

MAIN STREET GAS PIPELINE REPLACEMENT NOTICE OF INTENT

TOWN OF ACTON
CONSERVATION COMMISSION
JULY 2007

Prepared for:
KeySpan Energy Delivery
52 Second Avenue
Waltham, MA 02451
Attn: David Gedaminski

BSC Project No. 12971.49

Prepared by:



15 Elkins Street
Boston, MA 02127

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WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
and Town of Acton Wetlands Protection Bylaw, Chapter F

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 for GIS locator):

<u>Main Street</u>	<u>Acton</u>	<u>01720</u>
a. Street Address	b. City/Town	c. Zip Code
<u>Latitude and Longitude:</u>	<u>42°28'41"</u>	<u>-71°26'55"</u>
	d. Latitude	e. Longitude
<u>N/A</u>	<u>N/A</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>David</u>	<u>Gedaminski</u>	<u>KeySpan Energy Delivery</u>
a. First Name	b. Last Name	c. Company
<u>52 Second Avenue</u>		
d. Mailing Address		
<u>Waltham</u>	<u>MA</u>	<u>02451</u>
e. City/Town	f. State	g. Zip Code
<u>781-466-5214</u>	<u>781-890-6091</u>	<u>dgedaminski@keyspanenergy.com</u>
h. Phone Number	i. Fax Number	j. Email address

3. Property owner (if different from applicant):

Check if more than one owner

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

4. Representative (if any):

<u>BSC Group, Inc.</u>		
a. Firm		
<u>Kenneth</u>	<u>Fields</u>	
b. Contact Person First Name	c. Contact Person Last Name	
<u>15 Elkins Street</u>		
d. Mailing Address		
<u>Boston</u>	<u>MA</u>	<u>02127</u>
e. City/Town	f. State	g. Zip Code
<u>617-896-4342</u>	<u>617-896-4301</u>	<u>kfields@bscgroup.com</u>
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$500.00</u>	<u>\$237.50</u>	<u>\$262.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid

6. General Project Description:

The proposed project includes the replacement of an existing gas main on the Main Street/Route 27 bridge over Route 2 and approximately 450 feet on either side of the bridge on Main Street. The work will take place within the 100-foot buffer zone.



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A. General Information (continued)

7. Project Type Checklist:

- a. Single Family Home
- b. Residential Subdivision
- c. Limited Project Driveway Crossing
- d. Commercial/Industrial
- e. Dock/Pier
- f. Utilities
- g. Coastal Engineering Structure
- h. Agriculture – cranberries, forestry
- i. Transportation
- j. Other

8. Property recorded at the Registry of Deeds for:

<u>Middlesex</u>	<u>N/A</u>
a. County	b. Page Number
<u>N/A</u>	
c. Book	d. Certificate # (if registered land)

9. Has work been performed on the property under an Order of Resource Area Delineation involving Simplified Review within 3 years of the date of this application?

- a. Yes
- b. No

If yes, no Notice of Intent or Request for Determination of Applicability may be filed for work within the 50-foot-wide area in the Buffer Zone along the resource area during the three-year term of an Order of Resource Area Delineation, or any Extended Order, or until the applicant receives a Certificate of Compliance, whichever is later.

10. Buffer Zone Only - Is the project located only in the Buffer Zone of a bordering vegetated wetland, inland bank, or coastal resource area?

- a. Yes - answer 11 below, then skip to Section C.
- b. No - skip to Section B.

11. Buffer Zone Setback – For projects that involve work only in the buffer zone, select the applicable adjacent resource area (check one):

- a. BVW
- b. inland bank
- c. coastal resource area

The distance between the closest project disturbance and the associated resource area is:

± 35 ft
d. linear feet



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B. Resource Area Effects

1. Inland 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.

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"/> 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	2. square feet
	3. cubic yards dredged	
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet of flood storage replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet of flood storage replaced
f. <input type="checkbox"/> Riverfront area	1. Name of Waterway (if available)	

For projects impacted by the riverfront area and a buffer zone of another resource area, add 50% to the total fee.

