

**MASSACHUSETTS ELECTRIC COMPANY**

**WEBSTER STREET SUBSTATION**  
**PERIMETER FENCE REPLACEMENT AND**  
**RECONFIGURATION**

**Notice of Intent**

City of Worcester  
Conservation Commission  
June 2020

Prepared for:  
Massachusetts Electric Company  
40 Sylvan Road  
Waltham, MA 02451-1120

---

Prepared by:



33 Waldo Street  
Worcester, MA 01608



33 Waldo Street  
Worcester, MA 01608

June 30, 2020

Tel: 508-792-4500  
800-288-8123

City of Worcester  
Division of Planning and Regulatory Services  
City Hall, 455 Main Street, Room 404  
Worcester, MA 01608

[www.bscgroup.com](http://www.bscgroup.com)

**RE: Notice of Intent  
Webster Street Substation #6 – Security Enhancements  
Perimeter Fence Replacement and Relocation Project  
Massachusetts Electric Company**

Dear Worcester Conservation Commission:

BSC Group, Inc. (BSC) is pleased to submit this Notice of Intent (NOI) on behalf of the Massachusetts Electric Company d/b/a National Grid (MECO), for work associated with security fence replacement and relocation at the Webster Street Substation #6 and its associated parcel located at 50 & 29 Webster Street Worcester, Massachusetts (the Project). The existing perimeter fence is in poor condition and no longer meets National Grid Safety Standards. A new black vinyl fence will replace the existing outer perimeter fence of the MECO Substation and associated parcels. The interior fence surrounding the utility yard at 29 Webster Street will be replaced and reconfigured to provide necessary clearances and passage ways between utility yard equipment and the interior Substation fence. In addition, *at grade* concrete beams will be installed below the Substation’s access gate where pavement currently does not extend beneath the gate. The *at grade* beams provide structural support for the fence and added security to the Substation by restricting unauthorized access to the Substation by preventing undermining of the soil/stone beneath the gate.

The proposed activities will be located within the 25-foot Riverfront Area (RA), and the 100-foot buffer to Bank and Bordering Land Subject to Flooding (BLFS/FEMA Flood Zone AE). All resource areas are associated with the Middle River. Nine (9) catch basins are located along Webster Street adjacent to the Project area, therefore portions of the Project area will also be located within the locally regulated 100-foot Stormwater Protection Zone (SPZ). Accordingly, this Notice of Intent is being submitted under the Massachusetts Wetlands Protection Act, M.G.L. c. 131 s.40 (WPA), its implementing regulations, 310 C.M.R. 10.00, and the City of Worcester Wetland Protection Ordinance and Regulations for work within previously disturbed BLSF and Worcester’s local SPZ. Please also note that the Project qualifies as a limited project in accordance with the WPA regulations (310 C.M.R. 10.53(3)(d)) which allows for “the construction, reconstruction, operation, and maintenance of underground and overhead public utilities.”

- Engineers
- Environmental Scientists
- Custom Software Developers
- Landscape Architects
- Planners
- Surveyors



## EXISTING CONDITIONS

The Webster Street Substation and its associated parcel are located at 50 and 29 Webster Street in Worcester, MA. (See Site Locus provided in **Attachment A**).

The Substation parcel is located at 29 Webster Street and is bordered by the Webster Street sidewalk to the north and Nixon Street to the south. The Middle River bisects this parcel. Within the parcel, the Substation yard is located east of the River, while an office building, parking and storage facility are located west of the River. A chain link fence surrounds the parcel along its perimeter. An additional chain link fence surrounds the Substation yard. The outer perimeter fence is in disrepair and in need of maintenance. Other than the Middle River itself, this parcel is mainly composed of gravel, concrete and pavement.

The associated Substation parcel, 50 Webster Street is bordered by Webster Street to the south, Curtis Pond to the north, the Middle River to the east and a mill building to the west. This parcel contains a utility building. The remaining area is composed of crushed gravel and pavement with sparse vegetation growing on top of and through gaps in the pavement.

Nine (9) catch basins were identified along Webster Street and within 100-feet of the Project area. Project activities are proposed within the 25-foot Riverfront Area, the 100-foot buffer to Bank and the BLSF associated with the Middle river as well as within the locally regulated SPZ.

### 25-Foot Riverfront Area

Within the Project area, the Middle River is entirely channelized within concrete walls. The River has no natural bank or vegetative buffer. A portion of the river is covered by the foundation of a former steam utility plant as well as Webster Street. The 25-foot RA consist mainly of gravel, concrete and pavement that is separated from the channel by concrete walls.

Sections of the outer perimeter security fence are located within the 25- foot Riverfront area at both parcels. Portions of the existing perimeter fence are installed within the concrete sidewalk layout as well as on concrete abutments and within pavement. As requested by the Worcester Zoning Board of Appeals, the outer perimeter chain-link fence will be replaced with a taller vinyl coated fence. The new fence will be installed within the footprint of the existing fence. Therefore, impacts to the 25-foot RA are limited to previously disturbed area and developed footprints.

### Bordering Land Subject to Flooding

As stated above, the majority of the Project area is located within Flood Zone AE (also known as the 100-year floodplain). Because the 100-year floodplain in this location is attributed to the Middle River, the resource area is characterized as BLSF. BLSF is defined by 310 CMR 10.57(2)(a) as, “...*an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland*



*occurs, it extends from said wetland. The boundary of BLSF is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm.”*

According to the applicable Flood Insurance Rate Maps for Worcester (Community Panel 25027C0802E) dated July 4, 2011, most of the Project area is situated within the 100-year floodplain. The established base flood elevation at the Substation is 476 feet. The 2013 surveyed elevation of the Substation yard is approximately 471 feet.

Project activities within BLSF include the replacement of the outer perimeter fence with the vinyl coated fencing, replacement and relocation of the interior chain link fence, gate replacement and installation, installation of concrete beams, installation of new pavement, and the removal of existing pavement a small building.

#### 100-foot Buffer Zone to Bank

Portions of the Project area are located within the 100-foot Buffer Zone to the Bank of the Middle River. As previously noted, within the Project area, the Bank of the Middle River consist of concrete walls. The 100-foot Buffer Zone primarily consist of gravel, pavement and concrete, and includes portions of the outer perimeter chain link fence and associated gates, graveled and paved parking areas and Webster Street and its sidewalks.

Project activities proposed within the Buffer Zone include the replacement of the existing chain link fence with a black vinyl coated fence, gate replacements and the installation of a new section of chain link fence within the interior of the Substation parcel. The new chain link fence will be located on the outer 15-foot portions of the Buffer Zone.

#### Stormwater Protection Zone

The City of Worcester Wetland Protection Ordinance also regulates activity within 100-feet of a catch basin that may outlet to wetlands and waterways. This area is known as the Stormwater Protection Zone (SPZ). There are no stormwater catch basins on the Substation site, but, there are several catch basins located along the adjacent roadways including along Webster Street. Project activities within the SPZ include chain link fence replacement with black vinyl coated fencing, pavement removal, building removal, and new pavement installation.

#### Other Resource Areas

No other sensitive resource areas such as Estimate and Priority Habitat for rare species, Potential Vernal Pools (PVP) or Certified Vernal Pools (CVP), Outstanding Resource Waters (ORW), or Areas of Critical Environmental Concern (ACEC) were identified within the Project Area.

### **PROPOSED ACTIVITIES AND OTHER ANTICIPATED IMPACTS**

Construction equipment will access the work areas directly from Webster Street, the Substation driveway, and existing paved, concrete and gravel access roads within the



Substation. The following Project elements are proposed as part of this application. Project activities with detailed impact call outs and environmental resource locations are available in **Attachment A**.

### Perimeter Fence Replacement

The Project proposes to replace the existing outer perimeter fence at 29 Webster Street and the roadside perimeter fence at 50 Webster Street with a black coated vinyl fence that meets National Grid's security standards as well as the requirements of the Worcester Zoning Board of Appeals. Due to the added weight associated with the vinyl coating, replacement mid span posts and end posts will be wider than the existing posts resulting in minor permanent impacts to RA, BLSF and Buffer Zone. Temporary impacts resulting from vacuum truck trenching for the fence replacement activities will be restored to pre-existing conditions (gravel to gravel, concrete to concrete, pavement to pavement, etc.).

Temporary impacts to the Webster Street sidewalk are also anticipated as part of the fence replacement. The sidewalk will be repaired/replaced to pre-existing conditions upon completion of the fence replacement work.

Wider fence posts will result in the following permanent impacts to each of the resource areas:

- 25-ft RA: 10 square feet
- BLSF: 23 square feet (115 cubic feet)
- 100-foot Buffer Zone: 5 square feet

### Interior Fence Relocation

Approximately 200 linear feet of the interior chain link fence, currently located mainly within BLSF, will be relocated to provide safety clearances and passage way between existing utility yard components and the fence. Approximately 60 linear feet of the relocated fence will be installed within the 100-foot Buffer Zone resulting in one (1) square feet of new permanent impact within the Buffer Zone. The 200 linear feet of relocated fence will consist of the same type of fencing currently installed in the BLSF and will remain within BLSF, but in a different location. Thus, the fence will not result in additional permanent impacts to the wetland resource area.

The double gate access to the Substation yard will be relocated with the fence. One new pedestrian access gate is proposed adjacent to the double gated entrance to the Substation yard and within BLSF. The pedestrian access gate requires the installation of an *at grade* concrete beam. The *at grade* beam will span the length of the gate, six (6) feet, with a width of two (2) feet. The new *at grade* beam will result in 12 square feet of impact to BLSF.

The fence along the southern border of the Substation by Nixon Avenue will be replaced in kind. No new permanent impacts are anticipated from the fence replacement.

The interior fence relocation, including the new pedestrian gate and grade beam will result



in the following permanent impacts to each of the resource areas:

- 25 ft RA: none
- 100-foot Buffer: 1 square foot
- BLSF: 12 square feet (0.1 cubic feet)

#### Additional Pavement

The Project will result in the addition of 48 square feet (4 cubic feet, *assuming a one inch reveal*) of pavement within BLSF and SPZ. The pavement will be installed in lieu of a grade beam under the existing and to be replaced double gate access into the Substation yard from Webster Street. Ground penetrating radar identified multiple utility conduits beneath this gate. The excavation required to install a grade beam could potentially damage the underground utility equipment. As a result, MECO has requested that the pavement be extended from the existing curb cut 3-feet into the Substation yard. The pavement affords the same level of security as a grade beam. Pavement will be installed at existing grades.

#### Building Removal

A small building that used to house utility equipment is located on the northwest corner of the Substation yard and within BLSF and SPZ. The building is in disrepair and no longer in use. MECO proposed to remove the building, including its foundation. Once removed, the building footprint will be covered with gravel. As a result of the building removal, 160 square feet (800 cubic feet) of impermeable surfaces will be removed and replaced with a permeable surface.

#### Pavement Removal

Approximately 4,965 square feet of pavement (413 cubic feet, *assuming a one inch reveal*) will be removed as part of the Project. Pavement will be removed primarily within BLSF and SPZ, Once the pavement is removed, the area will be surfaced with gravel.

#### Total Impacts

In total, the Project will result in the following permanent impacts to each of the resource areas. Impacts to BLSF will be mitigated with compensatory flood storage in the form of building and pavement removal.

Resource Area	Permanent Impact	Mitigation
200-ft RA	10 square feet	n/a
BLSF	83 square feet (16.1 cubic feet)	5,125 square feet (1,213 cubic feet)
100-foot Buffer Zone	6 square feet	n/a



## **LIMITED PROJECT STATUS AND NO ALTERNATIVE**

The entire Project is necessary to ensure that MECO continues to provide reliable delivery of electric service to the region. Due to the nature of the Project, these activities are eligible to be treated as a Limited Project subject to 310 CMR 10.53, according to Section 310 CMR 10.53(3)(d) of the MA WPA, which states that "The construction, reconstruction, operation and maintenance of... overhead public utilities, such as electrical distribution or transmission lines..." may be permitted.

The proposed plan has been designed to avoid, minimize and mitigate Project related impacts to the Riverfront Area to the maximum extent practicable. The proposed activities will occur entirely within previously disturbed areas of the substation property and have been specifically designed to maximize the use of these areas. The specific activities within the Riverfront Area are associated with the maintenance, improvement and continued operation of the facility. There is no practicable alternative for the siting of the proposed activities, except on the existing lot.

## **CONFORMANCE WITH WPA AND WORCESTER WETLAND ORDINANCE**

The proposed Project is consistent with the site's current use as an electric substation. The Substation site is previously disturbed and has been used for utility activities for decades.

Work within BLSF includes those activities needed for the security fence enhancement and the removal of the building and pavement. The impact will occur within the previously disturbed Substation yard and can be considered minor. Notwithstanding, impact to BLSF will be mitigated. Per 310 CMR 10.57(4), compensatory flood storage must be provided for any flood storage lost due to the Project. No loss of flood storage or increase in the volume or velocity of stormwater flows from the Project is expected as there will be no change in grade or significant changes in surface type as part of the Project.

As previously noted, Project related impacts to the Riverfront Area to the maximum extent practicable. The proposed activities will occur entirely within previously disturbed areas of the Substation property, Webster Street and the Webster Street sidewalk, and have been specifically designed to maximize the use of these areas and can be considered minor. The specific activities within the Riverfront Area are associated with the maintenance, improvement and continued operation of the facility.

## **CONSTRUCTION AND BEST MANAGEMENT PRACTICES**

MECO has established environmental procedures and BMPs that are to be followed by all employees and its contractors for accessing sites and performing construction activities on all facilities, including within substations (See EG-303NE National Grid's Access Maintenance and Construction Best Management Practices provided in **Attachment D**).

### Erosion and Sediment Controls

Equipment will access the work area through the existing access drive and remain within the previously developed areas. There will be no grading associated with this Project and



erosion and sediment controls, will be placed, if needed, to prevent off site sedimentation. Proposed erosion and sediment control measures may include haybales, straw wattles, fiber rolls, or similar treatment.

Ground disturbance associated with the Project will be limited to the fence replacement and concrete beam installation. Displaced soils will be managed away from wetland resource areas and will be either used as backfill or disposed of appropriately offsite. Soil stockpiles will be placed on plastic sheets and will be Soil ringed with sediment controls.

Inlet protection will be provided in roadway catch basins as necessary.

### Stormwater Management

The proposed activities will consist of new construction and redevelopment of previously disturbed areas. No grading or paving within the Substation yard is required as part of the Project. The Project will not result in a significant increase of impervious surfaces within the Substation.

The site will continue to attenuate and treat stormwater runoff as well as provide groundwater recharge within the Substation, through the crushed stone. During construction, sediment and erosion controls will be installed to ensure protection of the adjacent resource areas. As a result, the Project, and the Webster Street Substation itself, are expected to continue to function as it does currently.

### Dewatering and Concrete Washout Areas

If dewatering is necessary for the installation of the new foundations, discharge water will be pumped into a dewatering basin consisting of a filter bag with hay/straw bale or silt fence perimeter controls which will be located in approved areas outside wetland resource areas. The pump intake hose will not be allowed to set on the bottom of the excavation throughout dewatering. The basin and all accumulated sediment will be disposed of properly.

In addition, designated concrete washout areas will also be provided. Concrete washout water will not be deposited or discharged directly on the ground, in wetlands or waterbodies, or in catch basins or other drainage structures. Concrete washouts will be located as far away from the resource areas as possible (exact location to be determined during construction). Following the completion of concrete pouring operations, the wash outs will be disposed of off-site.

Please refer to the Sediment Control Details as described in National Grid's Environmental Guidance Document (EG-303NE) provided in Attachment E.

### Restoration

All disturbed areas will be stabilized and the construction site will be returned to pre-construction conditions. All construction materials, vehicles, and non-biodegradable sediment controls will be removed from the site upon completion of the work.



## CONCLUSION

Although portions of the Project will occur within wetland resource areas, the proposed Project will:

- Minimize disturbance by utilizing the existing paved access road as work platforms;
- Result in only minor permanent impacts to developed portions of the RA and the 100-foot buffer zone;
- Mitigate for permanent impacts to developed portions of the BLSF; and
- Utilize appropriate BMPs to protect wetland resource areas from sedimentation and soil disturbance during project activities.

Due to the emergent need for infrastructure replacement to ensure system reliability, we request that the Worcester Conservation Commission find this proposal adequately protective of the public interests identified in the WPA and the City of Worcester Wetlands Protection Ordinance and issue an Order of Conditions allowing the Project to proceed as described herein.

Enclosed please find one original and two (2) copies of the Notice of Intent, which includes the WPA Form 3, a USGS Site Locus Map, an Environmental Constraints Map, Project Plans, Abutter Notification, Site Photographs and Best Management Practices. If you have any questions regarding the enclosed information, please contact me at (617) 784-7595. Thank you for your consideration in this matter.

Please do not hesitate to contact our office with any inquiries you may have.

Very truly yours,  
**BSC Group, Inc.**

Alexandra Echandi, CESSWI  
Ecological Scientist

cc: MassDEP Central Region  
Kellie Doherty, National Grid, 781-793-1085

## TABLE OF CONTENTS

MASSACHUSETTS ELECTRIC COMPANY  
WEBSTER STREET SUBSTATION  
PERIMETER FENCE REPLACEMENT AND RECONFIGURATION  
NOTICE OF INTENT

---

WPA FORM 3	NOTICE OF INTENT CHECKLIST FOR STORMWATER REPORT
ATTACHMENT A	SITE FIGURES, FEMA FIRMETTE
ATTACHMENT B	ABUTTER INFORMATION AND NOTIFICATION
ATTACHMENT C	SITE PHOTOGRAPHS
ATTACHMENT D	NATIONAL GRID's EG-303 BEST MANAGEMENT PRACTICES

---



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



**Note:**  
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

## A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

<u>29 and 50 Webster Street</u>	<u>Worcester</u>	<u>01603</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>08</u>	<u>42.244180</u>	<u>-71.832048</u>
f. Assessors Map/Plat Number	d. Latitude	e. Longitude
	<u>031-00007</u>	
	g. Parcel /Lot Number	

2. Applicant:

<u>Kellie</u>	<u>Doherty</u>	
a. First Name	b. Last Name	
<u>Massachusetts Electric Company</u>		
c. Organization		
<u>40 Sylvan Road, E2477</u>		
d. Street Address		
<u>Waltham</u>	<u>MA</u>	<u>02451</u>
e. City/Town	f. State	g. Zip Code
<u>781-703-1085</u>	<u>Kellie.doherty@nationalgrid.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (required if different from applicant):  Check if more than one owner

<u>New England Power</u>		
a. First Name	b. Last Name	
c. Organization		
d. Street Address		
e. City/Town	f. State	g. Zip Code
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Alexandra</u>	<u>Echandi</u>	
a. First Name	b. Last Name	
<u>BSC Group, Inc.</u>		
c. Company		
<u>33 Waldo Street</u>		
d. Street Address		
<u>Worcester</u>	<u>MA</u>	<u>01608</u>
e. City/Town	f. State	g. Zip Code
<u>617-896-4512</u>	<u>aechandi@bscgroup.com</u>	
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

<u>\$750.00</u>	<u>\$362.50</u>	<u>\$387.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

## A. General Information (continued)

6. General Project Description:

Massachusetts Electric Company (MECO) proposes to replace and reconfigure portions of the the substation's perimeter fence and gated access. As part of the fence replacement and reconfiguration activities, at grade concrete serucity beams and pavement will be installed below the substation's access gates, where the fence does not extend below grade. Pavement will also be removed.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1.  Single Family Home
- 2.  Residential Subdivision
- 3.  Commercial/Industrial
- 4.  Dock/Pier
- 5.  Utilities
- 6.  Coastal engineering Structure
- 7.  Agriculture (e.g., cranberries, forestry)
- 8.  Transportation
- 9.  Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

- 1.  Yes  No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

310 C.M.R. 10.53(3)(d) - The construction, reconstruction, operation, and maintenance of underground and overhead public utilities

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Worcester

a. County

1981

c. Book

b. Certificate # (if registered land)

134

d. Page Number

## B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1.  Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2.  Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
 \_\_\_\_\_  
 MassDEP File Number  
 \_\_\_\_\_  
 Document Transaction Number  
 Worcester  
 \_\_\_\_\_  
 City/Town

## B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet _____	2. linear feet _____
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet _____	2. square feet _____
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet _____ 3. cubic yards dredged _____	2. square feet _____

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	83 _____ 1. square feet _____ 16.1 _____ 3. cubic feet of flood storage lost _____	5,125 _____ 2. square feet _____ 1,213 _____ 4. cubic feet replaced _____
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet _____ 2. cubic feet of flood storage lost _____	3. cubic feet replaced _____
f. <input checked="" type="checkbox"/> Riverfront Area	Middle River _____ 1. Name of Waterway (if available) _____	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 58,856 square feet

4. Proposed alteration of the Riverfront Area:

10 a. total square feet      10 b. square feet within 100 ft.      0 c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI?       Yes  No

6. Was the lot where the activity is proposed created prior to August 1, 1996?       Yes  No

3.  Coastal Resource Areas: (See 310 CMR 10.25-10.35)



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

## B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:  
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment

	Size of Proposed Alteration	Proposed Replacement (if any)
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	_____	
	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	

4.  Restoration/Enhancement  
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

_____	_____
a. square feet of BVW	b. square feet of Salt Marsh

5.  Project Involves Stream Crossings

_____	_____
a. number of new stream crossings	b. number of replacement stream crossings



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Worcester

City/Town

## C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Notice of Intent – Required Actions (310 CMR 10.11).

### Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to [http://maps.massgis.state.ma.us/PRI\\_EST\\_HAB/viewer.htm](http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm).

- a.  Yes  No **If yes, include proof of mailing or hand delivery of NOI to:**

Natural Heritage and Endangered Species Program  
Division of Fisheries and Wildlife  
1 Rabbit Hill Road  
Westborough, MA 01581

- MassGIS2019  
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.1.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review\*

1.  Percentage/acreage of property to be altered:

(a) within wetland Resource Area \_\_\_\_\_  
percentage/acreage

(b) outside Resource Area \_\_\_\_\_  
percentage/acreage

2.  Assessor's Map or right-of-way plan of site

2.  Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work \*\*

(a)  Project description (including description of impacts outside of wetland resource area & buffer zone)

(b)  Photographs representative of the site

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

\*\* MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

## C. Other Applicable Standards and Requirements (cont'd)

(c)  MESA filing fee (fee information available at [http://www.mass.gov/dfwele/dfw/nhosp/regulatory\\_review/mesa/mesa\\_fee\\_schedule.htm](http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_fee_schedule.htm)). Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

*Projects altering 10 or more acres of land, also submit:*

(d)  Vegetation cover type map of site

(e)  Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1.  Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, [http://www.mass.gov/dfwele/dfw/nhosp/regulatory\\_review/mesa/mesa\\_exemptions.htm](http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_exemptions.htm); the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2.  Separate MESA review ongoing. a. NHESP Tracking # \_\_\_\_\_ b. Date submitted to NHESP \_\_\_\_\_

3.  Separate MESA review completed. Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a.  Not applicable – project is in inland resource area only      b.  Yes     No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -  
Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
1213 Purchase Street – 3rd Floor  
New Bedford, MA 02740-6694  
Email: [DMF\\_EnvReview.South@state.ma.us](mailto:DMF_EnvReview.South@state.ma.us)

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -  
North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930  
Email: [DMF\\_EnvReview.North@state.ma.us](mailto:DMF_EnvReview.North@state.ma.us)

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

**Online Users:**  
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

## C. Other Applicable Standards and Requirements (cont'd)

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?  
 a.  Yes  No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.  
 b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?  
 a.  Yes  No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?  
 a.  Yes  No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?  
 a.  Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:  
 1.  Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)  
 2.  A portion of the site constitutes redevelopment  
 3.  Proprietary BMPs are included in the Stormwater Management System.  
 b.  No. Check why the project is exempt:  
 1.  Single-family house  
 2.  Emergency road repair  
 3.  Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

## D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

**Online Users:** Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1.  USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2.  Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

## D. Additional Information (cont'd)

3.  Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4.  List the titles and dates for all plans and other materials submitted with this NOI.

Webster Street Substation Environmental Constraints

a. Plan Title

BSC Group, Inc.

n/a

b. Prepared By

c. Signed and Stamped by

6.24.2020

1"=60'

d. Final Revision Date

e. Scale

USGS Locus Map & FEMA Firm Map

9/16/2020

f. Additional Plan or Document Title

g. Date

5.  If there is more than one property owner, please attach a list of these property owners not listed on this form.

6.  Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7.  Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8.  Attach NOI Wetland Fee Transmittal Form

9.  Attach Stormwater Report, if needed.

## E. Fees

1.  Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

33214

6/25/2020

2. Municipal Check Number

3. Check date

EDEP Online

4. State Check Number

5. Check date

BSC Companies

6. Payor name on check: First Name

7. Payor name on check: Last Name



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Worcester
City/Town

## F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

**Kellie Doherty**

Digitally signed by Kellie Doherty  
DN: cn=Kellie Doherty, o=SHE, ou=SHE, email=kellie.doherty@nationalgrid.com, c=US  
Date: 2020.06.26 16:19:08 -04'00'

_____ 1. Signature of Applicant	_____ 2. Date
_____ 3. Signature of Property Owner (if different)	_____ 4. Date
_____ 5. Signature of Representative (if any)	_____ 6. Date

**For Conservation Commission:**

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

**For MassDEP:**

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

**Other:**

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**NOI Wetland Fee Transmittal Form**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



**A. Applicant Information**

1. Location of Project:

29 & 50 Webster Street  
 a. Street Address  
 Worcester  
 b. City/Town  
 \$750.00  
 d. Fee amount

2. Applicant Mailing Address:

Kellie  
 a. First Name  
 Doherty  
 b. Last Name  
 Massachusetts Electric Company  
 c. Organization  
 40 Sylvan Road , E2-468  
 d. Mailing Address  
 Waltham  
 e. City/Town  
 MA  
 f. State  
 02451-1120  
 g. Zip Code  
 781-703-1085  
 h. Phone Number  
 kellie.doherty@nationalgrid.com  
 j. Email Address

3. Property Owner (if different):

a. First Name  
 b. Last Name  
 c. Organization  
 d. Mailing Address  
 e. City/Town  
 f. State  
 g. Zip Code  
 h. Phone Number  
 i. Fax Number  
 j. Email Address

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

**B. Fees**

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

**Step 1/Type of Activity:** Describe each type of activity that will occur in wetland resource area and buffer zone.

**Step 2/Number of Activities:** Identify the number of each type of activity.

**Step 3/Individual Activity Fee:** Identify each activity fee from the six project categories listed in the instructions.

