

From: [Zylich, Michael](#)
To: [Natural Resources Department](#)
Cc: [Lang, Luan](#); [Zylich, Michael](#)
Subject: NSTAR Electric Nonset Path and Nagog Woods Maintenance Notification Letter
Date: Monday, January 30, 2012 4:56:40 PM
Attachments: [NSTAR Electric Nonset Maint letter.pdf](#)

Attached is a WPA notification exemption letter for an electrical conduit maintenance project NSTAR has planned for Nonset Path and Nagog Woods. Also attached is the project narrative, which includes a description of the work as well as our efforts to minimize environmental impact, and a plan showing where this activity will take place. This project is being conducted under the Utility Maintenance Exemption of the WPA at 310CMR 10.02(2)(a)2.

Please confirm receipt. If there is any other information you would like to have, or if you would like a hard copy of these documents feel free to contact me.

<<NSTAR Electric Nonset Maint letter.pdf>>

Thanks,

*Mike Zylich, P.G., LSP
Contract LSP/Environmental Engineer
NSTAR Electric & Gas
Office: 781 441 3804*

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One NSTAR Way, NE250
Westwood, MA 02090-9230

January 25, 2012

Acton Conservation Commission
472 Main St.
Acton, MA 01720

**RE: Electric Conduit Installation
Nonset Path and Nagog Woods, Massachusetts**

Dear Commission Members,

NSTAR Electric is submitting this letter to inform the Commission that construction work will be performed on Nonset Path and within the various roads of the Nagog Woods subdivision, Acton, Massachusetts. The work will involve the installation of underground electric conduit and cable located within the right of way of Nonset Path and within the various roads of the Nagog Woods subdivision. Under M.G.L. Chapter 131, Section 40 Massachusetts Wetland Protection Act at 310CMR 10.02(2)(a)2, this activity is exempt. NSTAR is providing this notification to your commission which consists of a brief narrative about the planned work, as well as a plan of the area showing the location of the activity.

If you have any questions regarding this project, please contact me at 781-441-3804 or by email at Michael.Zylich@nstar.com.

Respectfully,

A handwritten signature in blue ink, appearing to read "Michael Zylich", with a long horizontal line extending to the right.

Michael J. Zylich, P.G., LSP
Contract LSP/Environmental Engineer

Attachments: Project Narrative
Plan of work location



Project Narrative

Proposed Project: NSTAR Electric Underground Cable Replacement
Nonset Path and Nagog Woods Subdivision, Acton, Massachusetts

Applicant: NSTAR Electric

Purpose: To replace the existing direct buried electric cable which routinely faults and causes electrical outages, NSTAR proposes to install approximately 10,350 linear feet of electric underground conduit and replace associated transformers, manholes and splice boxes within the paved roadway and existing unpaved right of way of Nonset Path and the various roads within the Nagog Woods Subdivision, Acton, Massachusetts. This work will begin at the existing cable near the northern intersection of Nonset Path and Route 119 (Great Road), run throughout the Nagog Woods subdivision, and end at the southern intersection of Nonset Path and Great Road.

Agency Submittals: Acton Conservation Commission – Utility Maintenance Exemption Notification (310 CMR 10.02(2)(a)2)

Project Description of Work The proposed conduit will be installed underground and will be located within the paved roadway surface and existing disturbed right of way of Nonset Path and the various roads within the Nagog Woods Subdivision. The conduit will be installed as described below, and will be limited to the length that can be installed, backfilled, and re-paved each day (approximately 80 to 150 linear feet). This project is being conducted under the Utility Maintenance Exemption of the WPA at 310CMR 10.02(2)(a)2 which provides for the following exemption.

"activities conducted to maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, water, telephone, telegraph and other communication services, provided said work utilizes the best practical measures to avoid or minimize impacts to wetland resource areas outside the footprint of said structure or facility."

The portions of the conduit that will be replaced are shown on the attached map. The conduit will be installed using the *Open Trench Method* as described below.

Daily construction activities will include: mobilization, trenching, laying out of conduit, joining conduit, backfilling, compaction and restoration of the road/ground surface.

Prior to leaving the work area each day, the trench will be backfilled, compacted and permanently paved except for a small work zone at the end of the conduit. This portion is left unfilled so the end of the conduit can be located the next day without re-excavating and possibly damaging the new pipe. This unfilled portion is covered with a steel road plate.

All non-paved areas will be replaced to a state at which they were prior to the job. Any sod or other plantings shall be replaced in kind, or with reasonable alternative.

