NOTICE OF INTENT FOR
NPDES DEWATERING GENERAL PERMIT
TEMPORARY CONSTRUCTION DEWATERING
PARKER RIVER CULVERT AT WEST STREET
GEORGETOWN, MASSACHUSETTS

Prepared For:

J. Tropeano, Inc.
1780 Osgood Street
North Andover, Massachusetts 01845

Prepared By:

Lynnfield Engineering, Inc.
Consulting Environmental Engineers
199 Newbury Street, Suite 115
Danvers, Massachusetts 01923

August 21, 2013

LYNNFIELD ENGINEERING INC.
integrating design, expertise and technology

August 21, 2013

United States Environmental Protection Agency (USEPA)
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Attention: **Dewatering General Permit (DGP) Processing**

Subject: **Notice of Intent (NOI) for National Pollutant Discharge Elimination System (NPDES) General Permit**
Temporary Construction Dewatering
West Street Culvert at Parker River
Georgetown, MA
LEI Job No. 506-10

To Whom it may concern:

In compliance with the NPDES Dewatering General Permit (DGP), this Notice of Intent (NOI) and supporting documentation is being submitted for construction site dewatering under the DGP.

Project Description

The project involves the replacement of an existing 2' x 3' stone and slab culvert which conveys the Parker River under West Street in Georgetown, Massachusetts. The culvert will be replaced with a new 10'W x 6'H concrete box culvert with head walls and wing walls on each side of West Street. A bar rack will be installed on the upstream side of the culvert. West Street will be raised in the vicinity of the culvert. The roadway work will include new pavement, guardrail installation and roadside grading and stabilization. Dewatering activities are anticipated to be required intermittently during the installation of the new culvert.

Discharge Start Date and Length of Discharge

Site work and associated construction dewatering is anticipated to begin in July/August 2013 and is estimated to take 90 days to complete. Dewatering activities during construction are anticipated to be periodic and intermittent.

Management of Dewatering Effluent

Groundwater in the culvert excavation will be pumped from the excavation to a sediment settling structure. The suction hose will be buried in a crushed stone sump approximately 3' lower than the proposed culvert invert. The excavation will be cut to a subgrade 6" greater than required elevations, (approximately 79.5"). Six inches of 1.5" crushed stone will be used to bed the culvert and provide positive drainage to the dewatering sump. This will create a dry subgrade to work on. The settling basin will be comprised of a 20 yard dumpster. The gate end of the dumpster will be 1' lower than the back end and will be lined with filter fabric. Water will be pumped by means of a 2" and 3" centrifugal pump, size determined by volume of water in the excavation. Water exiting the settling dumpster will discharge to a temporary stone-lined swale extending to the Parker River.

The excavation of for the culvert installation will be an open cut across the roadway utilizing benching and side sloping in conformance with Occupational Safety and Health Administration (OSHA) regulations.

Receiving Waters

Prior to discharge, collected water will be routed though a dumpster settling basin to a stone lined channel and check dam to remove suspended solids. Construction dewatering will flow from the stone line channel and check dam to discharging to the Parker River. The proposed on-site point of discharge and the outfall location are shown on Figure No. 1.

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

If you have any questions or desire any additional information regarding this matter, please do not hesitate to contact me at 978.777.7250 Ext. 12.

Very truly yours,
Lynnfield Engineering, Inc.

