



January 30, 2019

US Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP06-4)
5 Post Office Square – Suite 100
Boston, MA 02109-3912

RE: Notice of Intent – Dewatering General Permit (DGP)
Harbourtown Development, LLC
150 Water Street Plymouth, MA 02360
ADE Project #2809.01

To Whom It May Concern:

On behalf of Harbourtown Development, LLC and Reynolds Construction Services, Inc, Atlantic Design Engineers Inc. (Atlantic) has prepared this Notice of Intent (NOI) requesting a determination of coverage under the United States Environmental Protection Agency's (EPA's) Dewatering General Permit (DGP), pursuant EPA's National Pollutant Discharge Elimination System (NPDES) program. This NOI was prepared in accordance with the requirements of the NPDES General Permits for Dewatering Activity Discharge (Permit No. MAG070000) and related guidance documentation provided by EPA. The completed NOI Form is provided in **Appendix A**.

Site Information

This NOI has been prepared for the management of water that will be generated during dewatering activities associated with the construction of a three-story mixed use building located at 150 Water Street Plymouth, Massachusetts (the Site). This structure will include retail stores, hotel rooms, and condominiums. Previously, the property was a paved parking lot. The Site is not listed as a disposal site within the Massachusetts Department of Environmental Protection (MassDEP) online database. A Site Locus is provided as **Figure 1** and a Site Plan is provided as **Figure 2**.

Work Summary

Portions of the property where structural footings are proposed will require dewatering activities to lower the groundwater table as the work is being performed. A series of well points constructed of crush stone and corrugated culvert piping surrounding the perimeter of the work area will be utilized and the water generated during dewatering (source water) will be pumped to a treatment system prior to discharge to the Plymouth Harbor. Atlantic collected representative groundwater samples from one onsite test pit (Sample 1) on December 21, 2018, January 2, 2019 and January 29, 2019, to characterize groundwater from the proposed excavation area. Per DGP requirements, sample of the receiving water (Plymouth Harbor) was collected on December 21, 2018. The location of the source water and receiving water sampling locations are depicted on **Figure 2**.

Discharge and Receiving Surface Water Information

Per the requirements listed within the NPDES General Permits for Dewatering Activity Discharge guide and discussions with MassDEP and EPA representative, source groundwater samples were submitted for analytical analyses of pH, Chloride, Total Suspended Solids (TSS), and Total Metals. Additionally, the receiving water was analyzed for pH and hardness.

Effluent Characteristic	Units	Discharge Limitations		Monitoring Requirements	
		Avg. Monthly	Max Daily	Monitoring Frequency	Sample Type
Flow	MGD	Report	Report	1/Week	Actual or Est.
TSS	mg/l	50	100	1/Week	Grab
Oil & Grease	mg/l	-	15	1/Week	Grab
pH	s.u.	6.5 – 8.5		1/Week	Grab
Total Residual Chlorine	mg/l	Footnote ¹		1/Week	Grab

¹ Freshwater acute (Class A or B) = 19 ug/l (0.019 mg/l); use for daily maximum
Freshwater chronic (Class A or B) = 11 ug/l (0.011 mg/l); use for average monthly
Marine acute (Class SA or SB) = 13 ug/l (0.013 mg/l); use for daily maximum
Marine chronic (Class SA or SB) = 7.5 ug/l (0.0075 mg/l); use for average monthly

A summary of the laboratory analytical results are provided in Tables 1 and 2, attached. Laboratory analytical summary tables and associated analytical reports are included in **Appendix B**. The laboratory results for the source water samples indicate that analyzed constituent concentrations are below the respective NPDES Effluent Limitations. Details of the water treatment system are provided below.

Water Treatment System

A water treatment system schematic is provided as **Figure 3**. Cut sheets of the system components are included in **Appendix C**.

Source water will initially enter an 18,480-gallon weir tank at an anticipated flow rate of 180-gallons per minute (gpm) to allow sediment settling. Discharge from the weir tank will be pumped at an estimated average flow rate of 55 gpm into two Dirt-Bag filters arranged in parallel and resting on a bed of crushed stone and surrounded by silt fencing and hay bales, installed per the discretion of the contractor. Discharge from the bag filters will pass through a High Flow Silt-Sack installed within a catchment basin prior to discharging into the Plymouth Municipal Stormwater System that discharges stormwater runoff into Plymouth Harbor as depicted on **Figure 2**. Specification Sheets for the weir tank, Unwoven Dirt-Bag, High-Flow Silt-Sack, and pumps can be found in **Appendix C**.

Consultation with Federal Services

Atlantic reviewed online electronic data viewers and databases from the Massachusetts Geographical Information System (MassGIS), the Massachusetts Division of Fisheries and Wildlife (MassWildlife; Natural Heritage and Endangered Species Program), and the U.S. National Parks Service Natural Historic Places (NPS). Based on this review, the Site and the point where the proposed discharge reaches the receiving surface water body are not located within an Area of Critical Environmental Concern (ACEC) and the Site is not listed as a National Historic Place. Documentation is included in **Appendix D**.

Coverage under NPDES DGP

It is our opinion that the proposed discharge is eligible for coverage under the NPDES DGP through filing of this Notice of Intent. On behalf of Harbourtown Development, LLC and Reynolds Construction Services, Inc, Atlantic is requesting coverage under the NPDES DGP for the discharge of treated water to Plymouth Harbor in support of construction dewatering activities that are to take place at 150 Water Street Plymouth,

MA.

The enclosed NOI form provides required information on the general site conditions, discharge, treatment system, receiving water, and consultation with federal services. For the dewatering activities to be performed for this project, Reynolds Construction Services, Inc. is considered the Operator and has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications.

Please feel free to contact us at (508) 888-9282 if you have any questions or if you require additional information.

Very Truly Yours,

Atlantic Design Engineers, Inc.



Simon B. Thomas, P.E., LSP,
President

TABLE 1
LABORATORY ANALYTICAL RESULTS - GROUNDWATER

150-158 Water Street
Plymouth, Massachusetts
Project #2809.02

	EPA DGP Discharge Limitations	EPA Maximum Saltwater Concentrations*	Site Sample #1 (12/21/18)	Site Sample #2 (1/2/19)	Site Sample #3 (1/29/19)	Receiving Location (12/21/18)
<i>General Chemistry (mg/L)</i>						
Chloride	Report		39	1070	~	~
Solids, Total Suspended	30		27	2	~	~
Chlorine			<0.03	~	~	~
pH (H)	6.5-8.3		6.91	~	~	7.47
Total Hardness	Monitor Only		~	~	~	3900
<i>Total Metals (ug/L)</i>						
Antimony		206	12	ND(5)	~	~
Arsenic		104	ND(10)	ND(10)	~	~
Cadmium		10.2	ND(5)	ND(5)	~	~
Chromium		323	ND(5)	ND(5)	~	~
Copper		242	30	ND(20)	~	~
Iron		5000	1780	800	~	~
Lead		160	19	ND(5)	~	~
Nickel		1450	7	11	~	~
Silver		35.1	ND(5)	ND(5)	~	~
Zinc		420	79	448	68	~
Mercury		0.739	ND(0.2)	ND(.2)	~	~
Hexavalent chromium		323	ND(10)	ND(10)	~	~

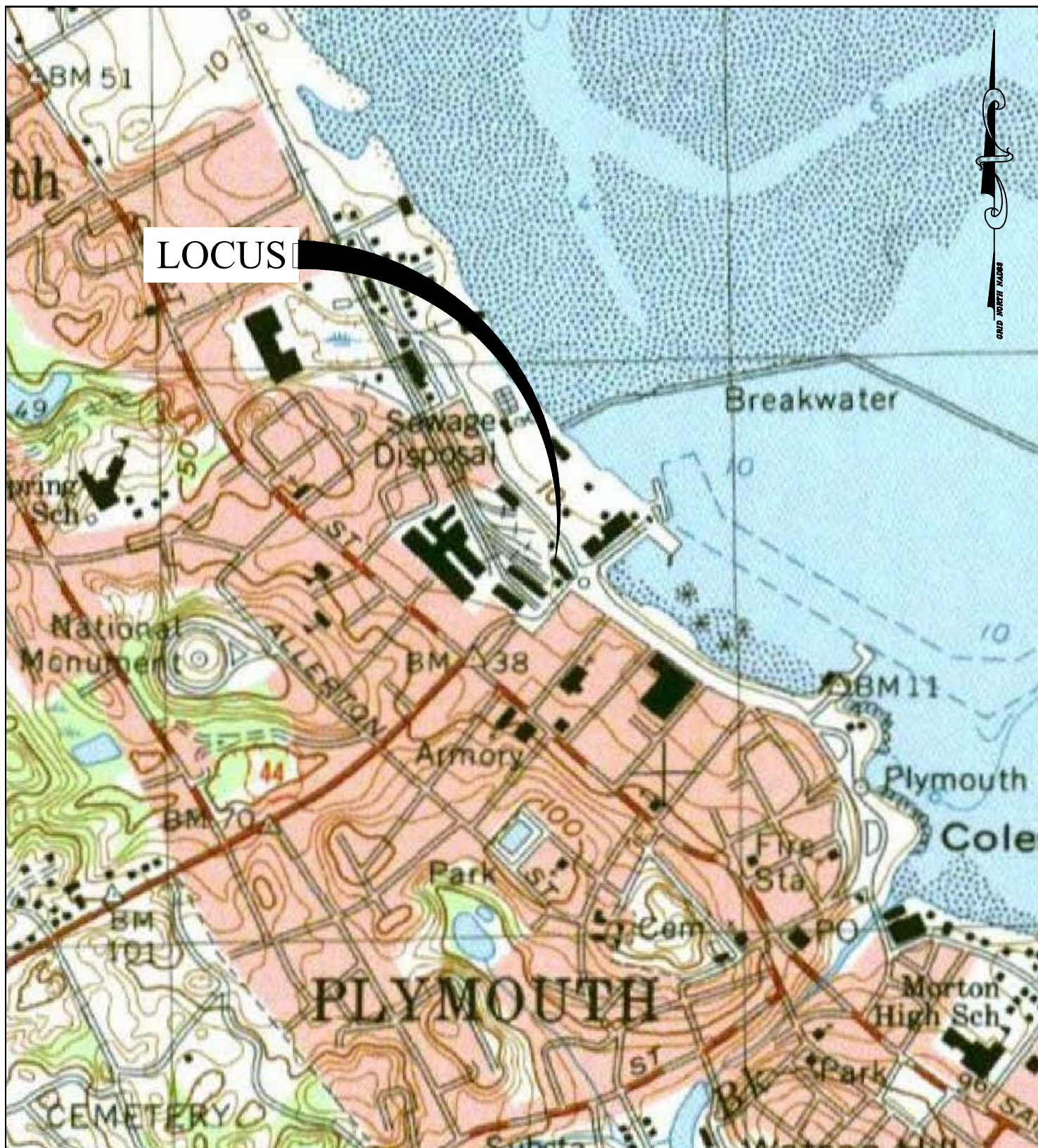
Notes:

ND = No Detection

~ = Not Tested

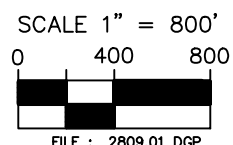
(5) = Numbers in Parenthesis Indicate Laboratory Minimum Detection Limit (i.e. the metal concentration was below the associated minimum laboratory limit)

*EPA Maximum Saltwater Concentrations obtained from Appendix V of the EPA's RGP



HARBOURTOWN

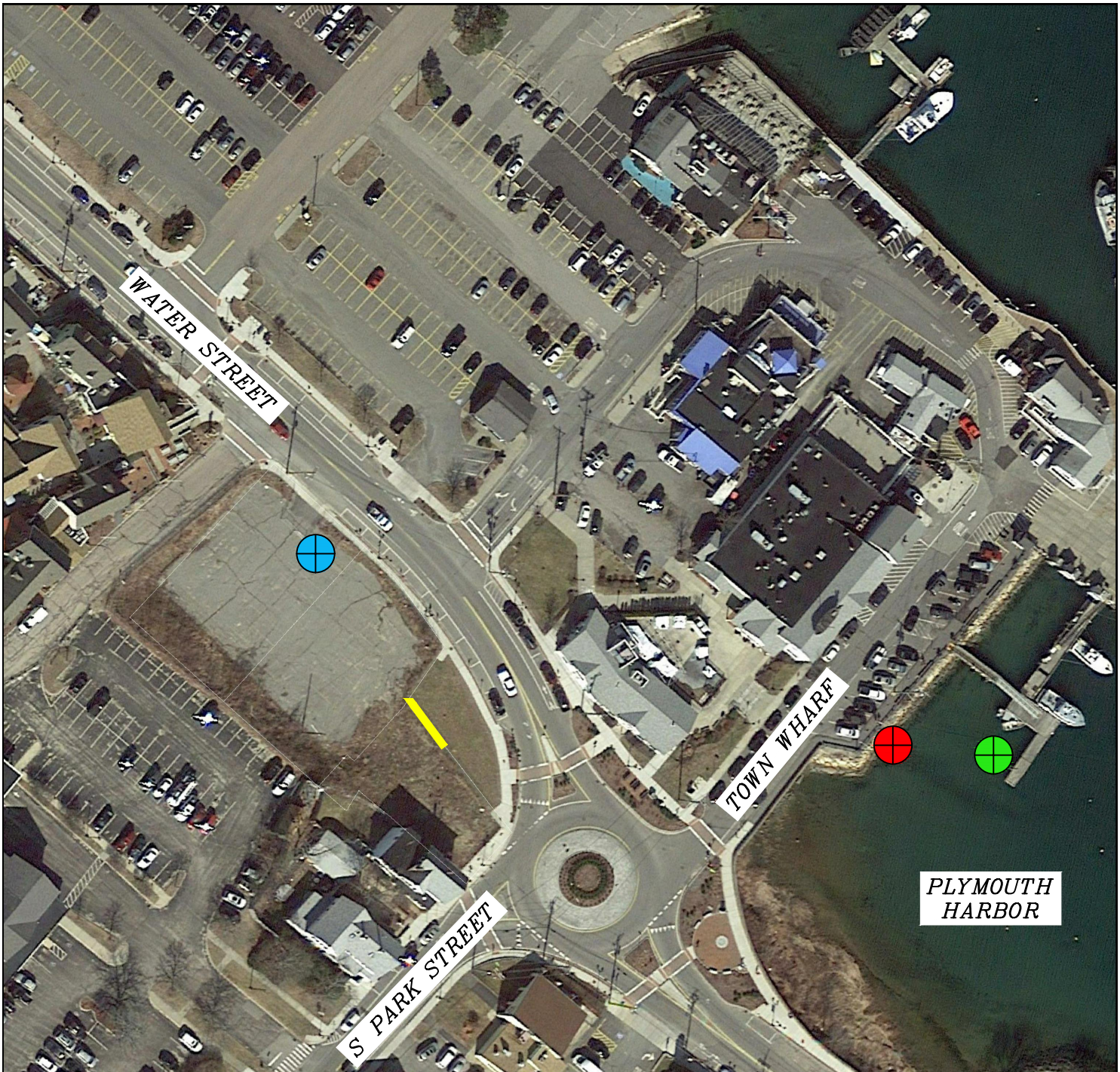
P.O. Box 3299, Plymouth, M- 02361



PREP-RED FOR:
H-RBOURTOWN
P.O. BOX 3299
PLYMOUTH, M- 02361

AERIAL LOCUS PLAN
FOR
150-158 W-TER STREET
PLYMOUTH, M-
J-NU-RY 8, 2019

Sheet	of
1	3
JOB NUMBER	
2809.01	

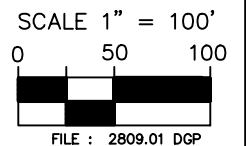


KEY

- RECEIVING WATER SAMPLE LOCATION ●
- DISCHARGE LOCATION ●
- ONSITE SAMPLE LOCATION ●

HARBOURTOWN

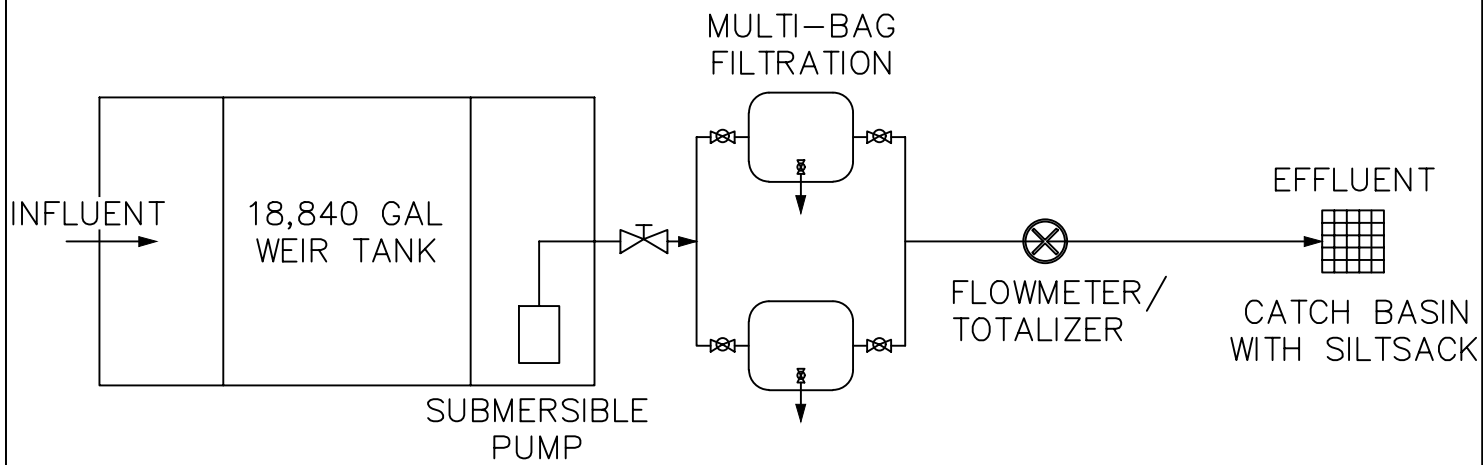
P.O. Box 3299, Plymouth, M- 02361



PREP-RED FOR:
H-RBOURTOWN
 P.O. BOX 3299
 PLYMOUTH, M- 02361

SITE PLAN
 FOR
150-158 W-TER STREET
 PLYMOUTH, M-
 J-NU-RY 8, 2019

Sheet	of
2	3
JOB NUMBER	
2809.01	



HARBOURTOWN

P.O. Box 3299, Plymouth, M- 02361

NOT TO
SCALE

FILE : 2809.01 DGP

PREP-RED FOR:
H-RBOURTOWN
P.O. BOX 3299
PLYMOUTH, M- 02361

WATER TREATMENT SYSTEM DETAIL
FOR
150-158 W-TER STREET
PLYMOUTH, M-
J-NU-RY 8, 2019

Sheet	of
3	3
JOB NUMBER	
2809.01	

APPENDIX A

NOI FORM



Enter your transmittal number

X282270

Transmittal Number

Your unique Transmittal Number can be accessed online:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>

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: MassDEP, 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

WM-15

1. Permit Code: 4 to 7 character code from permit instructions

CONSTRUCTION DEWATERING

3. Type of Project or Activity

GENERAL DISCHARGE PERMIT NPDES NOI

2. Name of Permit Category

B. Applicant Information – Firm or Individual

REYNOLDS CONSTRUCTION SERVICES, INC

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

2. Last Name of Individual
14 APOLLO 11 ROAD

3. First Name of Individual

4. MI

5. Street Address

PLYMOUTH

MA

02360

508-746-4153

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

BRIAN HOEG

BRIAN@REYCONSERVICES.COM

11. Contact Person

12. e-mail address

C. Facility, Site or Individual Requiring Approval

HARBOURTOWN

1. Name of Facility, Site Or Individual

150-158 WATER STREET

2. Street Address

PLYMOUTH

MA

02360

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

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)*

1. Name of Firm Or Individual

2. Address

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

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

EOEA File Number

F. Amount Due

Special Provisions:

- ☐ 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.
- ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
- ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
- ☐ Homeowner (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

005291

Check Number

\$500.00

Dollar Amount

1-8-19

Date

II. Suggested Notice of Intent (NOI) Format

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

a) Name of facility:		Mailing Address for the Facility:	
b) Location Address of the Facility (if different from mailing address):	Facility Location	Type of Business:	
	longitude: _____ latitude: _____	Facility SIC codes:	
c) Name of facility owner: _____ Owner's email: _____ Owner's Tel #: _____ Owner's Fax #: _____ Address of owner (if different from facility address) _____ Owner is (check one): 1. Federal _____ 2. State _____ 3. Private _____ 4. Other _____ (Describe) _____			
Legal name of Operator, if not owner: _____ Operator Contact Name: _____ 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 discharger" as defined by 40 CFR Section 122.2? 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: _____

State Water Quality Classification: _____ Freshwater: _____ 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.
2. Short-term or long-term dewatering of foundation sumps.
3. Other.

c) Number of outfalls _____

For each outfall:

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

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

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.

g.) What treatment does the wastewater receive prior to discharge?