**Step 4/Subtotal Activity Fee:** Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

**Step 5/Total Project Fee:** Determine the total project fee by adding the subtotal amounts from Step 4.

**Step 6/Fee Payments:** To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**NOI Wetland Fee Transmittal Form**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Cat 2(e) Inland Limited Project	1.5	\$750	\$750
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>Step 5/Total Project Fee:</b>			<u>\$500.00</u>
<b>Step 6/Fee Payments:</b>			
Total Project Fee:			<u>\$750.00</u>
State share of filing Fee:			<u>\$362.50</u>
City/Town share of filing Fee:			<u>\$387.50</u>
			a. Total Fee from Step 5
			b. 1/2 Total Fee <b>less</b> \$12.50
			c. 1/2 Total Fee <b>plus</b> \$12.50

**C. Submittal Requirements**

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection  
 Box 4062  
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

**To MassDEP Regional Office** (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



# Checklist for Stormwater Report

## A. Introduction

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.<sup>1</sup> This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8<sup>2</sup>
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

<sup>1</sup> The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

<sup>2</sup> For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



# Checklist for Stormwater Report

## B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

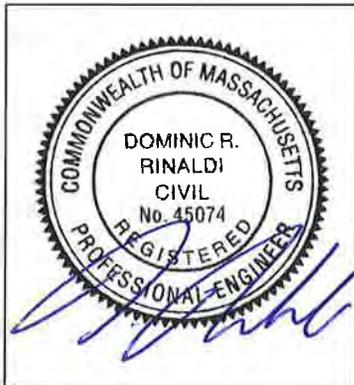
*Note:* Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

### Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date

## Checklist

**Project Type:** Is the application for new development, redevelopment, or a mix of new and redevelopment?

- New development
- Redevelopment
- Mix of New Development and Redevelopment



# Checklist for Stormwater Report

---

## Checklist (continued)

**LID Measures:** Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- No disturbance to any Wetland Resource Areas
- Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- Reduced Impervious Area (Redevelopment Only)
- Minimizing disturbance to existing trees and shrubs
- LID Site Design Credit Requested:
  - Credit 1
  - Credit 2
  - Credit 3
- Use of "country drainage" versus curb and gutter conveyance and pipe
- Bioretention Cells (includes Rain Gardens)
- Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- Treebox Filter
- Water Quality Swale
- Grass Channel
- Green Roof
- Other (describe): \_\_\_\_\_

### Standard 1: No New Untreated Discharges

- No new untreated discharges
- Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



# Checklist for Stormwater Report

---

## Checklist (continued)

### Standard 2: Peak Rate Attenuation

- Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

### Standard 3: Recharge

- Soil Analysis provided.
- Required Recharge Volume calculation provided.
- Required Recharge volume reduced through use of the LID site Design Credits.
- Sizing the infiltration, BMPs is based on the following method: Check the method used.
  - Static
  - Simple Dynamic
  - Dynamic Field<sup>1</sup>
- Runoff from all impervious areas at the site discharging to the infiltration BMP.
- Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
  - Site is comprised solely of C and D soils and/or bedrock at the land surface
  - M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
  - Solid Waste Landfill pursuant to 310 CMR 19.000
  - Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

---

<sup>1</sup> 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



# Checklist for Stormwater Report

---

## Checklist (continued)

### Standard 3: Recharge (continued)

- The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

### Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
  - Provisions for storing materials and waste products inside or under cover;
  - Vehicle washing controls;
  - Requirements for routine inspections and maintenance of stormwater BMPs;
  - Spill prevention and response plans;
  - Provisions for maintenance of lawns, gardens, and other landscaped areas;
  - Requirements for storage and use of fertilizers, herbicides, and pesticides;
  - Pet waste management provisions;
  - Provisions for operation and management of septic systems;
  - Provisions for solid waste management;
  - Snow disposal and plowing plans relative to Wetland Resource Areas;
  - Winter Road Salt and/or Sand Use and Storage restrictions;
  - Street sweeping schedules;
  - Provisions for prevention of illicit discharges to the stormwater management system;
  - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
  - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
  - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
  - Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
    - is within the Zone II or Interim Wellhead Protection Area
    - is near or to other critical areas
    - is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
    - involves runoff from land uses with higher potential pollutant loads.
  - The Required Water Quality Volume is reduced through use of the LID site Design Credits.
  - Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



# Checklist for Stormwater Report

---

## Checklist (continued)

### Standard 4: Water Quality (continued)

- The BMP is sized (and calculations provided) based on:
  - The ½" or 1" Water Quality Volume or
  - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

### Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- The NPDES Multi-Sector General Permit does **not** cover the land use.
- LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- All exposure has been eliminated.
- All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

### Standard 6: Critical Areas

- The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- Critical areas and BMPs are identified in the Stormwater Report.



# Checklist for Stormwater Report

---

## Checklist (continued)

### Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
- Limited Project
  - Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
  - Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
  - Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
  - Bike Path and/or Foot Path
  - Redevelopment Project
  - Redevelopment portion of mix of new and redevelopment.
- Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

### Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
  - Construction Period Operation and Maintenance Plan;
  - Names of Persons or Entity Responsible for Plan Compliance;
  - Construction Period Pollution Prevention Measures;
  - Erosion and Sedimentation Control Plan Drawings;
  - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
  - Vegetation Planning;
  - Site Development Plan;
  - Construction Sequencing Plan;
  - Sequencing of Erosion and Sedimentation Controls;
  - Operation and Maintenance of Erosion and Sedimentation Controls;
  - Inspection Schedule;
  - Maintenance Schedule;
  - Inspection and Maintenance Log Form.
- A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



# Checklist for Stormwater Report

---

## Checklist (continued)

### Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- The project is **not** covered by a NPDES Construction General Permit.
- The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

### Standard 9: Operation and Maintenance Plan

- The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
  - Name of the stormwater management system owners;
  - Party responsible for operation and maintenance;
  - Schedule for implementation of routine and non-routine maintenance tasks;
  - Plan showing the location of all stormwater BMPs maintenance access areas;
  - Description and delineation of public safety features;
  - Estimated operation and maintenance budget; and
  - Operation and Maintenance Log Form.
- The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
  - A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
  - A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

### Standard 10: Prohibition of Illicit Discharges

- The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- An Illicit Discharge Compliance Statement is attached;
- NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

# **ATTACHMENT A**

MASSACHUSETTS ELECTRIC COMPANY  
WEBSTER STREET SUBSTATION  
PERIMETER FENCE REPLACEMENT AND RECONFIGURATION

NOTICE OF INTENT

SITE FIGURES

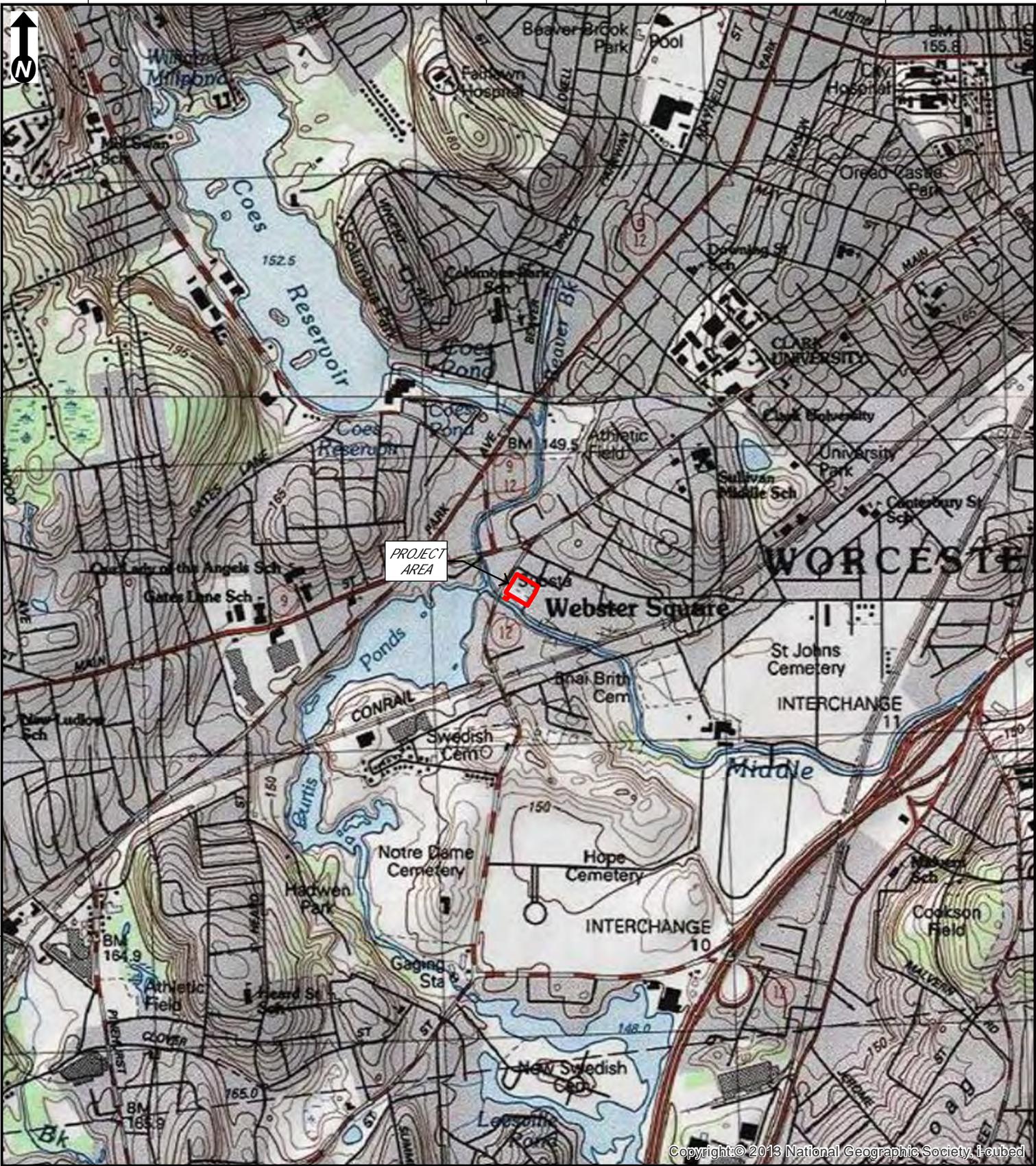
71°51'0"W

71°50'0"W

71°49'0"W

42°15'0"N  
42°14'0"N

42°15'0"N  
42°14'0"N



Copyright © 2013 National Geographic Society, i-cubed

71°51'0"W

71°50'0"W

71°49'0"W

Scale:  
1 inch = 2,000 feet  
(page size: 8.5 X 11)

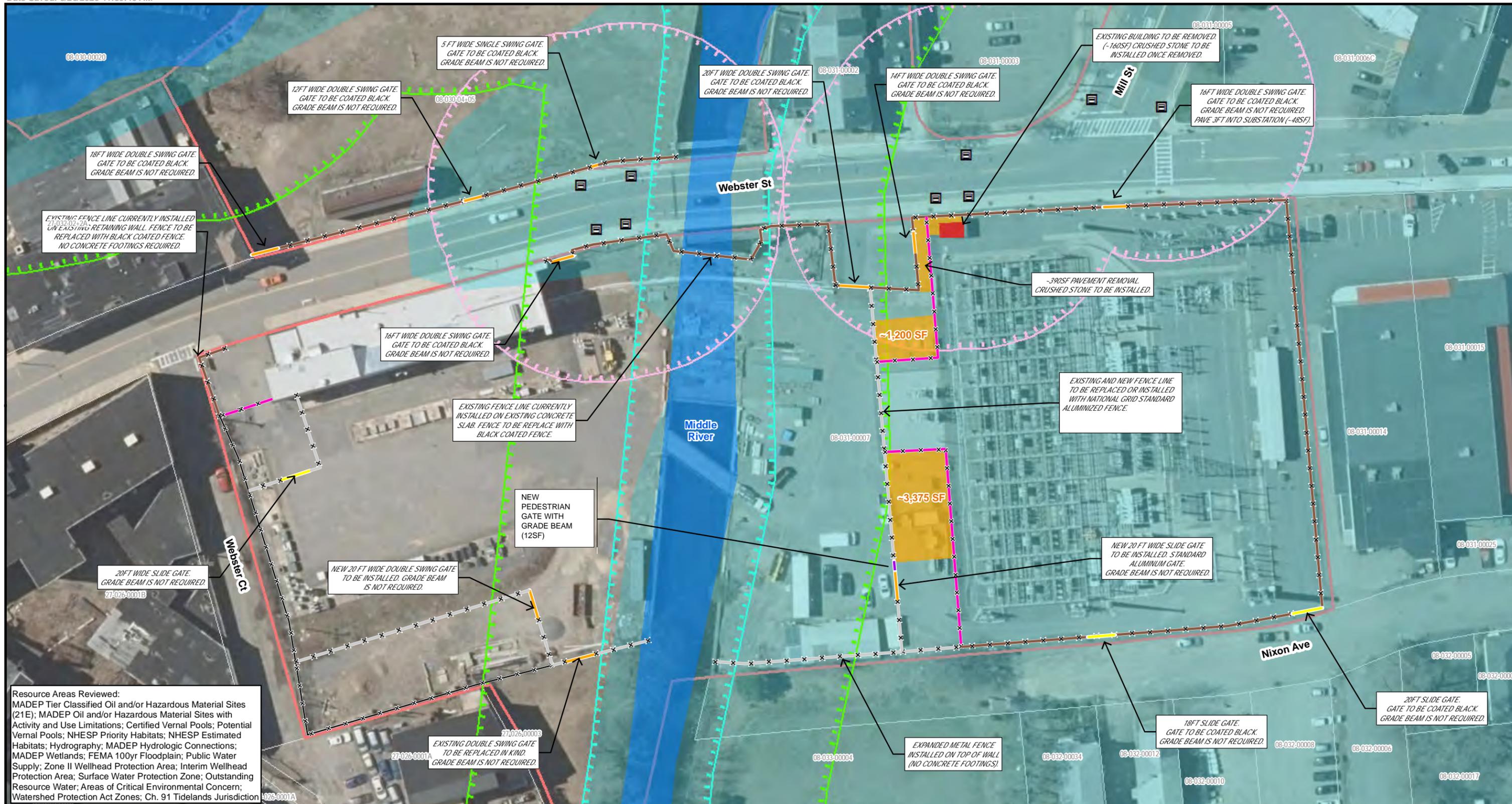
0 1,000 2,000  
Feet

**WEBSTER STREET 6 SUBSTATION**  
**USGS Site Location Map**  
**Worcester, MA**

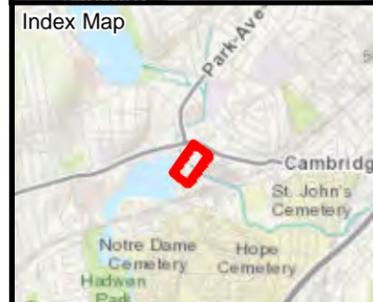
Source: 2013  
National Geographic  
Society, i-cubed

**nationalgrid**

**BSC GROUP**



Resource Areas Reviewed:  
 MADEP Tier Classified Oil and/or Hazardous Material Sites (21E); MADEP Oil and/or Hazardous Material Sites with Activity and Use Limitations; Certified Vernal Pools; Potential Vernal Pools; NHESP Priority Habitats; NHESP Estimated Habitats; Hydrography; MADEP Hydrologic Connections; MADEP Wetlands; FEMA 100yr Floodplain; Public Water Supply; Zone II Wellhead Protection Area; Interim Wellhead Protection Area; Surface Water Protection Zone; Outstanding Resource Water; Areas of Critical Environmental Concern; Watershed Protection Act Zones; Ch. 91 Tidelands Jurisdiction



**Legend**

<ul style="list-style-type: none"> <li>⊗ ⊗ Replace/Install Fence with Aluminum Fence</li> <li>⊗ ⊗ Replace Fence with Black Coated Fence</li> <li>⊗ ⊗ Remove Fence</li> <li>⊗ ⊗ Existing Fence</li> <li>— Install/Replace Swing Gate</li> <li>— Install Slide Gate</li> <li>— Install Pedestrian Gate</li> </ul>	<ul style="list-style-type: none"> <li>Remove Pavement &amp; Install Crushed Stone</li> <li>Remove Existing Building &amp; Install Crushed Stone</li> <li>MADEP Open Water*</li> <li>100ft Buffer to Wetlands &amp; Streams</li> <li>25ft Riverfront Area</li> <li>100ft Buffer to Catch Basin</li> <li>FEMA 100yr Floodplain*</li> </ul>	<ul style="list-style-type: none"> <li>National Grid Owned Property</li> <li>Parcel Boundaries</li> <li>Catch Basin</li> </ul>
---	---	--

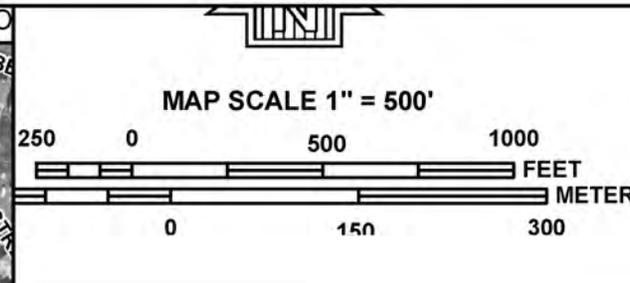
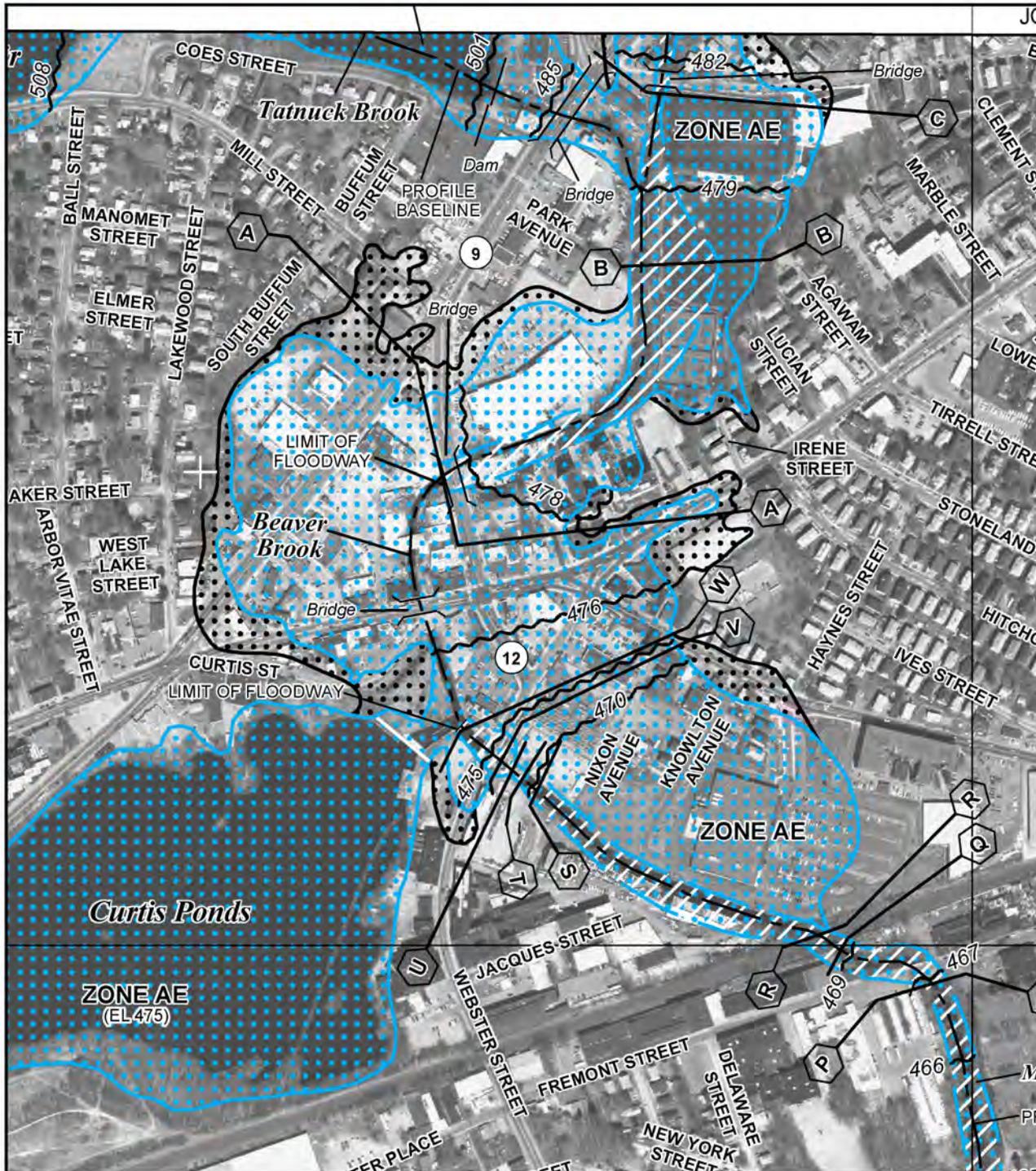
\*Indicates Layers Set to Transparency

1 inch = 60 feet  
 0 30 60 Feet

## WEBSTER STREET 6 SUBSTATION

### Environmental Resources Map

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0802E

## FIRM

### FLOOD INSURANCE RATE MAP WORCESTER COUNTY, MASSACHUSETTS (ALL JURISDICTIONS)

**PANEL 802 OF 1075**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
AUBURN, TOWN OF	250292	0802	E
WORCESTER, CITY OF	250349	0802	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
25027C0802E

**EFFECTIVE DATE**  
JULY 4, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

**ATTACHMENT B**

MASSACHUSETTS ELECTRIC COMPANY  
WEBSTER STREET SUBSTATION  
PERIMETER FENCE REPLACEMENT AND RECONFIGURATION

NOTICE OF INTENT

ABUTTER INFORMATION and NOTIFICATION

CITY OF WORCESTER, MASSACHUSETTS

Edward M. Augustus, Jr.  
City Manager



Samuel Konieczny, MAA  
City Assessor

Administration and Finance  
Division of Assessing

Certified Abutters List

A list of 'parties in interest' shall be attached to the application form and shall include the names and addresses. All such names and addresses shall be obtained from the most recent applicable tax list maintained by the City's Assessing Department. The Assessing Department certifies the list of names and addresses.

Total Count: 32

Owner: \_\_\_\_\_  
Owner Mailing: \_\_\_\_\_  
\_\_\_\_\_

Petitioner (if other than owner): Ale Echandi  
Petitioner Mailing Address: BSC Group, Inc.  
33 Waldo Street  
Worcester

Petitioner Phone: 617 784 7595

Parcel Address: 29 & 50 Webster Street  
Assessor's Map-Block-Lot(s): 08-031-00007 & 08-030-04+05

Planning: \_\_\_\_\_ Zoning: \_\_\_\_\_ Liquor License: \_\_\_\_\_ ConComm: X  
Historical: \_\_\_\_\_ Cannabis: \_\_\_\_\_ Other: \_\_\_\_\_

08-030-04+05	NEW ENGLAND POWER COMPANY	40 SYLVAN RD	WALTHAM
27-032-02+2A	WORCESTER AFFORDABLE HOUSING LLC	0006 JACQUES ST	WORCESTER MA 01610
08-030-00002	ASKANIAN VREJ (TRUSTEE)+	231 NORTH OXFORD ST	AUBURN MA 01501
08-031-0006C	T + K REAL ESTATE HOLDINGS LLC	0088 PROVIDENCE ST	WORCESTER MA 01604
08-031-00005	CITY OF WORCESTER DPW	20 EAST WORCESTER ST	WORCESTER MA 01604
08-032-00001	HANLON PAUL P + BRIAN J	0054 HEMLOCK ST	LEICESTER MA 01524
08-031-00003	NEW ENGLAND POWER COMPANY	40 SYLVAN RD	WALTHAM MA 02451
08-030-00003	PATEL SANAT D TRUSTEE	0112 AUTUMN CIR	HOLDEN MA 01520
08-032-00010	I.B.BARROWS COMPANY INC	0015 WEBSTER ST	WORCESTER MA 01603
08-032-00006	GCV 916 LLC	0285 MASSASOIT RD	WORCESTER MA 01604
08-030-00020	NEW ENGLAND POWER COMPANY	40 SYLVAN RD.	WALTHAM MA 02451
08-031-0000D	CITY OF WORCESTER DPW	20 EAST WORCESTER ST	WORCESTER MA 01604

08-031-0001B	1083 MAIN STREET WORCESTER LLC	0090 MADISON STREET	WORCESTER MA 01608
08-030-00009	GPTA LLC	1095 MAIN ST	WORCESTER MA 01608
08-031-00025	HANLON PAUL P + BRIAN J	0018 CAMBRIDGE ST	WORCESTER MA 01603
08-030-0003A	PATEL SANAT D TRUSTEE	0112 AUTUMN CIR	HOLDEN MA 01520
08-031-00002	CITY OF WORCESTER	0455 MAIN STREET	WORCESTER MA 01608
08-032-00017	SHELTER OF MOST HIGH PENTECOSTAL	489 GRAND STREET	BROOKLYN NY 11211
08-031-00007	NATIONAL GRID	0040 SYLVAN RD	WALTHAM MA 02451
08-030-00007	VUONG HUNG	0394 MASSASOIT RD	WORCESTER MA 01604
08-030-00022	PHAM NGUYET T	0021 CURTIS ST	WORCESTER MA 01603
08-032-00005	HANLON PAUL P + BRIAN J	16 CAMBRIDGE ST	WORCESTER MA 01603
08-030-00006	NATIONAL GRID	40 SYLVAN RD.	WALTHAM MA 02451
08-032-00008	I B BARROWS COMPANY INC	15 WEBSTER ST	WORCESTER MA 01603
08-033-00004	RED APPLE WORCESTER MA LLC	461 NOTT STREET	SCHENECTADY NY 12308
08-032-00012	9 NIXON AVE LLC	0364 RIVER RD	HUDSON MA 01749
08-032-00034	WESTERN TREVOR + DONNA TRUSTEES	0080 WINDSOR RD	SUDBURY MA 01776
27-026-00003	CITY OF WORCESTER CITY MANAGER	0455 MAIN ST	WORCESTER MA 01608
27-026-0001A	MASS AUTO RECYCLING INC	69 WEBSTER COURT	WORCESTER MA 01603
27-026-0001B	WORCESTER AFFORDABLE HOUSING LLC	6 JACQUES ST	WORCESTER MA 01603
27-026-0000A	JACQUES STREET LLC	6709 WOODBRIDGE DR	BOCA RATON FL 33434
08-031-00014	I B BARROWS COMPANY INC	15 WEBSTER ST	WORCESTER MA 01603

This is to certify that the above is a list of abutters to Assessor's Map-Block-Lot(s) 08-031-00007 & 08-030-04+05 as cited above.