1. Width of Riverfront Area (check one):

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

2. Total area of Riverfront Area on the site of the proposed project: _____ Square Feet

3. Proposed alteration of the Riverfront Area:

_____ a. Total Square Feet	_____ b. Square Feet within 100 ft.	_____ c. Square Feet between 100 ft. and 200 ft.
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4. Has an alternatives analysis been done and is it attached to this NOI? Yes No

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



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B. Resource Area Effects

2. Coastal Resource Areas:

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.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
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
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., or 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	2. Square feet restoration, rehab.
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	

3. Limited Project:

Is any portion of the proposed activity eligible to be treated as a limited project subject to 310 CMR 10.24 or 310 CMR 10.53?

a. Yes No If yes, describe which limited project applies to this project:

310 CMR 10.53 (3)(d) The construction, reconstruction, operation, and maintenance of underground utilities

b. Limited Project



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C. Bordering Vegetated Wetland Delineation Methodology

Check all methods used to delineate the Bordering Vegetated Wetland (BVW) boundary:

1. Final Order of Resource Area Delineation issued by Conservation Commission or DEP (attached)
2. DEP BVW Field Data Form (attached)
3. Final Determination of Applicability issued by Conservation Commission or DEP (attached)
4. Other Methods for Determining the BVW Boundary (attach documentation):
 - a. 50% or more wetland indicator plants
 - b. Saturated/inundated conditions exist
 - c. Groundwater indicators
 - d. Direct observation
 - e. Hydric soil indicators
 - f. Credible evidence of conditions prior to disturbance
5. Other resource areas delineated: Bank of intermittent stream

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

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

D. Other Applicable Standards and Requirements

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://www.mass.gov/dfwele/dfw/nhosp/nhregmap.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
Route 135, North Drive
Westborough, MA 01581

b. Date of map 2006

If yes, the project is 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 D.1.A, and include requested materials with this Notice of Intent (NOI); OR complete Section D.1.B, 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).*

A. Submit Supplemental Information for Endangered Species Review *

- Percentage/acreage of property to be altered:
- (1) within wetland Resource Area _____
percentage/acreage
- (2) outside Resource Area _____
percentage/acreage
- Assessor's Map or right-of-way plan of site



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D. Other Applicable Standards and Requirements (cont.)

- 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 **
- Project description (including description of impacts outside of wetland Resource Area & Buffer Zone)
- Photographs representative of the site
- MESA filing fee (fee information available at: <http://www.mass.gov/dfwele/dfw/nhesp/nhenvmesa.htm>)
Make check payable to "Natural Heritage & Endangered Species Fund" and **mail to NHESP** at above address

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

- Vegetation cover type map of site
- Project plans showing Priority & Estimated Habitat boundaries

B. OR Check One of the Following

- 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/nhesp/nhenvexemptions.htm>)
- Separate MESA review ongoing.

NHESP Tracking Number

Date submitted to NHESP

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

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see www.nhosp.org regulatory review tab). 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.

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

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

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

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
838 South Rodney French Blvd.
New Bedford, MA 02744

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930

b. Not applicable – project is in inland resource area only



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D. Other Applicable Standards and Requirements (cont.)

3. 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 DEP Website for ACEC locations). **Note:** electronic filers click on Website.
- b. ACEC
-
4. 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
5. Is any activity within any Resource Area or Buffer Zone exempt from performance standards of the wetlands regulations, 310 CMR 10.00.
- a. Yes No If yes, describe which exemption applies to this project:
- b. Exemption
-
6. Is this project subject to the DEP Stormwater Policy? a. Yes No
- If yes, stormwater management measures are required. Applicants should complete the Stormwater Management Form and submit it with this form.
- b. If no, explain why the project is exempt:
- The proposed work will not increase the amount of impervious surface or create new stormwater discharges.

E. Additional Information

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.

- 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.)
- 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.
- Other material identifying and explaining the determination of resource area boundaries shown on plans (e.g., a DEP BVW Field Data Form).
- List the titles and dates for all plans and other materials submitted with this NOI.
- If there is more than one property owner, please attach a list of these property owners not listed on this form.
- Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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G. Signatures and Submittal Requirements (cont.)

Other:

If the applicant has checked the “yes” box in any part of Section D, 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.