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) _____

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 _____ approximate end date of dewatering _____

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

<p>MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):</p> <p>k.) Does the discharge occur in an ACEC? Yes _____ No _____ If yes, provide the name of the ACEC: _____</p>

3. Contaminant Information

<p>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 LC₅₀ in percent for aquatic organism(s)).</p> <p>b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge.</p>
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4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix IV. In addition, respond to the following questions.

<p>a) Which of the three eligibility criteria listed in Appendix IV, Criterion (A, B, or C) have you met? _____</p> <p>b) Please attach documentation with your NOI supporting your response. Please see Appendix IV for acceptable documentation</p>

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

<p>a) See Screening Process in Appendix III and respond to questions regarding your site and any historic properties listed or eligible for listing on the National Register of Historic Places. Question 1: Yes _____ No _____ ; Question 2: No _____ Yes _____</p> <p>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).</p> <p>c) Which of the three National Historic Preservation Act eligibility criterion listed in Appendix III, Criterion (A, B, or C) have you met? _____</p> <p>d) Is the project located on property of religious or cultural significance to an Indian Tribe? Yes _____ or No _____ If yes, provide that name of the Indian Tribe associated with the property. _____</p>


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: HARBOUR TOWN (150-158 Water Street Plymouth, MA)

Operator signature: 

Print Full Name and Title: MICHAEL REYNOLDS, PRESIDENT - REYNOLDS CONSTRUCTION SERVICES, INC.

Date: 01/07/2019

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.

APPENDIX B

LABORATORY DATA



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 8L24009
Client Project: 2809.01 - 150 Water Street, Plymouth

Report Date: 31-December-2018

Prepared for:

Atlantic Design
Atlantic Design Engineers
39 Pleasant Street
Sandwich, MA 02532

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 12/24/18. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 8L24009. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
8L24009-01	W-1	Water	12/21/2018	12/24/2018
8L24009-02	W-3	Water	12/21/2018	12/24/2018

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

W-1 (Lab Number: 8L24009-01)

Analysis

Antimony
Arsenic
Cadmium
Chromium
Copper
Iron
Lead
Mercury
Nickel
Silver
Zinc

Method

EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 7470A
EPA 6010C
EPA 6010C
EPA 6010C

W-3 (Lab Number: 8L24009-02)

Analysis

Chloride
Hexavalent Chromium
Total Suspended Solids

Method

SM4500CI-B
SM3500-Cr-B
SM2540-D

Method References

Standard Methods for the Examination of Water and Wastewater, 20th Edition, APHA/ AWWA-WPCF, 1998

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, USEPA

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

Results: General Chemistry

Sample: W-3
Lab Number: 8L24009-02 (Water)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Chloride	39		10	mg/L	12/26/18	12/26/18
Hexavalent chromium	ND		0.01	mg/L	12/24/18 14:30	12/24/18 14:30
Total Suspended Solids	27		2	mg/L	12/27/18	12/27/18

Results: Total Metals**Sample: W-1****Lab Number: 8L24009-01 (Water)**

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Antimony	0.012		0.005	mg/L	12/26/18	12/26/18
Arsenic	ND		0.01	mg/L	12/26/18	12/26/18
Cadmium	ND		0.005	mg/L	12/26/18	12/26/18
Chromium	ND		0.005	mg/L	12/26/18	12/26/18
Copper	0.03		0.02	mg/L	12/26/18	12/26/18
Iron	1.78		0.05	mg/L	12/26/18	12/26/18
Lead	0.019		0.005	mg/L	12/26/18	12/26/18
Mercury	ND		0.0002	mg/L	12/26/18	12/26/18
Nickel	0.007		0.005	mg/L	12/26/18	12/26/18
Silver	ND		0.005	mg/L	12/26/18	12/26/18
Zinc	0.079		0.020	mg/L	12/26/18	12/26/18

Quality Control

General Chemistry

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8L1052 - Chloride										
Blank (B8L1052-BLK1)	Prepared & Analyzed: 12/26/18									
Chloride	ND		1	mg/L						
LCS (B8L1052-BS1)	Prepared & Analyzed: 12/26/18									
Chloride	63		1	mg/L	60.6		104	90-110		
Duplicate (B8L1052-DUP1)	Prepared & Analyzed: 12/26/18									
Chloride	392		10	mg/L	372				5.13	20
Matrix Spike (B8L1052-MS1)	Prepared & Analyzed: 12/26/18									
Chloride	431		10	mg/L	60.6	372	97.0	80-120		
Batch: B8L1078 - Hexavalent Chrome										
Blank (B8L1078-BLK1)	Prepared & Analyzed: 12/24/18									
Hexavalent chromium	ND		0.01	mg/L						
Blank (B8L1078-BLK2)	Prepared & Analyzed: 12/24/18									
Hexavalent chromium	ND		0.01	mg/L						
LCS (B8L1078-BS1)	Prepared & Analyzed: 12/24/18									
Hexavalent chromium	0.51		0.01	mg/L	0.500		102	90-110		
LCS (B8L1078-BS2)	Prepared & Analyzed: 12/24/18									
Hexavalent chromium	0.09		0.01	mg/L	0.100		91.0	90-110		
LCS (B8L1078-BS3)	Prepared & Analyzed: 12/24/18									
Hexavalent chromium	0.50		0.01	mg/L	0.500		100	90-110		

Quality Control
(Continued)

General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8L1078 - Hexavalent Chrome (Continued)										
Duplicate (B8L1078-DUP1)			Source: 8L24009-02			Prepared & Analyzed: 12/24/18				
Hexavalent chromium	ND		0.01	mg/L		ND				20
Matrix Spike (B8L1078-MS1)			Source: 8L24009-02			Prepared & Analyzed: 12/24/18				
Hexavalent chromium	0.49		0.01	mg/L	0.500	ND	97.4	80-120		
Batch: B8L1159 - TSS										
Blank (B8L1159-BLK1)						Prepared & Analyzed: 12/27/18				
Total Suspended Solids	ND		2	mg/L						
LCS (B8L1159-BS1)						Prepared & Analyzed: 12/27/18				
Total Suspended Solids	964		10	mg/L	1000		96.4	90-110		
Duplicate (B8L1159-DUP1)			Source: 8L24019-03			Prepared & Analyzed: 12/27/18				
Total Suspended Solids	13		2	mg/L		11			16.4	20

Quality Control
(Continued)

Total Metals

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8L1035 - Hot plate acid digestion waters										
Blank (B8L1035-BLK1)					Prepared & Analyzed: 12/26/18					
Chromium	ND		0.005	mg/L						
Iron	ND		0.05	mg/L						
Nickel	ND		0.005	mg/L						
Cadmium	ND		0.005	mg/L						
Lead	ND		0.005	mg/L						
Zinc	ND		0.020	mg/L						
Arsenic	ND		0.01	mg/L						
Copper	ND		0.02	mg/L						
Silver	ND		0.005	mg/L						
Antimony	ND		0.005	mg/L						
LCS (B8L1035-BS1)					Prepared & Analyzed: 12/26/18					
Arsenic	0.23		0.01	mg/L	0.200		113	85-115		
Cadmium	1.08		0.005	mg/L	1.00		108	85-114		
Silver	0.370		0.005	mg/L	0.400		92.4	85-115		
Chromium	1.07		0.005	mg/L	1.00		107	85-115		
Copper	1.04		0.02	mg/L	1.00		104	85-115		
Iron	10.2		0.05	mg/L	10.0		102	85-115		
Nickel	1.09		0.005	mg/L	1.00		109	85-112		
Antimony	1.12		0.005	mg/L	1.00		112	85-115		
Zinc	0.960		0.020	mg/L	1.00		96.0	85-115		
Lead	1.08		0.005	mg/L	1.00		108	85-115		
Batch: B8L1037 - Hot plate acid digestion waters										
Blank (B8L1037-BLK1)					Prepared & Analyzed: 12/26/18					
Mercury	ND		0.0002	mg/L						

Quality Control
(Continued)

Total Metals (Continued)

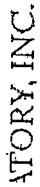
Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------

Batch: B8L1037 - Hot plate acid digestion waters (Continued)

LCS (B8L1037-BS1)					Prepared & Analyzed: 12/26/18					
Mercury	0.994			ug/l	1.00		99.4	85-115		

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.



8 L 2 4009 6007

CHAIN OF CUSTODY RECORD

Total Metals

[illegible]

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc.

Project #: 2809.01

Project Location: Plymouth, MA

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
8L24009

 Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input checked="" type="checkbox"/>	MassDEP VPH (GC/PID/FID) CAM IV A <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP VPH (GC/MS) CAM IV C <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

¹ All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

 Signature: Richard Warila

 Position: Laboratory Director

 Printed Name: Richard Warila

 Date: 12/31/2018

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive Unit 12

Sandwich, MA 02563

(508)888-6460 1-800-339-6460

FAX (508)888-6446

Client Name : Atlantic Design Engineers

Location :

Address : 39 Pleasant St.

150-158 Water St

Sagamore, MA

Plymouth, MA

02561

Lab Number : DW-184296

Collected By : B Reali

Date Received : 12/21/18

Sample Type : Well

Well Specs :

Location Source	Date Collected	Time Collected	Comments			
A	12/21/18	13:30	W-2			
Analysis Requested	Units	Recommended Limits	Analysis Result	Method	Date Analyzed	Analyzed By
pH	pH units	6.5-8.5	6.91	SM 4500-H-B	12/21/2018	RL
Free Chlorine	mg/L	N/A	< 0.03	SM4500-CL-G	12/21/2018	RS

Comments:

Date 12/31/2018


Ronald J. Sudd
Laboratory Director

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive Unit 12

Sandwich, MA 02563

(508)888-6460 1-800-339-6460

FAX (508)888-6446

Client Name : Atlantic Design Engineers**Location :****Address :** 39 Pleasant St.

150 Water St

Sagamore, MA

Plymouth, MA

02561

Lab Number : DW-184297**Collected By :** B Reali**Date Received :** 12/21/18**Sample Type :** Well**Well Specs :**

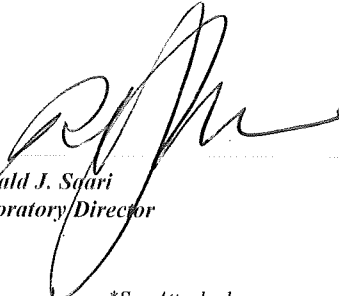
<i>Location Source</i> A	<i>Date Collected</i> 12/21/18	<i>Time Collected</i> 13:30	<i>Comments</i> H-1			
<i>Analysis Requested</i>	<i>Units</i>	<i>Recommended Limits</i>	<i>Analysis Result</i>	<i>Method</i>	<i>Date Analyzed</i>	<i>Analyzed By</i>
pH	pH units	6.5-8.5	7.47	SM 4500-H-B	12/21/2018	RL
Calcium	mg/L	N/A	239	EPA 200.7	12/31/2018	MC
Magnesium	mg/L	N/A	794	EPA 200.7	01/07/2019	MC
Total Hardness	mg/L	50-200	3900	EPA 200.7	01/08/2019	MC

Comments:

Total Hardness results indicate water is very hard to calcium carbonate concentration.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.