Certified by: Samuel E. Konieczny  
Signature

6/11/2020  
Date

**CITY OF WORCESTER, MASSACHUSETTS**

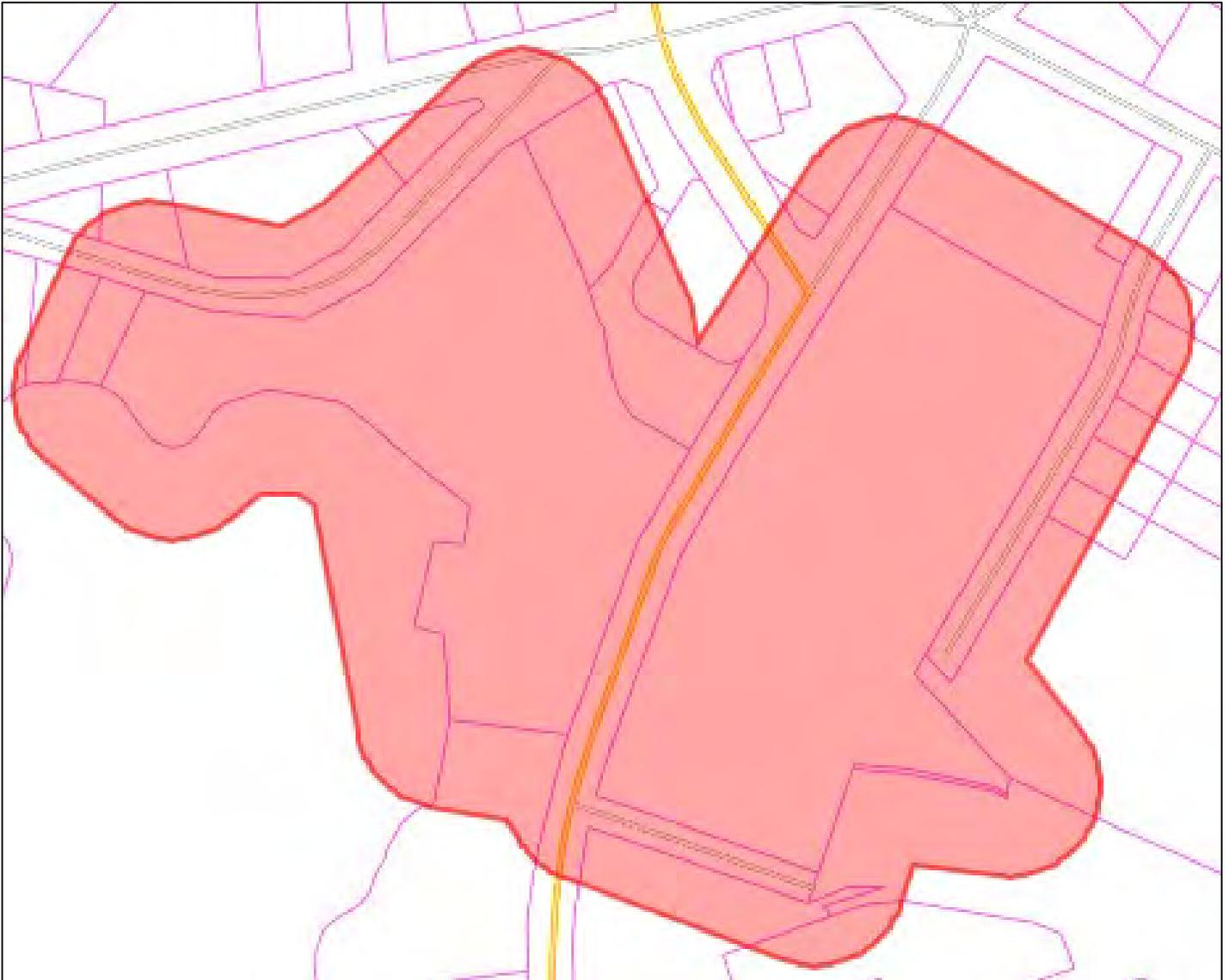
**Edward M. Augustus, Jr.**  
City Manager



**Samuel Konieczny, MAA**  
City Assessor

**Administration and Finance**  
**Division of Assessing**

**Abutters Map**



NEW ENGLAND POWER COMPANY  
PROPERTY TAX DEPT  
40 SYLVAN RD  
WALTHAM, MA 02451

NEW ENGLAND POWER COMPANY  
PROPERTY TAX DEPT.  
40 SYLVAN RD.  
WALTHAM, MA 02451

PHAM NGUYET T  
0021 CURTIS ST  
WORCESTER MA 01603

WORCESTER AFFORDABLE HOUSING LLC  
0006 JACQUES ST  
WORCESTER MA 01610

CITY OF WORCESTER DPW  
20 EAST WORCESTER ST  
WORCESTER MA 01604

HANLON PAUL P + BRIAN J  
16 CAMBRIDGE ST  
WORCESTER MA 01603

ASKANIAN VREJ (TRUSTEE)+  
C/O GRACE B. KANOON  
231 NORTH OXFORD ST  
AUBURN MA 01501

1083 MAIN STREET WORCESTER LLC  
0090 MADISON STREET  
C/O SZETO LANDMARK REALTY INC  
WORCESTER MA 01608

NATIONAL GRID  
PROPERTY TAX DEPT  
40 SYLVAN RD.  
WALTHAM, MA 02451

T + K REAL ESTATE HOLDINGS LLC  
0088 PROVIDENCE ST  
WORCESTER MA 01604

GPTA LLC  
1095 MAIN ST  
WORCESTER MA 01608

I B BARROWS COMPANY INC  
15 WEBSTER ST  
WORCESTER MA 01603

CITY OF WORCESTER DPW  
20 EAST WORCESTER ST  
WORCESTER MA 01604

HANLON PAUL P + BRIAN J  
0018 CAMBRIDGE ST  
WORCESTER MA 01603

RED APPLE WORCESTER MA LLC  
C/O PRICE CHOPPER #179 RE DEPT.  
461 NOTT STREET  
SCHENECTADY NY 12308

HANLON PAUL P + BRIAN J  
0054 HEMLOCK ST  
LEICESTER MA 01524

PATEL SANAT D TRUSTEE  
0112 AUTUMN CIR  
HOLDEN MA 01520

9 NIXON AVE LLC  
0364 RIVER RD  
HUDSON MA 01749

NEW ENGLAND POWER COMPANY  
PROPERTY TAX DEPT.  
40 SYLVAN RD  
WALTHAM, MA 02451

CITY OF WORCESTER  
0455 MAIN STREET  
WORCESTER MA 01608

WESTERN TREVOR + DONNA TRUSTEES  
0080 WINDSOR RD  
SUDBURY MA 01776

PATEL SANAT D TRUSTEE  
0112 AUTUMN CIR  
HOLDEN MA 01520

SHELTER OF MOST HIGH PENTECOSTAL  
489 GRAND STREET  
BROOKLYN NY 11211

CITY OF WORCESTER CITY MANAGER  
0455 MAIN ST  
WORCESTER MA 01608

I.B.BARROWS COMPANY INC  
0015 WEBSTER ST  
WORCESTER MA 01603

NATIONAL GRID  
PROPERTY TAX DEPT  
0040 SYLVAN RD  
WALTHAM, MA 02451

MASS AUTO RECYCLING INC  
69 WEBSTER COURT  
WORCESTER MA 01603

GCV 916 LLC  
0285 MASSASOIT RD  
WORCESTER MA 01604

VUONG HUNG  
0394 MASSASOIT RD  
WORCESTER MA 01604

WORCESTER AFFORDABLE HOUSING LLC  
6 JACQUES ST  
WORCESTER MA 01603

JACQUES STREET LLC  
6709 WOODBRIDGE DR  
BOCA RATON FL 33434

I B BARROWS COMPANY INC  
15 WEBSTER ST  
WORCESTER MA 01603

**NOTICE OF INTENT  
ABUTTER NOTIFICATION LETTER**

**RE: Worcester Conservation Commission  
Notice of Public Hearing**

To Whom It May Concern,

As an abutter within 100-feet of a proposed project, please be advised that a NOTICE OF INTENT application has been filed with the Worcester Conservation Commission under the Massachusetts Wetlands Protection Act and the City of Worcester Wetlands Protection Ordinance and Regulations.

**APPLICANT:** Massachusetts Electric Company

**PROJECT LOCATION:** 29 and 50 Webster Street (Webster Street Substation #6)

**PROJECT DESCRIPTION:** Massachusetts Electric Company (MECO) is seeking an Order of Conditions from the Worcester Conservation Commission to replace the perimeter fence at the Webster #6 Substation. The purpose of the project is to allow MECO to continue to provide safe and reliable electric service to the area.

**APPLICANT'S AGENT:** BSC Group, Inc. (Attn: Alexandra Echandi)  
33 Waldo Street  
Worcester, MA 01608  
617-896-4512

**PUBLIC HEARING:** Worcester City Hall  
Levi Lincoln Chambers (Room 309), 3<sup>rd</sup> Floor City Hall  
455 Main Street

**DATE AND TIME:** Please contact the Worcester Conservation Commission for Date and Time information.

**NOTE:** You may consult a copy of the Worcester Telegram and Gazette for more information regarding the time and date of the public hearing, or contact the Worcester Conservation Commission at 508-799-1454.

Plans and an application describing the proposed project are on file with the Worcester Conservation Commission at 508-799-1454.

You also may contact the Department of Environmental Protection, Central Regional Office at (508) 792-7650 for more information about this application or the Wetlands Protection Act.

# **ATTACHMENT C**

## **MASSACHUSETTS ELECTRIC COMPANY WEBSTER STREET SUBSTATION PERIMETER FENCE REPLACEMENT AND RECONFIGURATION**

**NOTICE OF INTENT**

**SITE PHOTOGRAPHS**



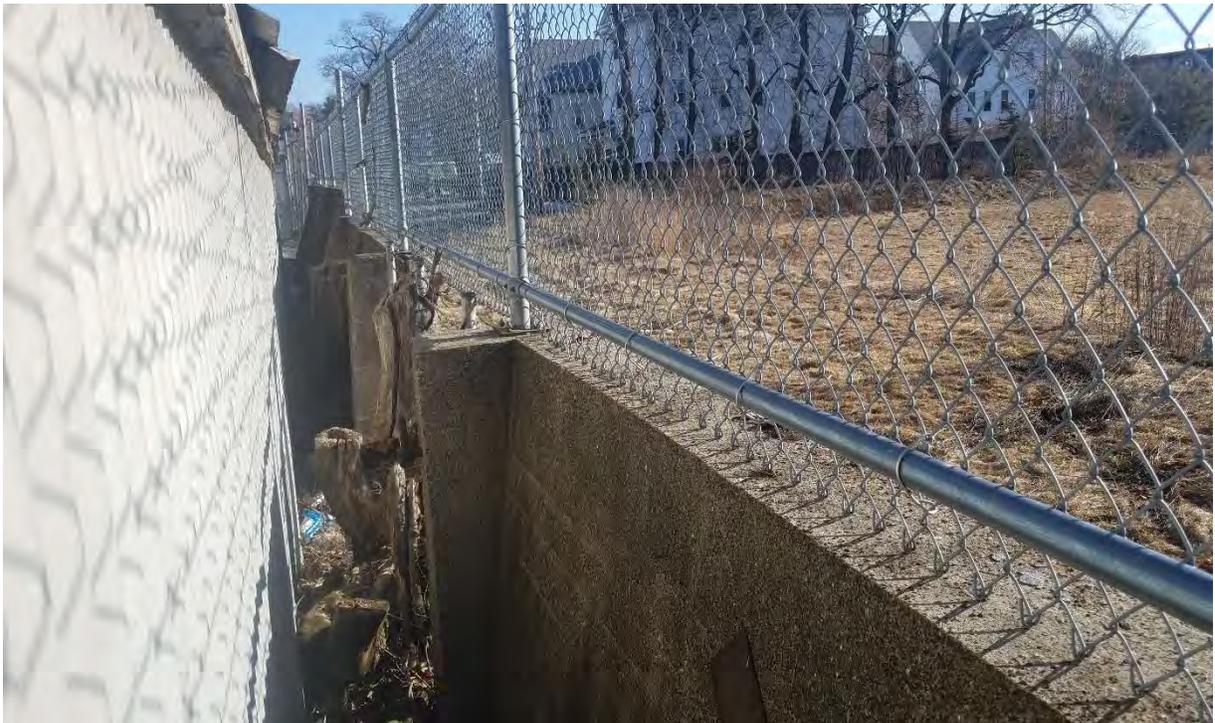
**Photo #1:** View of the existing fence located within the 25- Riverfront Area at 29 Webster Street. The Middle River is located beneath the concrete bridge. *Facing west.*



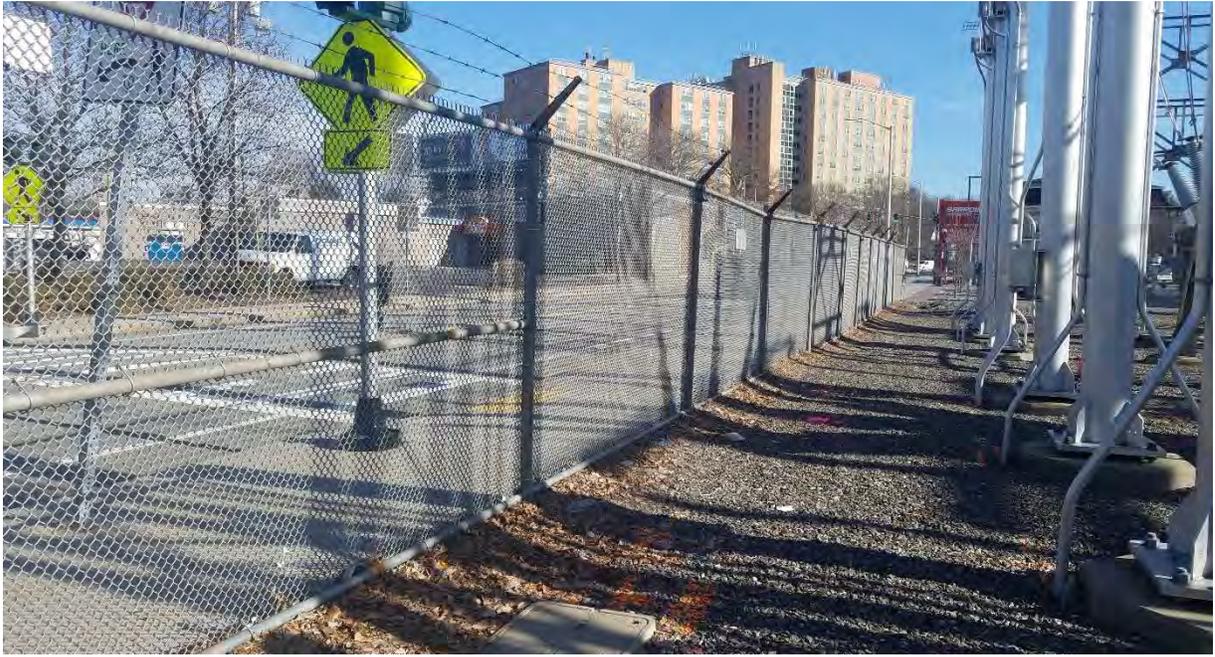
**Photo #2:** View of the Riverfront Area from the Substation yard's main access. *Facing southwest.*



**Photo #3:** View of the existing chain link fence along the eastern perimeter of the substation yard (29 Webster Street) within the 25-foot RA. This fence will be replaced in kind. *Facing east.*



**Photo #4:** View of the existing chain link fence along the eastern perimeter of the Substation yard within the 100-foot Buffer Zone. The fence will be replaced in kind on the existing concrete wall. *Facing north.*



**Photo #5:** View of the existing perimeter fence along Webster Street at 29 Webster Street. This fence will be replaced with a vinyl coated fence. Temporary impacts to the sidewalk are expected as a result of the proposed fence replacement activities. *Facing north.*



**Photo #6:** View of the existing small building at 29 Webster street to be removed as part of the project. A portion of this fence will also be relocated and pavement between the fence and the substation yard removed. *Facing north.*



**Photo #7:** View of the proposed fence bump out area and pavement removal within 29 Webster Street. *Facing east.*



**Photo #8:** View of the proposed fence relocation from BLSF to BLSF and 100-foot Buffer Zone and proposed pavement to be removed at 29 Webster Street. *Facing north.*



**Photo #9:** View of a portion of the fence at 50 Webster Street to be replaced by vinyl coated fencing. This fence is located within BLSF. Temporary impacts to the sidewalk are expected as a result of the proposed fence replacement activities *Facing west.*



**Photo #10:** View of a portion of the fence at 50 Webster Street to be replaced with vinyl coated fencing. Temporary impacts to the sidewalk are expected as a result of the proposed fence replacement activities Portions of the fence replacement are located within the 25-ft RA. *Facing south.*



**ATTACHMENT D**

MASSACHUSETTS ELECTRIC COMPANY  
WEBSTER STREET SUBSTATION  
PERIMETER FENCE REPLACEMENT AND RECONFIGURATION

NOTICE OF INTENT

EG-303NE NATIONAL GRID BEST MANAGEMENT PRACTICES  
SPILL RESPONSE

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	1 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

**PURPOSE/OBJECTIVE:**

This document provides National Grid personnel, consultants and contractors with Best Management Practices (BMPs) for conducting work on electric and natural gas transmission and distribution rights-of-ways (ROWs) and substations in New England.

**WHO:**

These BMPs are to be followed by all personnel conducting work on Company electric and gas ROWs and substations in New England. These BMPs do not apply to Company employees and contractors performing routine vegetation management activities that are not a part of construction or re-construction projects. Employees and contractors maintaining vegetation on Company ROWs and substations must follow the National Grid ROW Vegetation and Substation Vegetation Management Plans.

**DEFINITIONS:**

Refer to **Glossary** in **Appendix 1** and **Acronyms** in **Appendix 2**.

**WHAT TO DO:**

**1.0 Project Planning**

Prior to the start of any project (proposed new facilities or maintenance of existing facilities), the Project Engineer or other project planner shall determine whether any environmental permits or approvals are required, per the state-specific EG-301 environmental checklists. Any questions regarding which activities may be conducted in regulated areas or within environmentally sensitive areas shall be referred to the National Grid Environmental Scientist or Project Environmental Consultant.

All new construction and maintenance projects shall follow clear and enforceable environmental performance standards, which is the purpose for which these BMPs have been compiled.

**1.1 Avoidance and Minimization**

Measures shall always be taken to avoid impacts to wetlands, waterways, rare species habitats, known below and above ground historical/archeological resources and other environmentally sensitive areas. If avoidance is not possible, then measures shall be taken to minimize the extent of impacts. Alternate access routes or staging areas shall always be considered. Below is a list of methods that shall be considered where impacts are unavoidable:

- Use existing ROW access where available. Keep to approved routes and roads without deviating from them or making them wider.
- Off-ROW access shall never be assumed and shall be coordinated through National Grid Real Estate before being implemented.
- Where no existing ROW access is present, avoid wetlands and if a wetland crossing is necessary, cross wetlands at the most narrow point possible or at the location of a previously used crossing (if evident). Figure 1 below illustrates this minimization technique.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	2 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

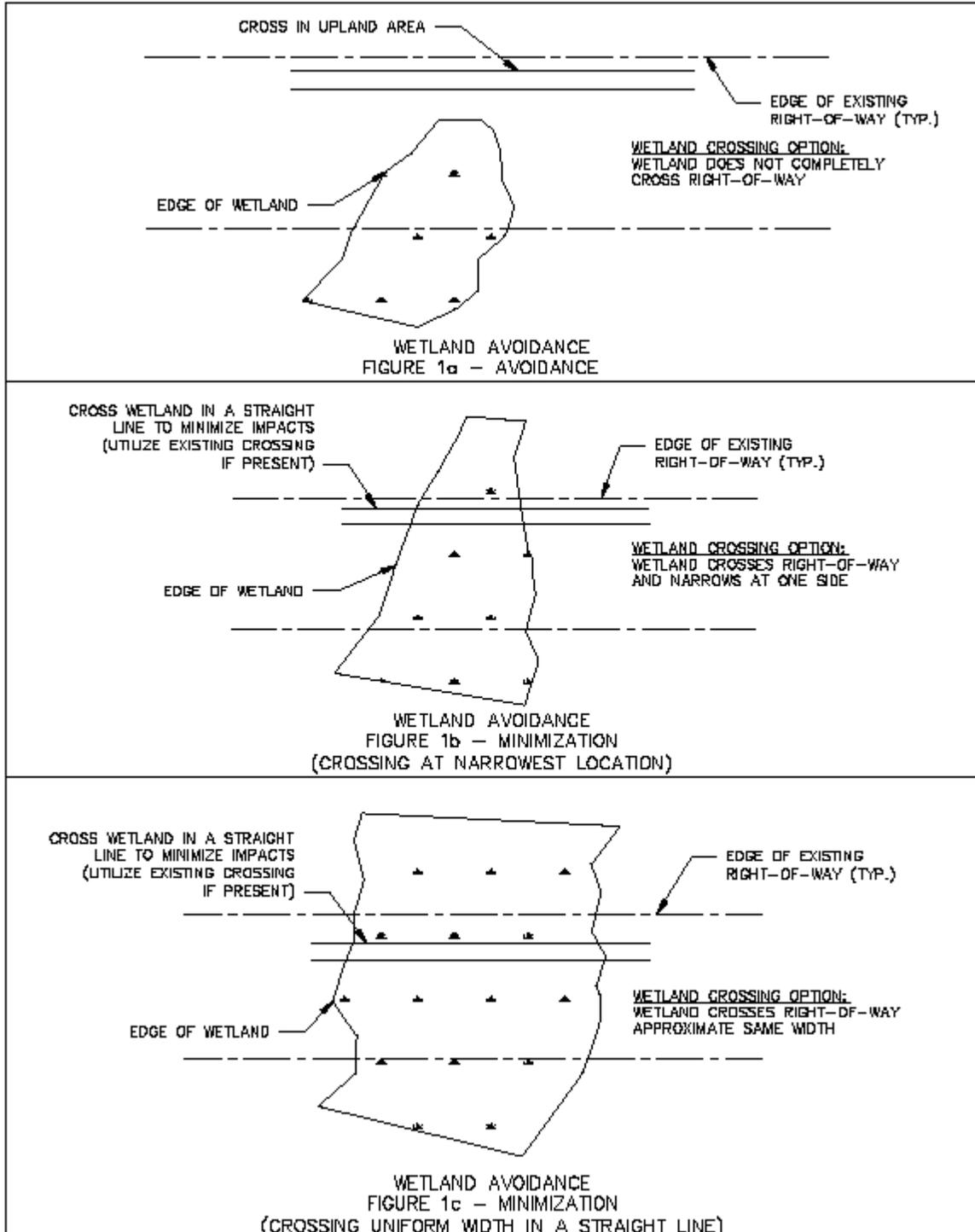
- Avoid and minimize stream crossings.
- Minimize the width of typical access roads through wetlands to a maximum width of 16 feet.
- Conduct work manually (without using motorized equipment) in wetlands, wherever possible.
- Use construction mats in wetlands to minimize soil disturbance and rutting when crossing or working within wetlands. When not using mats for access, standard vehicles shall not be allowed to drive across wetlands without the prior approval of the National Grid Environmental Scientist. Use of a low ground pressure (LGP) vehicle may be a feasible alternative to mats provided that such LGP vehicle use has been reviewed and approved by the National Grid Environmental Scientist. See Section 7.0.
- Coordinate the timing of work to cause the least impacts during the regulatory low-flow period under normal conditions, when water/ground is frozen, after the spring songbird nesting season, and, outside of the anticipated amphibian migration window (mid-February to mid-June). Refer to the United States Army Corps of Engineers (USACE) state-specific General Permit for the definition of the low-flow period in each state at: <http://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/>. A summary table is provided in Section 7.0.
- Seek alternative routes or work methods to minimize impact.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

**SUBJECT**  
ROW Access, Maintenance and Construction Best Management Practices for New England

**REFERENCE**  
EP-3; Natural Resource Protection



**Appi**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	4 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

### 1.2 Historically Significant Areas

Areas that have been identified as historically and/or culturally significant shall be avoided in accordance with site-specific avoidance plans, as applicable. Refer to the project-specific Environmental Field Issue (EFI) for any applicable avoidance plans or consult with the National Grid Environmental Scientist. Demarcation of these areas to be avoided shall use staked orange snow fencing or an equivalent physical barrier (not just ribbon flagging) and signage. Refer to Section 14.0 for signage guidance.

