge temporary? Yes ✓ **No** _____
If yes, approximate start date of dewatering August 21, 2012 **approximate end date of dewatering** December 31, 2012

i) **Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long.** 71.12 **lat.** 42.21 ;
Outfall 2: long._____ **lat.**_____; **Outfall 3: long.**_____ **lat.**_____.

j) **If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations**_____ **cfs**
(See Appendix VII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

k) **Does the discharge occur in an ACEC? Yes _____ No ✓**
If yes, provide the name of the ACEC: _____

3. Contaminant Information

a) **Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for aquatic organism(s)).** See attached report

b) **Please report any known remediation activities or water-quality issues in the vicinity of the discharge.** See attached report

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendices III and IV. In addition, respond to the following questions.

a) **Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes____No ✓**
b) **Has any consultation with the federal services been completed ? Yes___ No ✓**
c) **Is consultation underway? Yes____ No ✓**
d) **What were the results of the consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service (check one): a "no jeopardy" opinion _____or written concurrence____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.**
e) **Which of the five eligibility criteria listed in Appendix 2, Section B (A,B,C,D,or E) have you met?** A
f) **Please attach a copy of the most current federal listing of endangered and threatened species, found at USF&W website.**

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

a) **Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes _____ No ✓**
b) **Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No ✓ If yes, attach the results of the consultation(s).**
c) **Which of the three National Historic Preservation Act requirements listed in Appendix 3, Section C (1,2 o3) have you met?** 1

6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or

dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e.stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: F.A. Day Middle School

Operator signature: Cynthia F Cabral

Title: Budget + Project Specialist

Date: August 20, 2012

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Enter your transmittal number → X252792 (Transmittal Number)

Your unique Transmittal Number can be accessed online: http://mass.gov/dep/service/online/trasmfrm.shtml

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

BRPWM-10	Dewatering General Permit
1. Permit Code: 7 or 8 character code from permit instructions	2. Name of Permit Category

Temporary Construction Dewatering
3. Type of Project or Activity

B. Applicant Information – Firm or Individual

City of Newton Public Buildings Department
1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. **Last Name** of Individual	3. **First Name** of Individual	4. MI

52 Elliot Street
5. Street Address

6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
Newton	MA	02464	617-796-1609	

11. Contact Person	12. e-mail address (optional)
Arthur Cabral	acabral@newtonma.gov

C. Facility, Site or Individual Requiring Approval

F.A. Day Middle School
1. Name of Facility, Site Or Individual

21 Minot Place
2. Street Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Newton	MA	02460		

8. DEP Facility Number (if Known)	9. Federal I.D. Number (if Known)	10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

McPhail Associates, LLC
1. Name of Firm Or Individual

2269 Massachusetts Avenue
2. Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Cambridge	MA	02140	617-868-1420	

8. Contact Person	9. LSP Number (BWSC Permits only)
Amy M. Falconeiri	

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☐ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

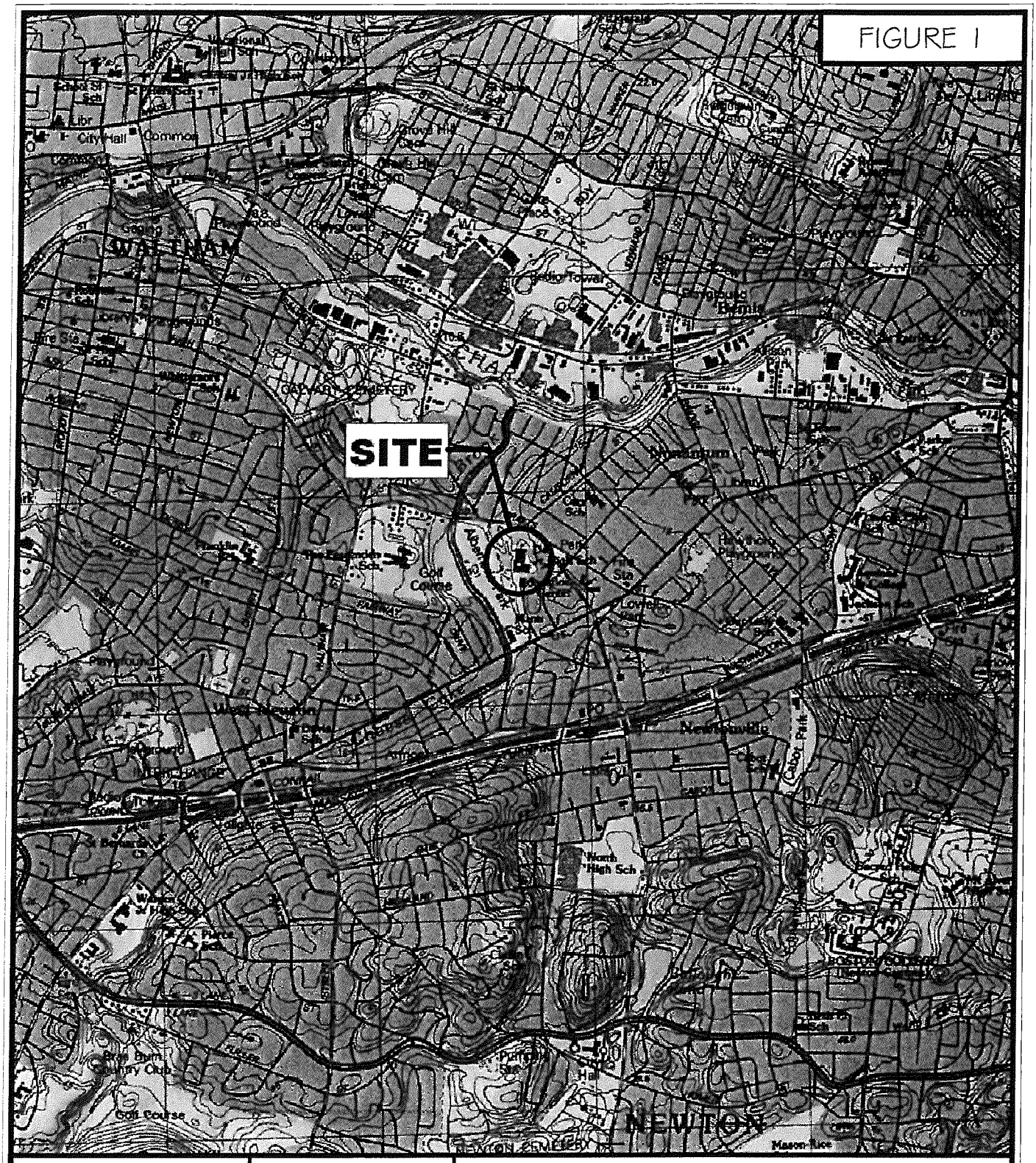
Reviewer:

Special Provisions:

1. ☐ **Fee** Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

Check Number	Dollar Amount	Date
30735	385.00	8/14/2012

FIGURE 1



McPHAIL ASSOCIATES, INC
Geotechnical Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)

N

SCALE 1:25,000

PROJECT LOCATION PLAN

FA DAY SCHOOL

NEWTON MASSACHUSETTS

FIGURE 2

LEGEND

— APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. ON OCTOBER 15, 2011 FOR McPHAIL ASSOCIATES, INC.