ATTACHMENT A

MAIN STREET GAS PIPELINE REPLACEMENT NOTICE OF INTENT

FIGURES

ATTACHMENT B

MAIN STREET GAS PIPELINE REPLACEMENT
NOTICE OF INTENT

PROJECT DESCRIPTION

1.0 PROJECT SUMMARY

KeySpan Energy Delivery (“KeySpan”) is seeking an Order of Conditions for the replacement of an existing natural gas main on Main Street (Route 27) in Acton, Massachusetts. Approximately 1,100 feet of the existing 2-inch diameter natural gas main will be replaced with an 8-inch plastic natural gas main. The project extends approximately from the off ramp of Route 2 eastbound to the off ramp of Route 2 westbound and includes the Main Street Bridge over Route 2. The work includes trenching within the roadway and will partly take place within the 100-foot buffer zone to wetland resource areas. This Notice of Intent (NOI) is being submitted pursuant to the Massachusetts Wetlands Protection Act (MGL Ch. 131, § 40) and implementing regulations (310 CMR 10.00) as well as the Town of Acton Wetland Protection Bylaw (Chapter F).

A portion of the proposed work qualifies as a limited project under 310 CMR 10.53 (3)(d) in that the work will involve the construction of an underground utility. However, the proposed project will have no temporary or permanent impacts to the adjacent wetlands and has been designed to conform to the requirements for work in the buffer zone under the Massachusetts Wetlands Protection Act and its implementing Regulations.

2.0 SITE DESCRIPTION

The proposed work will take place in Main Street/Route 27 near the interchange with Route 2. The work extends 1,100 feet approximately from the off ramp of Route 2 eastbound to the off ramp of Route 2 westbound and includes the Main Street Bridge over Route 2. The work will take place within the currently developed roadway.

BSC Group, Inc. (BSC) delineated wetland resource areas along the project route in May 2007. Wetland resource areas were identified as per the Federal Clean Water Act and the Massachusetts Wetlands Protection Act (MWPA) and Regulations (310 CMR 10.00) and were delineated using the methodologies set forth in the U.S. Army Corps of Engineers 1987 Manual and the Massachusetts Wetland Delineation Methodology (DEP Policy 95-1). Wetland resource areas along the project route were flagged using pink and black (BVW) or blue (bank) flagging and located by GPS (Trimble ProXH with sub-meter accuracy) for inclusion in the Project Plans.

Bordering Vegetated Wetlands

Bordering Vegetated Wetlands (BVW) on the site consist of freshwater wetlands bordering on an intermittent stream. The limit of wetland was located based upon the line “within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist” (310 CMR 10.55(2)(c)). Consistent with the Massachusetts Department of Environmental Protection Handbook on “Delineating Bordering Vegetated Wetlands” (Handbook), onsite wetlands were delineated using a three-parameter approach that included the evaluation of vegetation, hydrology, and soils.

Wetlands A and B as shown on the plan, *Natural Gas Main Replacement Project – Main Street (Route 27) and Route 2*, are located south of Main Street and west of Route 2 and consisted of a broad-leaved deciduous forested BVW bordering on an intermittent stream. Wetland C, located inside of the Route 2 west on ramp, consisted of an emergent wetland. Broad-leaved deciduous forested BVW occurs along the stream, south of Main Street and east of Route 2 (Wetland D), north of Main Street and east of Route 2 (Wetland E), and north of Main Street and west of Route 2 (Wetland F). Data sheets providing documentation of the BVW delineation are included in Attachment D.

Bank

Bank, as defined at 310 CMR 10.54(2), occurs above the mean annual low flow level of a waterbody and below either the first observable break in slope or the mean annual flood level of a waterbody, whichever is lower. Regulated Bank occurs along the intermittent stream channel and is identified by blue flagging in the field.

Land Subject to Flooding

Based on review of the most recent Federal Emergency Management Act Flood Insurance Rate Map (Community Panel 250211 0001 B), the area of the proposed work is located within Zone C, area of minimal flooding.

Riverfront Area

BSC reviewed the status of the unnamed tributary to Coles Brook as it pertains to the regulations associated with Riverfront Area (310 CMR 10.58). See Attachment E for the StreamStats analysis and discussion. Based on the results of the analysis, the watershed area and stream flow are below the regulatory requirements for a “river.” The stream is therefore considered intermittent and no Riverfront Area exists on the site.

