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Massachusetts Water Resources Authority
Chelsea Facility
2 Griffin Way
Chelsea, Massachusetts 02150

Frederick A. Laskey
Executive Director

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March 28, 2014

Richard K. Sullivan Jr., Secretary
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Subject: Environmental Notification Form - MWRA Wachusett Aqueduct Pumping Station, Marlborough, Massachusetts

Dear Secretary Sullivan,

The Massachusetts Water Resources Authority (MWRA) is pleased to submit this Environmental Notification Form (ENF) for the proposed Wachusett Aqueduct Pumping Station (WAPS).

As described more fully in the attached documents, the proposed $45.6 million WAPS, with a capacity of 240 mgd, is designed to provide redundancy for the Cosgrove Tunnel by pumping raw water from the Wachusett Aqueduct to the John J. Carroll Water Treatment Plant (CWTP) in Marlborough, MA. The project is a significant part of MWRA's Water Supply Redundancy Program. This project, along with the completion of the Hultman Aqueduct rehabilitation and interconnections project, will provide fully treated water transmission redundancy from the Wachusett Reservoir to deliver safe drinking water during an emergency to 2.3 million people in 44 communities in and around the Metropolitan Boston area.

Please notice the ENF in the Environmental Monitor to be published on April 9, 2014. The public comment period will extend through April 29, 2014. By copy of this letter, I am advising recipients of the ENF that written comments may be filed during the comment period, sent to the address above. Copies of the ENF may be obtained by calling Erica M. Lotz, FST, at (781)221-1163 or via email at elotz@fstinc.com.

Sincerely,

Jae R. Kim, P.E.
Chief Engineer

Cc: Circulation List

Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **MWRA Wachusett Aqueduct Pumping Station**		
Street Address: **84 D'Angelo Drive**		
Municipality: **Marlborough**	Watershed: **Concord**	
Universal Transverse Mercator Coordinates: **Zone 19** **286,603 E, 4,688,124 N (meters)**	Latitude: **42.31613** Longitude: **-71.58949**	
Estimated commencement date: **2014**	Estimated completion date: **2017**	
Project Type: **Water**	Status of project design: **90** %complete	
Proponent: **Massachusetts Water Resources Authority**		
Street Address: **2 Griffin Way**		
Municipality: **Chelsea**	State: **MA**	Zip Code: **02150**
Name of Contact Person: **Erica M. Lotz, P.E.**		
Firm/Agency: **Fay, Spofford & Thorndike**	Street Address: **5 Burlington Woods**	
Municipality: **Burlington**	State: **MA**	Zip Code: **01803**
Phone: **781-221-1163**	Fax: **781-221-1086**	E-mail: **elotz@fstinc.com**

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	☐Yes ☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes ☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes ☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes ☒No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

Section 11.03(3)(b)1.c. Alteration of 1,000 or more sf of salt marsh or outstanding resource water.

Which State Agency Permits will the project require?
MWRA 8(m) and Trench Excavation permit
Massachusetts Department of Public Safety Building permit
Marlborough and Northborough Conservation Commission Notice of Intent
Massachusetts Historical Commission Section 106 Review
401 Water Quality Certification
(See Appendix A for more detail on permitting/approval requirements).

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:

Massachusetts Department of Environmental Protection Drinking Water State Revolving Fund- $40,000,000 (Pending Approval)

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	184.51		
New acres of land altered		1.23	
Acres of impervious area	18.02	0.33	18.35
Square feet of new bordering vegetated wetlands alteration		-	
Square feet of new other wetland alteration		1503 LUWW	
Acres of new non-water dependent use of tidelands or waterways		-	
STRUCTURES			
Gross square footage	411,642	14,375	426,017
Number of housing units	-	-	-
Maximum height (feet)	-	-	-
TRANSPORTATION			
Vehicle trips per day	94	0	94
Parking spaces	79	4	83
WASTEWATER			
Water Use (Gallons per day)	0	25	25
Water withdrawal (GPD)	240	0	240
Wastewater generation/treatment (GPD)	0	25	25
Length of water mains (miles)	2.20	0.075	2.95
Length of sewer mains (miles)	1.00	0.01	1.01

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☒ Yes (EEA # **9370**) ☐No
Prior MEPA project number was for the development of the John J. Carroll Water Treatment Plant and the Treatment Plant site. The proposed pumping station and site access improvements will be part of the water supply infrastructure related to the operations at the larger treatment site.

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

The Massachusetts Water Resources Authority (MWRA) is planning to construct a 240 million gallon per day (MGD) capacity pumping station on a parcel of land owned by the MWRA in the city of Marlborough. Besides the pumping station, the project also includes modifications to the site access and modifications to the Carroll Water Treatment Plant (CWTP). This project is the recommendation of the Water Transmission Redundancy Plan completed in 2011.