Ronald J. Sqari
Laboratory Director**Date** 1/8/2019

BRL = Below Reportable Limits

*See Attached

□Certification is not available for this analyte for potable water samples..



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 9A03061
Client Project: 2809.01 - 150 Water Street, Plymouth

Report Date: 04-January-2019

Prepared for:

Atlantic Design
Atlantic Design Engineers
39 Pleasant Street
Sandwich, MA 02532

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 01/03/19. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 9A03061. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
9A03061-01	W-7	Water	01/02/2019	01/03/2019
9A03061-02	W-4	Water	01/02/2019	01/03/2019

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

W-4 (Lab Number: 9A03061-02)

Analysis

Hexavalent Chromium

Method

SM3500-Cr-B

W-7 (Lab Number: 9A03061-01)

Analysis

Antimony
Arsenic
Cadmium
Chromium
Copper
Iron
Lead
Mercury
Nickel
Silver
Zinc

Method

EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 6010C
EPA 7470A
EPA 6010C
EPA 6010C
EPA 6010C

Method References

Standard Methods for the Examination of Water and Wastewater, 20th Edition, APHA/ AWWA-WPCF, 1998

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, USEPA

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Wet Chemistry

The sample "W-4" was received outside of the method recommended holding time for hexavalent chromium analysis.

Results: General Chemistry

Sample: W-4
Lab Number: 9A03061-02 (Water)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	ND		0.01	mg/L	01/03/19 16:20	01/03/19 16:20

Results: Total Metals**Sample: W-7****Lab Number: 9A03061-01 (Water)**

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Antimony	ND		0.005	mg/L	01/04/19	01/04/19
Arsenic	ND		0.01	mg/L	01/04/19	01/04/19
Cadmium	ND		0.005	mg/L	01/04/19	01/04/19
Chromium	ND		0.005	mg/L	01/04/19	01/04/19
Copper	ND		0.02	mg/L	01/04/19	01/04/19
Iron	0.80		0.05	mg/L	01/04/19	01/04/19
Lead	ND		0.005	mg/L	01/04/19	01/04/19
Mercury	ND		0.0002	mg/L	01/04/19	01/04/19
Nickel	0.011		0.005	mg/L	01/04/19	01/04/19
Silver	ND		0.005	mg/L	01/04/19	01/04/19
Zinc	0.448		0.020	mg/L	01/04/19	01/04/19

Quality Control

General Chemistry

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B9A0105 - Hexavalent Chrome										
Blank (B9A0105-BLK1)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	ND		0.01	mg/L						
Blank (B9A0105-BLK2)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	ND		0.01	mg/L						
LCS (B9A0105-BS1)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	0.45		0.01	mg/L	0.500		90.8	90-110		
LCS (B9A0105-BS2)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	0.10		0.01	mg/L	0.100		96.0	90-110		
LCS (B9A0105-BS3)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	0.45		0.01	mg/L	0.500		90.0	90-110		
Duplicate (B9A0105-DUP1)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	ND		0.01	mg/L		ND				20
Matrix Spike (B9A0105-MS1)					Prepared & Analyzed: 01/03/19					
Hexavalent chromium	0.47		0.01	mg/L	0.500	ND	94.2	80-120		

Quality Control
(Continued)

Total Metals

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B9A0121 - Hot plate acid digestion waters										
Blank (B9A0121-BLK1)					Prepared & Analyzed: 01/04/19					
Lead	ND		0.005	mg/L						
Nickel	ND		0.005	mg/L						
Chromium	ND		0.005	mg/L						
Antimony	ND		0.005	mg/L						
Arsenic	ND		0.01	mg/L						
Copper	ND		0.02	mg/L						
Silver	ND		0.005	mg/L						
Zinc	ND		0.020	mg/L						
Cadmium	ND		0.005	mg/L						
Iron	ND		0.05	mg/L						
LCS (B9A0121-BS1)					Prepared & Analyzed: 01/04/19					
Silver	0.357		0.005	mg/L	0.400		89.2	85-115		
Arsenic	0.22		0.01	mg/L	0.200		111	85-115		
Chromium	1.07		0.005	mg/L	1.00		107	85-115		
Zinc	1.15		0.020	mg/L	1.00		115	85-115		
Copper	1.06		0.02	mg/L	1.00		106	85-115		
Iron	11.3		0.05	mg/L	10.0		113	85-115		
Nickel	1.07		0.005	mg/L	1.00		107	85-112		
Lead	1.06		0.005	mg/L	1.00		106	85-115		
Antimony	1.11		0.005	mg/L	1.00		111	85-115		
Cadmium	1.08		0.005	mg/L	1.00		108	85-114		

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc.

Project #: 2809.02

Project Location: Plymouth, MA

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
9A03061

 Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input checked="" type="checkbox"/>	MassDEP VPH (GC/PID/FID) CAM IV A <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP VPH (GC/MS) CAM IV C <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

¹ All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

 Signature: Richard Warila

 Position: Laboratory Director

 Printed Name: Richard Warila

 Date: 1/4/2019



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 9A03060
Client Project: 2809.01 - 150 Water Street, Plymouth

Report Date: 04-January-2019

Prepared for:

Atlantic Design
Atlantic Design Engineers
39 Pleasant Street
Sandwich, MA 02532

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 01/03/19. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 9A03060. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
9A03060-01	W-5	Water	01/02/2019	01/03/2019

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

W-5 (Lab Number: 9A03060-01)

<u>Analysis</u>	<u>Method</u>
Total Suspended Solids	SM2540-D

Method References

Standard Methods for the Examination of Water and Wastewater, 20th Edition, APHA/ AWWA-WPCF, 1998

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

Results: General Chemistry

Sample: W-5
Lab Number: 9A03060-01 (Water)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Total Suspended Solids	2		2	mg/L	01/03/19	01/03/19

Quality Control

General Chemistry

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B9A0110 - TSS										
Blank (B9A0110-BLK1)										
Total Suspended Solids	ND		2	mg/L			Prepared & Analyzed: 01/03/19			
LCS (B9A0110-BS1)										
Total Suspended Solids	996		10	mg/L	1000		99.6	90-110		
Duplicate (B9A0110-DUP1)										
			Source: 8L31021-01				Prepared & Analyzed: 01/03/19			
Total Suspended Solids	11		2	mg/L		10			11.8	20

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

1254 Douglas Ave.

North Providence, RI 02904

1-888-863-8522

CHAIN OF CUSTODY RECO



9 A 0 3060 0

[illegible]



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 9A03059
Client Project: 2809.01 - 150 Water Street, Plymouth

Report Date: 04-January-2019

Prepared for:

Atlantic Design
Atlantic Design Engineers
39 Pleasant Street
Sandwich, MA 02532

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 01/03/19. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 9A03059. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
9A03059-01	W-6	Water	01/02/2019	01/03/2019

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

W-6 (Lab Number: 9A03059-01)

<u>Analysis</u>	<u>Method</u>
Chloride	SM4500CI-B

Method References

Standard Methods for the Examination of Water and Wastewater, 20th Edition, APHA/ AWWA-WPCF, 1998

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

Results: General Chemistry

Sample: W-6
Lab Number: 9A03059-01 (Water)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Chloride	1070		50	mg/L	01/04/19	01/04/19

Quality Control

General Chemistry

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B9A0135 - Chloride										
Blank (B9A0135-BLK1)										
Chloride	ND		1	mg/L						Prepared & Analyzed: 01/04/19
LCS (B9A0135-BS1)										
Chloride	56		1	mg/L	60.6		91.9	90-110		Prepared & Analyzed: 01/04/19
Duplicate (B9A0135-DUP1)										
Chloride	1090		50	mg/L	1070				2.20	20
Matrix Spike (B9A0135-MS1)										
Chloride	1170		50	mg/L	60.6	1070	157	80-120		Prepared & Analyzed: 01/04/19

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

1-888-863-8522

CHAIN OF CUSTODY REC



9 A 0 3059*

[illegible]



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 9A29043
Client Project: 2809.01 - 150 Water Street, Plymouth

Report Date: 30-January-2019

Prepared for:

Atlantic Design
Atlantic Design Engineers
39 Pleasant Street
Sandwich, MA 02532

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 01/29/19. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 9A29043. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
9A29043-01	A-1	Water	01/29/2019	01/29/2019

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

A-1 (Lab Number: 9A29043-01)

<u>Analysis</u>	<u>Method</u>
Zinc	EPA 6010C

Method References

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, USEPA

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Results: Total Metals

Sample: A-1
Lab Number: 9A29043-01 (Water)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Zinc	0.068		0.020	mg/L	01/30/19	01/30/19

Quality Control

Total Metals

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B9A1165 - Hot plate acid digestion waters										
Blank (B9A1165-BLK1)										
Zinc	ND		0.020	mg/L	Prepared & Analyzed: 01/30/19					
LCS (B9A1165-BS1)										
Zinc	1.06		0.020	mg/L	1.00		106	85-115		

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

9 A 2 9043 -

CHAIN OF CUSTODY RECORD

Page 8 of 9

Turnaround Business Days

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc.