3.0 PROPOSED ACTIVITIES

The work will involve the replacement of an existing 2-inch diameter natural gas main across the bridge with an 8-inch diameter plastic natural gas main inside a 12-inch diameter coated steel casing pipe. The existing 2-inch diameter natural gas main is supported on the bridge in the utility bay under the east side of the bridge. The new natural gas main will be assembled within a trench within Main Street (see trenching method below). Once the gas main is assembled, it will be installed in the utility bay under the bridge via pipe rollers installed on the utility supports.

Within the roadway, approximately 450 feet of 2-inch buried natural gas main will be replaced with an 8-inch plastic natural gas main within the roadway on either side of the bridge. The new gas main will connect to an existing 8-inch plastic natural gas main. The pipeline will be installed using a trenching method as described below and will be limited to the length that can be installed and backfilled each day (approximately 250 feet per day). All disturbed areas will be returned to their original elevation and condition following the installation of the new natural gas main.

Trenching Method

Existing pavement shall be removed before any excavation or trenching is performed. The pavement will be removed by a pneumatic hammer or saw cut and will be disposed of in accordance with applicable laws. Trenching is then conducted with backhoes and all material is sidecast along the trenchline and examined to determine if it is suitable for use as backfill. Suitable backfill material consists of gravels, sand, and gravel-sand mixtures that are free of large stones, construction debris, trash, frozen soil, and other foreign material. All unsuitable material will be removed from the site via covered dump truck and disposed of in accordance with applicable laws. All suitable backfill placed along the trenchline will be placed back in the trench on a daily basis. Any extra excavate will be removed from the area daily. Any additional fill material needed will be trucked in on a covered dump truck and will be placed in the trench directly from the truck. No long-term stockpiling of material will be required.

The trench will be approximately 30 inches wide and approximately 4 feet deep. Daily construction activities include mobilization, trenching, removal of existing 2-inch pipeline, laying out of new pipe, joining pipe, backfilling, compacting, and restoration of the road surface.

The work will likely consist of 4-5 workers including a dump truck, crew truck, and excavator. Prior to leaving the work each day, the trench will be backfilled and compacted except for a small work zone (6-8 feet in length) at the end of the pipe. This portion is left unfilled so the end of the pipe can be located without re-excavating the area and possibly damaging the new pipe. The unfilled portion is covered with a steel road plate.

4.0 ANTICIPATED IMPACTS AND PROPOSED MITIGATION

Part of the work, approximately 500 linear feet, as shown on the plan, *Natural Gas Main Replacement Project – Main Street (Route 27) and Route 2*, will take place within the 100-foot buffer zone to Bank or BVW. The work conforms to the general provisions established for work in the buffer zone (310 CMR 10.03 (1)(a) 3), as erosion and sedimentation controls are provided to ensure that potential impacts to resource areas are minimized.

The work will partially take place within the Town of Acton 100-foot setback for the underground storage of fuels and partially within the 50-foot setback of undisturbed natural vegetation. However, the work involves the transportation, rather than storage, of natural gas. The proposed work is associated with a pre-existing natural gas main and will not be located closer to the adjacent wetlands than the existing main. In addition, the work is occurring within the previously altered roadway layout. Natural gas is a vapor; therefore, it poses no risk of ecological impact to adjacent wetlands. The proposed project will not affect the interests provided for in the Town of Acton Wetland Protection Bylaw more adversely than the existing natural gas main.

To ensure that there are no indirect impacts to any wetland as a result of the proposed work, the following Best Management Practices will be implemented:

- Existing curbing along the roadway will direct runoff to existing catch basins. Catch basins therefore will be protected with filter fabric to ensure sediments do not enter the drainage system. Catch basins to be protected are shown on the plan, *Natural Gas Main Replacement Project – Main Street (Route 27) and Route 2*.
- Areas where there is no curbing will be lined with staked or weighted haybales, as indicated on the plan, *Natural Gas Main Replacement Project – Main Street (Route 27) and Route 2*.
- The amount of trench that will be opened up each day will be limited to that which can be completed, backfilled, and restored in one day. As such, no long-term stockpiling of any materials, either excavate or clean fill, will be required as these materials can be trucked in and out each day via dump truck.
- KeySpan contractors will typically not work on days of predicted rain.
- No equipment will be refueled, nor will fuel be stored, within 100 feet of a resource area.

5.0 CONSTRUCTION SEQUENCING

Install erosion controls in catch basins prior to any construction activity.