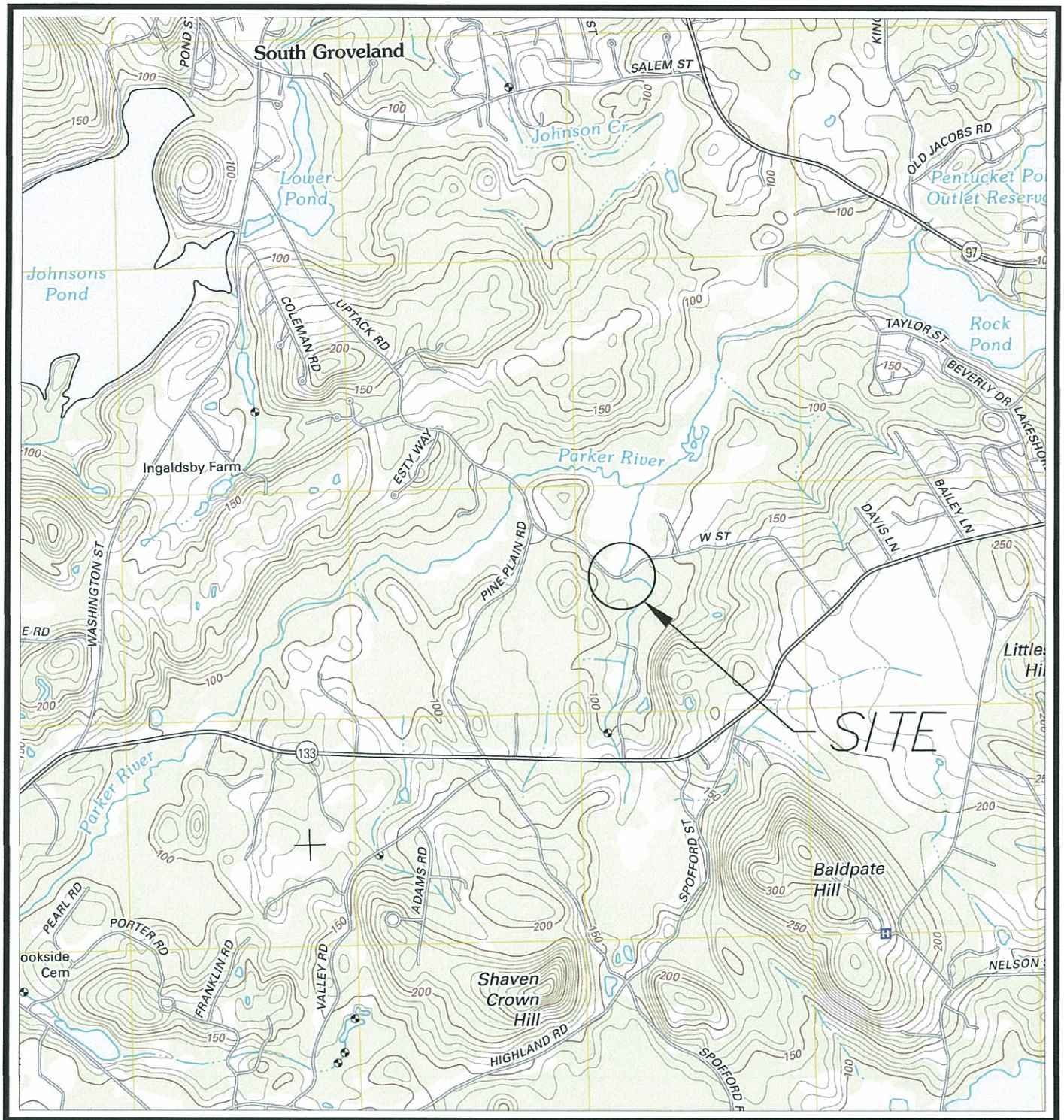
Richard Barthelmes, P.E.

enclosures
c: Michael Rygiel, J. Tropeano, Inc.
MassDEP
both w/enclosures

SUMMARY OF ATTACHMENTS

Attachment No. 1	NOI for Dewatering General Permit (DGP)
Attachment No. 2	MassDEP Transmittal Form and Payment
Attachment No. 3	National Register of Historic Places and Massachusetts Historical Commission Documentation
Attachment No. 4	Endangered Species Act Documentation

FIGURES



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BASED ON U.S.G.S.
QUADRANGLE: GROVELAND SOUTH
LATITUDE: 42° 43' 08.2"N
LONGITUDE: 71° 01' 30.6"W
SCALE: 1"=2,000'

Figure No. 1
LOCUS PLAN

HAZARD MITIGATION GRANT PROGRAM
(HMGP-1813-19)
WEST STREET OVER THE PARKER RIVER
GEORGETOWN, MASSACHUSETTS

LYNNFIELD ENGINEERING, INC.
DANVERS, MASSACHUSETTS
AUGUST 21, 2013

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ATTACHMENT NO. 1

NOI for Dewatering General Permit (DGP)

II. Suggested Notice of Intent (NOI) Form

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

a) Name of facility: West Street over the Parker River	**Mailing Address for the Facility:** C/O J. Tropeano, Inc. 1780 Osgood Street North Andover, MA 01845	
b) Location Address of the Facility (if different from mailing address): West Street over the Parker River Georgetown, MA 01833	**Facility Location** **longitude:** 42.7228 **latitude:** -71.0309	**Type of Business:** Public Roadway **Facility SIC codes:** N/A

c) Name of facility owner: Town of Georgetown **Owner's email:** pdurkee@georgetownma.gov

Owner's Tel #: 978-352-5704 **Owner's Fax #:** 978-352-5701

Address of owner (if different from facility address)

Highway Department C/O Town Hall 1 Library Street Georgetown, MA 01833

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

Legal name of Operator, if not owner: J. Tropeano, Inc.

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

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

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

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

c) **Number of outfalls** 1

For each outfall:

d) **Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow** 264,000 **GPD**
Average Monthly Flow 43,200 **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.** Surface Water

g) **What treatment does the wastewater receive prior to discharge?** Settling, filtering with filter fabric and stone

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)** I
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 21
Is the discharge temporary? Yes ✓ **No** _____
If yes, approximate start date of dewatering July 2013 **approximate end date of dewatering** September 2013

i) **Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long.** -70.0309 **lat.** 42.7228 ;
Outfall 2: long._____ **lat.**_____; **Outfall 3: long.**_____ **lat.**_____.

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

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

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

3. Contaminant Information

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

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge. N/A

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

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

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

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

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

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

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

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

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

Facility Name: West Street over the Parker River Georgetown, MA

Operator signature: Michael Rygiel

Title: Michael Rygiel, General Manager

Date: 8/21/23

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.