### 1.3 Rare Species Habitat

Work within areas that have been identified as mapped rare species habitat shall follow site-specific requirements, as applicable. In Massachusetts, maintenance activities within mapped habitat (known as Priority Habitat of Rare Species) shall follow the BMPs outlined in the Natural Heritage Endangered Species Program (NHESP)-approved National Grid Operation and Maintenance Plan. Work in mapped rare species habitat may require, at a minimum, turtle training for crews and sweeps of work areas for turtles, botanist identification of rare plant locations and avoidance of these locations, and protection of vernal pools, all prior to the start of work. Demarcation of these areas to be avoided (e.g., rare plant populations, overwintering turtles, nests) shall use staked orange snow fencing or an equivalent physical barrier (not just ribbon flagging) and signage. Refer to Section 14.0 for signage guidance.

Where new substations are being constructed or existing substations are undergoing a rebuild or expansion, and the substations are located in mapped rare turtle habitat, project team members should consider fenceline improvements or measures needed to prevent/eliminate turtle entrance into the substation or allow multiple points for easy egress such that turtles are not trapped within the substation fenceline.

Other requirements may apply in NH, VT and RI. Refer to the project-specific EFI for any applicable measures or consult with the National Grid Environmental Scientist.

### 1.4 Meetings

Pre-permitting meetings shall take place early in the project development process to determine what permits are triggered by the proposed work and the timeline required for permitting. During these meetings, the team shall develop access plans and BMPs to be used during construction of the project.

Field / Constructability review meetings shall take place on-site to evaluate construction site access and job site set-up, to ensure that the project can proceed as permitted. It is at this point in time where work areas, pulling locations, laydown areas, parking areas, and equipment storage areas are evaluated and located. Off-ROW areas under consideration should be included in this discussion.

Prior to submitting permit plans to regulatory authorities, the construction group (contractor or National Grid) shall review the plans for final sign off.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	5 of 49
	Date:	06/02/2020
<b>SUBJECT</b> <b>ROW Access, Maintenance and Construction Best Management Practices for New England</b>		<b>REFERENCE</b> <b>EP-3; Natural Resource Protection</b>

Pre-construction meetings are typically held prior to the commencement of all work to appoint responsible parties, discuss timing of work, and further consider options to avoid and/or minimize impacts to sensitive areas. These meetings can occur on- or off-site and shall include all the willing and available stakeholders (i.e., utility employees, contractors, consultants, inspectors, and/or monitors, and regulatory personnel). Training of crews and supervisors of the EFI, Stormwater Pollution Prevention Plan (SWPPP), rare species, and other permit requirements shall be conducted at a pre-construction meeting.

Pre-job briefings shall be conducted daily or otherwise routinely scheduled meetings shall be conducted on-site with the work crew throughout the duration of the work. These meetings are a way of keeping everyone up to date, confirming there is consensus on work methods and responsibilities, and ensuring that tasks are being fulfilled with as little impact to the environment as possible.

The Project Environmental Scientist/Monitor and Construction Project Manager shall communicate regularly (e.g. weekly or bi-weekly meetings or phone conversations) to discuss the work completed since last communication (i.e. work locations, wetland impacts, equipment used, and unexpected delays or work conditions). These meetings or calls shall include the expected schedule of construction for the upcoming week, the long term construction plans, and planned methods for working near/in wetlands. Both the Project Environmental Scientist/Monitor and Construction Project Manager shall work together so the Project complies with all environmental permits and regulations. When changes to the Project scope or agreed work plan are proposed they shall be done so with the final approval of the National Grid Environmental Scientist.

### **1.5 Communication of Project Specific Environmental Requirements**

Project specific environmental concerns, to include sensitive resources, permits, approved access and time-of-year or other restrictions, shall be communicated to the project team and be included as part of the Pre-Bid and Pre-Construction Meetings. Project specific requirements shall be communicated to the project manager/construction manager/engineering group using the following guidelines:

Environmental Field Issue – The EFI will be a full document consisting of narrative, project permits, access and matting plans. A table summarizing pertinent (but not all) permit conditions and the responsible party for those conditions shall be included in the EFI. Copies of all permits should be included as attachments. This will be prepared for most projects with multiple permits or large, complex projects (siting board, Section 404, 401 WQC, SWPPP). There shall be EFI training at the pre-construction meeting. The National Grid EFI template is located in **EI-303NE**.

Simplified Environmental Field Issue – The Simplified EFI is a memorandum containing environmental resources present, project permit(s), access and matting plans and a table summarizing relevant permit conditions and responsible party for those conditions. Copies of all permits should be included as attachments. The Simplified EFI will be prepared for most projects with 1 or 2 permits (Order of Conditions, S404 Cat 1). The Simplified EFI should also be provided for projects that have environmental resources present, but the scope of the project does not trigger environmental permitting (e.g., the scope of work qualifies for maintenance exemption(s)). The resources present

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	6 of 49
	Date:	06/02/2020
<b>SUBJECT</b> <b>ROW Access, Maintenance and Construction Best Management Practices for New England</b>		<b>REFERENCE</b> <b>EP-3; Natural Resource Protection</b>

shall be discussed at the Pre-Bid and Pre-Construction meetings and any changes in scope will require additional review by the National Grid project team.

E-mail delivery of Permit and any Sediment/Erosion control or BMP plan – For those projects with only one permit (eg., MA Order of Conditions, RI DEM permit, RI CRMC permit, NH Utility Notification) or projects with a sediment & erosion control plan (local town requirement or for exempt maintenance work), a copy of the permit and any applicable plan will be emailed to the Project Manager (and the project team where deemed necessary) to be incorporated into the Construction Field Issue.

STORMS work management system input – For STORMS work, no EFI is prepared unless multiple permits are required for the project (see guidance above). If only a MA Order of Conditions, MA Determination of Applicability, RI DEM permit, RI CRMC permit, RI SESC Approval, or NH Utility Notification is required, then the permit is attached in the Documents tab and conditions noted in Remarks/Comments section. Standard STORMS boilerplate language is located in **EI-303NE**.

### **1.6 Timing of Work**

Regulatory authorities may place seasonal or time-of-year restrictions on project construction elements. These time-of-year restrictions may be state or permit-specific, and shall be adhered to.

Work during frozen conditions. Activities conducted once wetland areas are frozen sufficient to minimize rutting and other impacts to the surrounding environment may be authorized by the National Grid Environmental Scientist. Work during this time also generally reduces disturbance of aquatic and terrestrial wildlife movement by avoiding sensitive breeding and nesting seasons. When not using mats for access, vehicles shall not be allowed to drive across wetlands without the prior approval of the National Grid Environmental Scientist.

Work during the regulatory low-flow period. Conducting work during the low-flow period can reduce impacts to surface water and generally avoids spawning and breeding seasons of aquatic organisms. If the water is above normal seasonal levels, adjustments to work activities and methods are required.

### **1.7 Alternate Access**

#### **1.7.1 Manual Access**

In some cases such as for smaller projects, work areas can be accessed manually. This includes access on foot through upland and shallow wetland areas, access by boat through open water or ponded areas, and climbing of structures where possible. Smaller projects, such as repair of individual structures, or parts of structures, that do not categorically require the use of heavy machinery, shall be accessed manually to the greatest extent practicable.

#### **1.7.2 Use of Overhead/Aerial Access**

Using helicopters can be expensive and is not always feasible, but it may be appropriate in some situations in order to get workers and equipment to a site that otherwise may be very difficult to access. The use of overhead and/or aerial equipment may be beneficial for work in areas where larger water bodies, deep crevices, or mountainous areas hinder ground access. The landing area for

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	7 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

helicopters shall be reviewed for environmentally sensitive resources. Use of helicopters requires Project Manager and Senior Management approval.

## 2.0 Inspection, Monitoring and Maintenance

All construction practices and controls shall be inspected on a regular basis and in accordance with all applicable permits and local, state, and federal regulations to avoid and correct ANY damage to sensitive areas.

The construction crews shall be responsible for completing daily inspections, and IMMEDIATELY bring any **damage or observed erosion, or failed erosion controls** to the attention of the Person-In-Charge and the National Grid Environmental Scientist. Where applicable and/or as directed by environmental permits issued for the project, the Project Environmental Consultant shall conduct weekly (at a minimum) inspections of the project work areas and shall document their inspection using the Stormwater, Wetlands & Priority Habitat Environmental Compliance Site Inspection / Monitoring Report form found in **Appendix 3** and issue the report within 24 hours. The Person-in-Charge shall work with the National Grid Environmental Scientist and the Project Environmental Consultant to determine when and how the repairs shall be made.

Project-specific Action Logs and Long-Term Restoration Logs are prepared as needed by the National Grid Environmental Scientist or the Project Environmental Consultant to track issues and/or repairs and assign responsible parties.

## 3.0 Best Management Practices

The BMP sections presented in this EG address access, construction, snow and ice management, structures in wetlands, access road maintenance and repair, clean-up and restoration standards, ROW gates, field refueling and maintenance operations, management of spills/releases, and a summary of key construction BMPs.

Note that BMPs shown on any permit drawings for a specific project may need to be revised and or supplemented during the execution of a project based on unforeseen or unexpected factors such as extreme weather or unknown subsurface conditions. It is the responsibility of the Contractor to work with the National Grid Environmental Scientist and/or the Project Environmental Consultant to identify necessary changes and to ensure that construction-related impacts to wetlands, water bodies and other environmentally sensitive areas are avoided.

**Any deviation from the approved BMPs shown in the EFI and/or SWPPP plans shall be communicated immediately to the National Grid Environmental Scientist as it may require additional permitting or could result in a permit violation.**

### 3.1 Wetland Boundary Demarcation

Prior to the start of any activity conducted under an environmental permit, wetland boundaries shall be reviewed. Flagging for wetland boundaries, stream banks and other resource areas shall be

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	8 of 49
	Date:	06/02/2020
SUBJECT	REFERENCE	
ROW Access, Maintenance and Construction Best Management Practices for New England	EP-3; Natural Resource Protection	

refreshed as needed. This may become particularly important when the original flagging was placed in previous seasons and now may have become obscured.

### 3.2 Sedimentation and Erosion Controls

Appropriate sedimentation and erosion control devices shall be installed at work sites, in accordance with permit conditions and/or regulatory approvals, and as needed to prevent adverse impacts to water resources and adjacent properties.

The overall purpose of such controls is to prevent and control the movement of disturbed soil and sediment from work sites to adjacent, undisturbed areas, and particularly to water resources, public roads and adjacent properties. All proprietary controls shall be installed per manufacturer's recommendations and specifications.

Appropriate sedimentation and erosion control devices include but are not limited to: silt fencing, straw bales, wood chip bags, straw wattles, compost socks, erosion control blankets, mulch, slope interruption practices, flocculent powder/blocks and storm drain/catch basin inlet protection. Such controls shall be installed between the work area and environmentally sensitive areas such as wetlands, streams, drainage courses, roads and adjacent property when work activities shall disturb soils and result in a potential for causing sedimentation and erosion.

In Massachusetts, use of monofilament-encased wattles shall be avoided in mapped Priority Habitat for snakes and amphibians. For projects with work within mapped Priority Habitat for snakes and amphibians, wattles that are encased in a sock, hemp, fiber, or movable jute netting are required to prevent entrapment. Also, "wildlife gaps" should occur every 50 feet, if possible, given wetland permit conditions. This spacing of the wattles allows snakes and amphibians to move across the ROW. Refer to the Amphibian and Reptile BMPs in **Appendix 4**.

Staked straw bales often serve as the demarcation of the limits of work and/or sensitive areas to be avoided. Work shall never be conducted outside the limit of erosion controls without prior approval from the National Grid Environmental Scientist.

Project plans depict proposed erosion controls, however field conditions may warrant additional practices be implemented (e.g., wet conditions, frozen conditions, poorly drained soils, steep slopes, materials used for work pads, transition areas to construction mats, number of trips across work areas, etc.).

**Any deviation from the approved erosion controls shown in the EFI and/or SWPPP plans needs to be communicated immediately to the National Grid Environmental Scientist as it may require additional permitting or result in a permit violation.**

**Appendix 4** provides typical sketches of common sedimentation and erosion controls. If a SWPPP is required for the project, maintenance and inspection of erosion controls shall follow the SWPPP requirements. Sedimentation and erosion controls shall be properly maintained and inspected on a

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	9 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

periodic basis, until work sites are properly stabilized and restored. Inspections shall be documented using the Inspection Form “Storm Water, Wetlands & Priority Habitat Environmental Compliance Site Inspection/Monitoring Report” (**Appendix 3**).

The sequence and timing of the installation of sedimentation and erosion control measures is critical to their success. Sedimentation and erosion controls shall be installed prior to commencing construction activities that may result in any soil disturbance or cause otherwise polluted site runoff. Inspection of these devices may be required by the National Grid Environmental Scientist or by regulators prior to the start of work. The installation of water bars and other erosion control measures shall be installed shortly thereafter.

### 3.3 Concrete Wash Outs

Concrete wash outs shall be used for management of concrete waste. Concrete and concrete washout water shall not be deposited or discharged directly on the ground, in wetlands or waterbodies, or in catch basins or other drainage structures. Where possible, concrete washouts shall be located away from wetlands or other sensitive areas. Consult the National Grid Environmental Scientist on proposed concrete wash out locations prior to their use. Following the completion of concrete pouring operations, the wash outs shall be disposed of off-site with other construction debris. Refer to BMPs in **Appendix 4**.

### 3.4 Construction Activities in Standing Water

The use of silt curtains or turbidity barriers may be required when working in or adjacent to standing water such as ponds, reservoirs, low flowing rivers/streams, or coastal areas. Silt curtains and turbidity barriers prevent sediment from migrating beyond the immediate work area into the resource areas.

Coffer dams constructed using sheet piling or large sandbags (Trade names such as “the Big Bag” or “DamItDams”) may be used to temporarily isolate and contain a work area in standing water.

When working in standing water, an oil absorbent boom, in addition to a silt curtain or other temporary barrier, shall be placed around the work area for spill prevention.

Work in drinking water reservoirs or other waters may require extensive regulatory agency review, even for maintenance work, which could result in additional time required for permitting, review and material procurement prior to the start of work.

### 3.5 Dewatering

Where excavations require the need for dewatering of groundwater or accumulated stormwater, the water shall be treated before discharge. Appropriate controls include dewatering basins, flocculent blocks, filter bags, filter socks, or weir tanks. Schematics of these BMPs are included in **Appendix 4**. Water trucks or fractionation tanks may be utilized if watertight containers are desired for controlled on-site discharge or for off-site discharge into an approved dewatering area when site restrictions make it difficult to utilize other dewatering methods on-site. Dewatering discharge water shall never be directed into wetlands, streams/rivers, other sensitive resource areas, catch basins, other

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	10 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

stormwater devices, or substation Trenwa trenches. Dewatering flow shall be controlled so that it does not cause scouring or erosion through the use of a dewatering basin, filter sock, or equivalent. If it is determined that the chosen controls are not appropriately filtering the fine sediment from the dewatering pumpate then the National Grid Environmental Scientist shall be notified immediately and the controls shall be revised or supplemented.

When establishing a dewatering basin, consideration should be given to the anticipated volume of water and rate of pumping in determining the size of the dewatering basin. Dewatering basins shall be constructed on level ground. Once pumping commences, the basin shall be monitored frequently to assure that the rate of water delivery to the structure is low enough to prevent water from flowing, unfiltered, over the top of the basin walls. The basin shall be monitored throughout the dewatering process because the rate of filtration shall decrease as sediment clogs the filter fabric. If the basin is not appropriately filtering the fine sediment from the dewatering pumpate then the basin may need to be supplemented with a flocculent block. Field conditions shall dictate how often the basin should be inspected.

Distance to sensitive areas, direction of flow (toward or away from protected, or sensitive areas, such as wetlands, ponds, or streams), amount of vegetative ground cover between the basin and nearby sensitive areas, ground conditions (ledge, frozen, etc.), volume of water being pumped, and pump-rate, are some of the factors to be considered when determining an inspection frequency. Clogged filter fabric shall be replaced and accumulated sediment shall be removed as necessary from the basins to maintain efficacy.

Any new dewatering location (not previously reviewed and approved by the National Grid Environmental Scientist during project planning or permitting) shall be reviewed and the discharge location approved by the National Grid Environmental Scientist before use.

Complex projects that require large scale dewatering shall require individual review by the National Grid Environmental Scientist and may trigger additional permitting.

Dewatering in areas of known chemical contamination may require a separate NPDES permit, or other approval, and treatment or containment system. Consult with the National Grid Environmental Scientist.

### 3.5.1 Overnight Dewatering

Some projects may necessitate 24-hour dewatering for on-site construction activities. Overnight dewatering will be evaluated on a case-by-case basis by the National Grid Environmental Department.

If it is necessary to conduct overnight dewatering on a project, a dewatering plan must be submitted to the Environmental Department for review and approval **5 business days prior to beginning dewatering activities**. Sufficient knowledge of flow, discharge, and re-infiltration rate of water must be obtained and submitted for review. The Environmental Department

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	11 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

may require monitored dewatering for a period of time in order to provide this data in support of a request for 24-hour dewatering. The dewatering plan must include at a minimum:

1. Location of dewatering system, system components (basin, frac tank, etc), and materials.
2. Location of discharge and distance from closest wetland.
3. Location of erosion controls. A secondary perimeter of erosion controls will be required around the dewatering system for overnight dewatering.
4. Peak flow, discharge rate and re-infiltration rates.
5. Visual monitoring plan for discharge. Expected duration of dewatering.
6. Emergency provisions if overnight, unattended dewatering is proposed.

### 3.5.2 Dewatering Clean Up/Restoration

Basins shall be cleaned and removed as soon as dewatering is complete. Sediment removed from the dewatering basin shall be allowed to dry before being disposed of by evenly spreading it over unvegetated upland areas where erosion is not a concern if clean or removing it from the site for proper disposal. Off-site trucking of wet soils is prohibited. The sediment disposal area shall be approved by the National Grid Environmental Scientist or the Project Environmental Consultant prior to use. Stabilization measures shall also need to be implemented and approved by the National Grid Environmental Scientist or the Project Environmental Consultant. Soils/sediments shall be dewatered and dried to the point practicable for either on-Site reuse or off-Site transport.

### 3.6 Check Dams

Check dams are a porous physical barrier installed perpendicular to concentrated storm water flow. They are used to reduce erosion in a swale by reducing runoff energy (velocity), while filtering storm water, thereby aiding in the removal of suspended solids.

Check dams should only be used in small drainage swales that shall not be overtopped by flow once the dams are constructed. These dams should not be placed in streams. Check dams are typically installed in ROWs or on other construction sites prior to the start of soil disturbing work. Per the Rhode Island Soil Erosion and Sediment Control Handbook, no formal design is required for a check dam if the contributing drainage area is 2 acres or less and its intended use is shorter than 6 months; however, the following criteria should be adhered to when specifying check dams.

- The drainage area of the ditch or swale being protected should not exceed 10 acres.
- The maximum height of the check dam should be 2 feet.
- The center of the check dam must be at least 6 inches lower than the outer edges.
- The maximum spacing between the dams should be such that the toe at the upstream dam is at the same elevation as the top of the downstream dam.

Per the NHDES stormwater manual, the use of check dams should be limited to swales with longitudinal slopes that range between 2 to 5 percent that convey drainage from an area less than 1 acre. Existing conditions that exceed these limitations should be assessed in the field and discussed

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	12 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

with the National Grid Environmental Scientist to determine the viability of this BMP for the specific application. Check dams are often comprised of stone, straw bales, sand bags, or compost/silt socks. Use of check dams should be coordinated with the National Grid Environmental Scientist to ensure that the material selection, spacing and construction method are appropriate for the site. Check dams composed of biodegradable materials (e.g. straw bales or wattles, wood chip bags) may require periodic replacement for continued proper functioning<sup>1</sup>. Refer to BMPs in **Appendix 4**.

### 3.7 Water Bars

Water bars should be used on sloping ROWs to divert storm water runoff from unstabilized or active access roads when needed to prevent erosion. Surface disturbance and tire compaction promote gully formation by increasing the concentration and velocity of runoff. Water bars are constructed by forming a ridge or ridge and channel diagonally across the sloping ROW. Each outlet should be stable. The height and side slopes of the ridge and channel are designed to divert water and to allow vehicles to cross. When siting water bars, consideration shall be given to the sensitivity of the area receiving the diverted runoff. For example, runoff should not be directed into a wetland, waterbody, other environmentally sensitive areas, or to private property or public roadways. Refer to BMPs in **Appendix 4**.

### 3.8 Retaining Walls

In some situations, retaining walls comprised of concrete blocks, gabions, boulders or other comparable materials may be required to stabilize the shoulder of existing access roads and/or supplement required erosion controls. Installation of such measures shall not be allowed as a maintenance activity. Should these controls be considered for a project, it shall be reviewed by the National Grid Environmental Scientist, as design and additional permitting may be required.

### 3.9 Slope Stabilization

Temporary slope stabilization practices help to keep exposed, erodible soils stabilized while vegetation is becoming established. Acceptable temporary slope stabilization practices may include the use of erosion control blankets, or hydraulic erosion control. Erosion control blankets, often comprised of natural fibers (e.g., jute, straw, coconut, or other degradable materials) are a useful slope stabilization, erosion control and vegetation establishment practice for ditches or steep slopes. Blankets are typically installed after final grading and seeding for temporary or permanent seeding applications. Hydraulic erosion control practices, including Bonded Fiber Matrix or hydroseed with a soil stabilizer (e.g., tackifier and/or mulch) may be an acceptable or desirable alternative form of temporary slope stabilization. For all practices, manufacturer's specifications should be followed for installation depending on slope and other field conditions. Consult the National Grid Environmental Scientist prior to selecting and installing any slope stabilization practices. Refer to BMPs in **Appendix 4**.

<sup>1</sup> Grass growth on a biodegradable type check dam is evidence that the material is decomposing. While this doesn't mean it is no longer functioning, it means it may be in a weakened condition and could potentially fail under high flow velocity. It is acceptable for grass to be growing on a stone check dam.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	13 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

### 3.10 Maintenance of Sedimentation and Erosion Controls

Sedimentation and erosion controls shall be maintained in good operational condition during the course of the work. This includes, but is not limited to, replacing straw bales that are no longer in good condition, re-staking straw bales, replacing or re-staking silt fence, and removing accumulated sediment. Remove sediment before it has accumulated to one half the height of any exposed silt fence fabric, straw bales, other filter berm, check dams or water bars. Accumulated sediment shall be removed from sedimentation basins to maintain their efficacy. Manage the removed sediment by evenly spreading it over unvegetated upland areas where erosion is not a concern, by stockpiling and stabilizing, or by disposing of off-site. Stabilization measures shall also need to be implemented and approved by the National Grid Environmental Scientist or the Project Environmental Consultant. Where a SWPPP has been prepared for a specific site, the guidelines documented therein shall govern the management of sediment.

## 4.0 Right-of-Way (ROW) Access

Whenever possible, access shall be gained along existing access routes or roads within the ROW. However, in some cases there is no existing access. In many cases, temporary access can be utilized. The following practices provide general guidance on accessing a ROW. Check with a National Grid Environmental Scientist to determine if any environmental permitting is required before utilizing a temporary access.

Note that the building of new roads or enlargement of existing roads is **prohibited** unless this activity is allowed by a project-specific permit, and the new roads appear on the Site Plans that were authorized in the regulatory approvals.

### 4.1 Off-ROW Access

Off-ROW access shall be evaluated for wetlands, rare species, cultural resources and other potential sensitive receptors, as applicable. National Grid Real Estate and Stakeholder Relations shall also be contacted as soon as possible once off-ROW access is determined to be needed.

### 4.2 Stabilized Construction Entrance/Exit for Access to ROWs from Public or Private Roads

A suitable (minimum 15-foot wide by 50-foot long) construction entrance/exit shall be installed at the intersection of the ROW access road/route with public/private paved roads, or other such locations where equipment could track mud or soil onto paved roads. The construction entrance/exit should be comprised of clean stone installed over a geotextile fabric. Geotextile fabric may be omitted for permanent construction entrances/exits on a case-by-case basis with the approval of the National Grid Environmental Scientist. Refer to BMPs in **Appendix 4**.

Construction entrance areas shall be monitored and maintained to ensure that stone or other material is not deposited onto the roadway, causing a safety concern. Where track-out of sediment has occurred onto a roadway, it shall be swept off the road by the end of that same work day.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	14 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

If a construction entrance/exit is clogged with sediment and no longer functions, the sediment and stone may require removal and replacement with additional clean stone (clean stone refreshment) to ensure this tracking pad is performing its intended function adequately. Heavier traffic use may require this clean stone refreshment multiple times throughout a project. Reinforcement of these stabilized construction entrance/exits with asphalt binder or asphalt millings is not likely to be considered “maintenance” and may trigger additional permitting requirements<sup>2</sup>. In some cases, heavily used construction entrances/exits may benefit from the installation of a 5-15 foot strip of asphalt binder or asphalt millings closest to the paved roadway to capture any stone that is tracked from the stone apron. Such cases shall be evaluated on an individual basis with the National Grid Environmental Scientist.

Once work is complete, the construction entrance/exit shall either be removed or retained, depending upon future maintenance-related access needs, property ownership, and/or project-specific approvals. If removed, the area shall be graded, seeded (if adequate root and seed stock are absent) and mulched. Proper approvals for leaving access roads in place shall be obtained; contact the National Grid Environmental Scientist and Property Legal.

#### **4.3 Maintenance of Existing Access Roads**

In many cases, the existing access road may need to be maintained to allow passage of the heavy equipment required for scheduled maintenance work. Access roads cannot deviate from the approved and permitted access plans. Maintenance of these roads may include adding clean gravel or clean crushed stone to fill depressions and eroded areas. This activity shall be conducted only within the width of the existing access road footprint and does not include widening existing access roads

If gravel begins to migrate onto the existing vegetated road shoulder, this gravel shall be removed during the project and/or after the completion of use of the road to ensure the road fill is not spreading into adjacent resource areas, or resulting in the road becoming much wider than its pre-existing or permitted condition. In some areas of mapped rare species habitat or other sensitive areas where project-specific permit conditions require the prevention of the migration of sediments into adjacent resources, an engineered stabilization system (e.g., GeoWeb or similar) may be suitable to prevent sedimentation while allowing for unrestricted wildlife migration.