The goal of the Water Transmission Redundancy Plan was to provide concept level planning to address the long-term need for redundancy and reliability of water supply to all areas served by the MWRA. The Water Transmission Redundancy Plan addressed three major elements of the MWRA water system: the metropolitan tunnels, the Cosgrove tunnel and the Quabbin Aqueduct. The proposed project addresses the redundancy and reliability needs of the Cosgrove Tunnel, by allowing the Wachusett Aqueduct, currently a back-up/standby aqueduct, to be put in service.

The Cosgrove Tunnel was placed in service in 1966 to replace the Wachusett Aqueduct as the source of water supply and to provide water supply directly to the system at a higher pressure. In 2003, the Cosgrove Tunnel was temporarily shutdown and re-configured to provide water supply to the CWTP. The Cosgrove Tunnel is capable of supplying 405 MGD of raw water to the CWTP at a hydraulic grade line (HGL) elevation of 321.5 feet, the controlling HGL elevation at the plant inlet channel.

Inspections performed during that shutdown indicated that the tunnel was in need of repairs. These repairs can only be made with the tunnel removed from service. In addition, as the sole source of water supply for the CWTP, the system is at risk of failure if the tunnel or one of the other components of the raw water supply system fail: the Cosgrove Intake and Power Station, the CWTP Control valves and the CWTP inlet piping.

Facilities constructed as part of the CWTP project allow the Wachusett Aqueduct to supply the system at a maximum HGL elevation of 281.4 feet. While much lower than the HGL elevation of 321.5 feet necessary to supply the CWTP, it was sufficient to provide an adequate water supply during the construction of the CWTP. With the Cosgrove Tunnel connection completed, the Wachusett Aqueduct was returned to stand by status.

At the time of the CWTP construction, chlorination was sufficient to meet the disinfection requirements of the Safe Drinking Water Act. Disinfection requirements have since become more stringent. If a situation were to occur that would interrupt the flow of water to and through the CWTP, either from an emergency or a planned shutdown of the Cosgrove Tunnel, the Wachusett Aqueduct could be placed into service to maintain water supply. However, after April 1, 2014 the water would be in violation of Safe Drinking Water Act regulations unless it can be treated in the CWTP.

The loss of service due to a failure or planned maintenance of the CWTP raw water supply would have serious consequences. A sudden failure in the system would affect water quality and depending on the time of year, would impact system demands. In addition, it would take several hours for the Wachusett Aqueduct to be activated to its full capacity. During that time, water supply would be limited to the volumes in storage at the Authority's and its member communities' storage tanks. Demand management would likely be required to ensure that the storage tanks do not empty while the Wachusett Aqueduct is being placed into service.

Because it was designed and constructed as a pressure tunnel, the Cosgrove Tunnel is the only conduit capable of providing raw water supply to the CWTP.

In 2011, Fay, Spofford & Thorndike (FST) completed an evaluation of alternatives for providing redundancy to the Cosgrove Tunnel. The Alternatives Evaluation Report describes three options:

- Pressurizing the Wachusett Aqueduct by slip lining a steel pipe into the existing aqueduct
- Removing the aqueduct and installing a new pressure pipe by open cut construction within the current 6-mile alignment
- Constructing a new pumping station

The recommended alternative was the construction of a new pumping station. The pumping station option was considered to have the lowest environmental impact while providing an acceptable level of redundancy. The pumping station costs were estimated to be one-fourth the cost of the other options.

The pumping station will be located adjacent to the Forebay within an area that is currently used by the Authority for equipment storage. The Forebay is a manmade structure that was constructed in 1900 as part of the original Wachusett Aqueduct water supply system. It is maintained for emergency use and is therefore considered to be part of the Authority's water works infrastructure.

The pumping station will be a new building 68 feet by 123 feet with a total height to the top of the roof of 65 feet. The station will contain the main pump room, an electrical room, men's and women's rest rooms and office space. A mezzanine above the electrical room will contain heating and ventilating equipment. The lower level of the station will contain the discharge pipe gallery.

The station exterior will consistent of precast, architectural panels that will be consistent with the exterior treatment of the existing treatment plant structures. The building will have a hip roof. The color of the roof will match the existing structures but will also meet LEED requirements for reflectivity of solar energy.

The station will be have a nominal capacity of 240 MGD and will contain seven (7) pumps, any six (6) of which will be capable of supplying 240 MGD. The station will receive its suction supply from the Wachusett Aqueduct. During design, a flow test was performed to confirm that the Wachusett Aqueduct had the required capacity. The results of the flow test indicated that in order to supply 240 MGD to the pumping station, the water level in the Forebay had to be lowered from 278.5 feet to 276 feet. The elevation of the Forebay is set by a circular controlling weir located approximately 2,100 feet from the pumping station site. Since this lowering of the water level would only be required during station operation, modifications will be made to the existing Hultman Intake to allow the circular weir to be bypassed lowering the level in the Forebay to 276 feet.