Project #: 2809.02

Project Location: 150 Water St

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
9A29043

Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH (GC/PID/FID) CAM IV A <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP VPH (GC/MS) CAM IV C <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

¹ All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: Richard Warila

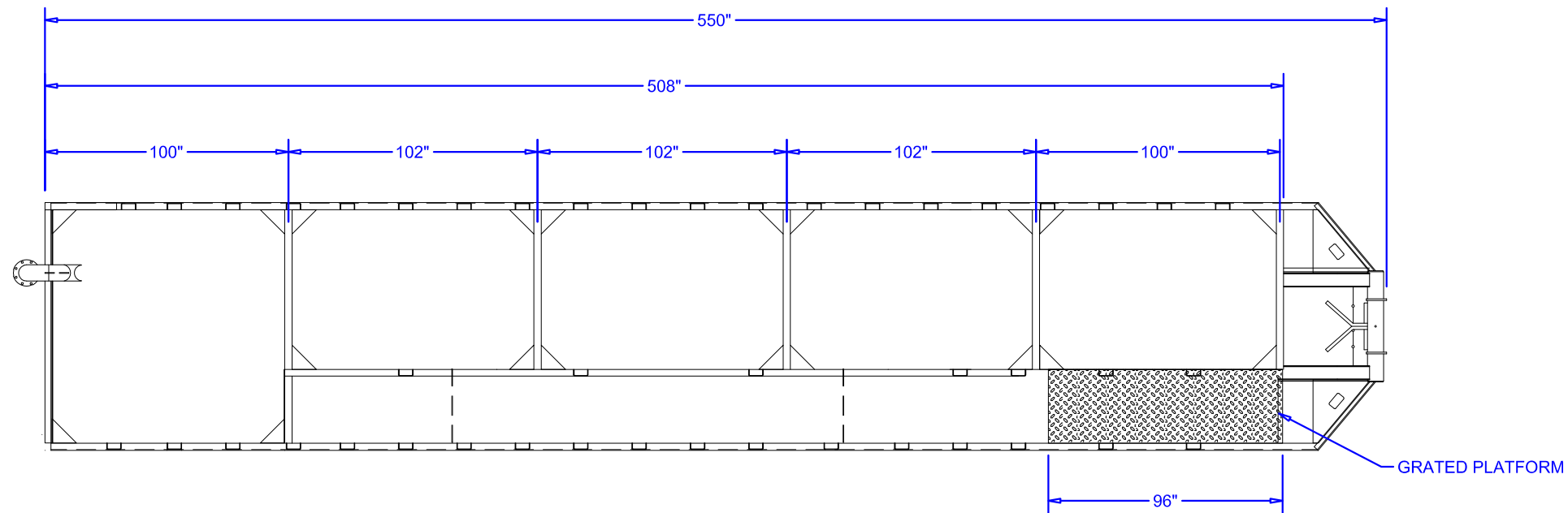
Position: Laboratory Director

Printed Name: Richard Warila

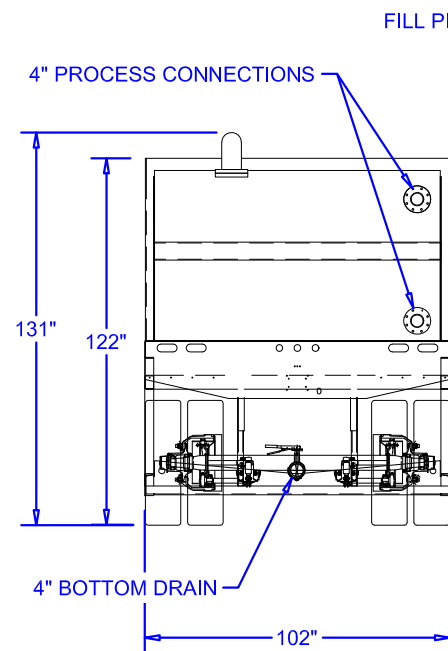
Date: 1/30/2019

APPENDIX C

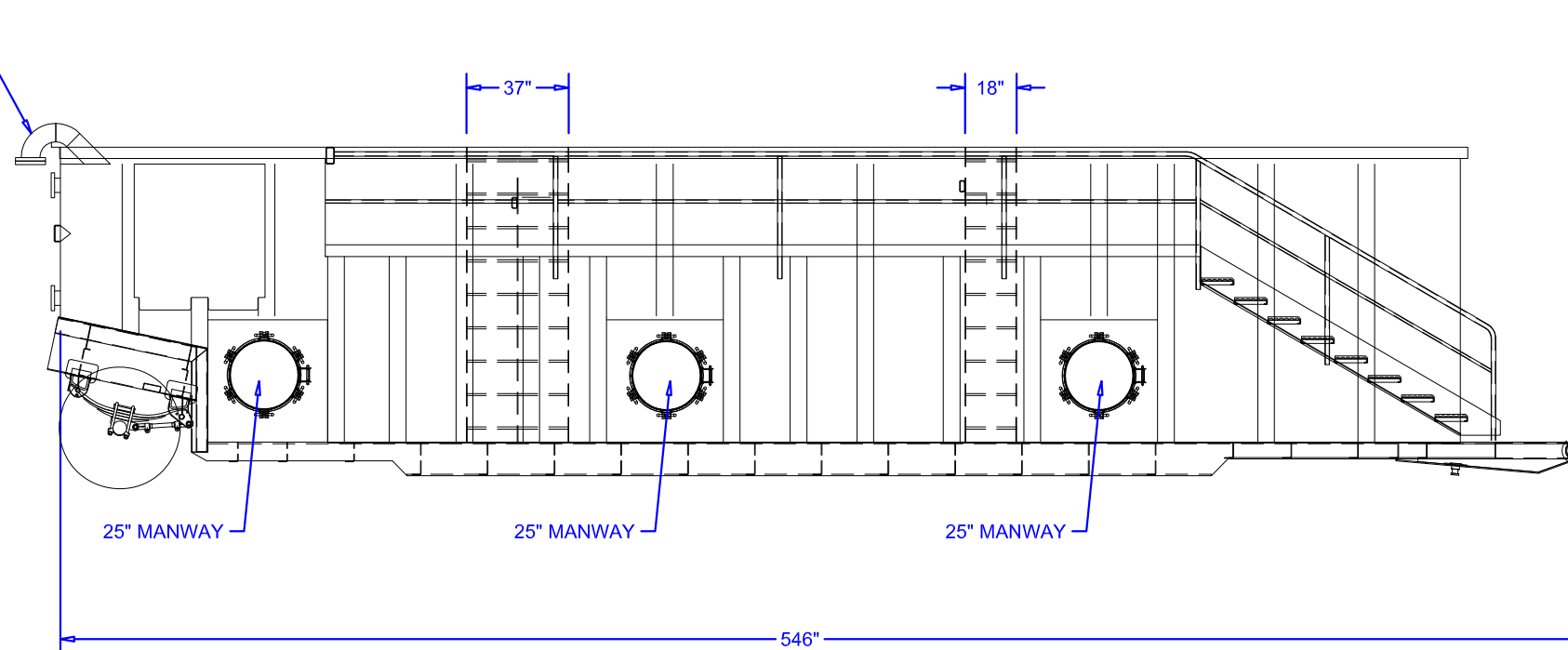
WATER TREATMENT SYSTEM



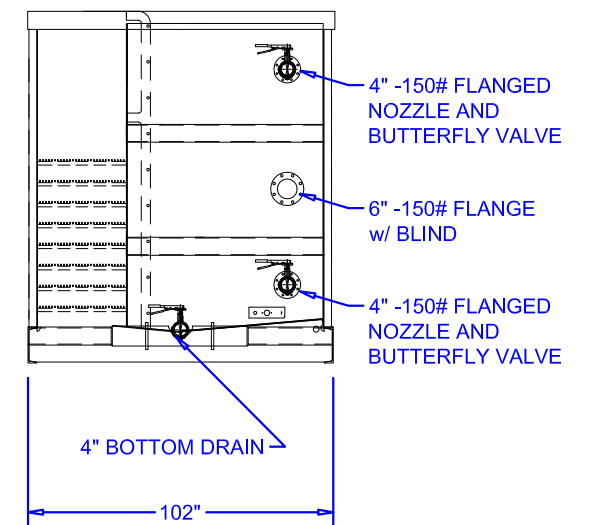
TOP VIEW



REAR VIEW



CURB SIDE VIEW



FRONT VIEW

- NOTES:
1. MAX CAPACITY: 440 BBL (18,840 gal.)
 2. DRY WEIGHT: 27,950 lbs.
 3. MATERIAL: CARBON STEEL

SHT. SIZE
B
11 x 17

The designs, information and data contained herein is proprietary and is submitted in confidence and shall not be disclosed, used or duplicated in whole or in part for any purposes whatsoever without prior written permission from Baker Corp. This document shall be returned to Baker Corp. on its demand. Receipt of this document shall be deemed to be an acceptance of the conditions specified herein.

TOLERANCE:
Fractions: $\pm 1/16$
Decimals: ± 0.001
Angles: $\pm 0^{\circ}30'$
Bends: $\pm 2^{\circ}$

MATERIAL:
FINISH:



3020 OLD RANCH PARKWAY
SEAL BEACH, CA 90740-2751

TITLE: PINNACLE AL470-OT FRAC TANK GENERAL LAYOUT AND DIMENSIONS			
CUSTOMER: BAKER CORP - SEAL BEACH, CA		BRANCH: CORP	
DWG BY: M. BUCHANAN	DATE: 02.12.14	SCALE: $\frac{3}{16}" = 1'-0"$	SHEET: 1 of 1
CKD BY: D. GARCIA	DATE: 02.12.14	DWG No: S-2-M0029	REV:

DIRTBAG

PUMPED SEDIMENT REMOVAL SYSTEM

SEDIMENT & PERIMETER CONTROL



Retains the silt, sand and fines while allowing the filtered water to drain out into the drainage system.

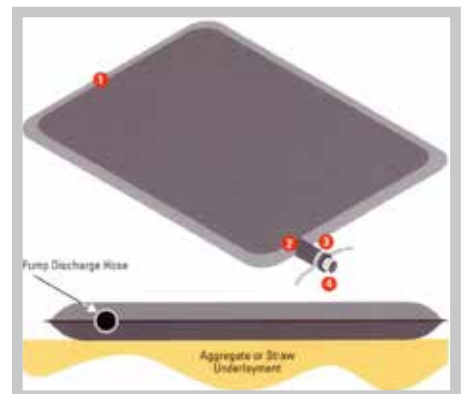
Protect the environment effectively and economically with the ACF Dirtbag®!

The ACF Dirtbag® collects sand, silt and fines, while regulating that enters streams, surrounding property and storm sewers. ACF can make custom Dirtbags® to suit your needs. ACF Environmental manufactures the Dirtbag® using a variety of woven and nonwoven geotextile fabrics. We can produce any size, dimension, or fabric weight requested.

Each standard Dirtbag® has a fill spout large enough to accommodate a 4" discharge hose. Straps are attached to secure the hose and prevent pumped water from escaping without being filtered. To increase the efficiency of filtration, place the bag on an aggregate or haybale bed to maximize water flow through the surface area of the bag. Dirtbag® is full when it no longer can efficiently filter sediment or pass water at a reasonable rate. Flow and removal rates will vary depending on the size of Dirtbag®, the type and amount of sediment discharged into Dirtbag®, the type of surface, rock or other substance under the bag. Under most circumstances Dirtbag® will accommodate flow rates of 500 gallons per minute. Use of excessive flow rates or overfilling Dirtbag® with sediment will cause ruptures of the bags or failure of the hose attachment straps.

Dirtbag® must be monitored during use.