ATTACHMENT NO. 2

MassDEP Transmittal Form and Payment

Enter your transmittal number → X256381 (Transmittal Number)

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

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

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

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

3. Three copies of this form will be needed.

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

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

MassDEP
P.O. Box 4062
Boston, MA
02211

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

A. Permit Information

BRP WM 10 — 1. Permit Code: 7 or 8 character code from permit instructions
Dewatering General Permit — 2. Name of Permit Category
Removal and installation of new stream culvert — 3. Type of Project or Activity

B. Applicant Information – Firm or Individual

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

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

1780 Osgood Street — 5. Street Address

North Andover	MA	01845	978-689-2745	
6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #

Michael Rygiel — 11. Contact Person
mrygiel@jtropeano.com — 12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

West Street — 1. Name of Facility, Site Or Individual
West Street — 2. Street Address

Georgetown	MA	01833		
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)*

Lynnfield Engineering, Inc. — 1. Name of Firm Or Individual
199 Newbury Street Suite 115 — 2. Address

Danvers	MA	01923	978-777-7250	12
3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #

Richard Barthelmes, P.E. — 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 EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

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

10078	$385	8/21/13
Check Number	Dollar Amount	Date

Massachusetts Department of Environmental Protection
Bureau of Resource Protection • Watershed Permitting Program
Surface Water Discharge (NPDES) • Non-Industrial Wastewaters

BRP WM 10 Instructions

A. GENERAL INFORMATION

The construction site dewatering general permit allows a surface water discharge with limited total suspended solids (TSS) and pH. The source water is primarily groundwater. A complete description of this permit is found here: http://www.epa.gov/region1/npdes/dewatering.html, "Final Dewatering General Permit." MassDEP will perform the technical review of the application and issue an approval letter to EPA, copy to the applicant. EPA will then issue the permit. If there are any questions, call 508-767-2854, fax 508-791-4131, or email robert.kubit@state.ma.us.

Note:

1. If the proposed discharge is likely to contain pollutants other than total suspended solids and pH, a remediation general permit may be needed. Contact the Environmental Protection Agency for a determination on whether the construction site dewatering general permit or the remediation general permit is appropriate. Contact information is found here: http://www.epa.gov/region1/npdes/rgp.html.

2. A construction general permit may be more appropriate. Information on how to apply can be found here: http://www.epa.gov/NE/npdes/stormwater/index.html. **N.B.** The dewatering general permit requires (1) field sampling to verify compliance with TSS and pH limits and (2) a state application fee. It applies to any size lot. The construction general permit requires (1) an enforceable Best Management Practices plan kept onsite (no sampling) and (2) no state application fee. It applies to sites that disturb one acre or more.

B. APPLICATION PROCEDURE

To apply for the dewatering general permit the applicant should prepare three packages: MassDEP Application; Transmittal Form and check; and EPA Application.

1. The MassDEP application package. Include EPA's NOI, the transmittal form http://mass.gov/dep/service/online/trasmfrm.shtml with a copy of the check and a cover letter summarizing the situation.

- The EPA NOI, Dewatering General Permit. This form is available on the EPA website: http://www.epa.gov.region1/npdes/dewatering.html.

- Transmittal Form. Obtain from MassDEP web site: http://mass.gov/dep/service/online/trasmfrm.shtml. Each transmittal form has a unique number and is used to track the permit status. **A transmittal form must have a transmittal number or it will become lost in the system.** A fee is required unless owner is exempt (see transmittal form). Include a copy of the check.

Send this package to: Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

2. The Transmittal Form and check package. Send the check and the transmittal form to the address indicated on the transmittal form.

3. EPA Application package. Send the NOI to:

EPA New England
1 Congress Street, Suite 1100
Boston, MA 02114-2023
ATTN: Olga Vergara

Olga Vergara can be reached at 617-918-1519, fax 617-918-2064, or email vergara.olga@epa.gov.

ATTACHMENT NO. 3

National Register of Historic Places and Massachusetts Historical Commission Documentation

APPENDIX A

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Town of Georgetown Culvert and Roadway Upgrade MA Emergency Agency (MEMA)

Project Name: Hazard Mitigation Grant Program (HMGP-1813-19)

Location / Address: West Street over the Parker River

City / Town: Georgetown

Project Proponent

Name: J. Tropeano, Inc.

Address: 1780 Osgood Street

City/Town/Zip/Telephone: North Andover, MA 01845

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	Type of License or funding (specify)
MassDEP	Construction Site Dewatering Permit
USEPA	NOI - Construction Site Dewatering Permit

Project Description (narrative):
Removal and installation of new stream culvert across West Street Georgetown, MA.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.
Project includes removal of existing culvert.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.
Not Applicable (N/A)

Does the project include new construction? If so, describe (attach plans and elevations if necessary).
Installation of new box culvert, wing walls and new bituminous concrete roadway pavement.