— APPROXIMATE LOCATION OF TEST PIT PERFORMED BY MATTUCHIO CONSTRUCTION ON OCTOBER 13, 2011 FOR McPHAIL ASSOCIATES, INC.

(OW) — DENOTES OBSERVATION WELL INSTALLED IN COMPLETED BOREHOLE

REFERENCE: THIS PLAN WAS PREPARED FROM A 30-SCALE DRAWING ENTITLED "EXISTING CONDITIONS PLAN" DATED OCTOBER 11, 2011 BY PRECISION LAND SURVEYING, INC.

NORTH

WALNUT STREET

MINOT PLACE

LAURI

N/F FREDERICK G. HOFFMAN & SHARON L. KELLEY 24621/304

N/F INDRA & SUSANTI SUGIANTO 47138/508

N/F DONALD A. & JILL L. EURICH 22169/297

N/F STEPHEN F. & NANCY CLAIRMONT 41474/571

N/F ISABEL C. HAGAMAN & CAROL H. SMITH 28095/380

N/F ELLEN CAHIR-MCFARLAND & PATRICK J. MCFARLAND 38164/374

N/F ELIZABETH STREIT SPENSIERI 42205/390

N/F MARIE C. & MARY C. KELLY 13405/23

N/F JUDITH V. SCHWEITZER 27784/265

N/F ROSEMARY E. & OTTAVIO MARIANO 23744/193

F.A. DAY MIDDLE SCHOOL

3 STORY BRICK

B-1 (OW)

B-2 (OW)

B-3 (OW)

TP-1

LOCATIONS OF DISCHARGE

APPROXIMATE LIMITS OF UNDERGROUND FUEL TANK

GRAPHIC SCALE

50 0 50 100

FILE NAME: H:\cad\JOBS\5318\RGP\5318-FO2.dwg

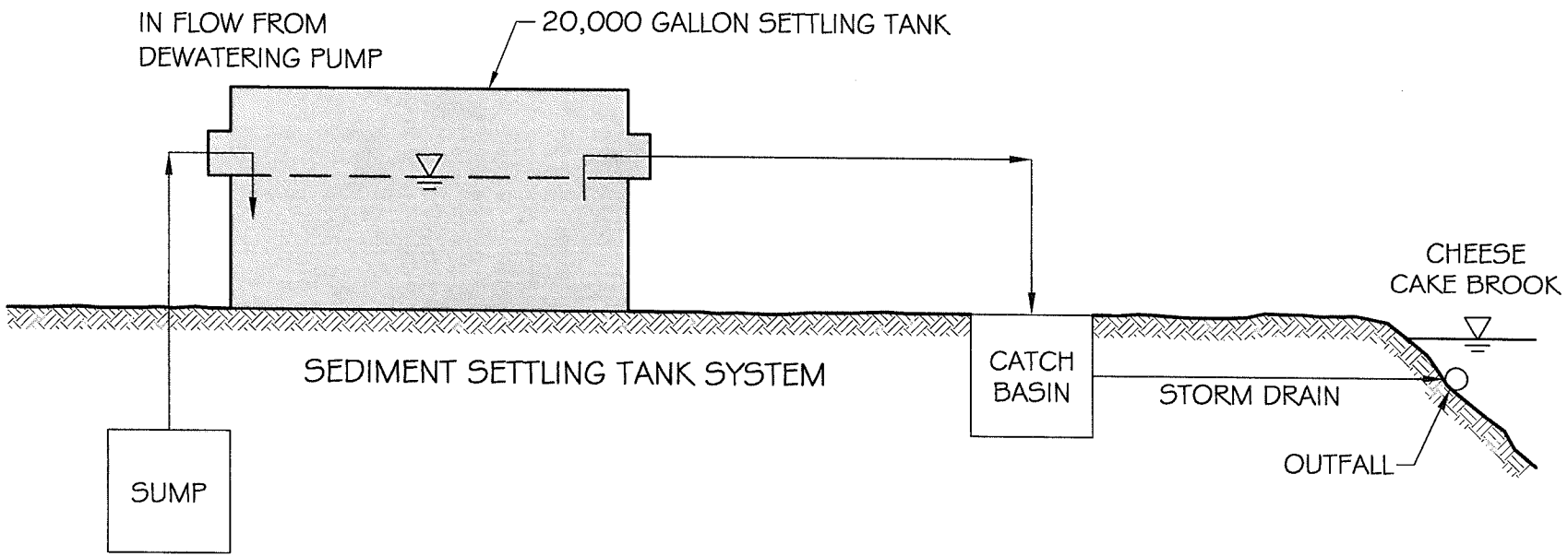
McPHAIL ASSOCIATES, LLC
Geotechnical and Geoenvironmental Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)

FA DAY SCHOOL
NEWTON MASSACHUSETTS
SITE PLAN
FOR
HMFH ARCHITECTS, INC.
BY
McPHAIL ASSOCIATES, LLC

Date: AUGUST 2012	Dwn: F.G.P.	Chkd: A.M.F.	Scale: 1" = 50'
Project No: 5318			

FILE NAME: H:\Acad\JOBS\5318\DGN\5318-F03.dwg

FIGURE 3



McPHAIL ASSOCIATES, LLC
Geotechnical and
Geoenvironmental Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)

FA DAY SCHOOL

NEWTON MASSACHUSETTS

SCHEMATIC OF WATER FLOW

FOR

HMFH ARCHITECTS, INC.