In Massachusetts, any proposed widening of access roads in turtle Priority Habitat would require individual consultation with NHESP and, depending on the level of impact proposed, may require a Project Review filing. The limited filling of ruts or potholes is compatible with the National Grid Operation and Maintenance Plan approved by NHESP under the Massachusetts Endangered Species Act, however, severely rutted access roads in turtle Priority Habitat that require extensive linear feet of stone for safe passage will require individual consultation with NHESP.

<sup>2</sup> Depending on the road, use of an asphalt binder or asphalt millings as a construction entrance/exit may trigger state or local permit requirements.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	15 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

Major reconstruction projects may require multiple permits. In all cases, the fill to be used for existing access roads shall be clean and free of construction debris, trash or woody debris. Use of processed gravel may be approved by the Person-In-Charge and the National Grid Environmental Scientist, on a case-by-case basis. If clean stone is used then addition of more erosion controls may not be necessary.

#### 4.5 Maintenance of Existing Culverts

Damaged culverts may not be repaired or replaced without consulting with the National Grid Environmental Scientist to determine if a permit is required. For functioning culverts, care shall be taken to protect adjacent wetlands and watercourses by installing appropriate sedimentation and erosion controls around the downstream end of the culvert. Culverts shall be repaired/replaced in kind and shall not be changed in size unless approval has been obtained from the National Grid Environmental Scientist. In-kind replacement is replacement using the same material, functional inverts, diameter and length as the existing culvert. Changes to any of these characteristics shall require permitting. Installation of any **new** culvert is not allowed without obtaining all necessary permits first. Refer to BMPs in **Appendix 4**.

If, at the time of anticipated replacement, there is heavy flow through the culvert, the Person-In-Charge shall consult with the National Grid Environmental Scientist, to verify whether the culvert shall be replaced at that time. Water may need to be temporarily diverted during culvert repair/replacement. There typically are seasonal restrictions limiting both the replacement of existing culverts as well as installation of new culverts to the low-flow period. The low-flow period can vary from state to state. If any unexpected conditions are encountered during culvert replacement, the National Grid Environmental Scientist shall be contacted immediately prior to the work being completed for additional consultation.

#### 4.6 Temporary Construction Access over Drainage Ditch or Swale

In some situations, construction access from paved roads onto ROWs may require the crossing of drainage ditches or swales along the road shoulder. In these situations, the installation of construction mats, mat bridges or temporary culverts may facilitate construction access over the ditches or swales. These culverts shall be temporary only, sized for peak flow, and shall be removed after construction is complete. Consult with the National Grid Environmental Scientist prior to installation. In addition, if access over existing culverts may require extending the culvert, consult with the National Grid Environmental Scientist. Refer to BMPs in **Appendix 4**.

#### 4.7 Construction Material along ROW

After preparing a site by clearing and/or installing any necessary erosion and sediment controls and prior to the start of construction, material such as poles, cross-arms, cable, insulators, stone and other engineered backfill materials may be placed along the ROW, as part of the project. The stockpiling of stone and other unconsolidated material on construction mats shall be avoided, if determined necessary due to access and work pad constraints, the material must be placed on a geotextile fabric and be properly contained with a sedimentation barrier such as straw wattle. No construction material shall be placed in wetlands or other sensitive resource areas unless authorized by the National Grid Environmental Scientist or Project Environmental Consultant.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	16 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

## 5.0 Winter Conditions

### 5.1 Snow Management

Refer to **Appendix 6** for the current Snow Disposal Guidelines.

### 5.2 De-Icing

Where allowed, calcium chloride is preferred as a de-icing agent when applied according to manufacturer's guidelines in upland areas. Sand shall be used on construction mats through wetland areas.

Consult with the National Grid Environmental Scientist on de-icing agents when working in a facility or substation close to resource areas. Many municipalities have specific requirements for de-icing agents allowed within 100 feet of wetland resources and other sensitive areas.

### 5.3 Snow and Ice Management on Construction Mats

Proper snow removal on construction mats shall avoid the formation of ice. To avoid the formation of ice, snow shall be removed from construction mats before applying sand. Prior to their removal from wetlands, sand shall be collected from the construction mats and disposed of in an upland area. A round street sweeping brush mounted on the front of a truck may be an effective way to remove snow from construction mats. Propane heaters may also be suitable solutions for snow removal and/or de-icing of construction mats.

Once construction mats are removed, wetlands shall be inspected for build up of sand that may have fallen through construction mats. Care shall be taken to inspect wetland crossings as each mat is removed to ensure sand is properly removed and disposed of off-site.

## 6.0 Construction Mats

The use of construction mats allows for heavy equipment access within wetland areas. The use of construction mats minimizes the need to remove vegetation beneath the access way and helps to reduce the degree of soil disturbance and rutting in soft wetland soils. Construction mats most often used by National Grid are wooden timbers bolted together typically into 4-ft by 16-ft sections, wooden lattice mats, or composite mats. In some cases, construction mats or other mats are used for staging or access in upland areas based on site conditions (e.g., agricultural field access). Refer to BMPs in **Appendix 4**.

Typically construction mats may be installed on top of the existing vegetation, however in some instances cutting large woody vegetation may be required. Check with National Grid Environmental Scientist prior to cutting or clearing vegetation for construction mat placement.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	17 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

Where an extended period of time has lapsed since wetland delineation and start of construction, and new vegetative growth has concealed wetland flagging or flagging is simply no longer obviously visible, wetland boundaries should be re-flagged where necessary prior to the installation of matting.

Follow the approved plans in the EFI for construction mat installation and do not deviate from the plans. **Any deviation from the approved plans needs to be communicated immediately to the National Grid Environmental Scientist as it may require additional permitting, require stopping the project or result in a permit violation or revocation.**

### 6.1 Construction Mats and Mowing

Close coordination with the mowing contractor shall be required to ensure that access plans are followed, and construction mats are utilized when necessary. Sometimes mowing contractors may have to work off the leading edge of a construction mat to mow in order to lay the next construction mat and continue further into the wetland. Under no circumstances shall trees or shrubs be allowed to be pulled out of the wetland by the root ball. The root ball of trees and shrubs shall remain intact. Chipping debris and excessive amounts of slash shall not be placed in wetlands or other resource areas. In some instances, it may be beneficial to pile a reasonable amount of slash within a nearby upland area to create habitat for wildlife. This activity shall be approved by the National Grid Environmental Scientist.

### 6.2 Stream Crossings and Stream Bank Stabilization

Stream crossings shall be bridged with construction mats or other temporary minimally-intrusive measures unless fording is acceptable for the site and is authorized by the National Grid Environmental Scientist. Care shall be taken when installing a construction mat bridge to insure that the stream bed and banks are not damaged during installation and removal and that stream flow is not unduly restricted. Where stream width allows, construction mats shall be installed to span the watercourse in its entirety without stringer placement in the water or any restriction of stream flow. Environmental permits may be required to cross or disturb protected waters, depending upon state-specific regulatory requirements. Refer to BMPs in **Appendix 4**. Immediately following construction mat removal, all stream banks shall be stabilized and restored to prevent sedimentation and erosion.

### 6.3 Cleaning of Construction Mats

Mats shall be certified clean by the vendor prior to installation. The vendor shall use the certification form provided as **Appendix 5** to document compliance. Clean is defined as being free of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials prior to being brought to the project site. Any equipment or timber mats that have been placed or used within areas containing invasive species within the project site shall be cleaned of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials at the site of the invasive species prior to being moved to other areas on the project site to prevent the spread of invasive species from one area to another<sup>3</sup>. **Mats shall be cleaned prior to being removed at the completion of the project: exceptions to this requirement**

<sup>3</sup> On ROW projects where multiple wetlands may be dominated by the same invasive species, cleaning may not be required for movement along the ROW. Check with the National Grid Environmental scientist for guidance.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	18 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

**may be made on a case-by-case basis.** Consult with the National Grid Environmental Scientist prior to discharging or disposing of any waste water or waste material from the cleaning of construction mats.

#### **6.4 Stone Removal for Construction Mat Placement**

For situations where the matting contractor determines that stones or boulders must be removed or relocated within wetland areas in order to install safe and level structure work pads or access roads the boulders shall be moved in a manner which does not result in significant soil disturbance (i.e., pushing with a bull dozer is not allowed). The boulders shall not be placed on any existing vegetated areas within wetlands or within vernal pools. When numerous boulders shall be removed from a wetland area, they shall be deposited in an upland area outside of the flagged wetland limits, outside of any cultural resource areas and outside of any RTE species populations. Any boulders that shall be placed within buffers (In MA, the 100-foot buffer zone, and in RI, the 50-foot Perimeter Wetland, 100-foot or 200-foot Riverbank Wetlands) shall be placed to avoid causing soil disturbance and they shall be within an approved limit of work. When there is a significant number of boulders that need to be removed, the National Grid Environmental Scientist shall be consulted for guidance.

#### **6.5 Transition onto Mats**

Erosion controls and stone or wood chip ramps shall be installed to promote a smooth transition to and minimize sediment tracking onto construction mats. Geotextile may be added beneath stone or wood chip transitions to facilitate removal, as necessitated by site or permit conditions. Mat transitions shall be removed once construction mats have been removed and during restoration. Refer to BMPs in **Appendix 4**.

#### **6.6 Construction Material on Mats**

The stockpiling of stone, drill spoils and other unconsolidated material on construction mats shall be avoided unless determined necessary due to access and work pad constraints. Additional controls, such as watertight mud boxes and geotextile/filter fabric over or between construction mats shall be considered for stockpile management. If material is placed on construction mats and falls through into wetlands, the material must be removed by hand. Saturated soils shall be allowed to dewater prior to off-site transport for sufficient time to ensure that water/sediment is not deposited onto construction mats or public roads during transport. Heavy machinery shall not be left overnight on mats located within floodplain unless approved by the National Grid Environmental Scientist, the machinery is still in use, and removal of the equipment requires the use of additional equipment to move it and would increase vehicle trips in/ou of wetlands. In these situations and when approved by the National Grid Environmental Scientist, the equipment shall be secured against vandalism and secondary containment measures shall be employed where feasible. Mat anchoring shall be evaluated, see below.

#### **6.7 Mat Anchoring**

The National Grid Environmental Scientist and Project environmental consultant shall indicate to the project team when mat anchoring may or shall be necessary. The matting contractor will propose the method of mat anchoring, which will be approved by the National Grid Environmental Scientist and the

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	19 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

National Grid Construction Supervisor. The need for anchoring should be noted in the project EFI, on the project access and matting plans, and in the scope of the bid document (if externally sourced).

Anchoring of construction mats should be considered when any of the following conditions are presented at a project work location:

Location	Considerations
Stream crossings Shorelines of Ponds/Lakes Wetlands Floodplains	When located in a mapped flood area (A). When mapped 100-year flood elevations (AE) are greater than 2 ft above existing grades. Where past flash flood events have occurred. Where steep terrain is present or surrounds the project location. When mats will be in place during hurricane season for greater than 2 weeks.
Tidal areas	When located in a Velocity (V or VE) Zone. When mats will be in place during a moon tide cycle. When mats will be in place during hurricane season for greater than 2 weeks.

Examples of mat anchoring are provided below, but the implementation methods for anchoring mats are not limited to these examples. Where anchoring is determined to be necessary, the matting contractor should propose a method suitable based on field conditions and that takes crew safety, slip/trip/fall hazards, size of matting footprint, and other project and site-specific factors into consideration. Refer to BMPs in **Appendix 4**.

**Limited sets of mats**

- Cable or rope in chain pockets and run linearly, or
- Linear ropes anchored using helical screws, manta ray anchors, or posts.

**Larger sets of mats or those without chain pockets**

- Chain link fence posts or other posts driven in along mat edge every 3-4 feet and ropes then laced across mats between opposing posts before storm event, or
- Anchor bolts added to mats, then cable is laced between bolts and tied to helical or manta ray anchor.

**6.8 Corduroy Roads**

Corduroy roads are a wetland crossing method where logs are cut from the immediate area and used as a road bed to prevent rutting from equipment crossing. This technique is designed to be used in areas of wetland crossings where there is no defined channel or stream flow and should never be used in streams. Corduroy logs shall be placed in the narrowest area practicable for crossing with the logs

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	20 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

placed perpendicular to the direction of travel across wet area. The use of corduroy logs shall only be in emergencies when approved by the National Grid Environmental Scientist or when they have been specifically permitted as part of a project. Refer to BMPs in **Appendix 4**.

### 6.9 Construction Mat Removal

Once construction mats are removed, wetlands shall be inspected for build up of sand or other materials that may have fallen through construction mats. Care shall be taken to inspect wetland crossings as each mat is removed to ensure any materials are properly removed and disposed of off-site.

### 6.10 Utility Air Bridging

In ROWs where other utility facilities (including but not limited to gas, oil, fiber optic, electric, water, and sewer) are co-located within the transmission ROW, bridging may be required to cross those facilities. The project team shall coordinate with the respective utility company prior to determining if bridging or permanent crossings are required.

## 7.0 LGP Equipment Use

Only when approved by the National Grid Environmental Scientist on a case-by-case basis shall equipment with a LGP **psi that meets the state-specific USACE General Permit requirement when loaded** be allowed to access through wetlands. Refer to the state-specific General Permit for the definition of LGP in each state at: <http://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/>, or to the summary table provided below. The National Grid Environmental Scientist's approval of the use of LGP equipment through wetlands depends on several criteria including:

- Time of year. LGP equipment use may be allowed if weather and field conditions at the time of construction are suitable to eliminate/minimize the concern of rutting or other impacts. Frozen, frozen snow pack, low flow, drought conditions, or unsaturated surface soil conditions are typically acceptable conditions. Spring and fall construction, due to the typical higher precipitation, are not suitable times of year for LGP equipment use.
- Number of trips. Multiple trips through a wetland have shown to increase the potential for damage and require matting. LGP equipment use shall likely only be approved if trips are limited to one trip in and one trip out.
- Type of wetland system. Some wetlands have harder soils/substrate, and may be passable without causing significant damage. Some of the wetlands along National Grid ROWs have existing hard bottom roads that have been vegetated over time and may be traversed with LGP equipment without construction mats.
- Emergencies. LGP equipment use may be allowed during emergency or storm conditions for outage restoration.
- State-specific USACE General Permit Performance Standards. The standard is for no impact to the wetland, which may be obtained by using LGP equipment **when loaded**). *"Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground*

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	21 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

*pressure (as specified in the USACE GP), or shall not be located directly on wetland soils and vegetation; it shall be placed on construction mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation.”*

- Local bylaws. Municipal wetland bylaws, where applicable, shall be reviewed for prohibitive conditions or applicable performance standards.

LGP equipment is prohibited in the following resources areas:

- Stream crossings
- State listed-species habitat
- Outstanding Resource Waters (ORWs)
- Vernal pools
- Archaeological sensitive areas

Where LGP equipment use is desired in lieu of construction mats, the construction supervisor should identify these areas on marked-up access plans. A site visit with the Project Environmental Monitor should be scheduled to assess if the proposed locations are potential candidates. The Project Environmental Monitor will document potentially suitable locations and dismiss others as unsuitable.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	22 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

**ACOE New England District General Permit Requirements**

State	Restrictions	Maximum PSI (when loaded) for Use without Mats	Reference
MA	<p><i>One of the following must apply:</i></p> <p>Equipment operated within wetlands shall:</p> <ul style="list-style-type: none"> <li>a) Have low ground pressure;</li> <li>b) Be placed on timber mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation; or</li> <li>c) Equipment must be operated on adequately dry or frozen conditions such that shear pressure does not cause subsidence of the wetlands immediately beneath equipment and upheaval of adjacent wetlands.</li> </ul>	3 psi	MA General Permit, General Condition 13
NH	<p><i>One of the following must apply:</i></p> <p>Equipment operated within wetlands shall:</p> <ul style="list-style-type: none"> <li>a) Have low ground pressure;</li> <li>b) Be placed on timber mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation; or</li> <li>c) Be operated on frozen wetlands.</li> </ul>	4 psi	NH General Permit, General Condition 17
VT	<p><i>One of the following must apply:</i></p> <p>Equipment operated within wetlands shall:</p> <ul style="list-style-type: none"> <li>a) Have low ground pressure;</li> <li>b) Be placed on timber mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation; or</li> <li>c) Be operated on frozen wetlands such that shear pressure does not cause subsidence of the wetlands immediately beneath equipment and upheaval of adjacent wetlands.</li> </ul> <p>Note: Written authorization from the Corps required to waive the use of mats during frozen or dry conditions.</p>	3 psi	Vermont General Permit, General Condition 14
RI	<p><i>One of the following must apply:</i></p> <p>Equipment operated within wetlands shall:</p> <ul style="list-style-type: none"> <li>a) Have low ground pressure;</li> <li>b) Be placed on timber mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation; or</li> <li>c) Be operated on frozen wetlands such that shear pressure does not cause subsidence of the wetlands immediately beneath equipment and upheaval of adjacent wetlands.</li> </ul>	6 psi	Rhode Island General Permit, General Condition 15

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	23 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

State	Restrictions	Maximum PSI (when loaded) for Use without Mats	Reference
	Note: Written authorization from the Corps required to waive the use of mats during frozen or dry conditions.		

Due to the fact that ground conditions may change between the time of the evaluation and construction, LGP equipment approval is required **at the time of construction for each wetland crossing** and shall be dependent upon the above conditions. In addition, LGP equipment use and approval shall be assessed by the National Grid Environmental Scientist or Project Environmental Monitor during construction on a continuing basis

Once a location is approved for the use of LGP equipment:

- The Construction Supervisor must check-in with the Project Environmental Monitor at least two weeks before construction begins to ensure conditions remain suitable for LGP equipment use, and weather conditions are favorable.
- The Project Environmental Monitor must observe the equipment when in use.
- LGP equipment use shall cease immediately if field conditions are found to be unsuitable (i.e. soil rutting greater than six inches or the destruction of vegetation root systems beyond the capacity of natural revegetation).
- **If wetlands damage occurs, the use of the LGP equipment shall be suspended, and the wetlands be restored.**
- Any LGP equipment used within areas containing invasive species within the project site shall be cleaned of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials at the site of the invasive species prior to being moved to other areas on the project site to prevent the spread of invasive species from one area to another.

## 8.0 Soil Disturbing Activities

### 8.1 Dust Control

Cutting activities shall be conducted to minimize the impacts of dust on the surrounding areas. Dust suppression is an important consideration. Water or other National Grid approved equivalent in accordance with the manufacturer's guidelines may be used for dust control along ROWs in upland areas. During application of water for dust control, care shall be taken to ensure that water does not create run-off or erosion issues. Refer to BMPs in **Appendix 4**.

### 8.2 Clearing

Clearing is not allowed without specific permission as it constitutes soil disturbance under several regulatory programs and may trigger permitting by increasing the project's footprint of disturbance. If clearing is required for a project, the limit of clearing shall be established with flagging or construction

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	24 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

fencing and/or erosion controls. Clearing shall be done in accordance with project specific permits. Following the completion of clearing, the limits of work shall be re-established. Refer to BMPs in **Appendix 4**.

### 8.3 Grubbing

Grubbing is not allowed without specific permission as it constitutes soil disturbance under several regulatory programs and likely triggers permitting by increasing the project’s footprint of disturbance. If grubbing is required for a project, the limit of grubbing shall be re-established after clearing has been completed. The area of grubbing shall be identified with flagging or construction fencing and/or erosion controls. Grubbing shall be conducted in accordance with project-specific permits.

### 8.4 Blasting, Noise and Vibration Control

If blasting is anticipated, the project team, including the National Grid Environmental Scientist, shall be consulted. If possible, plan work in residential areas to avoid noisy activities at night, weekends or during evenings. Emergency work in residential areas should be carried out in such a way as to keep noise to a minimum at night and weekends. Equipment should be maintained as per the manufacturer’s guidance to minimize noise and vibration.

Work plans must consider local noise ordinances and provide specific controls to ensure noise levels are maintained within specified limitations.

### 8.5 Site Grading

The work site shall not be graded other than in accordance with project permits. Any proposed grading shall be reviewed by the National Grid Environmental Scientist for wetlands, rare species habitat, areas of cultural and historical significance, and other environmentally sensitive areas prior to start of work. In some cases, additional testing for cultural or historical resources may be triggered by proposed grading; alternatives to grading may be sought due to protracted time frame of obtaining the permit associated with testing and performing the testing. Grading outside of a regulated area shall be kept to the minimum extent necessary for safe and efficient operations and shall comply with the project permit plans.

Grading shall be performed in a manner which does not increase the erosion potential at the Site (e.g., terraces or slope interruptions shall be utilized). Graded sites shall be promptly stabilized by applying a National Grid approved seed mix (if adequate root and seed stock are absent), and mulching with hay, straw or cellulose (use straw or cellulose hydromulch where the potential introduction of invasive plant species is of concern) to reduce erosion and visual impact, as soon as possible following completion of work at the site. Grading within a regulated area shall be subject to the review and approval of the National Grid Environmental Scientist.

In some municipalities, site grading activities require the prior approval of the Town Engineer, Building and Zoning Official, or Public Works Director. Local ordinances or bylaws should be reviewed for applicable restrictions and permitting thresholds

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	25 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

### 8.6 Grounding Wells

The installation of grounding wells shall require erosion controls and proper soil management. Due to the typical depth required for grounding wells (typically 50 to 200 feet or more), erosion controls shall be installed around the proposed well location when working in buffer zone, in proximity to sensitive resources or near slopes. Also, dewatering basins may be required for the proper management of groundwater. The National Grid Environmental Scientist shall be consulted for the disposal of any excess soil.

### 8.7 Counterpoise and Cathodic Protection

The installation of counterpoise or cathodic protection shall require erosion controls and proper soil management. The National Grid Environmental Scientist shall be consulted for the disposal of any excess soil.

### 8.8 Work Pads

When work pads are being constructed, only clean material shall be used in their construction. Work pads shall only be constructed in areas approved by the National Grid Environmental Scientist and shown on the approved permit access plans.

### 8.9 Site Staging and Parking

During the project planning and permitting process, locations shall be identified for designated crew parking areas, material storage, and staging areas. Where possible, these areas should be located outside of buffer zones, watershed protection areas, and other environmentally sensitive areas. Any proposed locations shall be evaluated for all sensitive receptors and for new projects requiring permitting, shall be incorporated onto permitting and access plans.

### 8.10 Soil Stockpiling

Soil stockpiles shall be located in upland areas and, if in close proximity to wetlands and wetland buffers, shall be enclosed by staked straw bales or another erosion control barrier. The stockpiling of stone, drill spoils and other unconsolidated material on construction mats shall be avoided unless determined necessary due to access and work pad constraints. Additional controls, such as watertight mud boxes and geotextile/filter fabric over or between construction mats shall be considered for stockpile management. If material is placed on construction mats and falls through into wetlands, the material must be removed by hand. Saturated soils shall be allowed to dewater prior to off-site transport for sufficient time to ensure that water/sediment is not deposited onto construction mats or public roads during transport.

### 8.11 Top Soil/High Organic Content Soil

When the work site requires excavation and grading, the top soil shall be stockpiled separately from the material excavated. This top soil shall be spread as a top dressing over the disturbed area during restoration of the site.

In some instances where work is occurring within wetlands, high organic content soil may be displaced. Such high organic content soil shall be segregated from other excavated materials and stockpiled for

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	26 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

use in wetland restoration areas. Care shall be taken to minimize the handling of high organic content soil. Preferably, the soil shall be stockpiled in one location until it is moved to the restoration area.

## 9.0 Stone Wall Dismantling and Re-building

Removal or alteration of stonewalls shall be avoided, whenever possible. As appropriate, some stonewalls removed or breached by construction activities shall be repaired or rebuilt. Rebuilt stone walls shall be placed on the same alignment that existed prior to temporary removal, to the extent that it shall not interfere with operations. The removal and rebuilding of stone walls requires approval from the National Grid Environmental Scientist and Property Legal, and may require several weeks lead time for coordination. Note that not all states allow this technique and that dismantling may not be allowed at all due to quality or significance of the wall. Once a stone wall has been identified as requiring dismantling, the following procedures shall be followed:

- Identify stone wall that is required to be temporarily dismantled and notify project team that a site visit is warranted to review the stone wall.
- The National Grid Environmental Scientist, with support from Property Legal and/or cultural/historical consultant, shall determine if permitting or additional permissions are required prior to dismantling stone wall.
- Once permit or permissions have been received, full documentation of wall dimensions (measurements and photographs) shall be submitted to the National Grid Environmental Scientist. Documentation of the wall dimensions shall be marked onto a copy of the applicable EFI access plan (or equivalent plan) with a useful reference for future locating such as GPS coordinates and/or measurement from a permanent reference point (closest structure location or closest cross street, etc.). The wall shall be photographed from all sides with a written description of the photograph (i.e. southern side of wall looking north). In addition, documentation of the length of wall to be dismantled shall be recorded. Take special care to note if granite property bounds (or other marker) are located within the wall so additional survey can be accomplished prior to dismantling in cases where the stone wall represents a property boundary. Site visits by project team (which shall include the National Grid Environmental Scientist) are a mandatory requirement prior to dismantling.
- No dismantling shall take place until documentation has been submitted to the National Grid Environmental Scientist and approved as sufficient documentation.
- Stones from the wall shall be removed from the work area and temporarily stored in nearby location, away from wetlands; buffer zones; rare species habitat and other historical/archeological concerns.
- Avoid dismantling via the “bulldozer” method when possible as this method makes it nearly impossible to rebuild the wall in the same alignment due to its uncontrolled nature. Dismantling shall be conducted either by hand, with stones stacked as they are removed, or on less “sensitive” walls to use an excavator with a thumb to grab each stone and build a stockpile. Significant ground disturbance below the wall shall be avoided.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	27 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

- Once construction and access in the area has been completed, the wall shall be rebuilt to pre-dismantled conditions or better. If rebuilding a stone wall can not be placed on the same alignment that existed prior to temporary removal, approval from the National Grid Environmental Scientist and Property Legal is required. **Note that if the wall represents a legal property boundary or is historically or culturally significant (or was previously determined to be in a very high quality condition), a professional stone masonry company may be required to document wall alignment, and conduct the dismantling and rebuilding.**

## 10.0 Avian Nest Removal

Avian nest removal shall be done in accordance with EG-304. Consult the National Grid Environmental Scientist prior to removing any nests. There are seasonal restrictions of the removal of avian nests and federal or state permits may be necessary prior to removal.