Pipeline Installation Under Main Street Bridge

- All construction performed over Route 2 shall utilize single-lane closures and be done in phases.
- Remove existing 2-inch pipe.
- Install pipe rollers on existing bridge utility supports.
- Install temporary wood planking (shields) on existing bridge utility supports in preparation for installation of new natural gas main.
- Sawcut and remove portions of the approach slab as required and excavate behind backwall.
- Core 16-inch diameter opening through both abutment backwalls.
- Slide the proposed gas pipe through the abutment backwalls and along the rollers.
- Remove temporary shielding.
- Backfill and reconstruct approach slabs.

Roadway Trenching

- Install additional erosion controls in work areas with no curbing.
- Saw cut all asphalt in trench pathway
- Backhoe removal of asphalt only in active work area—removed asphalt will be hauled away
- Backhoe excavation of a 30-inch wide by 50-inch deep trench. Excavated material is temporarily placed on roadway pavement.
- Remove existing 2-inch diameter pipeline.

Pipeline Installation Within Roadway

- Backfill 6 inches of sand into bottom of trench.
- Assemble pipe in trench.
- Backfill 6 inches of sand above pipe.
- Backfill with suitable excavated material and/or additional fill material up to 12 inches from surface.
- Install warning tape.
- Backfill with excavated material to the surface. Any tailings excavated material not used will be hauled away on a daily basis.
- Mechanical trench compaction.
- 6-8 feet of trench will remain open at the end of the pipe each day. The open area will be covered with a steel plate.
- Upon complete installation of the pipeline, permanently pave previously trenched area to model pre-existing conditions.

ATTACHMENT C

MAIN STREET GAS PIPELINE REPLACEMENT
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FILING FEE AND ABUTTER INFORMATION



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. Applicant:

David _____ Gedaminski _____ KeySpan Energy Delivery _____
 a. First Name b. Last Name c. Company
 52 Second Avenue _____
 d. Mailing Address
 Waltham _____ MA _____ 02451 _____
 e. City/Town f. State g. Zip Code
 781-466-5214 _____
 h. Phone Number

2. Property Owner (if different):

_____ _____ _____
 a. First Name b. Last Name c. Company

 d. Mailing Address
 _____ _____ _____
 e. City/Town f. State g. Zip Code

 h. Phone Number

3. Project Location:

Main Street _____ Acton _____
 a. Street Address b. City/Town

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

Notice of Intent (Form 3) or Abbreviated Notice of Intent (Form 4):

The fee should be calculated using the following six-step process and 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
2e) Inland limited project	1	\$500.00	\$500.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Step 5/Total Project Fee: _____

Step 6/Fee Payments:

Total Project Fee:	<u>\$500.00</u>
State share of filing fee:	a. Total fee from Step 5 <u>\$237.50</u>
City/Town share of filing fee:	b. 1/2 total fee less \$12.50 <u>\$262.50</u> c. 1/2 total fee plus \$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.
- c.) **To DEP 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.)

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of Environmental Protection and the Conservation Commission when filing a Notice of Intent)

I, Kenneth Fields, hereby certify under the pains and penalties of perjury that on July 19, 2007 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by KeySpan Energy Delivery with the Acton Conservation Commission on July 19, 2007 for property located at Main Street/Route 27, Acton.

The form of the notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Name

Date

**NOTIFICATION TO ABUTTERS
UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT
AND THE TOWN OF ACTON WETLANDS BYLAW**

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the Town of Acton Bylaws, you are hereby notified of the following:

The Applicant: KeySpan Energy Delivery

Address 52 Second Avenue, Waltham, MA 02451 Phone 781-466-5000

has filed both a Request for Determination ("RDA") of Applicability and a Notice of Intent ("NOI") with the Acton Conservation Commission seeking permission to remove, fill, dredge or alter an Area Subject to Protection under the Wetlands Protection Act.

Applicant's Representative: BSC Group, Inc., Attn: Kenneth Fields

Address 15 Elkins Street, Boston, MA 02127 Phone 617-896-4342

The address of the property where the activity is proposed The work will take place on the Main Street/
Route 27 bridge over Route 2. Work will also take place within approximately 450 feet on each side of the bridge on Main St.