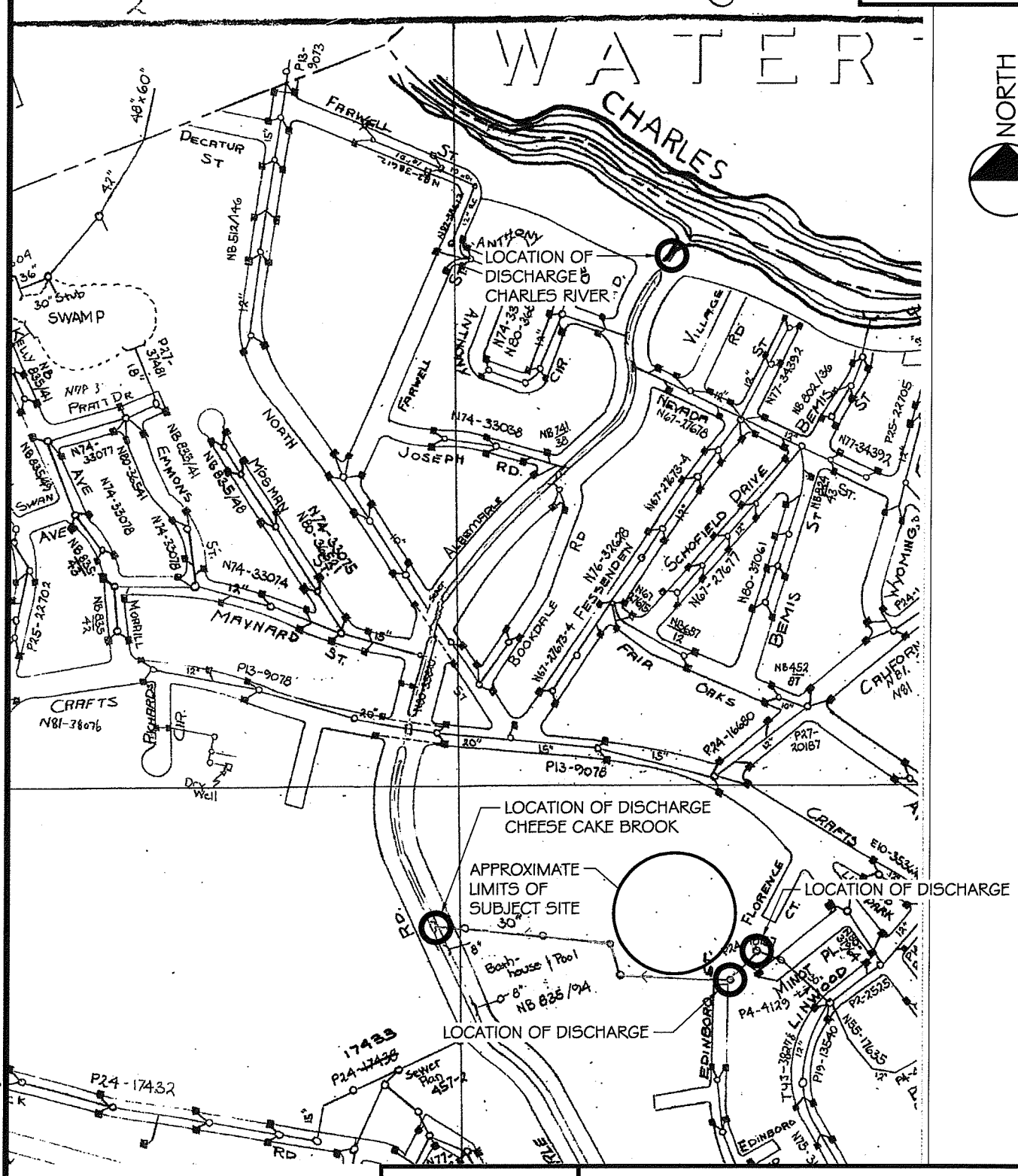
BY

McPHAIL ASSOCIATES, LLC

CONSULTING GEOTECHNICAL ENGINEERS

Date: AUGUST 2012	Dwn: F.G.P.	Chkd: A.M.F.	Scale: N.T.S.
Project No: 5318			

FIGURE 4



LEGEND

INDICATES DIRECTION FLOWS

REFERENCE: THIS PLAN WAS PREPARED FROM AN UNDATED CITY OF NEWTON ENGINEERING DEPARTMENT DRAINAGE PLAN

McPHAIL ASSOCIATES, LLC
Geotechnical and Geoenvironmental Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)

FA DAY SCHOOL

NEWTON MASSACHUSETTS

DISCHARGE LOCATION PLAN

FOR

HMFH ARCHITECTS, INC.

BY

McPHAIL ASSOCIATES, LLC

Date: AUGUST 2012	Dwn: F.G.P.	Chkd: A.M.F.	Scale: N.T.S.
Project No: 5318			

FILE NAME: H:\Acad\JOBS\5318\DGP\5318-F04.dwg

McPHAIL ASSOCIATES, LLC

ATTACHMENT A

LIMITATIONS

The purpose of this report is to present the results of testing of groundwater samples obtained from a monitoring well on the property identified as F.A. Day Middle School located at 21 Minot Place in Newton, Massachusetts, in support of an application for approval of construction site dewatering discharge into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Dewatering General Permit MAG070000.

The observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the nature and extent of subsurface conditions between the widely spaced subsurface explorations become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon chemical test data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used in disposal and other factors.

Chemical analyses have been performed for specific constituents during the course of this site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the site.

This report and application have been prepared on behalf of and for the exclusive use of HMFH Architects, Inc. who represents the City of Newton Buildings Department. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party nor used in whole or in part by any other party without prior written consent of McPhail Associates, LLC.

McPHAIL ASSOCIATES, LLC

ATTACHMENT B

RESULTS OF GROUNDWATER ANALYSIS

On July, 27, 2012, a groundwater sample was obtained from monitoring well B-2(OW) and tested for the presence of compounds required under the EPA Dewatering General Permit (DGP) application, including pH, total chloride, and total recoverable metals (antimony, arsenic, cadmium, chromium, hexavalent chromium, copper, iron, mercury, nickel, silver, and zinc). The results of the analysis are summarized in **Table 1**.

The tested sample exhibited a pH level of 6.5 Standard Units (S.U.) which is within the DGP effluent parameters for discharge into a freshwater body. The results of the analysis indicated the presence of chloride at a concentration of 540 milligrams per liter (mg/l). In addition, the analysis detected arsenic, copper, iron, nickel, silver and zinc at concentrations of 0.7 micrograms per liter (ug/l), 2.0 ug/l, 340 ug/l, 2.5 ug/l, 0.4 ug/l, and 11.1 ug/l, respectively. The remaining metals were not detected at concentrations above the laboratory method detection limits which are set below the DGP detection limits. Concentrations of the tested compounds are below the minimum levels included in Appendix VIII of the DGP and effluent limits included in the Remedial General Permit (RGP) for fresh water.

As indicated in the report, TSS reduction measures to the groundwater will be implemented prior to discharge to reduce the concentration TSS in the effluent.

TABLE 1

F.A. Day Middle School
Job #5318
Summary of Chemical Test Results for DGP

LOCATION	EPA Effluent Limits - Fresh Water	B-2 (OW)
SAMPLING DATE		27-JUL-12
LAB SAMPLE ID		L1213510-01
Total Suspended Solids (mg/l)	30	60
Chloride (mg/l)		540
pH (H)	6.5-8.5	6.5
Total Metals (ug/l)		
Antimony, Total	5.6	ND(0.5)
Arsenic, Total	10	0.7
Cadmium, Total	0.2	ND(0.2)
Chromium, Total	48.8	ND(1)
Hexavalent Chromium (mg/l)	11.4	ND(10)
Copper, Total	5.2	2
Iron, Total	1,000	340
Mercury, Total	0.9	ND(2)
Nickel, Total	29	2.5
Silver, Total	1.2	0.4
Zinc, Total	66.6	11.1

ND - Denotes Not Detected Above Laboratory Detection Limits

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L1213510
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	F.A. DAY SCHOOL
Project Number:	5318.2.C3
Report Date:	07/31/12

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1213510-01	B-2 (OW)	NEWTON, MA	07/27/12 07:45

Project Name:	F.A. DAY SCHOOL	**Lab Number:**	L1213510
Project Number:	5318.2.C3	**Report Date:**	07/31/12

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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Case Narrative (continued)

Metals

The WG551771-4 MS recovery, performed on L1213510-01, is below the acceptance criteria for Mercury (0%). A post digestion spike was performed with an acceptable recovery of 115%.