## 11.0 Drilling Fluids and Additives

When installing subsurface structures, there may be a need to utilize drilling aids such as slurries, borehole sealants, and other additives. All necessary steps shall be taken by National Grid personnel and contractors to prevent potential adverse effects on drinking water aquifers, groundwater quality, and wetlands when utilizing drilling aids. Efforts should be made to utilize natural bentonite clay-type materials, in place of polymer-based drilling aids. Regardless of the specific product type, the following requirements shall be met:

- Drilling aids must be NSF certified and manufactured to NSF-ANSI 60 standards. [https://www.nsf.org/newsroom\\_pdf/NSF-ANSI\\_60\\_watemarked.pdf](https://www.nsf.org/newsroom_pdf/NSF-ANSI_60_watemarked.pdf)
- Product use must be in accordance with manufacturer's specifications and instructions.
- National Grid personnel or their contractor shall provide all the necessary information regarding the proposed product to be used to National Grid's Environmental Sustainability, Compliance and Licensing & Permitting Department as early as possible in the project planning phase. If the work is being performed by a contractor, this information must be included as part of their initial bid package.
- If polymer-based products are proposed for use, product information shall be included in all related environmental regulatory filings and frac-out plans, if possible.
- A qualified individual shall be designated who will confirm/verify and document the specific use of a drilling aid at each location. This will include add-mix ratios, surface area treated, volume of water within excavation, volumes/weight of additives used, and any other measurements specified by the manufacturer. No mixing will be allowed in the drilled shaft excavation.
- The Contractor or National Grid crew performing the work is responsible for neutralizing all drilling products, as applicable, in accordance with the manufacturer's specifications. This shall be performed following removal from the excavation and while held in holding tanks. A

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	28 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

qualified person shall be designated by the Contractor who will confirm/verify and document the appropriate neutralization activity at each location, as necessary.

- Waste drilling aids (neutralized or not) or soils that may have come into contact with drilling aids will not be disposed of on National Grid properties, discharged to any ground surface or subsurface, waterbodies, wetlands or placed on 3<sup>rd</sup> party properties.
- All product use must be completed in strict adherence with the management, storage, mixing, transporting, disposing and any other requirements of state and federal regulatory approvals and permits, as applicable.
- National Grid reserves the right to refuse and terminate the use of any specific drilling aid at any time.

Regardless of the type of drilling aid utilized, the Contractor or National Grid crew performing the work is responsible for properly treating, containerizing, testing, transporting and disposing of any/all fluids and solids generated during their activities. All wastes must be disposed of in accordance with federal and state regulations. Relevant documentation shall be maintained and shall include volume of material treated and disposed and the location/facility at which it was disposed.

## 12.0 Water Withdrawal for Geotechnical Investigations

The use of water during geotechnical drilling operations may be required, and is most common during the “drive and wash” drilling technique, where 4- or 6-inch diameter casing is driven into the ground, and the soil inside the casing is washed out using a pump and hollow rods. Soil samples are generally collected at periodic intervals using a split spoon sampler (e.g., every 5 vertical feet).

The National Grid Environmental Scientist and/or Project Environmental Monitor may approve withdrawals from wetlands and waterways on a case-by-case basis should the geotechnical team advise no other options are available. Generally, the amount of water required for withdrawal is between 100 and 200 gallons, and the water is then recycled continuously in the drilling process. Certain scenarios may require additional water usage if water is lost down the boring (e.g., lost due to bedrock fractures during rock coring). The following general guidance should be adhered to when determining whether water withdrawals may be allowed during geotechnical investigations on the ROW. Approval from the National Grid Environmental Scientist and/or Project Environmental Monitor is required prior to initiating water withdrawals during geotechnical investigations.

- Withdrawals from perennial streams, ponds, lakes and large wetlands systems are preferred over small isolated wetlands to ensure the water level, water table, and hydroperiod are not affected. Prior to start of work, the Contractor shall identify which water source they prefer to withdraw from. The National Grid Environmental Scientist and/or the Project Environmental Monitor will confirm whether these sources are appropriate.
- Care should be taken to avoid alteration of wetlands or the beds and banks of surface waters. Examples of alterations include, but are not limited to, the following:
  - (a) the changing of pre-existing drainage characteristics, flushing characteristics, salinity

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	29 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

distribution, sedimentation patterns, flow patterns and flood retention areas;

(b) the lowering of the water level or water table;

(c) the destruction of vegetation; and

(d) the changing of water temperature, biochemical oxygen demand (BOD), and other physical, biological or chemical characteristics of receiving waters.

- Wetlands and waterways providing habitat for rare species should be avoided unless all other options are exhausted. Under no circumstances should water be withdrawn from a Vernal Pool.
- Withdrawal pipes or stingers should be elevated off the bottom of wetlands and streams during the duration of pumping. Additionally, fabric or screening should be covering the withdrawal pipes to eliminate inadvertent harm to wildlife.
- Withdrawals should be performed in a manner that does not damage vegetation, disturb sediment, or result in the release of temporary or permanent fill material (e.g., sediment, spoils, or turbid water) into the wetland/waterway. Additional detail from geotechnical experts may be required to solidify BMP recommendations.
- Any water used for geotechnical drilling operations (including water withdrawn from surface water, brought on-site, or from other sources) shall be discharged into the open borehole or to an upland area such that the water infiltrates to the ground and is not discharged to a wetland or surface water resource area. Consultation with the National Grid Environmental Scientist and/or the Project Environmental Monitor is required if this is not feasible. At no time should water withdrawals result in a temporary or permanent fill/discharge of material (e.g. sediment, spoils, or turbid water) into the wetland or waterway.
- If water sourcing options is not determined prior to mobilization, necessary water shall be brought in by tank truck. Should withdrawal from surface water sources become necessary during soil boring work, the National Grid Environmental Scientist and/or the Project Environmental Monitor shall be notified prior to beginning withdrawal. If initial withdrawal from surface water is approved by the National Grid Environmental Scientist and/or the Project Environmental Monitor, the driller may withdraw from the surface water, as long as the above criteria are met.
- If excessive water withdrawal is necessary, the National Grid Environmental Scientist and/or the Project Environmental Monitor shall be consulted to determine whether the water source is appropriate for withdrawal.
- In New Hampshire, withdrawals made from state-owned property require written permission from the agency with primary responsibility for monitoring and/or maintaining the site.

### 13.0 Gates

When not in use, gates shall be locked with a company-approved lock or double locked with the property owner’s lock. New gates may be installed during a project, however, installation of a gate requires permission from the property owner, and may require environmental permitting. Consult with National Grid Real Estate and the National Grid Environmental Scientist prior to installing a new gate, as well as with the appropriate engineering department for the current company gate

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	30 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

specifications. Refer to BMPs in **Appendix 4**. Installation of ROW access restrictions (e.g., stone, bollards, other) at road crossings also require consultation with the National Grid Environmental Scientist and Property Legal.

#### 14.0 Signage

Specific signage may be required by permits or be specified in the EFI to limit access in certain sensitive areas. Signs shall be used to clarify allowed access and sensitive areas, such as:

- “No snow stockpiling beyond this point”;
- “Approved access (to structures A-F)”;
- “Do not cross this area until construction mats are in place”;
- “No vehicle crossing”;
- “Areas to avoid”; and
- “Environmentally Sensitive Area – Keep Out.”

Signs shall be used in conjunction with snow fencing or other physical barriers as demarcation for sensitive areas (e.g., rare species areas, sensitive archeological locations, etc.) that need to be protected and avoided by construction activities. In addition, permit signs required by the regulatory agencies shall be present (i.e. MADEP, RIDEM, EPA (SWPPP), ACOE, etc) at construction sites and/or ROW access points. Construction signage shall be installed and maintained by the contractor performing the work during the project. Absence of signage does not eliminate the need to comply with access plans, permit conditions, and other regulatory requirements. Refer to BMPs in **Appendix 4**.

#### 15.0 Refueling and Maintenance Operations

##### 15.1 Spill Prevention and Response Plan

Spill controls shall be provided on every field vehicle. Bulk storage of fuels (55 gallons or greater) shall be approved by the National Grid Environmental Scientist prior to being brought on site. The need for a field spill plan shall be evaluated specific to the project for regulatory requirements under SPCC regulations or local ordinances. A field spill plan would include information on fuels and oils being used, approximate amounts in each container or type of equipment, location, fueling location, secondary containment, response and notification procedures, including contact phone numbers, etc. All personnel shall be briefed on spill prevention and response prior to the commencement of construction. The state-specific EI-501 and EG-502 shall be followed in the event of a spill.

Typical construction activities do not require the use or storage of large quantities of oil or hazardous materials (i.e., greater than 55 gallons). However, oil and/or hazardous materials (OHM) may be required in limited quantities to support construction or vehicle operations. Best practices shall be followed in the use and storage of OHM which include but are not limited to: storage and refueling greater than 100 feet from resource areas; maintenance of spill response equipment at work locations sufficient to handle incidental releases from operating equipment; general training for on-site personnel

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	31 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

for spill clean up response for incidental releases of OHM; and contracting with an on-call spill response contractor that is capable of managing incidental and significant releases of OHM. There may situations that additional precautions shall be required for the storage or use of OHM (i.e., within wellhead protection areas, GA/GAA areas, Zone IIs). Storage of OHM shall be done in accordance with any applicable regulatory requirements.

### 15.2 Field Refueling

Small equipment such as pumps and generators shall be placed in small swimming pools or on absorbent blankets/pads, to contain any accidental fuel spills. Small swimming pools with absorbent blankets/pads, and/or other secondary containment, shall be used for refueling of fixed equipment in wetlands and should be maintained to prevent accumulation of precipitation.

### 15.3 Grease, Oil, and Filter Changes

Routine vehicle maintenance shall not be conducted on project sites.

### 15.4 Other Field Maintenance Operations

When other vehicle or equipment maintenance operations (such as emergency repairs) occur, company personnel or contractors at field locations shall bring vehicles or equipment to an access location a minimum of 100 feet away from environmentally sensitive areas (e.g., wetlands or drinking water sources). A paved area, such as a parking lot or roadway, is a preferred field maintenance location to minimize the possibility of spills or releases to the environment.

Crews shall take all usual and reasonable environmental precautions during repair or maintenance operations. Occasionally, it is infeasible to move the affected vehicle or equipment from an environmentally sensitive area to a suitable access area. When this situation occurs, precautions shall be taken to prevent oil or hazardous material release to the environment. These precautions include (but are not limited to) deployment of portable basins or similar secondary containment devices, use of ground covers, such as plastic tarpaulins, and precautionary placement of floating booms on nearby surface water bodies.

### 15.5 Tools and Equipment

Cleaning of tools and equipment shall be conducted away from environmentally sensitive areas (such as wetlands, buffer zones or drinking water sources) to the maximum extent possible. A paved area such as a parking lot or roadway is preferred, to minimize the possibility of spill or release to the environment. Crews shall wipe up all minor drips or spills of grease and oil at field locations.

## 16.0 Stabilization Deadlines for Projects Subject to EPA Construction General Permit

### 16.1 Deadlines to Initiate Stabilization Activities (Permanent and Temporary)

Soil stabilization measures shall be implemented immediately whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the project. The following are some examples of activities that constitute initiation of stabilization:

#### Approved for use per EP – 10, Document Control.

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	32 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

- Preparing the soil for vegetative or non-vegetative stabilization;
- Applying mulch or other non-vegetative product to the exposed area;
- Seeding or planting the exposed area;
- Finalizing the arrangements to have stabilization product fully installed in compliance with the deadlines to complete stabilization in Section 15.2 below.

### 16.2 Deadlines to Complete Stabilization Activities (Permanent and Temporary)

As soon as practicable, but no later than 14 calendar days or 7 calendar days (for areas discharging to a sensitive water) after the initiation of soil stabilization measures commence the following should be completed:

- For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and
- For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

### 16.3 Vegetative Stabilization (all except for arid, semi-arid, or on agricultural lands)

- Provide established uniform vegetation (e.g., evenly distributed without large bare areas), which provides 70% or more of the density of coverage that was provided by vegetation prior to commencing earth-disturbing activities. Avoid the use of invasive species as cover.
- For final stabilization, vegetative cover must be perennial; and
- Immediately after seeding or planting a disturbed area to be vegetatively stabilized, a non-vegetative erosion control must be implemented to the area while the vegetation is becoming established. Examples include; mulch and rolled erosion control products.

### 16.4 Vegetative Stabilization (Agricultural Lands)

- Disturbed areas on land used for agricultural purposes that are restored to their pre-construction agricultural use are not subject to vegetative stabilization standards.

### 16.5 Non-Vegetative Stabilization

If using non-vegetative controls to stabilize exposed portions of your site, or if you are using such controls to temporarily protect areas that are being vegetatively stabilized, you must provide effective non-vegetative cover to stabilize any such exposed portions of the site. Examples of non-vegetative stabilization techniques include, but are not limited to, rip-rap, gabions, and geotextiles.

## 17.0 Clean-up and Restoration Standards

The following steps shall be taken once construction has been completed at each location along the ROW or within the project site. The following are minimum guidelines for clean-up and stabilization standards. Please refer to permit conditions for project-specific related standards. Refer to the EFI for applicable permit requirements and to determine if the site needs to be reviewed and approved by the permitting authorities prior to removal of erosion controls.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	33 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

**17.1 Removal of Sedimentation and Erosion Controls**

After all work has been satisfactorily completed and vegetation has been re-established to a minimum of 75% cover, and upon approval by the National Grid Environmental Scientist, all non-biodegradable materials (e.g., siltation fencing, straw bale strings, stakes, straw wattle mesh casing, etc.) shall be disposed of properly off-site.

Dependent on permit requirements, sedimentation and erosion controls may not be allowed to be removed until after inspection and approval by one or more permitting authority. In most cases, removed straw bales may be used to mulch disturbed areas. Remaining straw bales that do not block the flow of water may be left in place unless they are required to be removed pursuant to permit conditions. Straw bales that block the flow of water shall be removed.

Prior to project construction being completed, the project team will develop post-construction inspection intervals to ensure timely removal of temporary BMPs. BMPs will be removed when the area is stabilized, which typically occurs when the area has either naturally stabilized (75% cover), or seed and mulch that was installed has achieved 75% cover.

**17.2 In-Situ Restoration**

Unless otherwise specified in permits or prescribed by the National Grid Environmental Scientist or the Project Environmental Consultant, all disturbed areas, including stream banks, wetlands and access routes, shall be restored following the completion of work. When the work is completed and construction mats have been removed, the National Grid Environmental Scientist or Project Environmental Consultant shall conduct an inspection. Wetlands shall be inspected for build up of sand or other materials that may have fallen through construction mats. Care shall be taken to inspect wetland crossings carefully after construction mat removal to ensure any materials are properly removed and disposed of off-site.

Restoration of Soil Compaction. If rutting or soil compaction following construction mat removal is observed, the area shall be returned to pre-existing conditions, and comparable to the surrounding area, by light hand raking or by back-blading with machinery. Restoration shall be overseen by the Project Environmental Consultant or National Grid Environmental Scientist. Deep ruts (>12”) shall be filled in using available, loose soil from the work area.

Seeding and Mulching. If adequate root and seed stock are absent and have been stripped from the area, graded sites shall be promptly stabilized by applying an approved seed mix and mulching with straw to reduce erosion and visual impact. Seeding and mulching shall be completed as soon as possible following completion of work at the site. For some wetland areas, natural re-vegetation may be more appropriate than seeding disturbed sites. Wetland areas where adequate root and seed stock are absent will be seeded using an approved wetland native seed mix. For some wetland areas, natural re-vegetation may be more appropriate than seeding disturbed sites. Refer to BMPs in **Appendix 4** for seed mix tables and mulch ratio tables.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	34 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

If needed, the import of quality topsoil onto the ROW will be required. Topsoil should be tested, and approved by the Project Environmental Consultant or National Grid Environmental Scientist to determine its suitability for site conditions. Fertilizers will be approved on a case-by-case basis.

For upland areas, the disturbed vegetation and soil shall be restored and stabilized<sup>4</sup> by regrading the area to pre-existing conditions, if needed, seeding (if adequate root and seed stock are absent) and mulching the exposed soil, and removing strings and stakes from straw bales and using broken up straw bales for the mulch. Siltation fencing, strings and stakes shall be removed for disposal as ordinary waste. Refer to BMPs in **Appendix 4** for seed mix tables and mulch ratio tables.

For sites with excess boulders, additional boulders could be used at proposed and existing gate locations to use on either side of the gates as a deterrent for unauthorized vehicle access or be placed along the edges of work pads where steep slopes are present for safety purposes. The final placement of boulders should be reviewed prior to installation with Real Estate and the National Grid Environmental Scientist or Project Environmental Consultant.

Unless otherwise specified in Project-specific permit conditions, the National Grid Environmental Scientist or Project Environmental Consultant shall develop an inspection frequency to monitor restored areas for stabilization, germination and successful revegetation.

**17.3 Invasive Species**

All equipment shall be certified clean<sup>5</sup> utilizing the attached form (**Appendix 5**) or equivalent as approved by the vendor prior to mobilization to the work site. The vendor shall use the certification from provided as **Appendix 5** to document compliance with invasive species management BMPs. Clean is defined as being free of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials prior to being brought to the project site. Any equipment that has been placed or used within areas containing invasive species within the project site shall be cleaned of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials at the site of the invasive species prior to being moved to other areas on the project site to prevent the spread of invasive species from one area to another<sup>6</sup>. **Equipment shall be cleaned prior to being removed at the completion of the project: exceptions to this requirement shall be determined on a case-by-case basis.** Consult with the National Grid Environmental Scientist prior to discharging or disposing of any waste water or waste material from the cleaning of equipment.

**17.4 Cleaning of Equipment**

At the completion of the project, equipment shall be cleaned prior to being de-mobilized to prevent tracking of material onto roads and causing safety issues. Consult with the National Grid Environmental

<sup>4</sup> For projects subject to the 2012 CGP, stabilization is required within 14 days, or within 7 days for sensitive areas.

<sup>5</sup> The **Appendix 5** certification form (or equivalent as approved by National Grid Environmental Scientist) shall be used to document the clean certification

<sup>6</sup> On ROW projects where multiple wetlands may be dominated by the same invasive species, cleaning may not be required for movement along the ROW. Check with the National Grid Environmental Scientist for guidance.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	35 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

Scientist prior to discharging or disposing of any waste water or waste material from the cleaning of equipment.

**17.5 Access Roads**

Constructed gravel roads shall be left in place following project completion unless permit conditions require their removal. Refer to the specific permit conditions for these provisions. If the road is to be removed, the crushed stone and geotextile fabric shall be removed from the work site. Seeding and/or mulching of gravel roads is generally not required, unless necessary to prevent erosion. Pre-existing sandy soils within mapped rare turtle habitat shall not be seeded unless directed by the National Grid Environmental Scientist so as to not alter nesting habitat.

**17.6 Stone Work Pads**

Unless permit conditions or property owner’s require the removal of constructed stone work pads following project completion, constructed work pads shall be left in place. Refer to the specific permit conditions for these provisions.

**17.7 Construction Materials on ROWs**

As soon as the structure work has been completed, all used parts and trash are to be picked up and removed from the project site. Retired poles shall be removed in accordance with National Grid Engineering Standard SP.06.01.301. In some cases, the used material from structure work may be temporarily stored at the work area by placing it out of the wetlands or other sensitive resource area until work in the adjacent areas has been completed. However, treated wood poles shall never be stored in standing water or in wetlands. If the project is cancelled, all material shall be removed from the project site. Excess material brought to the project site shall be removed upon project completion. Consult with the National Grid Environmental Scientist on whether the work site shall be restored in addition to the measures outlined above

**17.8 Improved Areas**

Yards, lawns, agricultural areas, and other improved areas shall be returned to a condition at least equal to that which existed at the start of the project. Off-ROW access shall never be assumed and shall be coordinated through Real Estate before being implemented. Depending on the access point, construction matting or other BMPs may be required to prevent ruts, lawn damage, or other property damage. Restoration following the completion of work and any use of improved areas shall be conducted in accordance with the measures outlined above.

**17.9 Property Damage**

All damage to property occurring as a result of a project shall be immediately repaired or replaced. In some locations, it may be desirable to document pre-existing damage prior to work commencing in that area in order to demonstrate afterwards that the damage did not result from the project. Work crews, the Project Environmental Consultant or the National Grid Environmental Scientist shall document repairs that were performed in response to damage from unauthorized vehicle use.

**17.10 Overall Work Site**

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	36 of 49
	Date:	06/02/2020
<b>SUBJECT</b> <b>ROW Access, Maintenance and Construction Best Management Practices for New England</b>		<b>REFERENCE</b> <b>EP-3; Natural Resource Protection</b>

Upon satisfactory completion of work, the construction personnel shall remove all work-related trailers, buildings, rubbish, waste soil, temporary structures, and unused materials belonging to them or used under their direction during construction, or waste materials from previous construction and maintenance operations. All areas shall be left clean, without any litter or equipment (wire, pole butts, anchors, insulators, cross-arms, cardboard, coffee cups, water bottles, etc.) and restored to a stable condition and as near as possible to its original condition, where feasible. Debris and spent equipment shall be returned to the operating facility or contractor staging area for disposal or recycling (cardboard) as appropriate in accordance with EI-111.

**17.11 Material Storage/Staging and Parking Areas**

Upon completion of all work, all material storage yards, staging areas, and parking areas shall be completely cleared of all waste and debris. Unless otherwise directed or unless other arrangements have been made with an off ROW or off-property owner, material storage yards and staging areas shall be returned to the condition that existed prior to the installation of the material storage yard or staging area. Regardless of arrangements made with a landowner, all areas shall be restored to their pre-construction condition or better. Also any temporary structures erected by the construction personnel, including fences, shall be removed by the construction personnel and the area restored as near as possible to its original condition, including seeding and mulching as needed.

**18.0 Notification of Emergency Work**

Because it is sometimes difficult to identify wetlands and other sensitive environmental areas, the National Grid Environmental Scientist shall be notified within 24 hours or by the next working day whenever emergency off-road repair work takes place. Although the routine maintenance and emergency repair work is generally allowed, due to site conditions or the scope of the project, notification to the regulating agencies may be required.

**19.0 Appendices**

- APPENDIX 1: Glossary
- APPENDIX 2: Acronyms
- APPENDIX 3: Storm Water, Wetlands & Priority Habitat Environmental Compliance Site Inspection / Monitoring Report Form
- APPENDIX 4: BMP Drawings and Guidelines
- APPENDIX 5: Certification Sheet for Invasive Species Control
- APPENDIX 6: Snow Disposal Guidelines

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	37 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

### Appendix 1 – Glossary

Access Road – An existing, periodically maintained road often consisting of gravel and/or exposed soils or vegetated with grasses but devoid of woody vegetation, that is visible on aerial photography and shown on ROW T-sheets. May include newly permitted permanent roads (i.e., roads to be constructed in accordance with a project-specific permit).

Access Route - A pathway previously used or proposed to be used by crews for access along the ROW. Routes may be shown on ROW T-sheets or previous project access plans but are not improved as maintained gravel/exposed soil roads. Access routes may be mown and can consist of trails utilized by recreational vehicles.

Action Logs – Project-specific log used to document action items required for permit compliance. The log identifies timeframes for completion and responsible parties. The log is typically updated by the Project Environmental Consultant or the National Grid Environment Scientist and circulated to the project team on a weekly, or more frequent, basis.

Bank – The transitional slope immediately adjacent to the edge of a surface water body, the upper limit of which is usually defined by a break in slope, or, for a wetland, where a line delineated in accordance with applicable state and federal regulations that indicates a change from wetland to upland.

BMP – Best Management Practice. Individual engineered constructions or operating procedures intended to minimize and mitigate soil disturbance, erosion, sedimentation, turbid discharges, and/or impacts to sensitive receptors.

Clean - Free of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials prior to being brought to the project site.

Clean Gravel – Gravel is a type of coarse-grained soil that consists of small stones and other mineral particles. Clean Gravel shall meet the requirements in accordance with National Grid Standard Construction Specification for Electric Stations (Engineering Standard SP.08.00.001) Clean Gravel will not have fine materials that could lead to a turbid discharge.

Clean Stone (Crushed Stone) – Clean Stone (Crushed Stone) shall meet the requirements in accordance with National Grid Standard Construction Specification for Electric Stations (Engineering Standard SP.08.00.001). Clean Stone will not have fine materials that could lead to a turbid discharge.

Clearing – The cutting of trees and large bushes by hand and/or mechanical means.

Compost Socks – Tubular devices comprised of non-degradable, photodegradable, or biodegradable mesh tubing containing organic compost matrix. Compost socks are effective for intercepting site runoff, trapping

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	38 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

sediment, and treating for soluble pollutants by filtering stormwater runoff. . Compost socks are a useful sedimentation control device along construction site perimeters, as check dams in drainage channels, as a slope interruption practice on long and/or steep slopes, and around drain or street curb inlets.

Construction Mats - Construction, swamp, and timber mats (“construction mats”) are generic terms used to describe structures that distribute equipment weight to minimize disturbance to wetland soil and vegetation while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes.

Corduroy Road – Corduroy roads are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another.

Dewatering Basin – An established containment area for saturated materials and pumped discharges. This measure is used for the purpose of de-watering soils prior to transport off site or for use in another location on site, and for allowing suspended sediment to settle out of pumped discharges.