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify. No

What is the total acreage of the project area?

Woodland	acres	Productive Resources:	
Wetland	acres	Agriculture	acres
Floodplain	acres	Forestry	acres
Open space	acres	Mining/Extraction	acres
Developed 0.07	acres	Total Project Acreage 0.07	acres

What is the acreage of the proposed new construction? 0.07 acres

What is the present land use of the project area?
Public roadway.

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: _____ Date: 6/24/13

Name: Richard Barthelmes, P.E., Lynnfield Engineering, Inc.

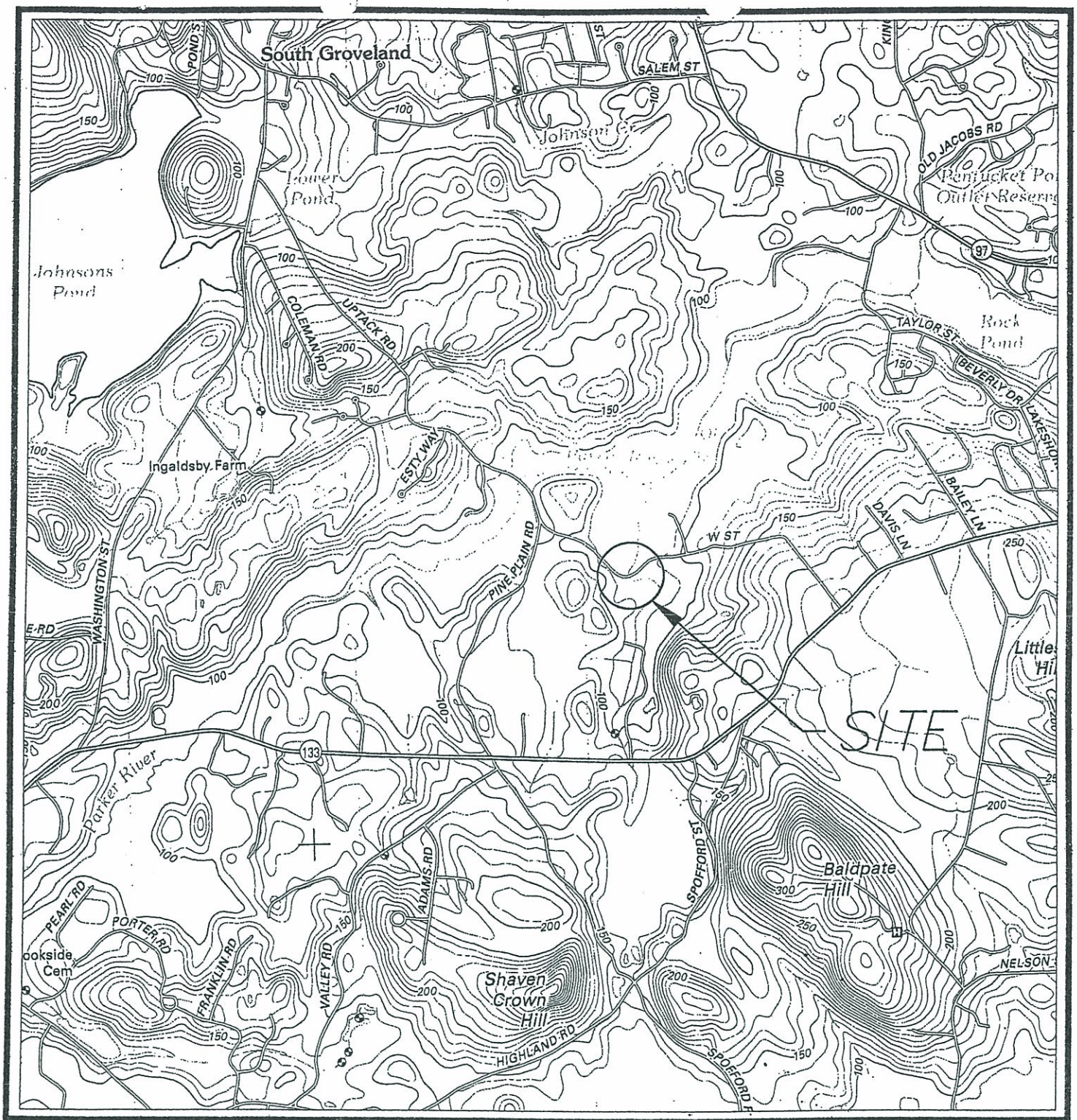
Address: 199 Newbury Street Suite 115

City/Town/Zip: Danvers, MA 01923

Telephone: 978-777-7250 Ext. 12

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.