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: Michelle M. Morris

Title: Technical Director/Representative

Date: 07/31/12

METALS

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3
Lab Number: L1213510
Report Date: 07/31/12

SAMPLE RESULTS

Lab ID: L1213510-01
Client ID: B-2 (OW)
Sample Location: NEWTON, MA
Matrix: Water
Date Collected: 07/27/12 07:45
Date Received: 07/27/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0005	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK
Arsenic, Total	0.0007		mg/l	0.0005	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK
Cadmium, Total	ND		mg/l	0.0002	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK
Chromium, Total	ND		mg/l	0.0010	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK
Copper, Total	0.0020		mg/l	0.0010	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK
Iron, Total	0.34		mg/l	0.05	--	1	07/30/12 12:50	07/30/12 19:15	EPA 3005A	19,200.7	BM
Mercury, Total	ND		mg/l	0.0002	--	1	07/30/12 19:39	07/31/12 16:21	EPA 7470A	3,245.1	KL
Nickel, Total	0.0025		mg/l	0.0005	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK
Silver, Total	0.0004		mg/l	0.0004	--	1	07/30/12 12:50	07/31/12 14:50	EPA 3005A	1,6020	AK
Zinc, Total	0.0111		mg/l	0.0100	--	1	07/30/12 12:50	07/31/12 12:23	EPA 3005A	1,6020	AK

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3
Lab Number: L1213510
Report Date: 07/31/12

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG551667-1										
Antimony, Total	ND		mg/l	0.0005	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK
Arsenic, Total	ND		mg/l	0.0005	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK
Cadmium, Total	ND		mg/l	0.0002	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK
Chromium, Total	ND		mg/l	0.0010	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK
Copper, Total	ND		mg/l	0.0010	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK
Nickel, Total	ND		mg/l	0.0005	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK
Silver, Total	ND		mg/l	0.0004	--	1	07/30/12 12:50	07/31/12 14:42	1,6020	AK
Zinc, Total	ND		mg/l	0.0100	--	1	07/30/12 12:50	07/31/12 12:15	1,6020	AK

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG551669-1										
Iron, Total	ND		mg/l	0.05	--	1	07/30/12 12:50	07/30/12 19:06	19,200.7	BM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG551771-1										
Mercury, Total	ND		mg/l	0.0002	--	1	07/30/12 19:39	07/31/12 15:14	3,245.1	KL

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: F.A. DAY SCHOOL

Project Number: 5318.2.C3

Lab Number: L1213510

Report Date: 07/31/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG551667-2								
Antimony, Total	94		-		80-120	-		
Arsenic, Total	99		-		80-120	-		
Cadmium, Total	102		-		80-120	-		
Chromium, Total	98		-		80-120	-		
Copper, Total	100		-		80-120	-		
Nickel, Total	101		-		80-120	-		
Silver, Total	94		-		80-120	-		
Zinc, Total	106		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG551669-2								
Iron, Total	97		-		85-115	-		
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG551771-2								
Mercury, Total	90		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551667-4 QC Sample: L1213510-01 Client ID: B-2 (OW)												
Antimony, Total	ND	0.5	0.4564	91		-	-		80-120	-		20
Arsenic, Total	0.0007	0.12	0.1259	104		-	-		80-120	-		20
Cadmium, Total	ND	0.051	0.0535	105		-	-		80-120	-		20
Chromium, Total	ND	0.2	0.1845	92		-	-		80-120	-		20
Copper, Total	0.0020	0.25	0.2470	98		-	-		80-120	-		20
Nickel, Total	0.0025	0.5	0.4855	96		-	-		80-120	-		20
Silver, Total	0.0004	0.05	0.0452	89		-	-		80-120	-		20
Zinc, Total	0.0111	0.5	0.5106	100		-	-		80-120	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551669-4 QC Sample: L1213510-01 Client ID: B-2 (OW)												
Iron, Total	0.34	1	1.3	96		-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551771-4 QC Sample: L1213510-01 Client ID: B-2 (OW)												
Mercury, Total	ND	0.001	ND	0	Q	-	-		70-130	-		20

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1213510
Report Date: 07/31/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551667-3 QC Sample: L1213510-01 Client ID: B-2 (OW)						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.0007	0.0007	mg/l	7		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.0020	0.0021	mg/l	6		20
Nickel, Total	0.0025	0.0024	mg/l	5		20
Zinc, Total	0.0111	0.0106	mg/l	5		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551667-3 QC Sample: L1213510-01 Client ID: B-2 (OW)						
Silver, Total	0.0004	ND	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551669-3 QC Sample: L1213510-01 Client ID: B-2 (OW)						
Iron, Total	0.34	0.36	mg/l	6		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551771-3 QC Sample: L1213510-01 Client ID: B-2 (OW)						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

SAMPLE RESULTS

Lab ID: L1213510-01
Client ID: B-2 (OW)
Sample Location: NEWTON, MA
Matrix: Water

Date Collected: 07/27/12 07:45
Date Received: 07/27/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	60		mg/l	5.0	NA	1	-	07/30/12 11:00	30,2540D	DW
pH (H)	6.5		SU	-	NA	1	-	07/27/12 20:00	4,150.1	SL
Chromium, Hexavalent	ND		mg/l	0.010	--	1	07/27/12 22:03	07/27/12 22:11	30,3500CR-D	SL
Anions by Ion Chromatography - Westborough Lab										
Chloride	540		mg/l	12	--	25	-	07/30/12 13:20	44,300.0	ED

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG551438-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	07/27/12 22:03	07/27/12 22:10	30,3500CR-D	SL
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG551627-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	07/30/12 11:00	30,2540D	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG551703-1										
Chloride	ND		mg/l	0.50	--	1	-	07/30/12 10:56	44,300.0	ED