To protect the pumps, piping and treatment plant from pressure surges during a power failure, a surge relief tank will be constructed adjacent to the pumping station. The tank will be approximately fifty (50) feet tall and sixteen (16) feet in diameter. The exterior of the tank will match that of the main building. Pressure surges resulting from the power failure will cause water to be discharged to the Forebay. While relatively high in magnitude, the duration of the discharge will be very short. In order to accommodate the high flow rates, a reinforced

channel will be constructed from the tank outlet into the Forebay. The discharged water will be raw water from the Wachusett Reservoir and will not contain any chemicals.

While full operation of the station would only occur during an emergency or planned maintenance, the station pumping equipment and controls will be operated monthly to ensure their reliability and to maintain the equipment. This regular maintenance of the facility will confirm its readiness in the event of an emergency.

As a result of a detailed energy evaluation of the station design, photovoltaic panels will be installed on the station roof and on the adjacent grounds to partially offset the amount of electricity purchased to operate the station. In addition, an open-loop geothermal system will be installed to reduce the reliance on fossil fuels and electricity for heating and cooling of the station. The geothermal system will take advantage of the constant supply of water in the Forebay. Water temperatures in the Forebay generally fluctuate between 36 degrees F and 63 degrees F. Water will be pumped from the Forebay through heat exchangers that will be used to heat or cool the building. After passing through the system, the water will be returned to the Forebay. It is anticipated that the water added back to the Forebay will be approximately 10 degrees F warmer after being used for heating/cooling. However, with the station in operation, there will be a minimum of 10 MGD (15.5 cfs) flowing through the Forebay. The flow requirements for the geothermal system are approximately 250 gallons per minute when the pumping station is operating (0.36 million gallons per day).
The station design will include other energy saving measures including a cold roof, light and temperature monitoring and sensors, premium efficiency motors and high efficiency pumps.

The project also includes upgrades to the security gate at the entrance to the Carroll Water Treatment Plant site. The security gate improvements will include relocation of the security gate to enclose an existing Authority building within the secured area, a new guard building and a new security gate and entrance. Due to the narrow access road in the vicinity of the new entrance, the modifications will require utility relocations that will impact the nearby storm drain and culvert at Stony Brook.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:
Is the project within or adjacent to an Area of Critical Environmental Concern?
☐Yes (Specify_____)
☒No
if yes, does the ACEC have an approved Resource Management Plan? ___ Yes ___ No;
If yes, describe how the project complies with this plan.

Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes _X_ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.

RARE SPECIES:
Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)
☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:
Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☒Yes (Specify: **The Wachusett Aqueduct Linear District, The Water Supply System of Massachusetts, The Wachusett Aqueduct Terminal Chamber, Hultman Intake Building, & Open Channel**) ☐No
If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐Yes (Specify_____) ☒No

WATER RESOURCES:
Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? _**X**_Yes ___No; if yes, identify the ORW and its location.

The Open Channel (MWRA Open Canal-Wachusett Aqueduct) is within a half-mile radius of the project site.

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? ___Yes _**X**_No; if yes, identify the water body and pollutant(s) causing the impairment:_____.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? _**X**_Yes ___No

Concord River Basin- Medium Stress
Massachusetts Water Resource Commission "Stressed Basin Report", December 2001.

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

Resources adjacent to the project area include the Forebay located northeast of the site, wetlands (natural and constructed) southwest of the site, and a channel/stream southeast of the site, existing stormwater runoff from the project area flows to the wetlands and channel/stream then to the Southern Diversion Channel located downstream of the circular weir and Hultman Intake building. Stormwater runoff from the site will be directed to a detention basin and then discharged to the Southern Diversion Channel. The site drainage and stormwater management design complies with Massachusetts Department of Environmental Protection's regulations for stormwater management. MassDEP's Massachusetts Stormwater Handbook outlines ten stormwater management standards and the stormwater design is in compliance with each standard. In addition, construction will be performed in compliance with these regulations, including appropriate use of erosion and sedimentation controls. Since the Southern Division Channel is a component of the MWRA's emergency water supply system, the MWRA will continue to use appropriate precautions during construction and operation to prevent pollutants from entering these water bodies.

MASSACHUSETTS CONTINGENCY PLAN:
Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? Yes ___ No _**X**_ ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response
Action Outcome classification):_____

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes ___ No _**X**_; if yes, describe which portion of the site and how the project will be consistent with the AUL:
_____.