Town Atlas Plate/Map F-3 Parcel/Lot N/A

Project Description The proposed work includes the replacement of an existing 2-inch diameter natural gas main and within the roadway 450 feet on either side of and under the Main Street Bridge with an 8-inch diameter natural gas main. Note that if the Commission votes a "Negative Determination" on the RDA, then KeySpan will withdraw the NOI.

Copies of the RDA and NOI may be examined at the Conservation Office, Acton Town Hall, 472 Main Street, Acton between the hours of 9:00 A.M. and 4:30 P.M. Monday through Friday. For more information please call the Conservation Office at 978-264-9631.

A Public Hearing will be held at the Acton Town Hall, 472 Main Street, on Wednesday,
August 1, 2007 at 7:15 P.M.
(date)

The notice of the public hearing will be published at least five (5) days in advance in the Acton edition of the *Beacon* newspaper or *Metrowest Daily News*.

NOTE: You may also contact your local conservation commission or the nearest Department of Environmental Protection Regional Office* for the information about this application or, the Wetlands Protection Act. Acton is in the Central Region. To contact DEP, call:

***DEP Central Region: 508-792-7650
627 Main Street, Worcester MA 01608**

ATTACHMENT D

MAIN STREET GAS PIPELINE REPLACEMENT
NOTICE OF INTENT

WETLAND DELINEATION FORMS

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: KeySpan Prepared By: BSC Group, Inc. Project Location: Acton DEP File #: _____

Check all that apply:

- Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out sections I and II
- Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Wetland A Transect Number: Near Flag A-8 Date of Delineation: 06/05/2007
Number: _____

A. Sample Layer and Plant Species		B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (Yes or no)	E. Wetland Indicator Category*
Trees	<i>Acer rubrum</i> (Red maple)	38.0	64.4%	Y	FAC*
	<i>Fagus grandifolia</i> (American beech)	10.5	17.8%	N	
	<i>Pinus strobus</i> (White pine)	10.5	17.8%	N	
Sapling	<i>Tilia americana</i> (American linden)	20.5	49.4%	Y	FACU
	<i>Acer rubrum</i> (Red maple)	10.5	25.3%	Y	FAC*
	<i>Quercus bicolor</i> (Swamp white oak)	10.5	25.3%	Y	FACW+*
Shrub	<i>Viburnum recognitum</i> (Northern arrow-wood)	20.5	66.1%	Y	FACW-*
	<i>Lindera benzoin</i> (Spicebush)	10.5	33.9%	Y	FACW-*
Herb	<i>Toxicodendron radicans</i> (Poison ivy)	38.0	64.4%	Y	FAC*
	<i>Viburnum recognitum</i> (Northern arrow-wood)	10.5	17.8%	N	
	<i>Symplocarpus foetidus</i> (Skunk cabbage)	10.5	17.8%	N	

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:
 Number of dominant wetland indicator plants: **6** Number of dominant non-wetland indicator plants: **1**
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? YES

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent. MA DEP; 3/95

Section II. Indicators of Hydrology					Other Indicators of Hydrology: (check all that apply and describe)																			
Hydric Soil Interpretation					<input type="checkbox"/> Site Inundated:																			
1. Soil Survey					<input checked="" type="checkbox"/> Depth to free water in observation hole: 4"																			
Is there a published soil survey for this site? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no					<input checked="" type="checkbox"/> Depth to soil saturation in observation hole: Surface																			
title/date: Soil Survey of Middlesex County, Massachusetts					<input type="checkbox"/> Water marks:																			
map number: digital version					<input type="checkbox"/> Drift lines:																			
soil type mapped: Narragansett silt loam, 3-8% slopes, very stony					<input type="checkbox"/> Sediment deposits:																			
hydric soil inclusions: No					<input type="checkbox"/> Drainage patterns in BVW:																			
Are field observations consistent with soil survey? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no					<input type="checkbox"/> Oxidized rhizospheres:																			
Remarks:					<input checked="" type="checkbox"/> Water-stained leaves:																			
					<input type="checkbox"/> Recorded data (stream, lake, or tidal gauge; aerial photo; other):																			
2. Soil Description					<input type="checkbox"/> Other:																			
Horizon	Depth	Matrix Color	Texture	Mottles Color	Vegetation and Hydrology Conclusion <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td>Number of wetland indicator plants ≥ number of non-wetland indicator plants</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Wetland hydrology present:</td> <td></td> <td></td> </tr> <tr> <td> hydric soil present</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td> other indicators of hydrology present</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Sample location is in a BVW</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>			Yes	No	Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wetland hydrology present:			hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Yes	No																						
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>																						
Wetland hydrology present:																								
hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>																						
other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>																						
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>																						
A	0-8"	10YR 2/1	Mucky																					
B	8-16"	10YR 4/1	Silt loam																					
B	16-18+"	10YR 2/2	Silt loam																					
3. Other: V. Mineral Histic (Field Indicators for Identifying Hydric Soils in New England)																								
Conclusion: Is soil hydric? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no																								