Lab Control Sample Analysis
Batch Quality Control

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG551434-1								
pH	101		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG551438-2								
Chromium, Hexavalent	94		-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG551703-2								
Chloride	110		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551438-3 QC Sample: L1213510-01 Client ID: B-2 (OW)												
Chromium, Hexavalent	ND	0.1	0.087	87		-	-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551703-3 QC Sample: L1213348-02 Client ID: MS Sample												
Chloride	310	40	310	0	Q	-	-		40-151	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551434-2 QC Sample: L1213510-01 Client ID: B-2 (OW)						
pH (H)	6.5	6.4	SU	2		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551438-4 QC Sample: L1213510-01 Client ID: B-2 (OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551627-2 QC Sample: L1213236-01 Client ID: DUP Sample						
Solids, Total Suspended	460	480	mg/l	4		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG551703-4 QC Sample: L1213348-02 Client ID: DUP Sample						
Chloride	310	250	mg/l	**21**	Q	18

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1213510-01A	Plastic 1000ml unpreserved	A	7	3	Y	Absent	CL-300(28),TSS-2540(7)
L1213510-01B	Plastic 1000ml unpreserved	A	7	3	Y	Absent	PH-150(.01),CL-300(28),HEXCR-3500(1)
L1213510-01C	Plastic 1000ml unpreserved	A	7	3	Y	Absent	PH-150(.01),CL-300(28),HEXCR-3500(1)
L1213510-01D	Plastic 250ml unpreserved	A	7	3	Y	Absent	PH-150(.01),CL-300(28),HEXCR-3500(1)
L1213510-01E	Plastic 250ml unpreserved	A	7	3	Y	Absent	PH-150(.01),CL-300(28),HEXCR-3500(1)
L1213510-01F	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1213510-01G	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1213510-01H	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1213510-01I	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)

*Values in parentheses indicate holding time in days

Project Name: F.A. DAY SCHOOL **Lab Number:** L1213510

Project Number: 5318.2.C3 **Report Date:** 07/31/12

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.

LFB - Laboratory Fortified Blank: 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.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

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.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL 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.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

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 MCP-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. 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. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

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.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	F.A. DAY SCHOOL	**Lab Number:**	L1213510
Project Number:	5318.2.C3	**Report Date:**	07/31/12

Data Qualifiers

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. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. 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 RL. (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).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: F.A. DAY SCHOOL
Project Number: 5318.2.C3

Lab Number: L1213510
Report Date: 07/31/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

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 Analytical 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 Analytical.

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.

Certificate/Approval Program Summary

Last revised May 11, 2012 - 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: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D, Fecal Coliform-EC Medium 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total 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, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterolert, E.Coli 9223.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, 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), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, 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), Dalapon, Volatile Organics, Acid Extractables (Phenols), Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

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); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-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), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; 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,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1,

SM2510B, 2540C, 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-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, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8081B, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065,1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8082, 8082A, 8081A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 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, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C,6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

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 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8270C, 8270D, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 3005A, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 3060A, 6010B, 6010C, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 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 NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson 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, 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.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 3005A,3015,1312,6010B,6010C,SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X. Organic Parameters: EPA 8260B)

Solid & Hazardous Waste (Inorganic Parameters: EPA 3050B, 1311, 1312, 6010B, 6010C, 9030B, 9010B, 9012A, 9014. Organic Parameters: EPA 5035, 5030B, 8260B, 8015B, 8015C.)

Department of Defense, L-A-B 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, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:
EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix, SO4 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA TECHNICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/27/12

ALPHA Job #: L1213510

Client Information

Client: McPhail Associates
Address: 2269 Mass. Ave Cambridge, MA 02140
Phone: 617-868-1420
Fax: 617-868-1423
Email:

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: F.A. Day School
Project Location: Newton, MA
Project #: 5318.2.C3
Project Manager: Amy Falconeiri
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)
Date Due: 7/31/12 Time:

Report Information - Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program EPA Criteria RGP Effluent Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☒ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All **CAM** methods for Inorganic analyses require MS every 20 soil samples)

ANALYSIS: TSS, pH, Chloride, Antimony, Arsenic, Cadmium, Chromium, Chromium, Hex, Copper, Iron, mercury, Nickel, Silver, Zinc

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	Collection Time	Sample Matrix	Sampler's Initials	TSS	pH	Chloride	Antimony	Arsenic	Cadmium	Chromium	Chromium, Hex	Copper	Iron	mercury	Nickel	Silver	Zinc	Sample Specific Comments	TOTAL # BOTTLES
													Total								
13510-1	B-2(ow)	7/27/12	9:45	GW	PLT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(9) plastic	9

Container Type	P	P	P	P	P	P	P	P	P	P	P	P
Preservative	A	A	A	C	C	C	C	C	C	C	C	C

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	7/27/12		7/27/12 1645
	7/27/12 1755		7/27/12 1755

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 Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 18-Jan-2010)

McPHAIL ASSOCIATES, LLC

ATTACHMENT C

ASSESSMENT OF DEP-LISTED SITES

The DEP on-line waste site database indicates that there is one (1) DEP listed site located within 500 of the subject site. The release of OHM which triggered notification to the DEP had achieved a Class A-1 Response Action Outcome (RAO) statement. A Class A-1 RAO indicates that response actions were performed at the site which resulted in a Permanent Solution to the release of which a Condition of No Significant Risk exists at the site. Based on the DEP status of this release site, this release site is not considered to pose a threat of impact to the groundwater dewatering activities at the subject site.

However, it should be noted that the DEP on-line database reports that a site identified as Horace Mann School with an address of 687 Watertown Street, which is located approximately 900 feet to the southwest of the subject site, is currently listed under Release Tracking Number (RTN) 3-16552 as being in a Phase V Remedy Operation Status due to a leaking No. 2 fuel oil UST. Further, the latest Phase V Remedy Operation Status Report dated January 25, 2012 and prepared by Lord Associates, Inc. indicates that the No. 2 fuel oil release was reported to the DEP in 1998 due to the identification of an oil sheen on Cheese Cake Brooke, adjacent to the Horace Mann School. The DEP on-line database indicates that response actions included bioremediation as well as the operation of a Groundwater Removal and Enhancement (GWRE) system since May 2004. Based on the reported response actions and distance of this release site, this release site is not considered to pose a threat of impact to the groundwater dewatering activities at the subject site.

McPHAIL ASSOCIATES, LLC

ATTACHMENT D

AREAS OF CRITICAL CONCERN,
ENDANGERED AND THREATENED SPECIES

Based on a review of the DEP Priority Resources Map, the site is not located within a Zone II of a public water supply, an Interim Wellhead Protection Area, or a Zone A of a Class A surface water supply reservoir. The site is not located within a Non-Potential Drinking Water Source Area of medium yield. There are no surface water bodies located within the site boundaries. The site is not located within an Area of Critical Environmental Concern (ACEC) nor are ACECs located within 1-mile of the subject site. In addition, the point of discharge in the Cheese Cake Brook is not an ACEC.

A review of the most recent federal listing of threatened and endangered species published by the U.S. Fish and Wildlife Service did not identify the presence of threatened and/or endangered species at or in the vicinity of the discharge location and/or discharge outfall. In addition, a review of the Massachusetts Division of Fisheries and Wildlife on-line database did not report the presence of threatened or endangered species at the point of discharge and/or the discharge outfall.