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? Yes ___ No _**X**_ ; if yes, please describe:_____

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:_____

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

The project will generate approximately 150 cubic yards of construction debris from the demolition of the Westborough State Hospital Pump Station. This abandoned building is contaminated with asbestos, lead-based paint, and with polychlorinated biphenyls at levels requiring that the demolition and disposal of debris be managed under the requirements of the US EPA Toxic Substances Control Act (TSCA: 40 CFR 761.00). Based on the concentration of the PCBs in the PCB source material (paint and caulking) and in building materials contaminated by the paint and caulking the contaminated debris requires disposal as PCB bulk product waste at a TSCA incinerator, a TSCA chemical waste landfill, or a RCRA hazardous waste landfill in accordance with 40 CFR 761.62. After a careful analysis of cost and project schedule requirements it was determined that the most cost-effective alternative will be to dispose of the entire building structure in this manner rather than to attempt to segregate PCB-contaminated from non-PCB contaminated materials.

Will your project disturb asbestos containing materials? Yes _**X**_ No ___ ;
if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment:

Construction equipment will be turned off while not in use as per the typical anti-idling provisions of the construction contract.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ No _**X**_ ;
if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River?
Yes ___ No ___ ; if yes, specify name of river and designation: _____;
if yes, will the project will result in any impacts to any of the designated "outstandingly remarkable" resources of the Wild and Scenic River or the stated purposes of a Scenic River.
Yes ___ No ___ ;
if yes, describe the potential impacts to one or more of the "outstandingly remarkable" resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document. **(See list of Appendices at the end of this form)**

2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries. **(Appendix B)**

3.. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities. **(Appendix C)**

4 Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts. **(Appendix C)**

5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase). **(Appendix D)**

6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2). **(Appendix E)**

7. List of municipal and federal permits and reviews required by the project, as applicable. **(Appendix A)**

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1)
___ Yes _**X**_ No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	**9.45**	**0.33**	**9.78**
Internal roadways	**5.31**	**0.00**	**5.31**
Parking and other paved areas	**3.26**	**0.54**	**3.80**
Other altered areas	**58.70**	**0.36**	**59.06**
Undeveloped areas	**107.79**	**-1.23**	**106.56**
Total: Project Site Acreage	**184.51**		**184.51**

B. Has any part of the project site been in active agricultural use in the last five years?
___ Yes _**X**_ No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
___ Yes _**X**_ No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes _**X**_ No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? ___ Yes_**X**_ No; if yes, does the project involve the release or modification of such restriction?
___ Yes ___ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes _**X**_ No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No _**X**_; if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan
Title: **Draft Open Space and Recreation Plan 2011-2018 (Marlborough)**
Date: **11/21/13**

B. Describe the project's consistency with that plan with regard to:
1) economic development **Providing a dependable water supply is essential for economic development**
2) adequacy of infrastructure **Providing redundancy to the water supply system supports adequacy of infrastructure because it will safeguard against emergencies and will allow raw water to be pumped to the treatment plant while allowing for maintenance and rehabilitation.**
3) open space impacts **N/A**

4) compatibility with adjacent land uses **N/A**

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)
RPA: **Metropolitan Area Planning Council**
Title: **Metro Future**
Date: **May 2008**

Describe the project's consistency with that plan with regard to:
1) economic development **N/A**
2) adequacy of infrastructure **The project is consistent with Goal Statement 61 of Metro Future: Water resources will be carefully budgeted and sustainably managed so that clean water is available for appropriate uses and development.**
3) open space impacts **N/A**

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes _**X**_ No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes _**X**_ No.

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes ___ No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___Yes ___No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat?

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No

4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? _**X**_ Yes ___ No; if yes, specify, in quantitative terms:

Section 11.03(3)(b)1.c. Alteration of 1,000 or more sf of salt marsh or outstanding resource water.

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? _**X**_ Yes ___ No; if yes, specify which permit:

Order of Conditions (Marlborough, Northborough)
401 Water Quality Certification

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section.** If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? _**X**_ Yes ___ No; if yes, has a Notice of Intent been filed? ___ Yes _**X**_ No; if yes, list the date and MassDEP file number: _____; if yes, has a local Order of Conditions been issued? ___ Yes ___ No; Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a Variance from the Wetlands regulations? ___ Yes ___ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

Existing Conditions

The pumping station site is within the buffer zone of Crane Swamp (Wetland A), which lies approximately 100 feet south of the pumping station site: an access road separates the pumping station site and Crane Swamp. Crane Swamp includes Bordering Vegetated Wetlands (BVW), Bank, and Land Under Water Bodies and Waterways (LUWW). A man made drainage channel, called the Southern Diversion Channel provides an outlet for Crane Swamp and intercepts drainage from Crane Swamp as well as upland areas to prevent upstream flow from entering the Forebay Channel. The Southern Diversion Channel includes Bank and Land Under Water with wetland vegetation, including red maple, silky dogwood, elderberry, alder, winterberry, tartarian, cinnamon fern, sensitive fern, purple loosestrife, steeplebush, skunk cabbage, royal fern and wool grass.