Open Trench Method:

The Open Trench Method consists of digging an excavation approximately 1 to 3 feet wide and approximately 2 to 5 feet deep. Trenches will be constructed using backhoes or excavators. The trenching operation will be limited to the length that can be completed in a day (approximately 80 to 150 feet depending on conditions). Excavated materials that meet NSTAR guidelines shall be reused as backfill. Unsuitable material may be temporarily stored in an area along the route at a safe distance from any environmentally sensitive resource areas. At the end of the job, all unused spoils will be hauled away and disposed or recycled according to applicable regulations.

Conduit Installation:

PVC pipes will be placed in the trench and then encased in concrete. Once the concrete has set, the trench will be backfilled with clean material (gravel) or the excavated materials, and temporarily paved. Following installation of the conduit, electrical cable will be installed within the conduit.

Manhole Installation:

To install a manhole, an area approximately 10 feet by 10 feet by 8 feet deep is excavated. Excavated soil will be placed in a dump truck and removed from the area as it is excavated and disposed of in accordance with applicable regulations. A pre-cast concrete manhole is then lowered into the excavation and backfilled with clean material (gravel) or the excavated materials and then re-paved.

Splice Box Installation:

To install a splice box, an area approximately 5 feet by 5 feet by 5 feet deep is excavated. Excavated soil will be placed in a dump truck and removed from the area as it is excavated and disposed of in accordance with applicable regulations. A pre-made fiberglass splice box is then placed into the excavation and backfilled with clean material (gravel) or the excavated materials and then re-paved.

Culvert Crossing:

Within Nagog Woods, the conduit will be installed over the existing culvert. The methods to install the conduit will be the same as described above. A steel plate will be inserted in the top of the trench as needed to stabilize the side walls.

Upon completion of the job, any temporary pavement will be removed and permanent paving installed. No work is conducted during rain events.

**Existing
Environmental
Conditions**

Identifying existing conditions included a review for wetland resource areas and riverfront areas. Work will occur within 100-feet of wetlands and streams. Priority and estimated habitat areas were not identified as the work is an exempt activity under 321 CMR 10.14 (6) installation, repair, replacement, and maintenance of utility lines (gas, water, sewer, phone, electrical) for which all associated work is within 10 feet from the edge of existing paved roads. Areas were identified using GIS mapping with data supplied from the MassGIS website.

**Best
Management
Practices**

Potential impacts to the resource areas described above would be due to excavation spillage, spoil pile runoff or trench washout during rain conditions. These concerns will be addressed through the use of various work procedures and the placement of protective barriers as

follows:

- Erosion control barriers will be placed between the proposed work area and the wetland resource areas. Appropriate erosion controls will consist of haybales, siltfence and/or straw wattles.
- Erosion controls will be inspected on a regular basis and maintained in working condition until all disturbed areas are stabilized.
- As the work is limited to that which can be completed and restored within a day, there is minimal, if any, potential for impact to waterways, wetlands or other habitat areas.
- Previously paved areas that are disturbed will be returned to original elevations and repaved the same day.
- No soil will be stockpiled overnight within buffer zones during this project. Unused spoils will be removed and disposed of according to applicable laws.
- No work shall be performed adjacent to resource areas during rain conditions to minimize runoff and washout situations.
- Catch basins will be protected with filter fabric to ensure that sediments do not enter the drainage system.
- Dewatering activities, if required, will be conducted in accordance with the attached Dewatering BMP Plan. Under no circumstances will trench water, or other forms of turbid water, be directly discharged onto exposed soil or into any wetland or waterbody.
- No equipment will be refueled, nor will fuel be stored, within 100 feet of a resource area.

**Proposed
Schedule:**

We anticipate that proposed work will begin in Spring 2012.

Contact:

Michael J. Zylich, P.G.,LSP
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NSTAR Electric & Gas
Environmental Affairs Department
One NSTAR Way, NE250
Westwood, Massachusetts 02090
Office: 781-441-3804
Cell: 339-987-7029
Email: Michael.Zylich@nstar.com



Legend

- Hydrology
- Reservoir
- Marsh
- Wooded Swamp
- Open Water
- 100' Wetlands Buffer
- Proposed electrical conduit

**Proposed Electrical Conduit Replacement
Nonset Path & Nagog Woods
Acton, MA**



SECTION 5.2

DEWATERING ACTIVITIES

During excavation activities for installation or replacement of the utility poles or natural gas pipelines, it may become necessary to dewater the trench in the instance that high groundwater or saturated soil is present. Dewatering is often necessary in wetlands or near streambanks to expose the ditch line and provide drier workspace. Discharges should only be conveyed to one of the following options.

OVERLAND FLOW

- If a discharge location is available where there is no potential for discharged water flowing overland into wetlands or waterbodies, water may be discharged overland without any filtering to well drained, vegetated upland areas and allowed to naturally infiltrate into soils.