Dirtbag® and Dirtbag® HD have been tested under ASTM D-7880 and ASTM D-7701, which are Standard Test Methods for Determining Flow Rate of Water and Suspended Solids Retention from a Closed Geosynthetic Bag. Testing summary available upon request.



DirtBag®

Standard Dirtbag® Features

- Higher flow rate
- Higher removal rate
- Smaller openings

Dirtbag®HD

NEW

Dirtbag®HD Features

- Higher strength
- More cost effective
- Less susceptible to ruptures

For more information about Sediment Perimeter Control, contact Inside Sales at 800.448.3636 or email at info@acfenv.com



DIRTBAG® SPECIFICATIONS

LET'S GET IT DONE

STANDARD DIRTBAG®

Standard Sizes:

4' x 6'
5' x 5'
8' x 10'
10' x 10'
15 x 15'

Custom Sizes available upon request.

Geotextile Properties - 8oz: Nonwoven

Property	Test Method	Units	Test Results
Weight	ASTM D-3776	oz/yd	8
Grab Tensile	ASTM D-4632	lbs.	205
CBR Puncture	ASTM D-6241	lbs.	525
Flow Rate	ASTM D-4491	gal/min/ft ²	90
Permittivity	ASTM D-4491	sec. ⁻¹	1.4
UV Resistant	ASTM D-4355	%	70
AOS %	ASTM D-4751	US Sieve	80

DIRTBAG®HD

Standard Sizes:

3' x 5'
4' x 10'
6' x 20'
12' x 12.5'
12' x 18.75'

Custom Sizes available upon request.

Geotextile Properties - Woven

Property	Test Method	Units	Test Results
Weight	ASTM D-3776	oz/yd	6.13
Grab Tensile	ASTM D-4632	lbs.	168x300
CBR Puncture	ASTM D-6241	lbs.	901
Flow Rate	ASTM D-4491	gal/min/ft ²	66.2
Permittivity	ASTM D-4491	sec. ⁻¹	0.862
UV Resistant	ASTM D-4355	%	96
AOS %	ASTM D-4751	US Sieve	30

Dirtbag® Test Results

Property	Test Method	Units	Standard Dirtbag Results	Results
Average Removal Efficiency	ASTM D-7701	%	99.6	95.3
Residual Low-Head	ASTM D-7701	gpm	<0.001	0.004
CBR Puncture	ASTM D-6241	lbs.	97.98	93.29

Dirtbag® Seam Test Results (under ASTM D4884)

NonWoven Dirtbag	Woven Dirtbag
Maximum Load 786 lbs	Maximum Load 934 lbs
Maximum Strength 1178 lb/ft	Maximum Strength 1402 lb/ft
NOTE: Each test result was derived from a material failure rather than a stitch failure.	

All properties are Minimum Average Roll Value (MARV) except the weight of the fabric, which is given for information purposes only. Depending on soil conditions and filtration requirements, additional geotextile options are available. All test methods are ASTM or industry standard, and have been verified by a third party testing facility. Test data is available upon request.



LET'S GET IT DONE

800.448.3636
acfenvironmental.com

Dirtbag^{HD} and Dirtbag^{SD} Tube are also available from ACF.



PRODUCT DATA SHEET

February, 2014

PINNACLE OPEN TOP FIXED AXLE TANK

GENERAL INFORMATION

440 BBL Fixed Axle Open Top Tank with smooth interior walls for easy cleaning.

WEIGHTS AND MEASURES

» Capacity: 440 BBL (18,480 gal.)

» Height: 9' - 9 1/2" (grade to top of tank)

» Width: 8' - 6" (between side runners)

» Length: 45' (overall)

» Weight: 27,950 lbs.

STRUCTURAL DESIGN

» Floor: 1/4" thick ASTM A36 carbon steel (V-bottom)

» Sides/Ends: 1/4" thick ASTM A36 carbon steel

» Wall Frame: 3/16" thick ASTM A36 formed channel

» Skid Rails: 12" x 20.7# Structural Channel

FEATURES

» Front Piping Connections:
Bottom Drain:
 4"-150# flanged nozzle and butterfly valve

Process Connections:
 2 - 4"-150# raised face flange with blind flange
 1 - 6" 150# flange w/ blind

» Rear Piping Connections:
Bottom Drain:
 4"-150# flanged nozzle and butterfly valve

Process Connections:
 2 - 4"-150# raised face flange with blind flange

Fill Piping:
 1 - 6" 150# flange w/ blind & pipe assembly

» Side Manways: Three - 25" side manways w/ gaskets (curb side)

FEATURES - cont.

» Roof Access Stairway: OSHA compliant front access stairway. Stairway includes handrails.

» Guardrails: Along tank walkway

» Internal Ladders: One to three internal vertical access ladders depending on tank configuration

» Axle: 77 1/2 track straight, non-steer, 22,500# capacity.

» Suspension: 3 leaf springs, 22,500# capacity

SURFACE DETAILS

» Exterior Coating: High Gloss Polyurethane

» Interior Coating: Epoxyphenolic

TESTS/CERTIFICATIONS

» Tests Performed: Scheduled- Level I, II and III inspections, including NESHAP testing

OPTION

» Weirs: Two weirs equally spaced between tank ends

SILTSACK®

(U.S. Patent #5,575,925)

Catch Basin Sediment Capture Device

Keeping catch basins free of silt!

Are you looking for a cost-effective, easy way to stop silt and sediment from entering catch basins on construction site? Siltsack is the simple and economical solution to prevent clogging of catch basins.

Siltsack is a sediment control device used to prevent silt and sediment from entering your drainage system by catching the silt and sediment while allowing water to pass through freely. Siltsack can be used as a primary or secondary sediment control device to prevent failure of your drainage system due to clogging. It must be maintained on a regular basis to function properly.

Siltsack is available in both high-flow or regular flow. A modified Siltsack is also available with a curb opening deflector attached to prevent sediment and debris from entering through curb openings. Constructed with properties shown on the Specifications page, Siltsack is a quality product designed to save time and money.

Routine inspection of a Siltsack's collected sediment level is important to prevent "ponding" around storm drains. We recommend the following maintenance schedule:

- Each Siltsack should be inspected after every major rain event.
- If there have been no major events, Siltsack should be inspected every 2-3 weeks.
- The yellow restraint cord should be visible at all times. If the cord is covered with sediment, the Siltsack should be emptied.



Versatile

Available in 2 styles to meet your needs:

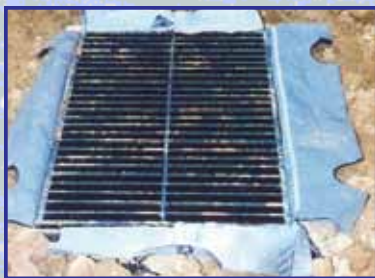
- High flow
- Regular flow

And It's Simple

- Remove drain grate
- Insert Siltsack
- Replace grate to hold Siltsack in position
- Siltsack traps silt
- Remove filled Siltsack easily
- Clean and reuse or simply discard and replace



Typical Siltsack® Construction



Installed Siltsack held in place by grate.

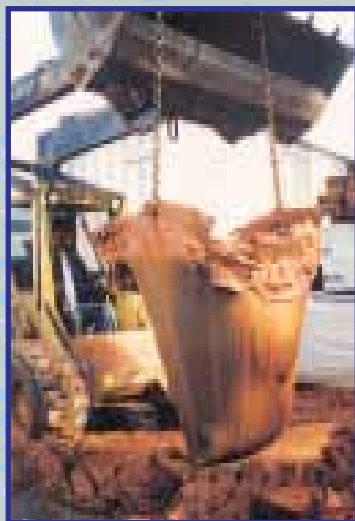
New Type C



Adjustable hanging frame.

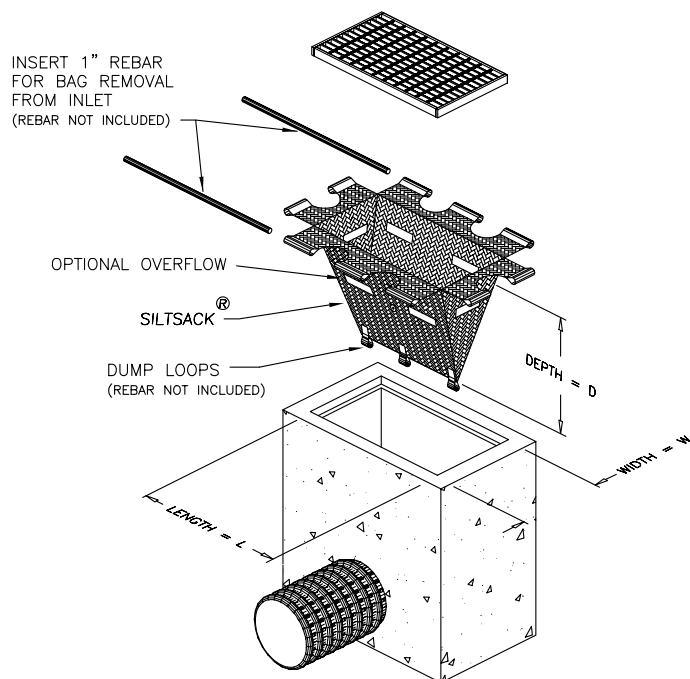


Adjustable frame installed. Adjusts from 16x24 to 24x36.

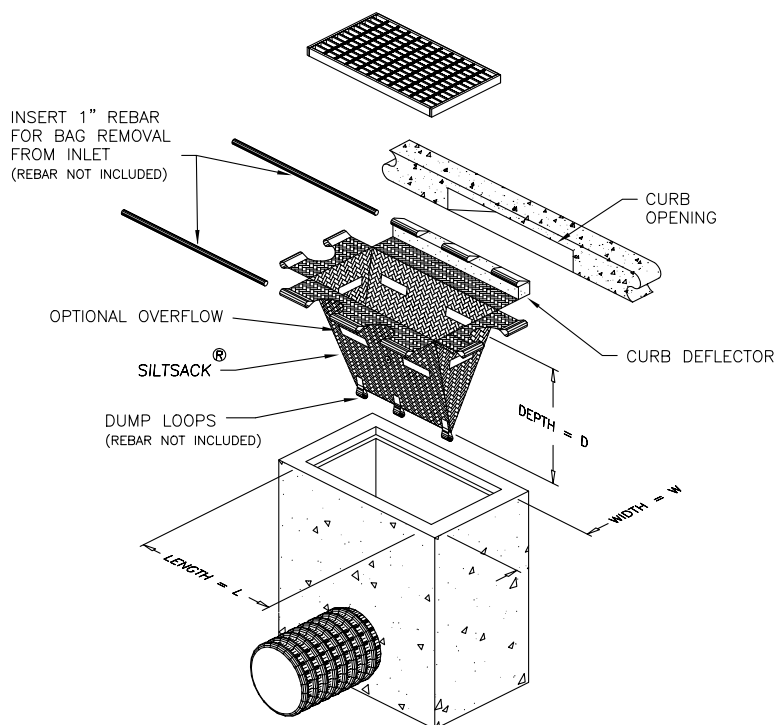


Sediment captured by Siltsack® can easily be removed from the site.