The MWRA's Open Channel (Wetland B) begins at the Hultman weir below/at the terminus of the MWRA's Hultman Aqueduct Forebay Channel (Forebay) and ends at Deerfoot Road, (Deerfoot Road is the beginning of Sudbury Reservoir) in Southborough. The Open Channel is variable in width. The Open Channel is a wetland resource area with Bank and LUWW: as a tributary to MWRA's emergency water supply, it is also considered an Outstanding Resource Water.

East of the pumping station site, and at the entrance to the John J. Carroll Water Treatment Plant (CWTP), is a swale, which is considered a perennial stream and has predominantly emergent vegetation and subject to occasional mowing (Wetland C). It receives flow from Wetland D, and discharges below the Hultman Weir of the Open Channel. Wetland D is part of a perennial stream system with a fringe of shrub and tree wetland vegetation. Typical plant species include red maple, aspen, arrowwood, silky dogwood, royal fern and cinnamon fern.

Wetland Resource Area Impacts

The construction of the pumping station will take place within the buffer zone of Crane Swamp and the Southern Diversion Channel. Compost filter socks will be used for erosion and sedimentation control to protect wetland resource areas.

Actual work in wetland resource areas includes work in three distinct areas.

- Work in Wetland A, to install a new headwall and pipe to allow water to flow from a new detention area associated with the pumping station to wetland areas southwest of the site. Approximately 80 square feet will be temporarily impacted during construction. Compost filter sock will be in place during this construction to protect wetlands. Following the temporary disturbance, the existing grades within the impacted area will be re-established and a wetland seed mix will be cast.

- Work in Wetland B associated with the conduit that is proposed to be constructed to allow the Forebay to be lowered by bypassing the Hultman Weir. - The conduit construction includes new headwalls and installation of rip rap where the new bypass conduit meets the Open Channel. This work will impact wetlands and land under water during construction on the downstream side of the weir. The new rip rap will be installed to dissipate the energy of the water flowing through the bypass conduit. New rip-rap will cover 1,111 square feet of LUWW and 40 linear feet of bank where the headwalls are constructed. In this location, the Open Channel is man-made and stone lined. During construction, an additional 1,890 square feet of LUWW will be altered as a temporary dam structure and silt boom are placed in the Open Channel so that the work area can be dewatered. The temporary dam will allow flow to be maintained in the open channel during construction. Temporary silt stops will be installed downstream of the temporary dam in the Open Channel. These silt stops will collect any sediment that passes the temporary dam or is transferred from temporary pumping in the Forebay. These construction elements will allow for the project to meet the performance standards of LUWW and bank. The silt stops and boom will maintain surface water quality in the open channel while still allowing water flow to be maintained at typical flow rates. While the culvert extension and new headwall will permanently impact approximately 80 LF of bank, this work will not impair the physical stability of the bank, the carrying capacity of the existing channel, groundwater or surface water quality, the capacity of the bank to provide habitat functions.

- Work in Wetland C is associated with proposed upgrades to the security gate at the entrance to the CWTP site. The security gate improvements include relocation of the security gate to enclose an existing Authority building within the secured area, a new guard building and a new security gate and entrance. Due to the narrow access road in the vicinity of the new entrance, the modifications will require utility relocations that will impact the nearby storm drain in an area where wetlands exist. A headwall for the storm drain to be relocated will impact 392 square feet of LUWW and 80 linear feet of bank. The entire work area is within the Riverfront Area of an unnamed perennial stream. Site construction will occur during the drier months to minimize impacts to the resource areas. Construction will include the installation of a temporary dam to impound any water flow, and water will be pumped to the south side of the access road where the existing stream daylights to maintain flow to the stream.

  The majority of the impacted Riverfront Area includes previously developed, disturbed and/or degraded areas (e.g. cleared areas, access roads). Only limited vegetative removal will be required in the Riverfront Area for equipment access for culvert extension and headwall installation. Most impacts are temporary in nature and will not impair the ability of the Riverfront Area to protect the private or public water supply; to protect the groundwater; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; or to protect fisheries.

While the culvert extension and new headwall will permanently impact approximately 80 LF of bank, this work will not impair the physical stability of the bank, the carrying capacity of the existing channel, groundwater or surface water quality, the capacity of the bank to provide habitat functions. After the work is complete, any impacted buffer zone/riverfront area will be reseeded with a wildlife mix to restore vegetation.