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BASED ON U.S.G.S.
QUADRANGLE: GROVELAND SOUTH
LATITUDE: 42° 43' 08.2"N
LONGITUDE: 71° 01' 30.6"W
SCALE: 1"=2,000'

Figure No. 1
LOCUS PLAN

HAZARD MITIGATION GRANT PROGRAM
(HMGP-1813-19)
WEST STREET OVER THE PARKER RIVER
NORTH ANDOVER, MASSACHUSETTS

LYNNFIELD ENGINEERING, INC.
DANVERS, MASSACHUSETTS
JUNE 24, 2013

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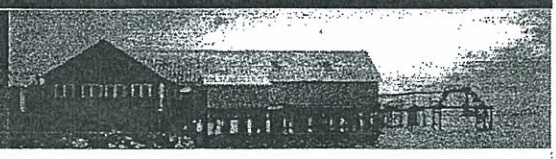
nps.gov

National Park Service
U.S. Department of the Interior

National Register of Historic Places



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History & Culture
Nature & Science
Education & Interpretation

TITLE LIST DISPLAY

From: NPS Digital Library
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Records Displayed: 1 to 4 of 4

Go back to: Revise Search

Sort By: Title | Relevancy | Modified

•	Adams--Clarke House *[Image]*	7%
•	Dickinson--Pillsbury--Witham House *[Image]*	7%
•	Georgetown Central School *[Image]*	7%
•	Hazen--Kimball--Aldrich House *[Image]*	7%

Prev | 1 | Next

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ATTACHMENT NO. 4

Endangered Species Act Documentation

TURTLE PROTECTION PLAN

FOR
CULVERT AND ROADWAY UPGRADE AT
WEST STREET OVER THE PARKER RIVER
Conducted Under
MASSACHUSETTS EMERGENCY MANAGEMENT AGENCY
HAZARD MITIGATION GRANT PROGRAM (HMGP)
(FEMA-1813-DR-MA)

TOWN OF
GEORGETOWN, MASSACHUSETTS

NOVEMBER 2012

Prepared by

COUGHLIN
ENVIRONMENTAL
SERVICES, LLC

CONSULTING ENGINEERS AND PLANNERS

62 Montvale Avenue
Stoneham, MA 02180-3637

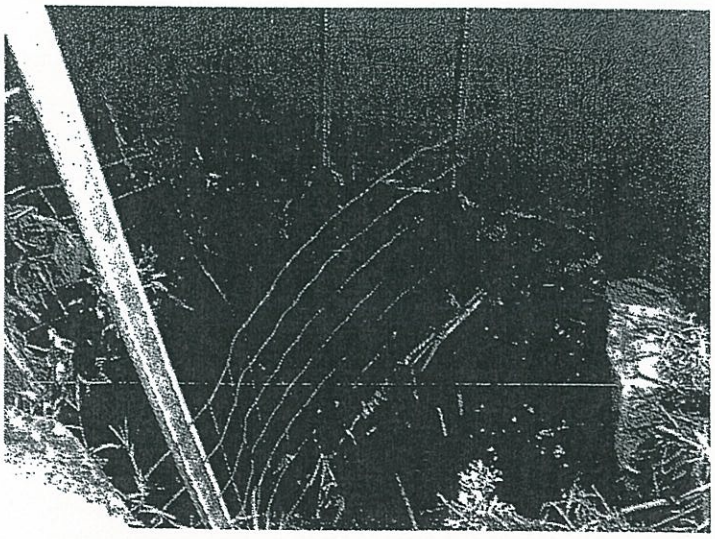
Phone 781-832-1002
Fax 781-438-9654
E-mail mail@coughlinenvironmental.com

TURTLE PROTECTION PLAN

BACKGROUND

During the environmental review process associated with the Town of Georgetown upgrade of the West Street culvert at the Parker River, the required Natural Heritage & Endangered Species Program (NHESP) project review determined that the project **"will not adversely affect"** rare wildlife species believed to be in the area of the project. The determination went further to request that a Turtle Protection Plan be developed for the project to help protect against and avoid a prohibited "take" as defined by the Massachusetts Endangered Species Act (MESA) regulations. The primary species of concern were the Blanding's Turtle ***(Emydoidea blandingii)*** and the Wood Turtle ***(Glyptemys insculpta)***. The following documents details proposed protection measures and also provides informative appendix data for use by the Town and the Contractor during the execution of the construction project. This document will be incorporated in contract Bid Documents as part of the Contractors obligation under Permitting. To avoid major impacts, heavy construction work will be attempted to be performed between October 16 and April 14 (the turtle inactive season) to avoid any major impacts. Weather conditions may impact work scheduling and progress, so if the construction activity spans beyond that period, which is likely, this document will provide additional guidance for specie protection. Extensive construction activity shall be avoided between May 25 and July 5 which is the primary nesting season.