Detention/Retention Basin – A detention/retention basin is designed for the purpose of detaining or retaining water. A dewatering basin is a form of detention basin

Dewatering – Use of a system of pumps, pipes and temporary holding dams to drain or divert waterways or wetlands, or lower the groundwater table before and during excavation activities.

Drainage Ditch or Swale – A clearly noticeable channel that is typically dry, except after precipitation events. Intermittent and perennial streams and rivers are not included in this definition.

Dredge – To dig, excavate, or otherwise disturb the contour or integrity of sediments in the bank or bed of a wetland, a surface water body, or other area within the regulating bodies’ jurisdiction.

Dredge Spoils – Material removed as the result of dredging.

Embankment – A protective bank constructed of mounded earth or fill materials located between a roadway (or rail bed) and a seasonal stream or other wetland.

Environmental Field Issue – Document that contains copies of all project-specific environmental permits and summarizes all environmental permit conditions. The EFI is prepared by the Project Environmental Consultant or the National Grid Environment Scientist and copies are provided to the Project Manager, Construction Supervisor(s), and other team members as appropriate.

Environmental Monitoring Records – Examples of checklists and/or monitoring reports suggested for use by the Company Environmental Engineer to document conformance of the project with this Environmental Guidance and or project specific permit/license conditions.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	39 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

Environmental Scientist – Formerly Environmental Engineer. The National Grid Environmental Department representative for the project or the territory where the work is located. For a map of Environmental Department staff territories, refer to the Environmental page of the National Grid infonet.

Environmentally Sensitive Areas – Examples of environmentally sensitive areas that may be found on National Grid properties are rivers, streams, ponds, lakes, wetlands, bogs, swamps, salt marshes, rare species habitat, wellhead protection areas, cultural sites, parks, preserves, schools and as otherwise defined by Federal, State or local regulations. Refer to EG-301.

Erosion Controls – The utilization of methods to prevent soil detachment and minimize displacement or washing down slopes by rainfall or run-off. Common practices include, but are not limited to:

- (a) Temporary and Permanent Seeding.
- (b) Mulching, Soil Binders, Tackifiers.
- (c) Erosion Control Blankets.
- (d) Hydraulic Erosion Control.

Excavate/Excavation – To dig, remove, or form a cavity or a hole in an area within the department’s jurisdiction.

Fill (n.) – Any rock, soil, gravel, sand or other such material that has been deposited or caused to be deposited by human activity.

Fill (v.) – To place or deposit materials in or on a wetland, surface water body, bank or otherwise in or on an area within the jurisdiction of the department.

Flats – Relatively level landforms composed of unconsolidated mineral and organic sediments usually mud or sand, that are alternately flooded and exposed by the tides and that usually are continuous with the shore.

Frozen Condition – Field conditions when the upper portion of the ground surface freezes or when areas of standing water freeze solid such that vehicle passage over these areas is supported without any resulting soil disturbance. The frozen conditions must have been affected by severe cold (maximum daily temperatures less than 32 degrees F) for a continuous 2-week period.

GAA – Rhode Island groundwater classification, groundwater resources that are known, or presumed to be suitable for drinking water use without treatment, and are located in one of the three areas described below.

a) The state’s major stratified drift aquifers that are capable of serving as a significant source for a public water supply (“groundwater reservoirs”) and the critical portion of their recharge area as delineated by DEM;

b) The wellhead protection area for each public water system community water supply well. Community water supply wells are those that serve resident populations and have at least 15 service

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <p style="text-align: center;"><b>National Grid Environmental Guidance</b></p>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	40 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

connections or serve at least 25 individuals, e. g. municipal wells and wells serving nursing homes, condominiums, mobile home parks, etc.; and

c) Groundwater dependent areas that are physically isolated from reasonable alternative water supplies and where existing groundwater warrants the highest level of protection. At present only Block Island has been designated as meeting this criterion.

GA – Rhode Island groundwater classification, groundwater resources that are known, or presumed to be suitable for drinking water use without treatment. However, groundwater classified by GA does not fall within any of the three priority areas described under the GAA classification.

Grade/Grading – The movement of soil and fill material to change the elevation of the land. The term refers to the combined actions of excavating and filling to change elevation or shape.

Grubbing – The removal of stumps/roots by mechanical means during site preparation activities.

Immediately - As soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

In-kind Replacement - Replacement using the same material, functional inverts, diameter and length as the existing item. In-kind replacement includes the substitution of a structure with a similar structure in approximately the same location as is practicable, and is approximately the same in design. The design may be altered to meet applicable utility standards, and may include alternate materials designed to prolong the life of that service.

Intermittent Stream – A stream that flows for sufficient time to develop and maintain a defined channel, but which might not flow during dry portions of the year.

In the Dry – Work done either during periods of low water or behind temporary diversions, such as Earth Dike / Drainage Swale and Lined Ditches designed and installed in accordance with best management practices.

Limit of Work/Disturbance – The approved project limits within regulated areas. All project related activities in regulated areas must be conducted within the approved limit of work/disturbance. The limit of work/disturbance shall be depicted on the approved permit site plans and in the EFI plans. Where it is warranted National Grid may require that these limits be identified in the field by flagging, construction fencing, and/or perimeter erosion controls.

Long-Term Restoration Logs - Project-specific log used to document restoration required following the completion of construction or as areas of the project have been completed (i.e., segments of ROW for a multi-mile project). The log is typically updated by the Project Environmental Consultant or the National Grid Environment Scientist and circulated to the project team on a weekly basis.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	41 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

Low Flow Conditions – Low water flow that generally occurs during the summer, as a result of decreased precipitation and the removal of water by increased evaporation and evapotranspiration by vegetation. Work done under low-flow conditions minimizes the potential for environmental damage. The USACE defines the calendar dates for low flow conditions in its New England state-specific Programmatic General Permits.

Low Ground Pressure – Equipment that meets the USACE GP state-specific defined Pounds per Square Inch (PSI) ground pressure when loaded. Use of LGP equipment **requires approval** from the National Grid Environmental Scientist.

Marsh – A wetland:

- a) That is distinguished by the absence of trees and shrubs;
- b) Dominated by soft-stemmed herbaceous plants such as grasses, reeds, and sedges; and
- c) Where the water table is at or above the surface throughout the year, but can fluctuate seasonally.

Methods – Are the construction practices and procedures that take place through choosing the proper equipment, trucks and labor to execute the earth moving activities based on the existing conditions and implementing creative and sensitive scheduling for the daily activities.

NHESP - Natural Heritage Endangered Species Program; a department within the Massachusetts Division of Fisheries and Wildlife that is responsible for protecting the 176 species of vertebrate and invertebrate animals and 259 species of native plants that are officially listed as Endangered, Threatened or of Special Concern in Massachusetts.

Perennial – A stream that contains water at all times except during extreme drought.

Permanently Ceased – Is applicable to earth disturbance activities when clearing and excavation within any area of the Project that will not include permanent structures has been completed.

Person-in-Charge – A National Grid Project Engineer, Manager, Supervisor, Field Construction Coordinator or equivalent Contractor personnel assigned to oversee and coordinate work activities.

Processed Gravel – Processed Gravel shall meet the requirements in accordance with National Grid Standard Construction Specification for Electric Stations (Engineering Standard SP.08.00.001). Processed Gravel will not have fine materials that could lead to a turbid discharge. Gravel consisting of inert material that is hard, durable stone and is free from loam and clay, surface coatings and deleterious materials.

Regulating Body – Federal, State, or local authority that has jurisdiction over resource areas that may be impacted by company operations

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	42 of 49
	Date:	06/02/2020
<b>SUBJECT</b> <b>ROW Access, Maintenance and Construction Best Management Practices for New England</b>		<b>REFERENCE</b> <b>EP-3; Natural Resource Protection</b>

Regulated Wetland Area – Those areas that are subject to federal, state or local wetland regulation, including certain buffer or adjacent areas.

Repair – The restoring of an existing legal structure by partial replacement of work, or broken, or unsound parts (Env-Wt 101.73).

Replacement – The substitution of a new structure for an existing legal structure with no change in size, dimensions, location, configuration, construction, or which conforms in all material aspects to the original structure

Right-of-Way – A corridor of land where National Grid has legal rights (either fee ownership, lease or easement) to construct, operate, and maintain an electric power line and/or natural gas pipeline and may include work on customer owned properties.

River – A watercourse that is larger than a perennial stream and flows all year long.

Routine Utility Rights-of-Way Maintenance Activity – Includes but is not limited to vegetation management and repair or replacement of existing utility structures.

Sedimentation Controls – Silt fences, straw bales, compost socks/berms and other barrier devices strategically placed to intercept and treat sediment-laden site runoff.

Sensitive Water - Includes any sediment or nutrient impaired water or a water that is identified by the state, tribe or EPA as Tier 2, 2.5 or Tier 3 for antidegradation purposes.

Siltation Curtain – An impervious barrier erected to prevent silt and sand and/or fines from being washed into a wetland, surface water body or other area of concern.

Surface Water Body or Surface Waters – Those portions of waters which have standing or flowing water at or on the surface of the ground.

Spill Prevention, Control and Countermeasure Plans – Required for site operations that involve the storage of 1,320 gallons or greater of fuel and oils, both in storage containers and stored in equipment. Response actions to spills and releases are specified in these plans.

Stormwater Pollution Prevention Plan – A site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at a construction site; (2) describes stormwater control measures to reduce or eliminate pollutants in stormwater discharge from a construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of EPA NPDES Construction General Permit (CGP). SWPPPs must be prepared, maintained on-site, and amended as necessary in order to obtain NPDES permit coverage for specific construction site stormwater discharges under the EPA NPDES CGP.

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	43 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England	<b>REFERENCE</b> EP-3; Natural Resource Protection	

Temporarily Ceased - Is applicable when there are earth disturbance activities such as clearing, grading, and/or excavation that are not complete, but will be idle in one area for a period of up to 14 or more calendar days, and which will resume in the future. The 14 calendar day timeframe begins as soon as you now that construction work on a portion of the Project will be left incomplete and idle. In circumstances where there are unanticipated delays and you do not know at first how long the work stoppage will continue, the requirement to immediately initiate stabilization is triggered as soon as you know with reasonable certainty that work will be stopped for 14 or more additional calendar days.

Tidal Wetlands – A wetland whose vegetation, hydrology or soils are influenced by periodic inundation or tidal waters.

Topsoil – The uppermost part of the soil, ordinarily moved in tillage, or its equivalent in uncultivated soils and ranging in depth from 2 to 10 inches.

Turbidity – The condition in which solid particles suspended in water make the water cloudy or even opaque in extreme cases.

United States Geological Survey Topographic Map – A map that uses contour lines to represent the three-dimensional features of a landscape on a two-dimensional surface. These maps use a line and symbol representation of natural and artificially created features in an area.

Wetland – An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation (more than 50 percent) typically adapted for life in saturated soil conditions (hydric soils). Wetlands include but are not limited to swamps, marshes, bogs, and similar areas.

Work Site – An area where work is performed.

Worker – Company employee, contractor, consultant working on site.

Zone II - Massachusetts - That area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock , or a recharge boundary).

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	44 of 49
	Date:	06/02/2020
<b>SUBJECT</b> <b>ROW Access, Maintenance and Construction Best Management Practices for New England</b>		<b>REFERENCE</b> <b>EP-3; Natural Resource Protection</b>

## Appendix 2 – Acronyms

ASTM	American Society for Testing and Materials
BMP	Best Management Practices
EFI	Environmental Field Issue
EG	Environmental Guidance
EPA	Environmental Protection Agency
GA/GAA	Rhode Island Groundwater Classifications – see glossary
LGP	Low Ground Pressure
MA	Massachusetts
MA DEP	Massachusetts Department of Environmental Protection
MassDOT	Massachusetts Department of Transportation
NE	New England
NH	New Hampshire
NH DES	New Hampshire Department of Environmental Services
NHESP	Natural Heritage Endangered Species Program
NPDES	National Pollutant Discharge Elimination System
OHM	Oil and/or Hazardous Materials
PSI	Pounds per square inch
RI	Rhode Island
RI DEM	Rhode Island Department of Environmental Management
RI CRMC	Rhode Island Coastal Resources Management Council
RI SESC	Rhode Island soil erosion and sediment control
ROW	Right-of-Way
RTE	Rare, Threatened or Endangered
SPCC	Spill Prevention, Control and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
TOY	Time-of-Year
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
VT	Vermont

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>National Grid</b> <b>Environmental Guidance</b>	Doc No.:	EG-303NE
	Rev. No.:	14
	Page No.:	45 of 49
	Date:	06/02/2020
<b>SUBJECT</b> ROW Access, Maintenance and Construction Best Management Practices for New England		<b>REFERENCE</b> EP-3; Natural Resource Protection

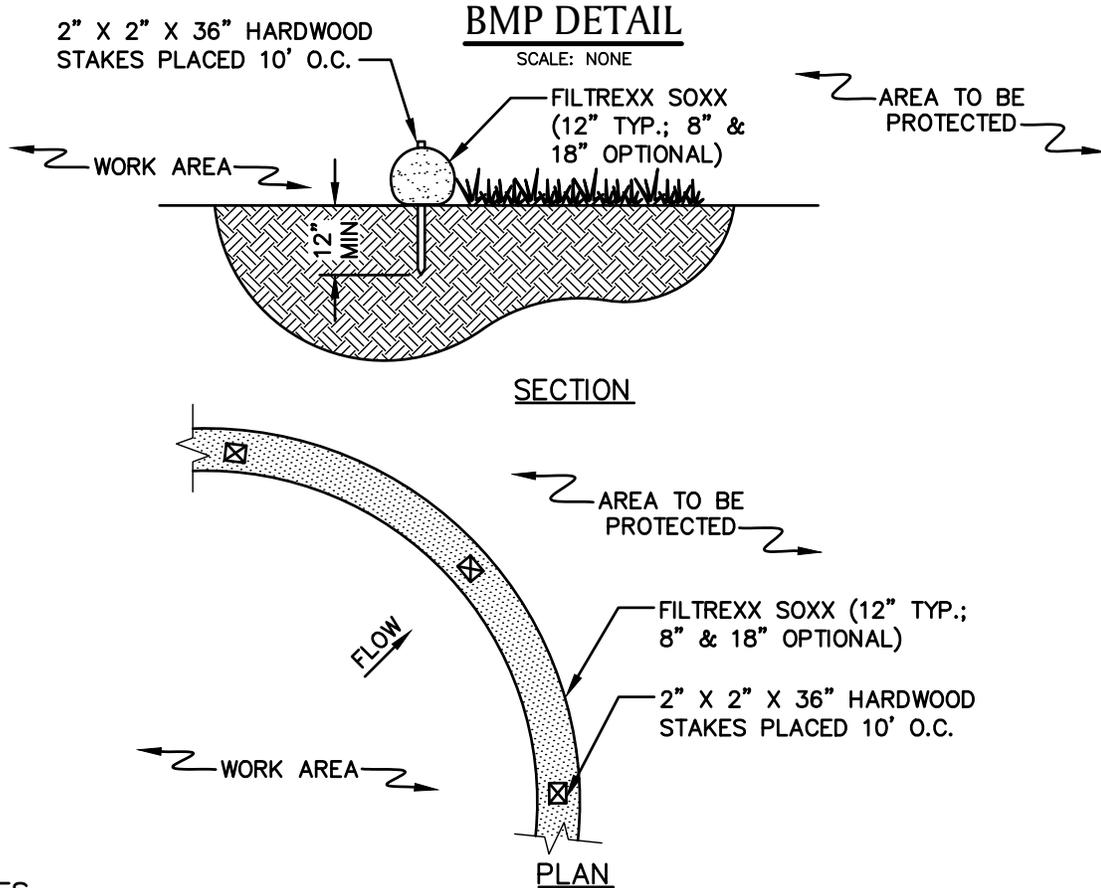
VT DEC            Vermont Department of Environmental Conservation  
 Zone II            Massachusetts Groundwater Protection district – see glossary

SUBJECT

Access, Maintenance and Construction  
Best Management Practices

Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)



**NOTES**

1. PRODUCT TO BE FILTREXX SILT SOXX OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
3. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
4. MESH CONTAINMENT MATERIAL SHOULD BE KNITTED PHOTODEGRADABLE OR BIODEGRADABLE MATERIAL, WITH OPENING SIZES BETWEEN 1/8" - 3/8".
5. COMPOST MEDIA SHOULD HAVE PARTICLE SIZE WHERE 99% < 2", 50% > 1/2".
6. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.

**BMP PICTURE**



\* PICTURE AND DETAIL PROVIDED BY FILTREXX LAND IMPROVEMENT SYSTEMS  
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES  
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-4  
SILT SOXX \*

**SUBJECT**

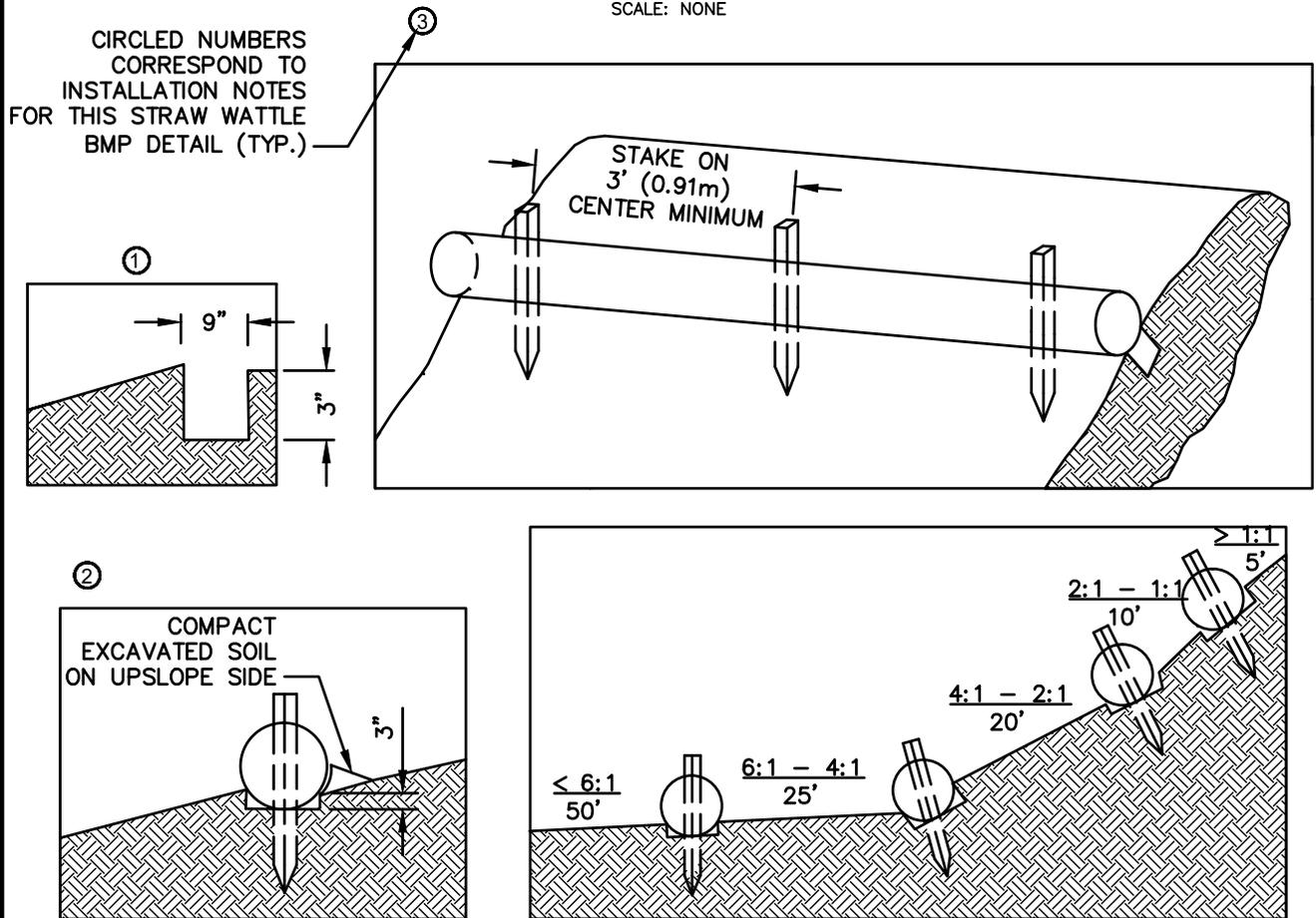
Access, Maintenance and Construction  
Best Management Practices

**Reference**

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE



TYPICAL WATTLE SPACING DETAIL

**NOTES:**

1. PRODUCT TO BE TENSAR NORTH AMERICAN GREEN STRAW WATTLE OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. TYPICAL WATTLE SPACING BASED ON SLOPE GRADIENT. COORDINATE SPACING AND LOCATION WITH NATIONAL GRID ENVIRONMENTAL SCIENTIST.
3. MINIMUM 12" DIAMETER WATTLES SHOULD BE USED FOR HIGHLY DISTURBED AREAS (I.E., HEAVILY USED ACCESS ROAD WITH ADJACENT WETLAND) AND MINIMUM 9-10" WATTLES SHOULD BE USED FOR LESS DISTURBED SOILS.

**INSTALLATION NOTES:**

1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" HARDWOOD STAKES EVERY 3-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

\* DETAIL AND PICTURE PROVIDED BY TENSAR NORTH AMERICAN GREEN  
**APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES**  
 PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
 VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

**SEC-5**  
**STRAW WATTLE \* (1 OF 2)**

**SUBJECT**

Access, Maintenance and Construction  
Best Management Practices

**Reference**

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP PICTURE**



**STRAW WATTLE – SHALLOW SLOPE ( $\leq 4:1$ )  
(ALTERNATE STAKING)**

**ALTERNATE STAKING INSTALLATION NOTES:**

1. ON SHALLOW SLOPES ( $\leq 4:1$ ), STRAW WATTLE MAY BE SECURED WITH 18–24” HARDWOOD STAKES DRIVEN AGAINST THE SIDES OF THE WATTLE INSTEAD OF THROUGH. STAKES SHALL ALTERNATE SIDES, AND BE SPACED 3–4’ MAX.
2. TWINE SHALL BE TIED FROM STAKE TO STAKE, CRISS–CROSSING THE STRAW WATTLE. TIE TWINE TO STAKES BELOW THE HEIGHT OF THE WATTLE.

**\* DETAIL AND PICTURE PROVIDED BY TENSAR NORTH AMERICAN GREEN  
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES  
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.**

**SEC-5  
STRAW WATTLE \* (2 OF 2)**

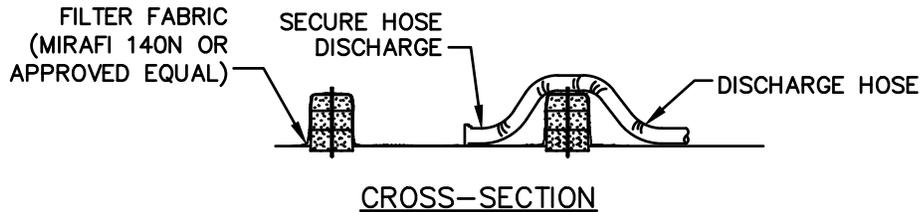
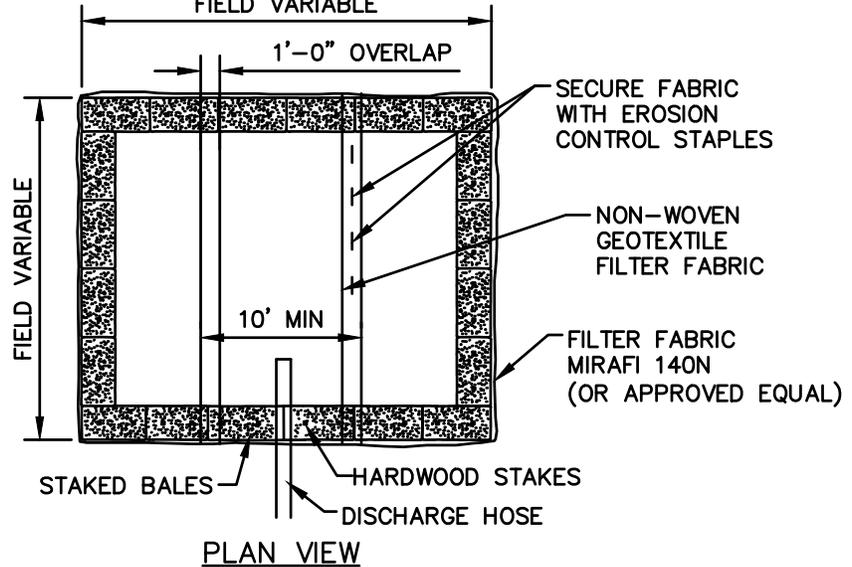
**SUBJECT**  
Access, Maintenance and Construction  
Best Management Practices

Reference  
EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE

FIELD VARIABLE



**NOTES:**

1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS,
2. THE BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
3. KEEP AS FAR FROM WETLANDS AS PRACTICAL.
4. CLEAN AND REMOVE AS SOON AS DEWATERING IS COMPLETE.