The amount of wetland resource area impacts is summarized below

Wetland Resource Area	Permanent Impacts	Temporary Impacts
Wetland A (Crane Swamp/outlet) Stormwater drainage pipe headwall	-	80 SF (BVW)
Wetland B (Open Channel) Rip-Rap	1,111 SF (LUWW) 40 LF Bank	1,890 SF (LUWW) – for dewatering
Wetland C (Swale near Entrance Gate) Headwall for new storm drain	392 SF (LUWW) 80 LF Bank	28,000 SF Riverfront

MWRA would employ extensive control measures to protect the area during construction, as the Open Channel and adjacent wetlands are tributary to the Sudbury Reservoir, an MWRA emergency water supply source, and consequently an Outstanding Resource Water. As a water supplier, work in an ORW is permitted pursuant to 314 CMR 9.06(3) (a) Projects conducted or approved by public or private water suppliers in the performance of their responsibilities and duties...to maintain, operate and improve the waterworks system;..."

Other

The Forebay was constructed for water supply purposes and extends from MWRA's Wachusett Aqueduct Terminal Chamber to the Hultman Weir, a distance of approximately 2,000 feet. MWRA does not believe the Forebay is either a water of the United States or Massachusetts, as the Forebay is neither a river, stream, lake, pond, spring, impoundment, estuary, wetland, etc., but instead is part of the MWRA water transmission system. There is no vegetation present. The only inlet to the Forebay is the Wachusett Aqueduct and the water level between the Terminal Chamber and the Hultman Weir is determined by MWRA operations. The overwhelming majority of the time, there are no active discharges from the Wachusett Aqueduct into the Forebay. The exception is when MWRA transfers water from Wachusett Reservoir through the Wachusett Aqueduct (and Forebay) and then to the Open Channel at times to reduce the risk of flooding in the Nashua River. MWRA also uses it when it exercises and does maintenance on sluice gates, and some non-routine activities such as Aqueduct flow tests or refilling the Forebay.

MWRA has received preliminary indication from the US Corps of Engineers that the Forebay may not be jurisdictional, and has requested MWRA file a formal Jurisdictional Determination Application. Should the Corps make a formal finding that the Forebay is not jurisdictional and agree with MWRA that the Forebay is part of the MWRA's transmission system, the work in the Forebay would not be regulated under Sections 401 and 404 . Work includes new rip-rap areas occupying 11,643 square feet for the pumping station's surge relief and outlet, and an additional 3,529 square feet of area that will be temporarily impacted for the dewatering needed to place the rip-rap. There will also be work in the Forebay for the bypass conduit installation, which includes a temporary dam upstream of the Hultman Weir, so that the bottom of the Forebay can be dewatered for the re-grading and installation of 4,412 square feet of new rip-rap. Since the Forebay is part of emergency water supply infrastructure, this area will be afforded the same protection as regulated areas.

Permits

The only components of the work described above that will require a Notice of Intent under the Wetlands Protection Act include the work in Wetland A associated with the new headwall to allow

stormwater to flow from the new pumping station site, and the work in Wetland C associated with the new security gate, and work in buffer zone associated with the construction of the new pumping station. The work in the buffer zone and the work for the new headwall for storm drainage will require a NOI to the Northborough Conservation Commission. The work in the Wetland C associated with security improvements will require a filing to the Marlborough Conservation Commission.

The work in the Open Channel associated with the installation of a bypass conduit to allow the Forebay to be lowered so that the existing Wachusett Aqueduct can be used to convey water to the CWTP in the event of planned maintenance of the Cosgrove Aqueduct or in the event of an emergency will not require the filing of a Notice of Intent. It is work that is exempt from the need to file an NOI under 310 CMR 10.02 (2) a. 2.which provides that "...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 to provide....water..." do not require the filing of a NOI "...provided such work utilizes the best practical measures to avoid or minimize impacts to wetland resource areas outside the footprint of said structure or facility." By the proposed work and construction of the pumping station, MWRA is not enlarging or substantially changing the Wachusett Aqueduct, it is instead making modifications so that the Wachusett Aqueduct can be maintained in the service of the public to provide water.

Although much of the work is exempt from the Wetlands Protection Act, it still requires a 401 Water Quality Certification. Even if the Corps of Engineers determines the Forebay is non jurisdicational, other components of the work would be subject to the Corps' jurisdiction as well as 401 Water Quality Certification by MADEP. This includes work for the headwall for drainage, work in the Open Channel to install the bypass conduit for lowering the Forebay elevation and including the temporary dewatering of the Open Channel, and work for installation of the security gate improvements. Together, the area of impact for these three elements totals less than 5,000 square feet.

On the federal level, the work proposed qualifies for a Category 1 under Section 404 of the Clean Water Act, new fill/excavation and discharges impacting less than 5,000 square feet of inland waterway and/or wetland fill and associated secondary impacts. Category 1 projects require a Category 1 Notification Form to the Army Corps of Engineers, but do not require an application to the Corps.