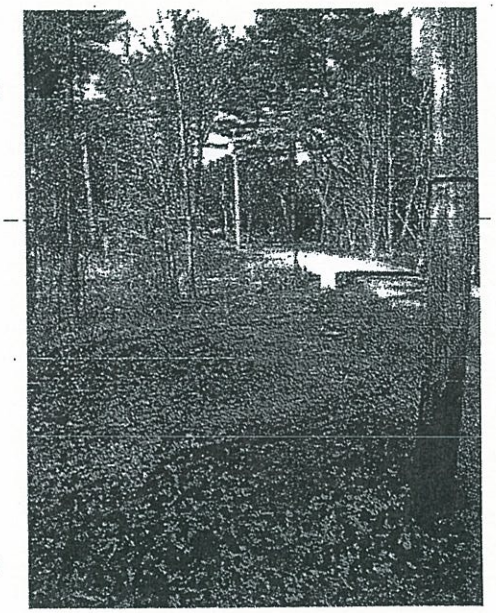
EXITING CONDITIONS AND DESIGN MEASURES TO ENHANCE HABITAT



The culvert upgrade project currently involves several design measures to enhance the current habitat and promote the free passage of turtle species in the area of the work. The existing culvert is a 4 foot wide by 2 foot high stone culvert. Due to its relatively small opening and low height, the culvert is often submerged by river flow and is very susceptible to beaver damming. A steel wire screen projecting out into the inlet channel (shown at right) has been historically used to minimize beaver damming; however, this also creates a debris capture mechanism and an obstruction to larger turtles, forcing them to traverse the roadway to follow the river channel and its abutting wetlands. The proposed culvert is a 10 foot wide by 6 foot high precast concrete box culvert. (Note: The effective depth is only 5 feet to allow for bottom infilling to establish a natural stream bottom.) This culvert should function under most conditions in a non-submerged state

and also allow enhanced open width, freeboard and day-lighting to encourage turtle movement through the culvert and not over the roadway. The new culvert, being of much larger open area and elevated above normal water levels would also be less apt to be subject to beaver damming or at least not as readily susceptible to damming as the existing culvert. As a result, the new culvert will not include a debris screen of beaver preventing devices and as a result, the new culvert would no longer be a hindrance to turtle passage.

As part of the culvert upgrade, the roadway section will also be raised up to three feet near the culvert to flood-proof the roadway. This will create sloping areas adjacent to the roadway and abutting the wetland area, especially on the southwestern edge. Currently, as shown at the right, the road side is relatively flat and well grassed. The new roadway side slopes would create an inclined surface above the normal high water mark.



The northeastern roadway shoulder is being stabilized with a retaining wall near the culvert due to the close proximity of abutting wetlands. Some replication will be conducted further away from the culvert exit and this replication area is currently proposed to be vegetated with a sloping approach to the roadway shoulder.

PRE-CONSTRUCTION PERIOD

SELECTION OF A BIOLOGIST

Sweeps of work areas must be conducted by a ***highly qualified wildlife biologist*** who has direct and extensive experience working with the turtle species of concern.

1. ***The NHESP MUST pre-approve the candidate biologist before work begins.*** The ability to locate and identify state-listed turtles requires significant experience with the target turtle species.
2. The resume/curriculum vitae of the candidate biologist, demonstrating extensive experience locating the target turtle species, shall be sent to the NHESP for written pre-approval.
3. The candidate biologist must develop a plan tied to the phasing of work and sensitive to the time of year, habitat features in the vicinity of work, and timing of searches associated with initiation of work and long cessations of work. The plan may include turtle barriers in portions of the project site, but rely on active sweeps over other sections of the work. This plan must be approved by the NHESP in writing prior to start of Construction mobilization.

4. In order to handle state-listed species, the biologist must obtain a Commercial Scientific Collection Permit for this project site prior to conducting turtle sweeps. Application & filing fee information is found at: http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/pdf/commercial_collect_permit_app.pdf.

Below is a list of three qualified biologist in the region of the work. This list is only provided for general reference purposes and is not intended to be comprehensive or complete, nor is it a recommendation or endorsement of any individual or firm.

Oxbow Associates, Inc.
http://oxbowassociates.com/

Hyla Ecological Services
http://www.hyla-ecological.com/

Mark Grgurovic
Swamp Walkers Inc.
(978) 265-4247

CONSTRUCTION STAFF EDUCATION

The NHESP-Approved Biologist will be responsible for providing training and guidance to all construction personnel relative to state-listed species. All construction staff shall attend a training session in which they will be apprised of the biology and behavioral traits of state-listed species, protocol if a state-listed species is found, and regulatory implications for harming or removing state-listed species from the wild.

At the beginning of construction, all workers entering the work zone shall be informed of the presence of the designated species.

The following measures will be conducted prior to initiating field mobilization measures.

1. A mandatory Pre-Construction Meeting will be held with the Contractor to advise and instruct their designated site foreman and/or other designated individuals or "Competent Person" regarding turtle specie identification, protection and reporting measures. That individual will be responsible to ensue that all workers and sub-contractors are advised of the presence of the designated specie before entering the work zone. (Educational data in Appendix materials.)