FILTER BAGS AND HAYBALE CONTAINMENT AREA

Where:

- Use filter bags and/or haybale containment areas for discharge when there is the potential for discharged water to flow overland into wetlands or waterbodies.
- Dewatering sites should be located in well-vegetated areas within the right of way or within approved work areas.
- If practicable, discharges should be located outside of wetlands and over 100 feet from a streambank or waterbody.

Installation:

- Pump should be placed in a containment structure, such as a plastic, child-sized pool to avoid any fuel leaks to the wetlands or waterways.
- Properly place the discharge hose into a pre-manufactured, geotextile filter bag per the manufacturer's instructions.
- Place the filter bag in a well-vegetated area outside of a wetland area and over 100 feet from a waterbody if practicable.
- The intake hose should be elevated off the trench bottom, and a sump should be created with clean rock in order to avoid pumping additional sediment.
- If the water must be discharged within 100 feet of a wetland or waterbody, or near an especially sensitive area, a haybale corral should be built around the filter bag.
- Stake a double vertical line of haybales in an "L" or "U" shape on the

downgradient sides of the bag. This will further filter the discharge water.

Maintenance:

- If the pump requires refueling, it should be done within the plastic containment structure or over 100 feet from the wetland or waterbody.
- The pump should be manned at all times.
- The filter bag should be checked regularly during pumping activities to ensure that it is not reaching its holding capacity.
- If the bag appears to be nearing its limits, dewatering should cease until more water has filtered out and the bag can be replaced.
- Used filter bags and the trapped sediment they hold, must be disposed of in the proper manner.

FRAC TANKS

- Frac tanks are pre-fabricated self-contained units that are shipped to construction sites. They contain a series of baffles that allow fine materials to settle out of the water column. Use of frac tanks is most appropriate when work that requires dewatering will occur in an area with contaminated groundwater and/or very silt laden water.