Alternatively, if the Corps determines that the Forebay is jurisdictional, this will increase the area subject to 401 and 404 permitting, since there will be rip-rap placed in the Forebay associated with the surge relief and outlet, re-grading for the bypass conduit, and dewatering. Consequently, the project would no longer qualify for Category 1, and would likely be a Category 2 project.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Land Under the Ocean	**N/A**	
Designated Port Areas	**N/A**	
Coastal Beaches	**N/A**	
Coastal Dunes	**N/A**	
Barrier Beaches	**N/A**	
Coastal Banks	**N/A**	
Rocky Intertidal Shores	**N/A**	
Salt Marshes	**N/A**	
Land Under Salt Ponds	**N/A**	
Land Containing Shellfish	**N/A**	

Fish Runs	N/A	
Land Subject to Coastal Storm Flowage	N/A	

Inland Wetlands*

Bank (lf)	120 LF	Permanent
Bordering Vegetated Wetlands	80 SF	Temporary
Isolated Vegetated Wetlands	N/A	
Land under Water	1503 SF / 1,890 SF	Permanent / Temporary
Isolated Land Subject to Flooding	N/A	
Bordering Land Subject to Flooding	N/A	
Riverfront Area	28,000 SF	Temporary

*The estimated area of impacts does not include work in the MWRA Forebay Channel, which MWRA believes is non-jurisdictional. If ultimately the Forebay is considered jurisdictional and considered Land Under Water, then an additional 16,055 of Land Under Water will be permanently impacted by placement of rip-rap, and an additional 3,529 square feet of the Forebay will be temporarily impacted for dewatering. This is addressed above.

D. Is any part of the project:
1. proposed as a **limited project**? ___ Yes _X_ No; if yes, what is the area (in sf)?____
2. the construction or alteration of a **dam**? ___ Yes _X_ No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? ___ Yes _X_ No
4. dredging or disposal of dredged material? ___ Yes _X_ No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? _X_ Yes ___ No
6. subject to a wetlands restriction order? ___ Yes _X_ No; if yes, identify the area (in sf):
7. located in buffer zones? _X_ Yes ___No; if yes, how much (in sf)

92,163 SF of work will be completed inside the 100-foot wetland buffer zone.

E. Will the project:
1. be subject to a local wetlands ordinance or bylaw? ___ Yes _X_ No

2. alter any federally-protected wetlands not regulated under state law? ___ Yes _X_ No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ___ Yes _X_ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ___ Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

B. Does the project require a new or modified license or permit under M.G.L.c.91? ___ Yes _X_ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use?
Current ___ Change ___ Total ___
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site: **N/A**
Area of filled tidelands covered by buildings: **N/A**
For portions of site on filled tidelands, list ground floor uses and area of each use: **N/A**
Does the project include new non-water-dependent uses located over flowed tidelands?
Yes ___ No _X__

Height of building on filled tidelands: **N/A**

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ___ Yes _**X**_ No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___Yes _**X**_ No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes _**X**_ No;
(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ___ Yes _**X**_ No; if yes, answer the following questions:
What type of dredging? Improvement ___ Maintenance ___ Both _____
What is the proposed dredge volume, in cubic yards (cys) _____
What is the proposed dredge footprint _____length (ft) ___width (ft)_____depth (ft);
Will dredging impact the following resource areas?
Intertidal Yes__ No__; if yes, ___ sq ft
Outstanding Resource Waters Yes__ No__; if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) Yes__ No__; if yes __ sq ft
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?
If no to any of the above, what information or documentation was used to support this determination?
Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.
Sediment Characterization
Existing gradation analysis results? __Yes ___No: if yes, provide results.
Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___Yes _____No; if yes, provide results.
Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___
Unconfined Ocean Disposal ___
Confined Disposal:
Confined Aquatic Disposal (CAD) ___
Confined Disposal Facility (CDF) ___
Landfill Reuse in accordance with COMM-97-001 ___
Shoreline Placement ___
Upland Material Reuse____
In-State landfill disposal____
Out-of-state landfill disposal ____
(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___ Yes _**X**_ No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes _**X**_ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section.** If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Municipal or regional water supply	_____	_____	_____
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____Will the project require an increase in that withdrawal? ___Yes ___No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___No. If yes, describe existing and proposed water supply facilities at the project site:

	Permitted Flow	Existing Avg Daily Flow	Project Flow	Total
Capacity of water supply well(s) (gpd)	_____	_____	_____	_____
Capacity of water treatment plant (gpd)	_____	_____	_____	_____

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No
2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?
3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	Existing	Change	Total
Discharge of sanitary wastewater			
Discharge of industrial wastewater			
TOTAL			

	Existing	Change	Total
Discharge to groundwater			
Discharge to outstanding resource water			
Discharge to surface water			
Discharge to municipal or regional wastewater facility			
TOTAL			