MassDEP - Bureau of Waste Site Cleanup

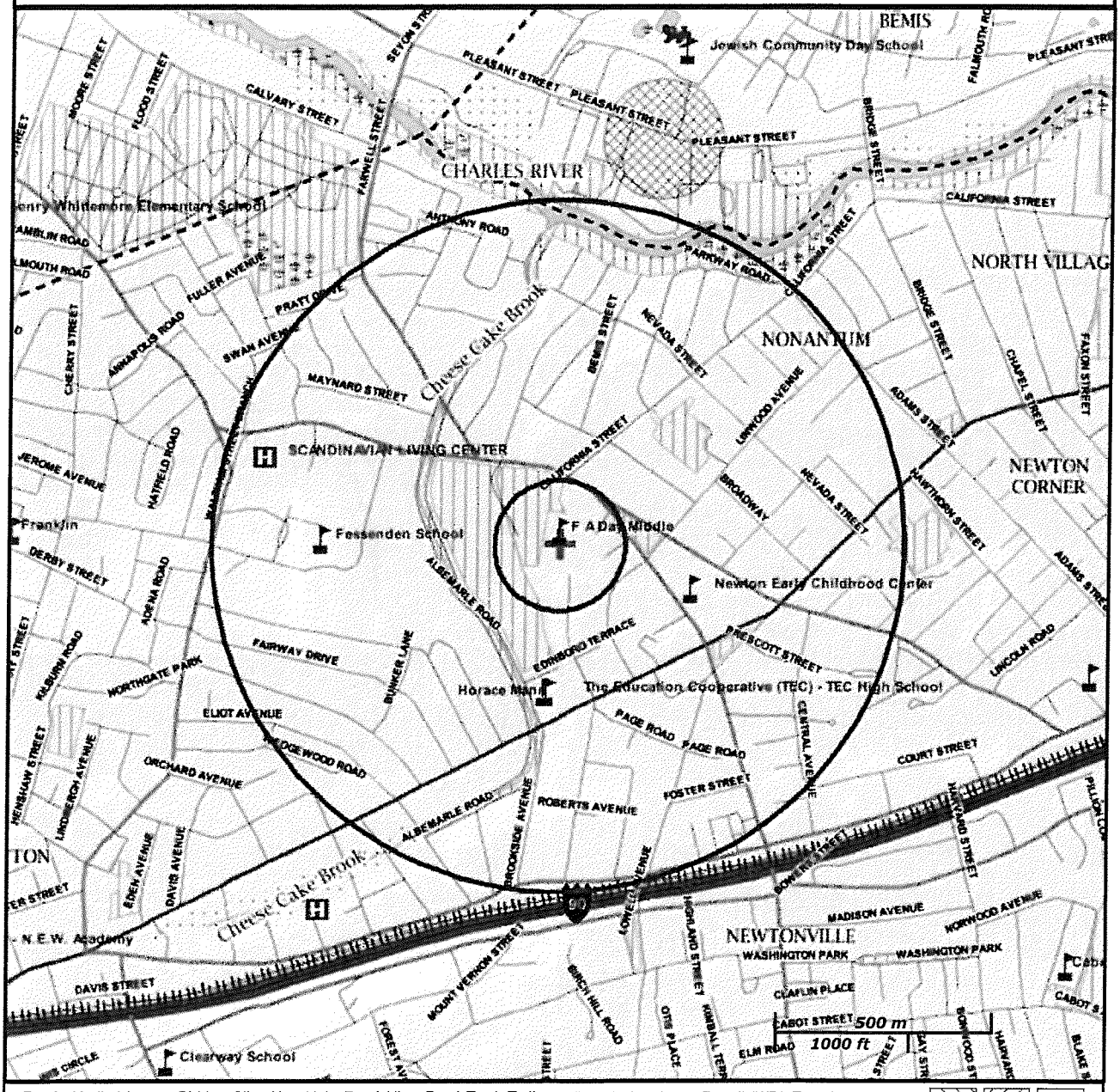
Site Information: MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

FA DAY SCHOOL
21 MINOT PLACE NEWTON, MA
NAD83 UTM Meters:
5214749mN , -7927407mE (Zone: 18)

August 13, 2012

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately repsponsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: http://www.mass.gov/mgis/.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major,PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

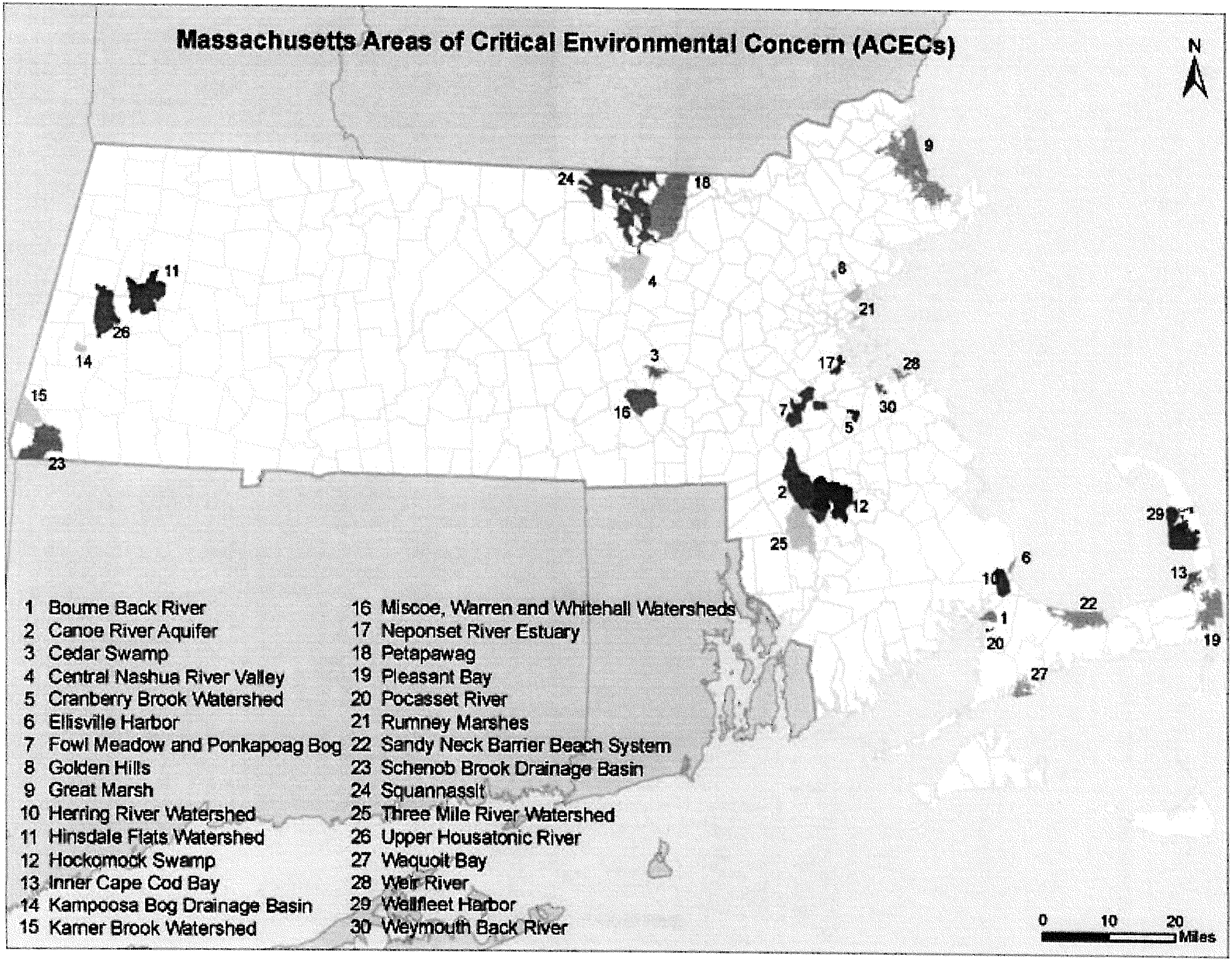
Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.