Type A



Type B



Siltsack® Specification

Control of Sediment Entering Catch Basins

(Stormwater Management)

1.0 Description

- 1.1** This work shall consist of furnishing, installing, maintaining, and removing Siltsack sediment control device as directed by the engineer or as shown on the site drawings. Siltsack sediment control device is manufactured by:

ACF Environmental, Inc.
 2831 Cardwell Road, Richmond, Virginia 23234
 Phone: 800-448-3636 • Fax: 804-743-7779
 www.acfenvironmental.com

2.0 Materials

2.1 Siltsack®

- 2.1.1** Siltsack shall be manufactured from a specially designed woven polypropylene geotextile and sewn by a double needle machine, using a high strength nylon thread.
- 2.1.2** Siltsack will be manufactured to fit the opening of the catch basin or drop inlet. Siltsack will have the following features: two dump straps attached at the bottom to facilitate the emptying of Siltsack; Siltsack shall have lifting loops as an integral part of the system to be used to lift Siltsack from the basin; Siltsack shall have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls, this yellow cord is also a visual means of indicating when the sack should be emptied. Once the cord is covered with sediment, Siltsack should be emptied, cleaned and placed back into the basin.

Siltsack Regular Flow

Property	Test Method	Units	Test Results
Grab Tensile	ASTM D-4632	lbs.	315
Grab Elongation	ASTM D-4632	%	15
Puncture	ASTM D-4833	lbs.	140
Mullen Burst	ASTM D-3786	P.S.I.	800
Trapezoid Tear	ASTM D-4533	lbs.	125x125
UV Resistance (@500 hrs)	ASTM D-4355	%	80
AOS	ASTM D-4751	US Sieve	40
Flow Rate	ASTM D-4491	Gal/Min/Ft ²	50
Permittivity	ASTM D-4491	sec ⁻¹	0.70

or SILTSACK® High Flow

Property	Test Method	Units	Test Results
Grab Tensile	ASTM D-4632	lbs.	255x275
Grab Elongation	ASTM D-4632	%	20x15
Puncture	ASTM D-4833	lbs.	135
Mullen Burst	ASTM D-3786	P.S.I.	420
Trapezoid Tear	ASTM D-4533	lbs.	40x50
UV Resistance	ASTM D-4355	%	90
AOS	ASTM D-4751	US Sieve	20
Flow Rate	ASTM D-4491	Gal/Min/Ft ²	200
Permittivity	ASTM D-4491	sec ⁻¹	1.50

All properties are Minimum Average Roll Values (MARV)

3.0 Construction Sequence

3.1 General

- 3.1.1** To install Siltsack in the catch basin, remove the grate and place the sack in the opening. Hold approximately six inches of the sack outside the frame. This is the area of the lifting straps. Replace the grate to hold the sack in place.
- 3.1.2** When the restraint cord is no longer visible, Siltsack is full and should be emptied.
- 3.1.3** To remove Siltsack, take two pieces of 1" diameter rebar and place through the lifting loops on each side of the sack to facilitate the lifting of Siltsack.
- 3.1.4** To empty Siltsack, place unit where the contents will be collected. Place the rebar through the lift straps (connected to the bottom of the sack) and lift. This will lift Siltsack from the bottom and empty the contents. Clean out and rinse. Return Siltsack to its original shape and place back in the basin.
- 3.1.5** Siltsack is reusable. Once the construction cycle is complete, remove Siltsack from the basin and clean. Siltsack should be stored out of sunlight until next use.

4.0 Basis of Payment

- 4.1** Payment for all Siltsacks used during construction is to be included in the bid price for the overall erosion and sediment control plan unless unit price is requested. Maintenance of Siltsack also to be included in this price.

**Siltsack is covered by U.S. Patent No. 5,575,925.*

Installation and Maintenance for Type A Siltsack



Remove grate from catch basin.



Slide Siltsack® over one side of grate.



Slide Siltsack® over opposite side of grate.



Replace Siltsack® and grate inlet into recess.



Installed Siltsack®.



To remove Siltsack®, clean area around grate and slide rebar through Siltsack® pockets.



Slowly remove Siltsack® from inlet.



Removed Siltsack® is now ready for cleanout.



To clean Siltsack® attach rebar through empty loops at bottom and lift to empty.



2831 Cardwell Road
Richmond, Virginia 23234
(800) 448-3636 • FAX (804) 743-7779
www.acfenvironmental.com

ACF Environmental
“Complete Source for Stormwater Solutions”

Distributed by:

APPENDIX D

SUPPLEMENTAL INFORMATION



ESA Eligibility Determination:

Using information in Appendix IV of the NPDES DGP, the project located at 150 Water Street Plymouth is eligible for coverage under this general permit under FWS Criterion C. This project is located in Plymouth County. No designated critical habitats were listed in the project area.

An Endangered Species Consultation was conducted on the U.S. Fish & Wildlife Service New England Field Office ECOS IPaC webpage for the Site:

- The Northern Long-eared Bat was listed as “Threatened” wherever it is found;
- The Red Knot was listed as “Threatened” wherever it is found;
- The Roseate Tern was listed as “Endangered” wherever it is found;
- The Plymouth Redbelly Turtle was listed as “Endangered” wherever it is found, while the project Location is outside of the critical habitat;

Temporary dewatering activities at the site are not expected to impact the Northern Long-eared Bat, Red Knot, Roseate Tern or the Plymouth Redbelly Turtle.

Northern long-eared bats spend winter hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). There are no caves and mines located at the site. There are trees in the immediate vicinity of the site; however, tree removal is not part of the scope of work related to this Notice of Intent. Therefore, temporary dewatering activities will have “no impact” to the Northern Long eared Bat.

The Red Knot is a medium sized shorebird that migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States (Southeast), the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. In the summer, the Red Knot can be found near Tidal flats, ocean shores and open tundra. In migration and winter, the Red Knot prefers coastal mudflats and tidal zones, and sometimes on open sandy beaches. Nests of the Red Knot can be found on the Arctic tundra, usually on rather high and barren areas. There are no shores, mudflats, barren tundra or tributaries located on-Site. Therefore, temporary dewatering activities will have “no impact” to the Red Knot.

The Roseate Tern is a medium sized marine coastal species that breeds along the coast of the Atlantic on salt marsh islands and beaches with sparse vegetation. The typical Roseate Tern nest consists of a depression in sand, shell or gravel, and may be lined with bits of grass and other debris. It is usually placed in dense grass clumps, or even under boulders or rip-rap. There are currently no beaches, salt marshes, boulders/rip rap located on-Site. Therefore, temporary dewatering activities will have “no impact” to the Roseate Tern.

The Plymouth Redbelly Turtle is a medium sized marine turtle (reptile) that spends most of its time in freshwater ponds. The Plymouth Redbelly Turtle typically breeds in the spring and summer within 100-yards of a freshwater pond. The Plymouth Redbelly Turtle feeds primarily on aquatic vegetation. There are currently no ponds or pond-shores located on-Site. Therefore temporary dewatering activities will have “no impact: to the Plymouth Redbelly Turtle.

APPENDIX I

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) IN MASSACHUSETTS

If the project is proposed in one of the communities listed in the following three pages (updated November 2013), the project may be located in an Area of Critical Environmental Concern (ACEC). Please see the Massachusetts Department of Conservation and Recreation (MADCR) webpage at <http://www.mass.gov/dcr/stewardship/acec/index.htm> for the most current listing of ACEC.

To confirm whether the project location is within an Area of Critical Environmental Concern (ACEC), call or contact the community's Conservation Commission of the Massachusetts Department of Conservation and Recreation (MADCR) program at:

MA DCR
251 Causeway Street
Suite 7000
Boston, MA 02114
(617) 626-1250

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

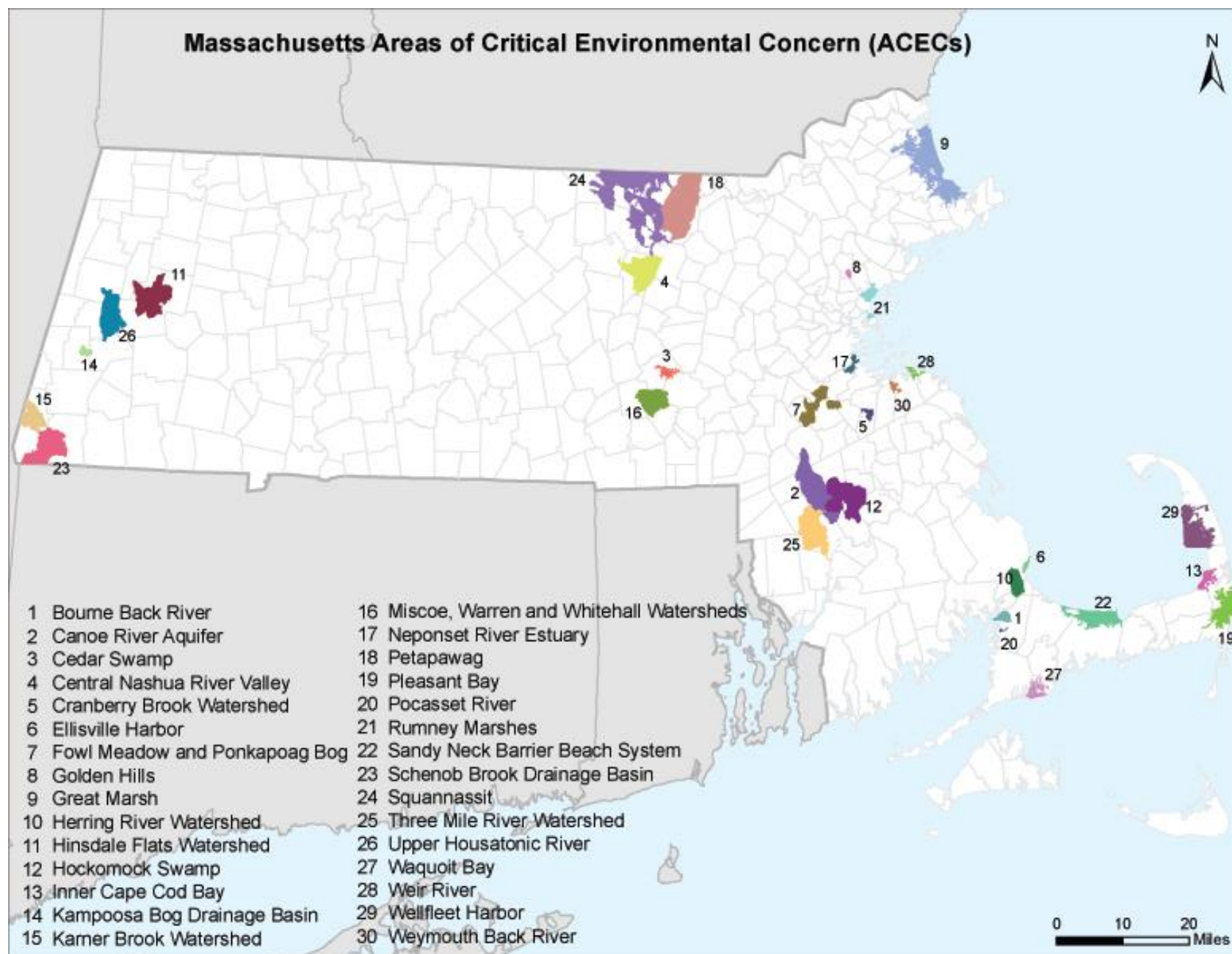
Wellfleet Harbor
(12,480 acres, 1989) Eastham, Truro, and Wellfleet