CONSTRUCTION PERIOD

1. All erosion control barriers shall be placed so as to segregate the work zone from the wetland buffer and to prevent siltation and sediment transport. A combination of silt fence, hay bales and eight inch diameter straw wattles may be used depending upon site terrain.
   a. Installation of the barrier must be conducted using methods that result in a minimum of disturbance (i.e., hand-dug, "2-man" trencher or auger). It is not appropriate to clear large access paths prior to sweeps for turtles. No clearing may occur outside the limit of work approved by the NHESP.
   b. The barrier must be composed of at least 2½feet of vertical barrier above ground and an additional 4-6 inches buried below ground.
   c. The face of the material must be relatively smooth. Materials commonly used include tightly woven geotextile, aluminum flashing, or other such materials stapled or tacked to stakes, which shall be placed at 6-10 foot intervals. Loosely woven geotextile fabrics, hay/straw bales, wattles or tubular materials are not generally sufficient.
   d. The bottom of the silt fencing must be carefully buried in a 4-6 inch deep trench. The trench must be backfilled and compacted. If it is not possible to dig a trench, then the bottom of the barrier must be affixed to the surface.
   e. If hay or straw bales are to be used with silt fencing, they shall be installed on the work-side of the silt fence to avoid turtles using these to breach the barrier.
   f. Once installed, the barrier shall be taut between the stakes. Slumps or loose materials will undermine the effectiveness of the barrier. In some circumstances, geotextile fabrics may need to be reinforced with backer material to ensure integrity. Backer material is typically similar to hardware cloth.
   g. Routine Turtle Barrier Inspections: Once per week, a person familiar with barrier maintenance and installation shall inspect the barrier and facilitate any repairs or alterations. The turtle barrier should remain taught between stakes and any holes along the bottom repaired.
2. Just prior to roadway closure, debris collection (snow or construction) fence shall in installed upstream and downstream of the culvert to capture debris and re-direct species away from work area.
3. No sand piles shall be stockpiled within the work zone unless utilized within one (1) work day.

4. A morning inspection by construction staff around siltation barriers, equipment and stored materials shall be conducted to ensure that turtle species have not migrated to the site over night.

   a. ***Stockpiles of dirt, loam, sand*** – From June 1 through July 1, stockpiles should be fully encircled during non-work hours with a turtle barrier to prevent turtles from nesting in this material

5. No open excavation shall be left over-night without suitable turtle barriers installed around it.

6. Prior to construction within and in proximity to turtle habitat, and prior to any re-start of construction after a temporary shut-down, the qualified biologist shall be responsible for searching the work areas (inside all erosion and sedimentation barriers and cofferdams and along the outer edge) for any turtles and, pursuant to a valid Scientific Collection Permit, shall relocate any turtles or protected species to a suitable habitat outside of the work zone

   a. ***Work stoppage greater than 48 hours during month of June and month of September*** – The qualified biologist shall search in work zone for turtles and provide guidance about potential additional protective measures as noted above in "stockpiles…" to prevent turtles from nesting in work zones or to accommodate discovered nest.

7. ***Land Under Water*** – The qualified biologist shall be present, at any time of year, as in-water barriers are installed (eg, coffer dam). Once installed, the qualified biologist shall search within the coffer dam and in the vicinity to remove any turtles encountered. Sweeps shall occur again immediately following dewatering.

8. ***Bank*** – The qualified biologist shall visually search the areas immediately prior to any work, including physical bank alteration and vegetation cutting.

9. ***Vegetated Areas within 200 feet of the Stream*** – In any area where machinery will enter over vegetated ground, the qualified biologist shall sweep for turtles in advance of machinery moving into and out of areas near the stream. If vegetation will be cut or vegetation will be herbicided, the qualified biologist must conduct sweeps prior to the start of work and remove any turtles. Sweeps must occur prior to any vegetation alteration; thus, they can be minimized by completing all vegetation alteration into a single event. Work shall be primarily conducted during the turtle inactive season (November 15 through April 15). To the extent possible, clearing, mowing, and grubbing shall **NOT** be conducted between May 1 and August 31.

10. In the event of finding an injured state-listed turtle, the turtle shall be transported to a suitable veterinarian and the veterinarian should be instructed that the turtle is a state-listed rare species and to coordinate with NHESP. In the event of finding a turtle with a radio transmitter, NHESP and the contact on the transmitter shall be alerted immediately.

11. All state-listed species encountered in or near the project shall be reported within 10 days of the observation. All observed rare species shall be reported using Rare Animal Observation Forms (See Appendix materials). A digital photograph shall also be taken of the turtle as well as the location found.

12. If species are encountered and believed to be entering the work zone and being subject to risk, they shall be carefully directed away from the site, without handling, in the direction the turtle was oriented. Whenever possible, species shall be directed away or relocated a minimum of 250 feet from the work zone. ***No state-listed species may be handled or removed from the project site unless under the direct supervision of the qualified biologist or the NHESP.***

13. Furthermore, the NHESP shall be provided with reports notifying them of the initiation of work as well as the completion of work, indicating the dates of all searches, species observed, and any corrective measures taken. The qualified biologist may modify the above noted plan, with prior NHESP written approval, to accommodate specific construction sequencing.

14. All dewatering sumps and pits shall be isolated/screened to protect species and the discharges should be directed to a stilling basin, fractionalization tank or filter bag to prevent wetland siltation, erosion or channel scouring.