ATTACHMENT E

MAIN STREET GAS PIPELINE REPLACEMENT
NOTICE OF INTENT

STREAMSTATS ANALYSIS

RIVERFRONT AREA ANALYSIS

BSC reviewed the status of the unnamed tributary to Coles Brook as it pertains to the regulations associated with Riverfront Area (310 CMR 10.58). In accordance with the regulations at 310 CMR 10.58 (2)(a)1., “A river is any natural flowing body of water that empties to any ocean, lake, pond, or other river and which flows throughout the year.” An analysis of the criteria used to establish a “river” in accordance with regulatory requirements is presented below:

310 CMR 10.58 (2)(a)1.a. A river or stream shown as perennial on the current United States Geological Survey (USGS) or more recent map provided by the Department is perennial.

The current USGS map for the particular site is the 1987 Maynard 7.5x15 minute quadrangle map. The linetypes associated with stream types is a thick blue continuous line for perennial streams and a thin blue continuous line for intermittent streams. The unnamed tributary is not shown on the USGS map.

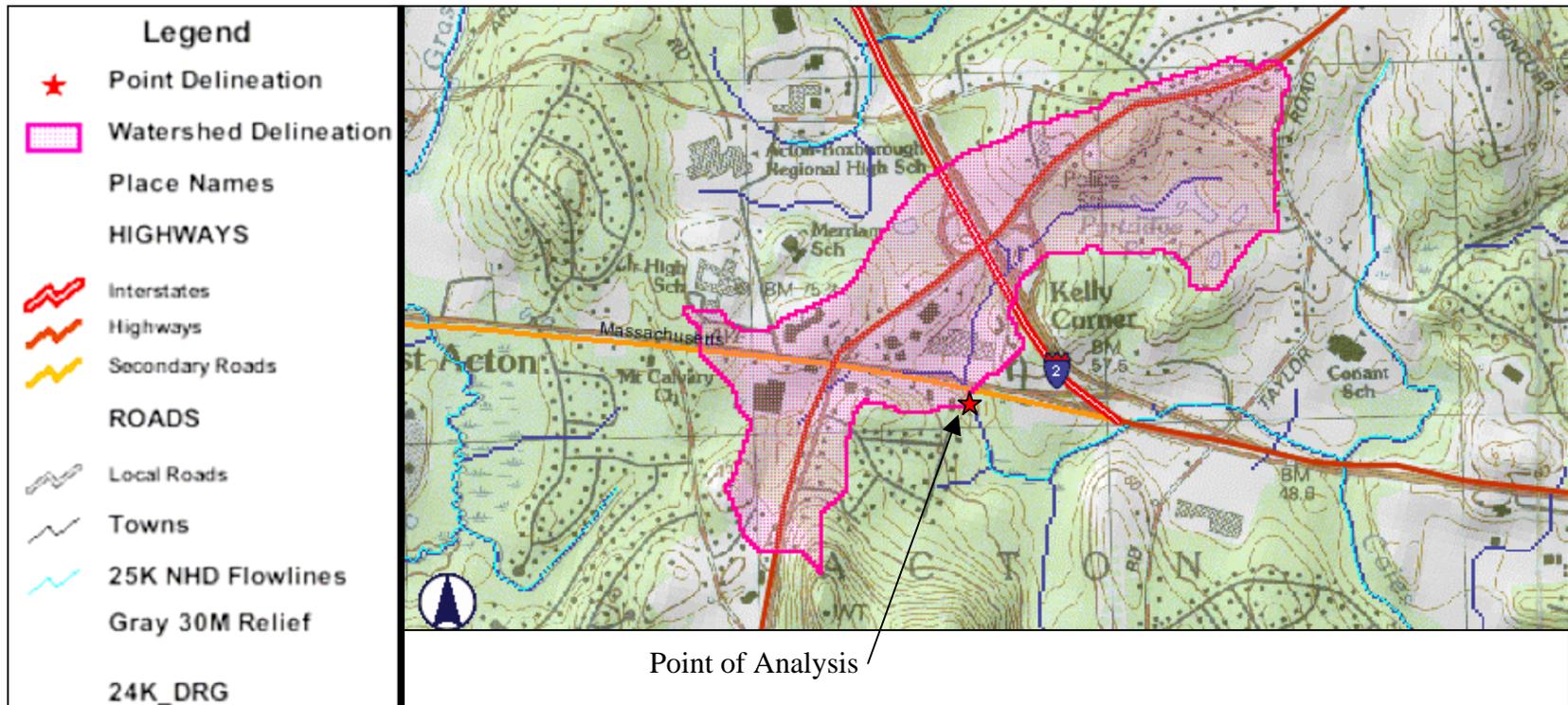
310 CMR 10.58 (2)(a)1.b. A river or stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size greater than or equal to one square mile, is perennial.