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	TOWN	ACEC
Ashby	Squannassit	Mt. Washington	Karner Brook Watershed
Ayer	Petapawag		Schenob Brook
	Squannassit	Newbury	Great Marsh
Barnstable	Sandy Neck Barrier Beach System	Norton	Hockomock Swamp
Bolton	Central Nashua River Valley		Canoe River Aquifer
Boston	Rumney Marshes		Three Mile River Watershed
	Fowl Meadow and Ponkapoag Bog	Norwood	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary	Orleans	Inner Cape Cod Bay
Bourne	Pocasset River		Pleasant Bay
	Bourne Back River	Pepperell	Petapawag
	Herring River Watershed		Squannassit
Braintree	Cranberry Brook Watershed	Peru	Hinsdale Flats Watershed
Brewster	Pleasant Bay	Pittsfield	Upper Housatonic River
	Inner Cape Cod Bay	Plymouth	Herring River Watershed
Bridgewater	Hockomock Swamp		Ellisville Harbor
Canton	Fowl Meadow and Ponkapoag Bog	Quincy	Neponset River Estuary
Chatham	Pleasant Bay	Randolph	Fowl Meadow and Ponkapoag Bog
Cohasset	Weir River	Raynham	Hockomock Swamp
Dalton	Hinsdale Flats Watershed	Revere	Rumney Marshes
Dedham	Fowl Meadow and Ponkapoag Bog	Rowley	Great Marsh
Dighton	Three Mile River Watershed	Sandwich	Sandy Neck Barrier Beach System
Dunstable	Petapawag	Saugus	Rumney Marshes
Eastham	Inner Cape Cod Bay		Golden Hills
	Wellfleet Harbor	Sharon	Canoe River Aquifer
Easton	Canoe River Aquifer		Fowl Meadow and Ponkapoag Bog
	Hockomock Swamp	Sheffield	Schenob Brook
Egremont	Karner Brook Watershed	Shirley	Squannassit
Essex	Great Marsh	Stockbridge	Kampoosa Bog Drainage Basin
Falmouth	Waquoit Bay	Taunton	Hockomock Swamp
Foxborough	Canoe River Aquifer		Canoe River Aquifer
Gloucester	Great Marsh		Three Mile River Watershed
Grafton	Miscoe-Warren-Whitehall Watersheds	Truro	Wellfleet Harbor
		Townsend	Squannassit
Groton	Petapawag	Tyngsborough	Petapawag
	Squannassit	Upton	Miscoe-Warren-Whitehall Watersheds
Harvard	Central Nashua River Valley		
	Squannassit	Wakefield	Golden Hills
Harwich	Pleasant Bay	Washington	Hinsdale Flats Watershed
Hingham	Weir River		Upper Housatonic River
	Weymouth Back River	Wellfleet	Wellfleet Harbor
Hinsdale	Hinsdale Flats Watershed	W Bridgewater	Hockomock Swamp
Holbrook	Cranberry Brook Watershed	Westborough	Cedar Swamp
Hopkinton	Miscoe-Warren-Whitehall Watersheds	Westwood	Fowl Meadow and Ponkapoag Bog
		Weymouth	Weymouth Back River
	Cedar Swamp	Winthrop	Rumney Marshes
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		





United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>



In Reply Refer To:

December 20, 2018

Consultation Code: 05E1NE00-2019-SLI-0583

Event Code: 05E1NE00-2019-E-01340

Project Name: 158 Water Street Plymouth MA

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2019-SLI-0583

Event Code: 05E1NE00-2019-E-01340

Project Name: 158 Water Street Plymouth MA

Project Type: DEVELOPMENT

Project Description: A building construction within a ~.75 acre property that was previously a vacant parking lot.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.961762832846645N70.66838409433913W>



Counties: Plymouth, MA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern <i>Sterna dougallii dougallii</i> Population: northeast U.S. nesting pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Reptiles

NAME	STATUS
Plymouth Redbelly Turtle <i>Pseudemys rubriventris bangsi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/451	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

150 WATER STREET PLYMOUTH, MA

NAD83 UTM Meters:
4646880mN, 361747mE (Zone: 19)
December 21, 2018

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible 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

(Step 3.) Print this map or create a new map

Print this map Create a new map

Site Location Information

The site you have selected is located at:

NAD 1983 UTM meters (Zone: 19):

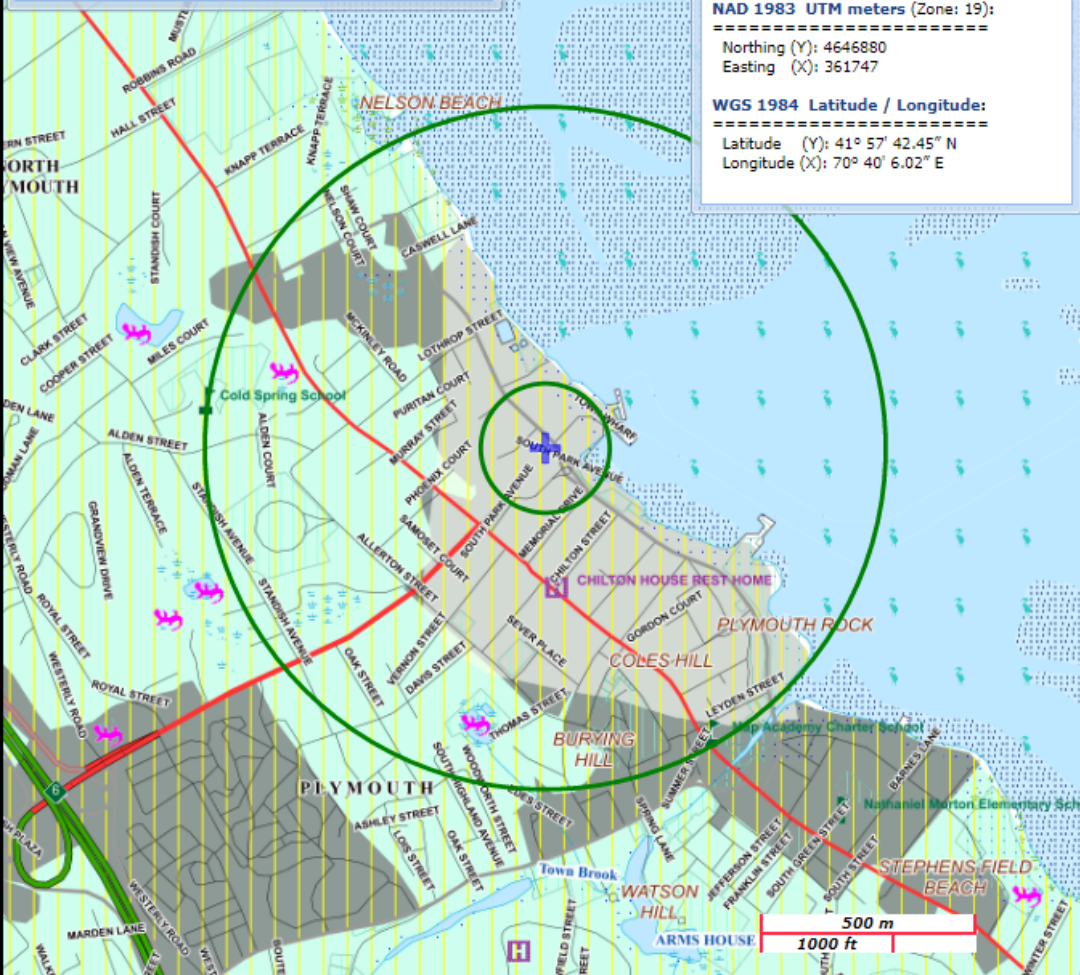
Northing (Y): 4646880

Easting (X): 361747

WGS 1984 Latitude / Longitude:

Latitude (Y): 41° 57' 42.45" N

Longitude (X): 70° 40' 6.02" E



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, MWFA, Zone A
Boundaries: Town, County, DEP Region, Train, Powerline, Pipeline, Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert. Potential
	Solid Waste Landfill; PWS: Com. GW, SW, Emerg, Non-Com



Reynolds Construction Services, Inc.

14 Apollo 11 Road
Plymouth, MA 02360
(508) 746-4153

Suggested Notice of Intent Format
For the Documentation of the National Historic Preservation Act:
requirements from Appendix III:

To Whom It May Concern:

January 7, 2019

Reynolds Construction Services hereby certifies that, in our opinion, the dewatering process to be implemented at the Harbourtown / 150-158 Water Street project has no potential to cause adverse effects to any historic properties as there are no listed historic properties abutting the 150-158 Water Street property, per the attached National Register of Historic Places figure provided within Appendix D. Reynolds Construction will not be constructing any control measures for the dewatering program which would constitute a subsurface land disturbance or interfere with groundwater migration.

Reynolds Construction Services affirms that the dewatering process to be used at the 150-158 Water Street, Plymouth, Harbourtown is eligible for the permit using Criterion A as identified within Section 5(c) of the NOI.

Please let us know if you have any questions.

Thank you,

Reynolds Construction Services

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Plymouth; Street No: 150; Street Name: water;

Inv. No.	Property Name	Street	Town	Year
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National Register of Historic Places

National Park Service
U.S. Department of the Interior



Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. Data last updated in April, 2014.