Massachusetts Areas of Critical Environmental Concern (ACECs)
N
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2 Canoe River Aquifer
3 Cedar Swamp
4 Central Nashua River Valley
5 Cranberry Brook Watershed
6 Ellisville Harbor
7 Fowl Meadow and Ponkapoag Bog
8 Golden Hills
9 Great Marsh
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New England Field Office

Conserving the Nature of New England

Tuesday, August 14, 2012

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Endangered Species

New England Listed Species

The following federally-listed species are protected in New England. This list includes links to species information on our National Fish and Wildlife Service website including current Federal Register documents, HCPs, Recovery Plans, Life History accounts.

Vertebrates

Mammals
Eastern Cougar -**Puma (=Felis) concolor couguar**
Gray Wolf -**Canis lupus**
Indiana Bat - **Myotis sodalis**
Canada Lynx - **Lynx canadensis**

Birds
Atlantic Coast Piping Plover - **Charadrius melodus**
Birds of North America Species Account ***Piping Plover***
Atlantic Coast piping plover website ***Piping Plover***
Roseate Tern – **Sterna dougallii dougallii**
Birds of North America Species Account ***Roseate Tern***

Reptiles
Bog Turtle - **Clemmys muhlenbergii**
Northern Redbelly Cooter (Plymouth redbelly turtle) **Pseudemys rubriventris bangsii**
Northern Redbelly Cooter 5-year Review; *(pdf size 1.6MB*) May 2007*

Fish
Atlantic Salmon - **Salmo salar** (Maine only)
Maine Atlantic Salmon Atlas

Invertebrates

Insects
American Burying Beetle - **Nicrophorus americanus**
Karner Blue Butterfly - **Lycaeides melissa samuelis**
Karner Blue Butterfly ***Fact sheet***
Northeastern Beach Tiger Beetle - **Cicindela dorsalis dorsalis**
Puritan Tiger Beetle - **Cicindela puritana**
Draft Puritan Tiger Beetle; *(pdf size 2.4MB*) 5-year Review*

Mussels
Dwarf Wedgemussel - ***Alasmidonta heterodon***
Dwarf Wedgemussel 5-Year Status Review 2007 *(pdf size 1.14MB*)*

Plants
Jesup 's Milkvetch - **Astragalus robbinsii var. jesupi**
Northeastern Bulrush - **Scirpus ancistrochaetus**
Sandplain Gerardia - **Agalinis acuta**
Small Whorled Pogonia - **Isotria medeoloides**
Seabeach Amaranth - **Amaranthus pumilus** (historic)
American Chaffseed - **Schwalbea americana** (historic)
Eastern Prairie Fringed Orchid - **Platanthera leucophaea** (Maine only)
Furbish's Lousewort - **Pedicularis furbishiae** (Maine only)

Candidate species and species recently delisted are identified below, including links for additional information regarding their status.

Candidate Species

The Service has recently completed a status assessment for the following species and determined that federally listing is "warranted, but precluded", i.e. the status of the species indicates that it should be listed but the listing is superceded by higher listing actions.

While there is currently no obligation for Federal Agencies to consult with us regarding these species, coordination is encouraged to avoid project delays that may occur as a result of the species becoming federally-listed during the planning or construction phases of a given project. In addition, the Service is interested in promoting conservation actions that may result in benefits to these species that will prevent the need to list it. Information regarding our **candidate conservation** program may help you decide if you would like to become involved.

- **New England Cottontail; Sylvilagus transitionalis**
- Red Knot **Calidris canutus rufa; Red Knot Fact Sheet**

Delisted Species

Bald Eagle - **Haliaeetus leucocephalus**
Bald Eagle Guidance

NCTC Eagle Cam

This Bald Eagle image is a link to a Service website that chronicles the activities of the eagle nest located on the grounds of the USFWS National Conservation Training Center near the Potomac River in Shepherdstown, West Virginia. The nest has been active for four seasons, fledging several juvenile bald eagles.

Files in PDF format will require Acrobat Reader to access the content. If you do not have a copy, please select the link [or click the image] to take you to the Adobe website where you can download a free copy. Get Adobe Acrobat Reader

Last updated: October 28, 2010

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
Suffolk	Piping Plover	Threatened	Coastal Beaches	Winthrop
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Revised 10/7/2011

MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN
November 2010

Total Approximate Acreage: 268,000 acres
Approximate acreage and designation date follow ACEC names below.

Bourne Back River
(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp
(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley
(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed
(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor
(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog
(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills
(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)
(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed
(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed
(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp
(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay
(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin
(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed
(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds
(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary
(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag
(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay
(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River
(160 acres, 1980) Bourne

Rumney Marshes
(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System
(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin
(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit
(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed
(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River
(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay
(2,580 acres, 1979) Falmouth and Mashpee

Weir River
(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor
(12,480 acres, 1989) Eastham, Truro, and Wellfleet

Weymouth Back River
(800 acres, 1982) Hingham and Weymouth

ACEC acreages above are based on MassGIS calculations and may differ from numbers originally presented in designation documents and other ACEC publications due to improvements in accuracy of GIS data and boundary clarifications. Listed acreages have been rounded to the nearest 50 or 10 depending on whether boundary clarification has occurred. For more information please see, http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm.