**BMP PICTURE**

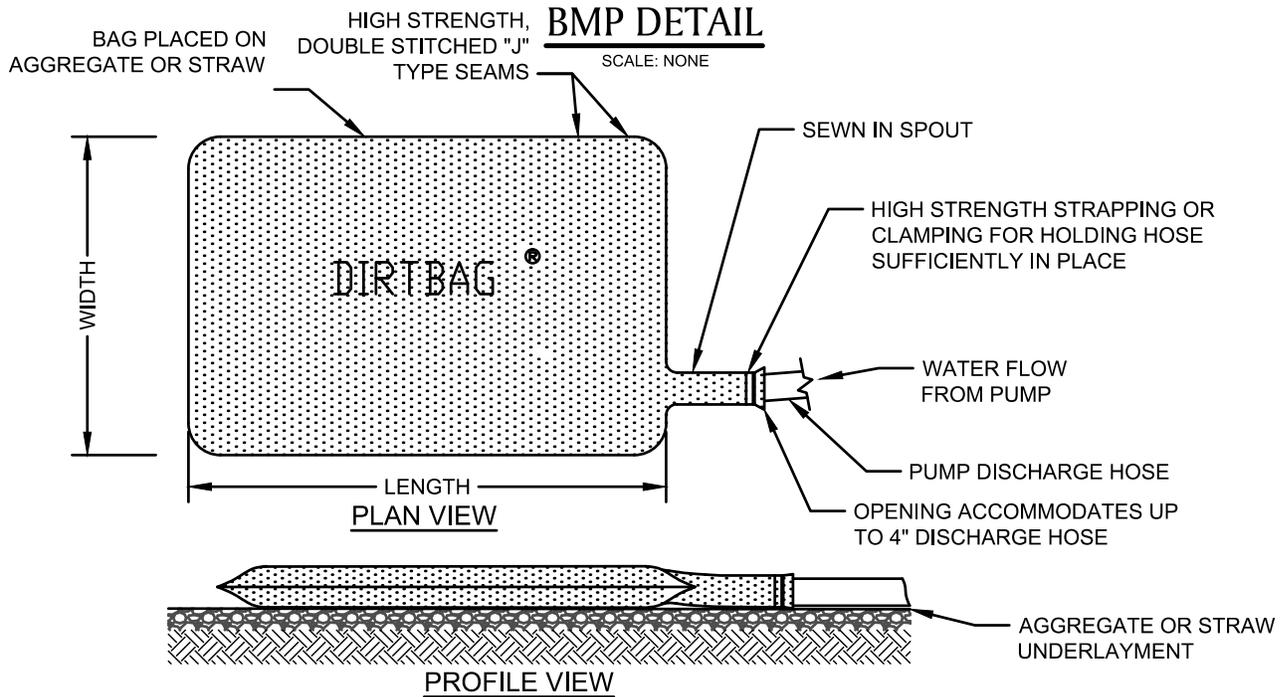


**APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES**  
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

**AA-10**  
**DEWATERING BASIN**  
**(SMALL SCALE)**

**SUBJECT**  
Access, Maintenance and Construction  
Best Management Practices

**Reference**  
EP No. 3 - Natural Resource  
Protection (Chapter 6)



**BMP PICTURE**



\* PICTURE AND DETAIL PROVIDED BY ACF ENVIRONMENTAL  
**APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES**  
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

**AA-12**  
**DIRTBAG** \*

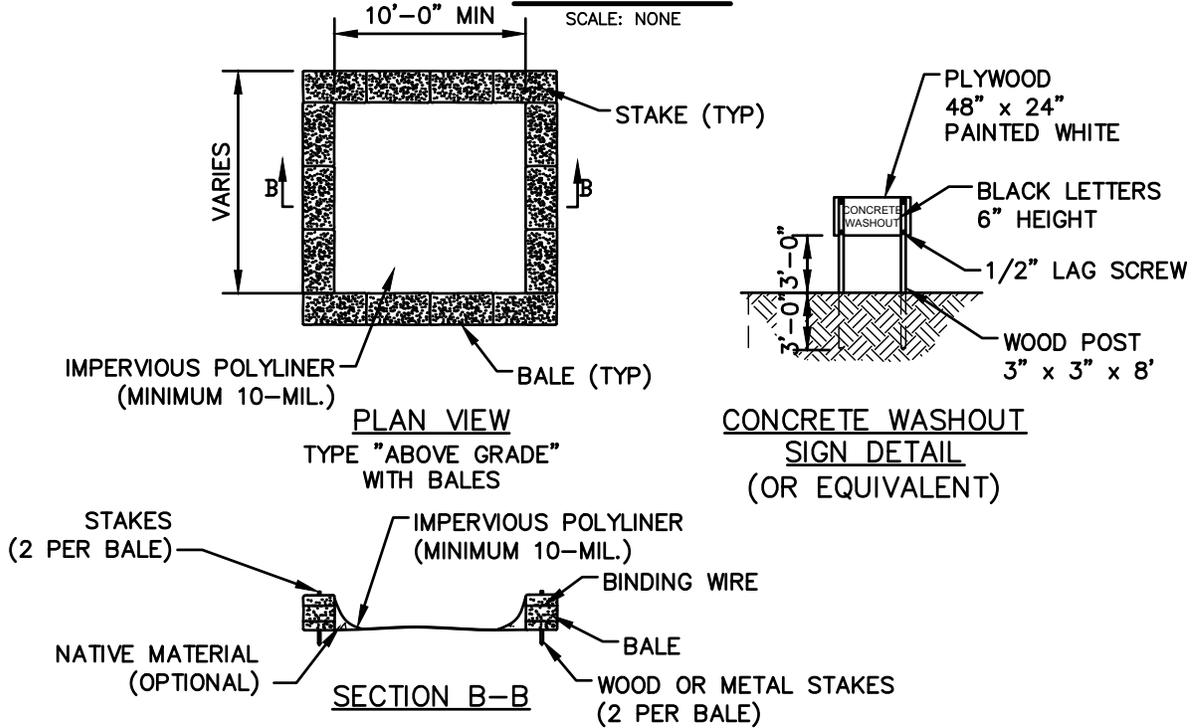
**SUBJECT**

Access, Maintenance and Construction  
Best Management Practices

**Reference**

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**



**NOTES:**

1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS. COORDINATE SIZE AND LOCATION OF CONCRETE WASTE SUMP WITH NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. KEEP AS FAR FROM DRAINAGE CHANNELS AND WETLAND AREAS AS PRACTICAL.
3. SUMPS TO BE CLEANED AND WASTE CONCRETE REMOVED AND PROPERLY DISPOSED OF UPON COMPLETION OF WORK.
4. SEE ADDITIONAL NOTES ON DETAIL AA-14.

**BMP PICTURE**



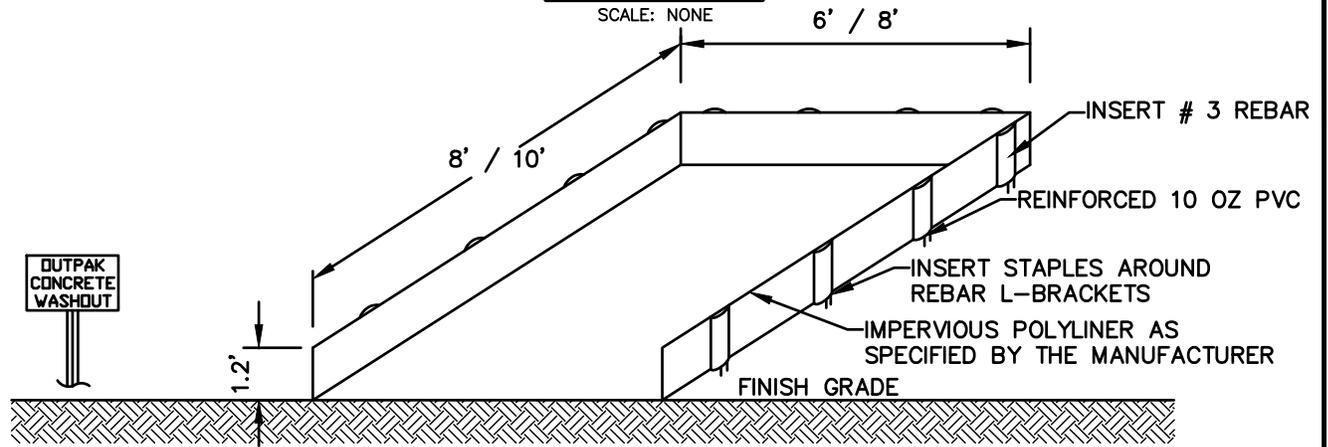
**SUBJECT**

Access, Maintenance and Construction  
Best Management Practices

**Reference**

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**



**CROSS SECTION**

**NOTES:**

1. PRODUCT TO BE OUTPAK PVC CONCRETE WASHOUT OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT.
3. SIGNS SHALL BE PLACED AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT.
4. THE CONCRETE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR WASTE CONCRETE AND OTHER LIQUID WASTE.
5. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPENSED OF AT AN APPROVED WASTE SITE.
6. DO NOT MIX EXCESS AMOUNTS OF FRESH CONCRETE OR CEMENT ON-SITE.
7. DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
8. AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
9. LOCATE WASHOUT AREA AT LEAST 50' FROM STORM DRAIN, OPEN DITCHES, OR WATERBODIES. COORDINATE LOCATION WITH NATIONAL GRID ENVIRONMENTAL SCIENTIST.
10. WASH OUT WASTES INTO THE OUTPAK WASHOUT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED OF PROPERLY.
11. A SECURE, NON-COLLAPSING, NON-WATER COLLECTING COVER MUST BE PLACED OVER CONCRETE WASHOUT PRIOR TO PREDICTED WET WEATHER TO PREVENT ACCUMULATION AND OVERFLOW OF PRECIPITATION.

**BMP PICTURE**



\* PICTURE AND DETAIL PROVIDED BY OUTPAK WASHOUT  
**APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES**  
 PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
 VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

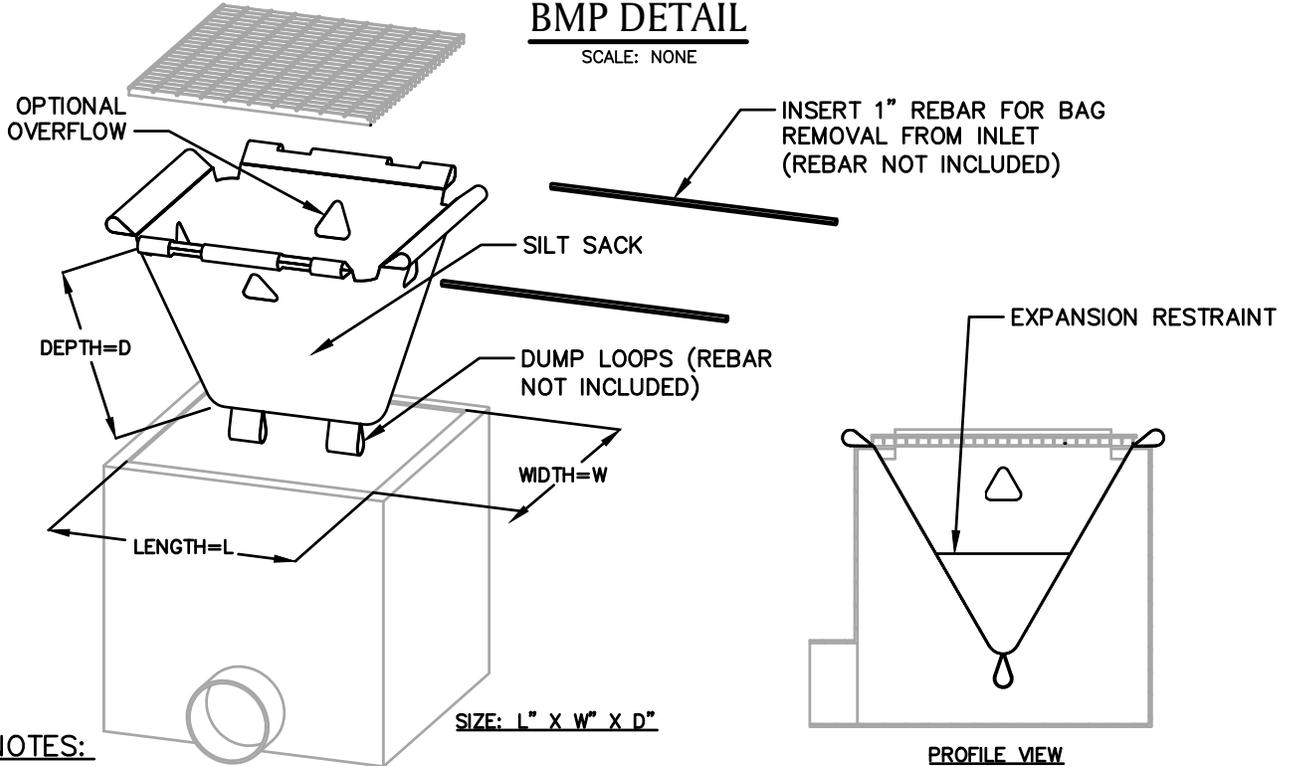
AA-14  
**OUTPAK CONCRETE WASHOUT \***

**SUBJECT**  
Access, Maintenance and Construction  
Best Management Practices

Reference  
EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE



**NOTES:**

1. PRODUCT TO BE SILT SACK OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. THE USE OF A SILT SACK OPTIONAL OVERFLOW AND OVERALL DIMENSIONS ARE TO BE COORDINATED WITH A NATIONAL GRID ENVIRONMENTAL SCIENTIST.

**BMP PICTURE**



\* DETAIL PROVIDED BY ACF ENVIRONMENTAL  
**APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES**  
 PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED  
 VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

AA-20  
 SILT SACK \*

 <b>ENVIRONMENTAL GUIDANCE</b>	<b>Doc. No.</b>	<b>EG-501MA</b>	<b>Rev. No. 4</b>
	<b>Page No.</b>	<b>1 of 4</b>	
	<b>Date</b>	<b>05/03/2013</b>	
<b>IMMEDIATE SPILL RESPONSE ACTIONS GUIDANCE</b>	<b>Reference EP5</b>		

**PURPOSE:** The purpose of this guidance is twofold:

1. Provide instructions to field crews on immediate actions to take in the event of an oil or hazardous materials spill; and
2. Provide clarity on the roles and responsibilities of all company employees and contractors who may be involved in spill response activities.

**SCOPE:** It is the responsibility of all company personnel and contractors to conduct their work activities with a sufficient level of diligence to protect themselves, the public, and the environment. This guidance document applies in the event of an oil or hazardous materials spill in Massachusetts. Note that all mercury spill response procedures are more specifically detailed in EG-504MA, and shall follow that guidance document.

**RESPONSIBILITIES:**

**Dispatch** – Upon notification being provided to Dispatch, they will be responsible for contacting the on-call Environmental Scientist/Engineer and providing a basic description of spill site conditions and the characteristics of the spill.

**Environmental Scientist/Engineer** – The Environmental Scientist/Engineer shall have overall responsibility for directing and coordinating spill cleanup actions and shall ensure that the cleanup is conducted in accordance with federal, state, and local regulations. The Environmental Scientist/Engineer may not be on-site to direct response activities at all spill sites, and may delegate on-site responsibilities to the Local Area Supervisor or an environmental consultant/contractor; however, the overall responsibility for directing and coordinating spill cleanup actions remains with the Environmental Scientist/Engineer. The Environmental Scientist/Engineer shall make every attempt to be on-site at all significant events, as outlined in EP-5. The responsibilities of the Environmental Scientist/Engineer are more fully detailed in EP-5.

**Field Personnel** – All employees are responsible for immediately reporting any release of oil or hazardous materials to their supervisor, dispatch, or the Environmental Scientist/Engineer. As they may frequently be “first responders” in the event of a spill, field crews shall conduct immediate spill response to minimize the extent of the spill and the potential for personal or public exposure as documented in this procedure.

**Local Area Supervisor** – The Local Area Supervisor shall work with the Environmental Scientist/Engineer to help coordinate spill response. The supervisor shall be responsible for ensuring that the Field Personnel carry out their responsibilities as documented in this procedure.

**Safety Department Representative** – The Safety Department representative shall coordinate with the Environmental Scientist/Engineer and Field Supervisor during incidents involving employee or public exposure to oil or hazardous materials. The Safety Department representative may be asked to help facilitate communications regarding the exposure and the effects of exposure to affected parties.

**Approved for use per EP 10, Document Control**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>ENVIRONMENTAL GUIDANCE</b>	<b>Doc. No.</b>	<b>EG-501MA</b>	<b>Rev. No. 4</b>
	<b>Page No.</b>	<b>2 of 4</b>	
	<b>Date</b>	<b>05/03/2013</b>	
<b>IMMEDIATE SPILL RESPONSE ACTIONS GUIDANCE</b>	<b>Reference EP5</b>		

**PROCEDURE:**

This section details the chronological order of an oil or hazardous materials spill response procedure by responsible areas. However, appropriate response actions should be dictated by the specifics of the incident. Therefore, the order of the response and the responding area may vary accordingly.

**Field Personnel**

Prior to proceeding with any of the spill assessment and response activities below, determine if such activities can be performed safely. Such activities may require donning PPE in accordance with Safety Procedure F-611 (for incidents involving PCBs) or other applicable safety guidance.

- Determine what material, and what quantity, has spilled or is spilling;
- Stop the spill;
- Control the spill and secure the area:
  - Use absorbent/containment materials to minimize or eliminate the spread of contamination.
  - Do not walk through or touch the spilled material; step away from the spill area;
  - Using physical barriers, visible warnings (i.e., caution tape, cones, etc.), or other means, restrict access to the spill area. Prevent unauthorized persons from entering the area.
- Initiate emergency response by contacting the Local Area Supervisor or Dispatch. This should be done immediately after the spill site has been secured through the actions listed above. If possible (if more than one person is at the spill site), it should be done concurrently with the spill/site control activities. Prompt reporting is imperative since the Massachusetts Department of Environmental Protection (MA DEP) requires that they be notified within two hours of the actual spill event. The following information should be conveyed to the Local Area Supervisor/Dispatch:
  - Location of release;
  - Material that was spilled;
  - Estimated amount spilled;
  - When the spill was discovered;
  - What caused the release;
  - A description of the spill area; and
  - A description of impacted receptors.
- Perform a thorough assessment of what areas and/or items have become contaminated by the spilled material. Document the assessment and ensure that any contaminated materials or items do not leave the spill site – this includes boots, clothing, tools, and vehicles. “Quarantine” any vehicles or items contaminated, or suspected to be contaminated. These items should be placed within a restricted access area and shall not leave the site until assessed and decontaminated as necessary. This assessment may be facilitated by using the Initial Release Characterization Report form in Appendix A.

**Dispatch**

**Approved for use per EP 10, Document Control**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>ENVIRONMENTAL GUIDANCE</b>	<b>Doc. No.</b>	<b>EG-501MA</b>	<b>Rev. No. 4</b>
	<b>Page No.</b>	<b>3 of 4</b>	
	<b>Date</b>	<b>05/03/2013</b>	
<b>IMMEDIATE SPILL RESPONSE ACTIONS GUIDANCE</b>	<b>Reference EP5</b>		

- Receive call from Field Personnel or Local Area Supervisor and obtain the information on the checklist provided as Appendix B.
- Initiate notification to the Environmental Scientist/Engineer.
- Provide a basic description of spill site conditions and the characteristics of the spill.

### **Local Area Supervisor**

The Local Area Supervisor's primary responsibility shall be to ensure that Field Personnel carry out their responsibilities as outlined above. In the absence of an Environmental Scientist/Engineer on-site, the Local Area Supervisor may be requested to report to the location of the spill to obtain a first-hand account of site conditions. The Local Area Supervisor will:

- Determine the facts of spill situation and establish and implement the appropriate make-safe response, which will consider:
  - Control of employee and public exposure to contamination; and
  - Minimizing contamination (e.g., to a larger area; to company vehicles, tools, equipment; to employees' clothing).
- Perform a thorough assessment of what areas and/or items have become contaminated by the spilled material. Document the assessment and ensure that any contaminated materials or items do not leave the spill site.
- As appropriate and in conjunction with the Environmental Scientist/Engineer or their designated environmental consultant/contractor, determine the release of employees from the site. No employee who was in the spill area may leave the spill location until:
  - Clothing, boots, tools, equipment and vehicles have been assessed for possible contamination; and,
  - Contaminated items/articles have been decontaminated or disposed of.
  - Clothing or boots that cannot be removed and left on site should be covered (e.g., with tyvek coveralls and duck boots) and, upon return to the Operations Center, should be removed and disposed of as a contaminated material.
  - Upon removal of contaminated clothing and/or PPE, the employee should shower at the Operations Center.

### **Environmental Scientist/Engineer**

- Assume responsibility for directing spill cleanup.
- Assess the scope of contamination, including property and personnel.
- Determine if release is reportable and contact Massachusetts Department of Environmental Protection or other applicable regulatory agency. Use EG-502MA as guidance. Perform notification as necessary.
- Communicate with owners of property or items contaminated by the spill;
- Communicate with employees exposed to the spilled material. With assistance from the Safety Department Representative, answer any questions employees may have regarding exposure and cleanup.

### **Approved for use per EP 10, Document Control**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 <b>ENVIRONMENTAL GUIDANCE</b>	<b>Doc. No.</b>	<b>EG-501MA</b>	<b>Rev. No. 4</b>
	<b>Page No.</b>	<b>4 of 4</b>	
	<b>Date</b>	<b>05/03/2013</b>	
<b>IMMEDIATE SPILL RESPONSE ACTIONS GUIDANCE</b>	<b>Reference EP5</b>		

- Coordinate clean up with the spill response contractor and environmental consultant, as applicable, to:
  - Assess and decon (or dispose of) all affected areas, including items of the property owner as well as National Grid employees' clothing, boots, tools and/or equipment;
  - Assess and, as necessary, decon company personnel and vehicles; and,
  - Provide or obtain from environmental consultant details of clean up, which shall include as applicable:
    - Personnel on site
    - Vehicles on site
- Enter the incident into National Grid's Incident Management System (IMS).
- Consult EP-5 for additional responsibilities of the Environmental Scientist/Engineer.

**Safety Department Representative**

Upon request from the Environmental Scientist/Engineer, aid with communications regarding the exposure and the effects of exposure to affected parties.

Appendix A - See EG-501MA Form 1  
 Appendix B - See EG-501MA Form 2

<b>Record of Change</b>		
<b>Date of Review/Revision:</b>		
<b>Revision</b>	<b>Date</b>	<b>Description</b>
3	04/27/12	Updated EG with a complete rewrite. Rewrite focused on providing clear guidance on roles and responsibilities during initial spill response.
4	5/3/13	Added more specific guidance for Dispatch. Published Appendices A and B as separate forms.

**Approved for use per EP 10, Document Control**  
 PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 National Grid Environmental Guidance	Doc No.:	EG-502MA
	Rev. No.:	7
	Page No.:	1 of 3
	Date:	02/19/2020
SUBJECT Spill Response Notifications	REFERENCE EP5- Release Response	

**Purpose / Objective:** This document contains information to assist in making proper notifications in the event of a spill.

**Who:** Company employees, Environmental Consultants, Spill Contractors and company contractors performing work for National Grid.

**What to Do:**

**SPILLS TO WATER**

*Oil spills to water are Category 1 classified in accordance with National Grid Environmental Procedure No. 15, if they are likely to result in an enforcement action from a regulatory agency.*

If any quantity of oil, regardless of PCB content or other hazardous material, is released to water (*wetlands, streams, lakes, ponds, storm or sanitary sewer*) contact:

DEP	ASAP (No later than 2 hours)
NRC	Within 2 hours
LEPC	Within 2 hours
Local Fire Dept.	Within 2 hours
Clean-up Contractor	ASAP
Environmental Engineer/Scientist	ASAP

If any quantity of oil with concentrations of PCBs  $\geq$  50 ppm, additionally notify:

EPA	Within 24 hours
-----	-----------------

**SPILLS TO GROUND**

*Spills of over 250 gallons or containing 1 pound or PCBs  $\geq$  500 ppm are Category 1 classified in accordance with National Grid Environmental Procedure No. 15.*

If ten or more gallons of oil, regardless of PCB content, are released to ground (soil, pavement) contact:

DEP	ASAP (No later than 2 hours)
Local Fire Dept.	Within 2 hours
Clean-up Contractor	ASAP
Environmental Engineer/Scientist	ASAP

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 National Grid Environmental Guidance	Doc No.:	EG-502MA
	Rev. No.:	7
	Page No.:	2 of 3
	Date:	02/19/2020
SUBJECT	REFERENCE	
Spill Response Notifications	EP5- Release Response	

If PCB concentrations are  $\geq$  **50 ppm or unknown** and/or the spill creates a public safety issue, additionally contact:

LEPC	Within 2 hours
SERC	Within 2 hours

If **any quantity** of oil is released to the ground with concentrations of **PCBs  $\geq$ 500ppm** contact:

DEP	ASAP (No later than 2 hours)
LEPC	Within 2 hours
Local Fire Dept.	Within 2 hours
Clean-up Contractor	ASAP

If PCB concentrations are between *50-499 ppm and over 2,700 gallons* are released or PCB concentrations  $\geq$  *500 ppm and 270 gallons* are released, *additionally notify*:

EPA	Within 24 hours
-----	-----------------

If 25 or more gallons of transformer oil with PCBs  $<$ 2 ppm are released to the ground contact:

DEP	ASAP
Local Fire Dept.	Within 2 hours
Clean-up Contractor	ASAP

### **SPILLS TO VEGETABLE GARDENS, FARM LAND, GRAZING LAND**

If any quantity of oil with detectable levels of PCBs is release to gardens, farms or grazing land, contact:

DEP	ASAP (No later than 2 hours)
LEPC	Within 2 hours
SERC	Within 2 hours
Clean-up Contractor	ASAP
Environmental Engineer/Scientist	ASAP

If concentrations of PCBs are  $\geq$  50 ppm, additionally contact:

EPA	Within 24 hours
LEPC	Within 2 hours

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

 National Grid Environmental Guidance	Doc No.:	EG-502MA
	Rev. No.:	7
	Page No.:	3 of 3
	Date:	02/19/2020
SUBJECT Spill Response Notifications	REFERENCE EP5- Release Response	

---

**ALWAYS NOTIFY THE DIVISION ENVIRONMENTAL ENGINEER/SCIENTIST OF ANY SPILL IMMEDIATELY.**

---

**AGENCY TELEPHONE NUMBERS**

---

<b>MADEP/MEMA (24 hours/day)</b>	<b>888.304.1133</b>
----------------------------------	---------------------

---

<b>NATIONAL RESPONSE CENTER (NRC)</b>	<b>800.424.8802</b>
---------------------------------------	---------------------

---

<b>ENVIRONMENTAL PROTECTION AGENCY (EPA)</b>	<b>617.223.7265</b>
--	---------------------

**Approved for use per EP – 10, Document Control.**

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