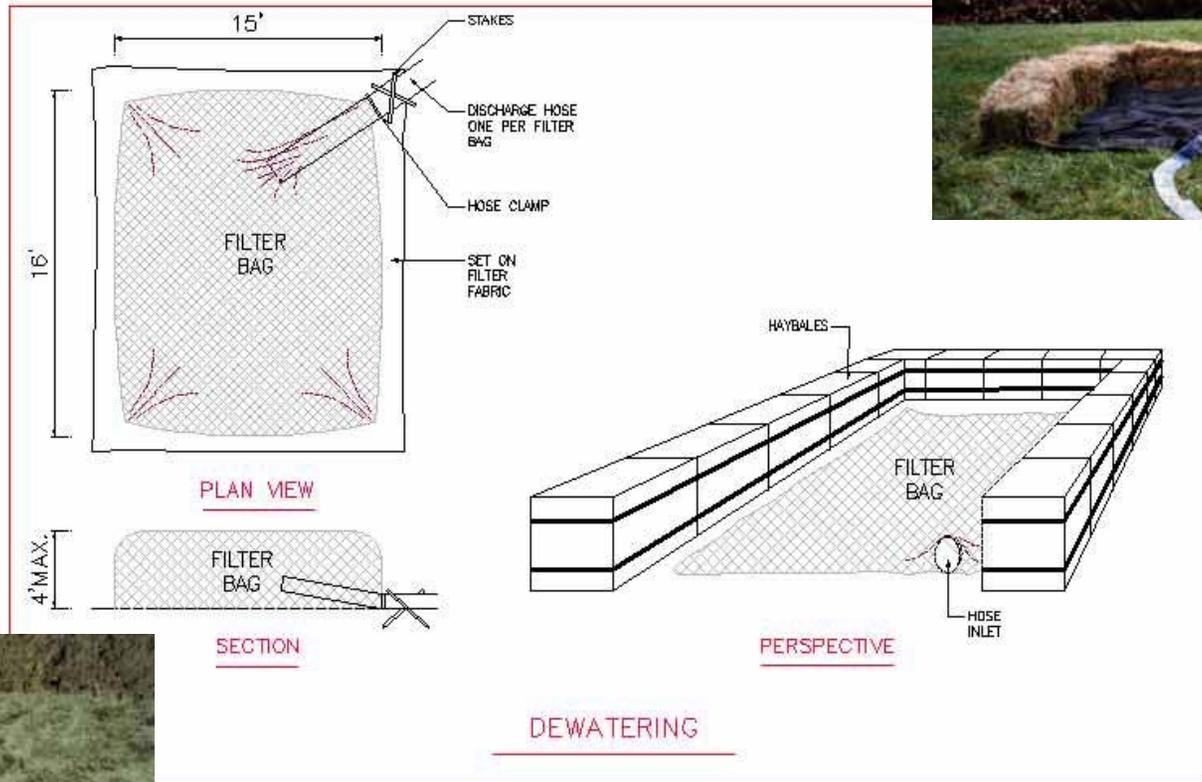


REMEMBER

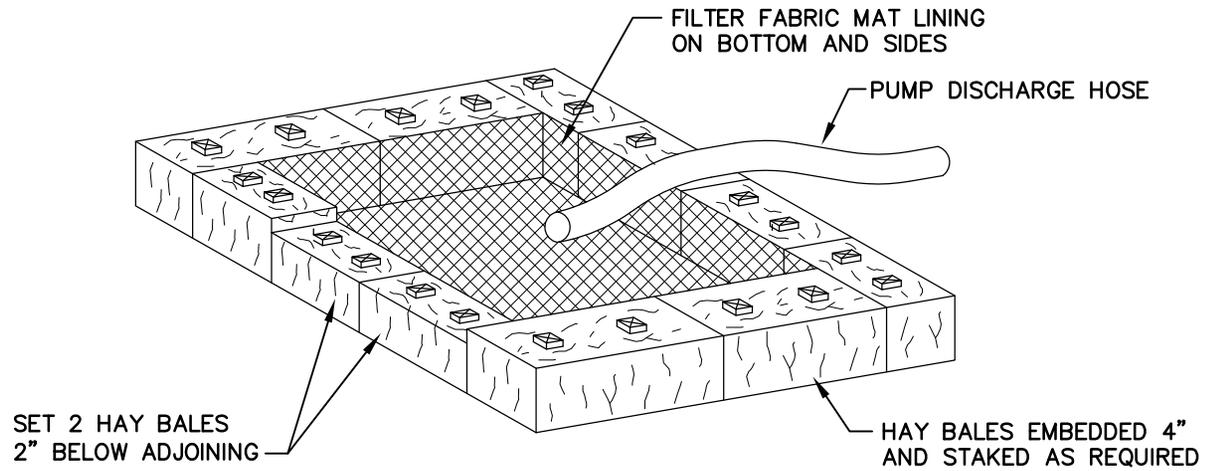
Under no circumstances should trench water, or other forms of turbid water, be directly discharged onto exposed soil or into any wetland or waterbody.

DEWATERING ACTIVITIES

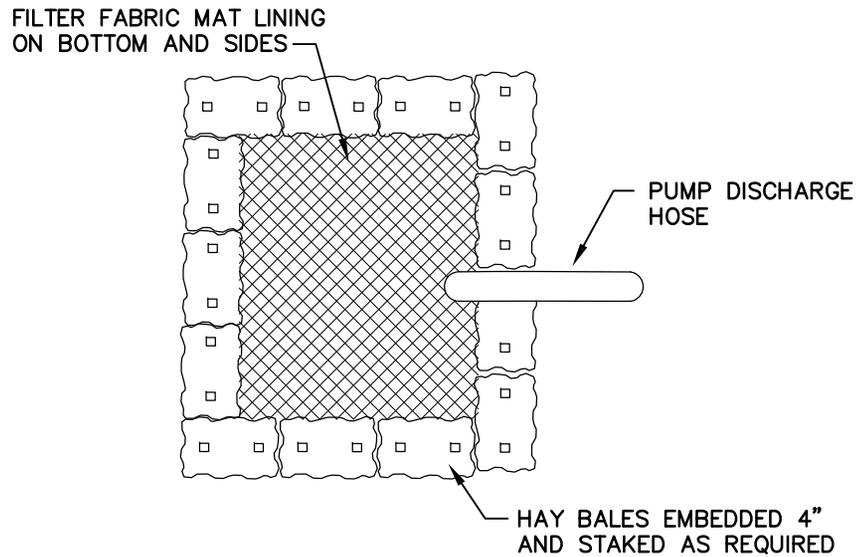
★ Use in combination with a haybale corral where necessary.



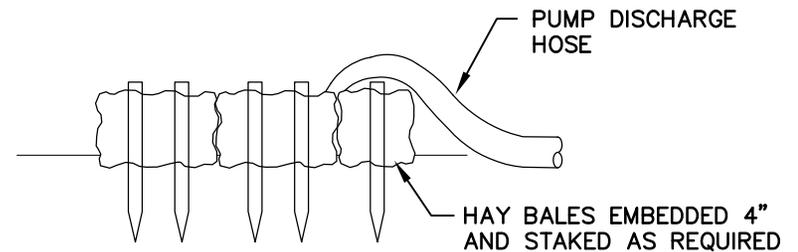
★ Place filter bags in a well-vegetated area, outside of wetlands whenever possible.



PERSPECTIVE



PLAN VIEW



SECTION

NOTES:
 PLACE DEWATERING/PUMPING SETTLING BASINS IN A WELL-VEGETATED AREA, OUTSIDE OF WETLANDS WHENEVER POSSIBLE.

TYPICAL
 DEWATERING BASIN

SCALE: NONE