15. Construction debris collection shall be conducted at the end of each work.

16. No activities shall occur outside of the NHESP approved limit of work. Construction equipment storage over-night shall be within one lane of the closed roadway and not off the roadway shoulder.

POST CONSTRUCTION PERIOD

1. The culvert re-opening shall be expedited and flow resumed as quickly as possible after construction completion.

2. Disturbed slopes shall be stabilized via loaming and hydroseeding without fertilizer or pesticide applications.

3. Final clean up shall be conducted to remove any debris, material piles or cut vegetation

4. After disturbed areas are restored and vegetated, all siltation barriers shall be removed.

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

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

Revised 10/7/2011

Towns with ACECs within their Boundaries — November 2010

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

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

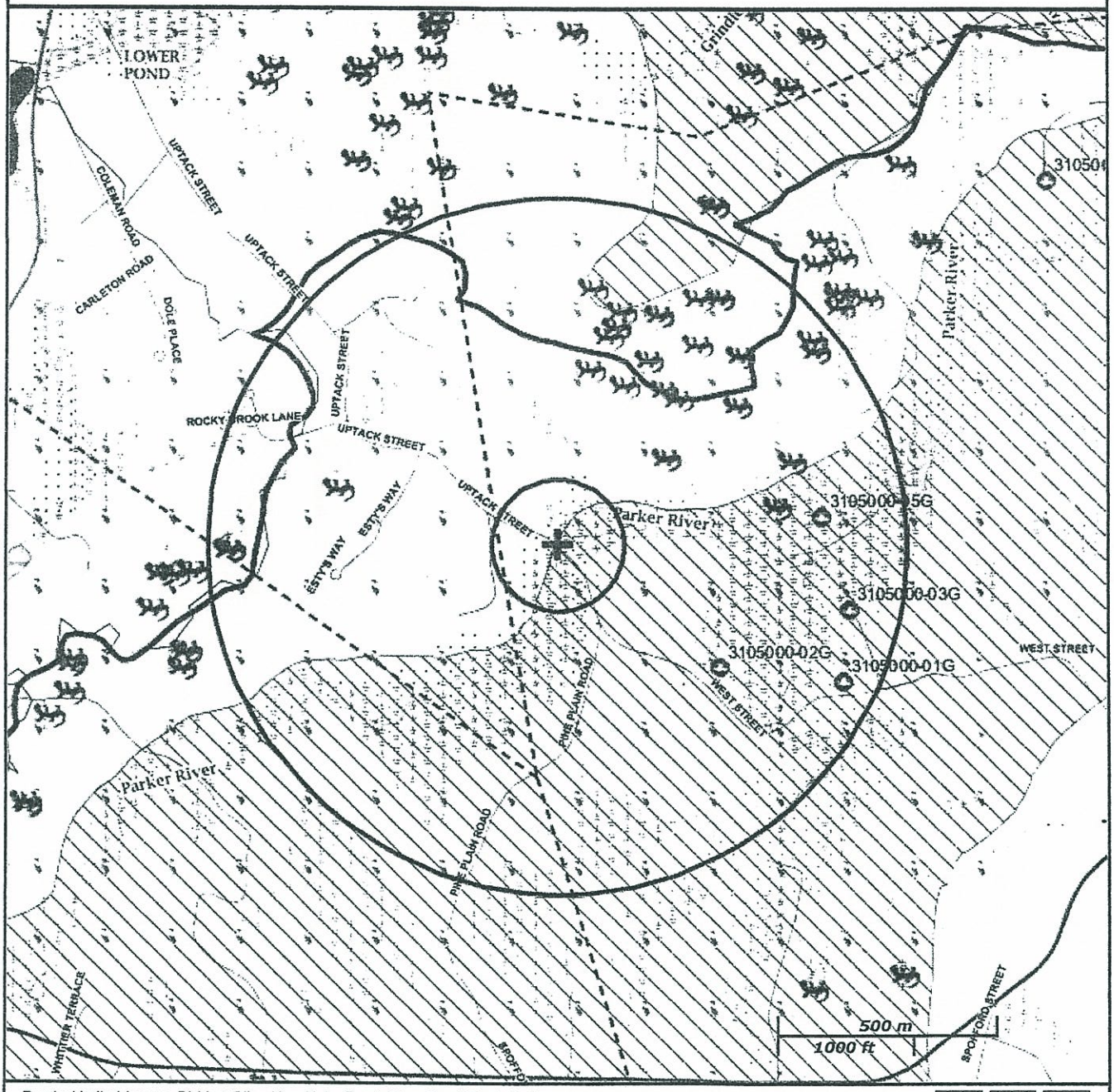
MassDEP - Bureau of Waste Site Cleanup

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

CUVERT AT WEST STREET AND PARKER RIVER
WEST STREET GEORGETOWN, MA
NAD83 UTM Meters:
4732037mN , 333716mE (Zone: 19)
June 14, 2013

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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