An analysis of the watershed size was conducted using the USGS StreamStats program. A point was selected on the unnamed stream near the confluence of a tributary stream, downstream from the site. This point is located more than 1,000-feet from the limit of work. At this point, the stream’s watershed is 0.32 square miles, which is less than the one square mile requirement established by the regulation.

310 CMR 10.58 (2)(a)1.c. A stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size less than one square mile, is intermittent unless:

- i. The stream has a watershed size of at least one-half (0.50) square mile and has a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats method. The issuing authority shall find such streams to be perennial; or*
- ii. When the USGS StreamStats method cannot be used because the stream does not have a mapped and digitized centerline, and the stream has a watershed size of at least one-half (0.50) square mile, and the surficial geology of the contributing drainage area to the stream at the project site contains 75% or more stratified drift, the issuing authority shall find such streams to be perennial. Stratified drift shall mean sand and gravel deposits that have been layered and sorted by glacial meltwater streams. Areal percentages of stratified drift may be determined using USGS surficial geologic maps, USGS Hydrological Atlases, Massachusetts Geographical Information System (MassGIS) surficial geology data layer, or other published or electronic surficial geological information from a credible source.*

STREAMSTATS WATERSHED DELINEATION



STREAMSTATS RESULTS

Basin Characteristics Report

Date: Thu Jul 12 2007 13:07:43
Latitude (NAD83): 42.4739 (42 28 26)
Longitude (NAD83): -71.4492 (-71 26 57)

Error when computing parameter DRFTPERSTR for the local watershed: Error when evaluating expression 1.15841945771467E-04/0.

Parameter	Value
Area in square miles	0.32
Average area slope in percent	1.85
square mile area covered by stratified drift	0.000116
Total stream length in miles	0
stratified drift per unit stream lenth	

Streamflow Statistics Report

Date: Thu Jul 12 2007 13:06:24
Site Location: Massachusetts
Drainage Area: 0.32 mi²
Latitude (NAD83): 42.4739 (42 28 26)
Longitude (NAD83): -71.4492 (-71 26 57)

Low Flow Basin Characteristics			
100% Statewide Low Flow (0.32 mi ²)			
Parameter	Value	Min	Max
Drainage Area	0.32		
Mean Basin Slope from 250K DEM	1.849		
Stratified Drift per Stream Length			
Massachusetts Region	0		

Parameter Stratified_Drift_per_Stream_Length could not be computed.

ATTACHMENT E – STREAMSTATS ANALYSIS
NOTICE OF INTENT
MAIN STREET GAS PIPELINE

(i) As mentioned above, the watershed size calculated by the StreamStats program is less than one-half square mile. The predicted flow is 0.00 cubic feet per second (ie. less than 0.01 cubic feet per second) at the 99% flow duration. Therefore the stream fails to meet this regulatory requirement for establishing perennial flow.

(ii) Not applicable – the Concord River watershed has a mapped and digitized centerline for this stream and the StreamStats program can be utilized for this site.

The evidence therefore establishes that unnamed stream does not meet the regulatory requirements to be considered as a “river” at this location. Therefore the site does not contain Riverfront Area.