Towns with ACECs within their Boundaries — November 2010

TOWN	ACEC
Ashby	Squannassit
Ayer	Petapawag
	Squannassit
Barnstable	Sandy Neck Barrier Beach System
Bolton	Central Nashua River Valley
Boston	Rumney Marshes
	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary
Bourne	Pocasset River
	Bourne Back River
	Herring River Watershed
Braintree	Cranberry Brook Watershed
Brewster	Pleasant Bay
	Inner Cape Cod Bay
Bridgewater	Hockomock Swamp
Canton	Fowl Meadow and Ponkapoag Bog
Chatham	Pleasant Bay
Cohasset	Weir River
Dalton	Hinsdale Flats Watershed
Dedham	Fowl Meadow and Ponkapoag Bog
Dighton	Three Mile River Watershed
Dunstable	Petapawag
Eastham	Inner Cape Cod Bay
	Wellfleet Harbor
Easton	Canoe River Aquifer
	Hockomock Swamp
Egremont	Karner Brook Watershed
Essex	Great Marsh
Falmouth	Waquoit Bay
Foxborough	Canoe River Aquifer
Gloucester	Great Marsh
Grafton	Miscoe-Warren-Whitehall Watersheds
Groton	Petapawag
	Squannassit
Harvard	Central Nashua River Valley
	Squannassit
Harwich	Pleasant Bay
Hingham	Weir River
	Weymouth Back River
Hinsdale	Hinsdale Flats Watershed
Holbrook	Cranberry Brook Watershed
Hopkinton	Miscoe-Warren-Whitehall Watersheds
	Cedar Swamp
Hull	Weir River
Ipswich	Great Marsh
Lancaster	Central Nashua River Valley
	Squannassit
Lee	Kampoosa Bog Drainage Basin
	Upper Housatonic River
Lenox	Upper Housatonic River
Leominster	Central Nashua River Valley
Lunenburg	Squannassit
Lynn	Rumney Marshes
Mansfield	Canoe River Aquifer
Mashpee	Waquoit Bay
Melrose	Golden Hills
Milton	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary

TOWN	ACEC
Mt. Washington	Karner Brook Watershed
	Schenob Brook
Newbury	Great Marsh
Norton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Norwood	Fowl Meadow and Ponkapoag Bog
Orleans	Inner Cape Cod Bay
	Pleasant Bay
Pepperell	Petapawag
	Squannassit
Peru	Hinsdale Flats Watershed
Pittsfield	Upper Housatonic River
Plymouth	Herring River Watershed
	Ellisville Harbor
Quincy	Neponset River Estuary
Randolph	Fowl Meadow and Ponkapoag Bog
Raynham	Hockomock Swamp
Revere	Rumney Marshes
Rowley	Great Marsh
Sandwich	Sandy Neck Barrier Beach System
Saugus	Rumney Marshes
	Golden Hills
Sharon	Canoe River Aquifer
	Fowl Meadow and Ponkapoag Bog
Sheffield	Schenob Brook
Shirley	Squannassit
Stockbridge	Kampoosa Bog Drainage Basin
Taunton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Truro	Wellfleet Harbor
Townsend	Squannassit
Tyngsborough	Petapawag
Upton	Miscoe-Warren-Whitehall Watersheds
Wakefield	Golden Hills
Washington	Hinsdale Flats Watershed
	Upper Housatonic River
Wellfleet	Wellfleet Harbor
W Bridgewater	Hockomock Swamp
Westborough	Cedar Swamp
Westwood	Fowl Meadow and Ponkapoag Bog
Weymouth	Weymouth Back River
Winthrop	Rumney Marshes

NEWBURYPORT	Vascular Plant	Aristida tuberculosa	Seabeach Needlegrass	T	2004
NEWBURYPORT	Vascular Plant	Bidens eatonii	Eaton's Beggar-ticks	E	2001
NEWBURYPORT	Vascular Plant	Bidens hyperborea	Estuary Beggar-ticks	E	1902
NEWBURYPORT	Vascular Plant	Bolboschoenus fluviatilis	River Bulrush	SC	1982
NEWBURYPORT	Vascular Plant	Conioselinum chinense	Hemlock Parsley	SC	2006
NEWBURYPORT	Vascular Plant	Cyperus engelmannii	Engelmann's Umbrella-sedge	T	1981
NEWBURYPORT	Vascular Plant	Elatine americana	American Waterwort	E	2004
NEWBURYPORT	Vascular Plant	Equisetum scirpoides	Dwarf Scouring-rush	SC	1897
NEWBURYPORT	Vascular Plant	Eriocaulon parkeri	Parker's Pipewort	E	1903
NEWBURYPORT	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC	2000
NEWBURYPORT	Vascular Plant	Rumex pallidus	Seabeach Dock	T	2006
NEWBURYPORT	Vascular Plant	Sabatia kennedyana	Plymouth Gentian	SC	1800s
NEWBURYPORT	Vascular Plant	Sagittaria montevidensis ssp. spongiosa	Estuary Arrowhead	E	2004
NEWBURYPORT	Vascular Plant	Scirpus longii	Long's Bulrush	T	2006
NEWBURYPORT	Vascular Plant	Tillaea aquatica	Pygmyweed	T	1903

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
NEWTON	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2007
NEWTON	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1901
NEWTON	Bird	Ammodramus henslowii	Henslow's Sparrow	E		1897
NEWTON	Bird	Vermivora chrysoptera	Golden-winged Warbler	E		1875
NEWTON	Butterfly/Moth	Acronicta albarufa	Barrens Daggermoth	T		Historic
NEWTON	Butterfly/Moth	Bagisara rectifascia	Straight Lined Mallow Moth	SC		1878
NEWTON	Butterfly/Moth	Lithophane viridipallens	Pale Green Pinion Moth	SC		Historic
NEWTON	Mussel	Ligumia nasuta	Eastern Pondmussel	SC		1967
NEWTON	Reptile	Glyptemys insculpta	Wood Turtle	SC		1900
NEWTON	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T		1893
NEWTON	Vascular Plant	Cardamine longii	Long's Bitter-cress	E		1919
NEWTON	Vascular Plant	Gentiana andrewsii	Andrews' Bottle Gentian	E		Historic
NEWTON	Vascular Plant	Houstonia longifolia	Long-leaved Bluet	E		1833
NEWTON	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1936
NEWTON	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1879
NEWTON	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T		1886
NEWTON	Vascular Plant	Rotala ramosior	Toothcup	E		1883
NEWTON	Vascular Plant	Senna hebecarpa	Wild Senna	E		1911
NEWTON	Vascular Plant	Viola brittoniana	Britton's Violet	T		1884

McPHAIL ASSOCIATES, LLC

ATTACHMENT E

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places on-line database was reviewed for listings located within the immediate vicinity of the subject site in Newton, Massachusetts. A review of the most recent National Register of Historical Places for Middlesex County, Massachusetts did not identify records or addresses of Historic Places that exist in the immediate vicinity of the subject site and/or outfall location. The nearest National Historic Place to the subject site is the Captain Edward Fuller Farm which is located approximately 1,250 feet to the northwest of the subject site. It is not anticipated that dewatering activities at the subject site will affect the Captain Edward Fuller Farm National Historic Place.