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	Permitted	Existing Avg Daily Flow	Project Flow	Total
Wastewater treatment plant capacity (in gallons per day)				

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	Existing	Change	Total
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **state-controlled roadways**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section.** If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	_____	_____	_____
Number of vehicle trips per day	_____	_____	_____
ITE Land Use Code(s):	_____	_____	_____

B. What is the estimated average daily traffic on roadways serving the site?

Roadway	Existing	Change	Total
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

C. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ____ Yes ____ No; if yes, describe if and how will the project will participate in the TMA:

D. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ____ Yes ____ No; if yes, generally describe:

E. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section.** If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? _____
2. Cutting of living public shade trees (number)? _____
3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ___Yes ___No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? _**X**_ Yes ___ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ____Yes _**X**_ No; if yes, attach correspondence

See Appendix F for correspondence.

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? _**X**_ Yes ___ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes _**X**_ No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes _**X**_ No; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes ___ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

The Wachusett Aqueduct Terminal Chamber, the Wachusett Aqueduct, the Hultman Aqueduct Intake Building, and the Open Channel are listed on the National Register of Historic Places as part of the Water Supply System of Metropolitan Boston and the Wachusett Aqueduct Linear District. The design and construction of the Wachusett Aqueduct Pumping Station will not include any alternations to any of the above mentioned structures.

The Wachusett Aqueduct Pumping Station will be constructed on a 1.2 acre developed site on the campus of the John J. Carroll Water Treatment Plant adjacent to the Forebay Channel in Marlborough. The area has been previously disturbed during the construction of the Wachusett Aqueduct in 1896, followed by the Forebay in 1898 and subsequently during the construction of the Carroll Water Treatment Plant in 2002 when the site was used as a construction staging area. An Archaeological Survey completed as part of the Carroll Water Treatment Plant permitting process concluded that "All remaining areas were either disturbed, rocky, on steep slopes or poorly drained and were therefore not considered to be archaeologically sensitive".

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

The project has been designed to avoid potential historical, archaeological and visual impacts to nearby historic properties and historic district. The Massachusetts Water Resources Authority has coordinated with the Massachusetts Historical Commission and had submitted a project notification form in compliance with Section 106 of the National Historic Preservation Act of 1966. After review of the information submitted the Massachusetts Historical Commission believes that the proposed project will have no adverse effect on the Wachusett Aqueduct Linear District part of the Water Supply System of Metropolitan Boston (Appendix F).

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name)	(Date)
Worcester Telegram & Gazette	**04/03/2014**
Marlborough Enterprise	**04/03/2014**
Marlborough Main Street Journal	**04/04/2014**
Northborough Villager	**04/04/2014**

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

3/28/14	3/28/14
Date Signature of Responsible Officer or Proponent	Date Signature of person preparing NPC (if different from above)
Jae R. Kim, P.E.	**Erica M. Lotz, P.E.**
Name (print or type)	Name (print or type)
Massachusetts Water Resources Authority	**Fay, Spofford & Thorndike**
Firm/Agency	Firm/Agency
2 Griffin Way	**5 Burlington Woods Drive**
Street	Street
Chelsea / MA / 02150	**Burlington / MA / 01803**
Municipality/State/Zip	Municipality/State/Zip
617-242-6000	**781-221-1163**
Phone	Phone

List of Appendices

Appendix A

Municipal and Federal Permits and Reviews

Appendix A – Municipal and Federal Permits and Reviews

State Permits

1. State Historic Register Review, Massachusetts Historical Commission
   If a project is funded by a State Revolving Fund from the DEP then a Project Notification Form should be submitted to MHC. A PNF has been submitted to MHC and has undergone the Section 106 review. The MHC has determined the project will have no adverse effect on any historic properties of concern.

2. Notice of Intent, Marlborough and Northborough Conservation Commissions
   Review under the Massachusetts Wetlands Protection Act is required for work within 100 feet of the edge of bank, bordering vegetated wetlands, stream, floodplain, or within 200 feet of a river. A NOI will be filed with the Northborough Conservation Commission for the work associated with a stormwater drainage pipe headwall (80 sq ft of temporary impacts to BVW) and work within the buffer zone (61,359 sq ft). A NOI will be filed with the Marlborough Conservation Commission for the work associated with the security entrance improvements (392 sq ft of permanent impacts to LUWW, 80 LF of permanent impacts to bank, 28,000 SF of temporary impacts to riverfront area and 28,334 sq ft within the buffer zone).

3. 8(m) Permit, Massachusetts Water Resources Authority
   In accordance with M.G.L. Ch. 372 Acts, 1984, Section 8, any work performed within an MWRA easement requires an 8(m) Permit.

4. Trench Excavation Permit, Massachusetts Department of Public Safety
   A Trench Excavation Permit will be required to perform excavation work under the jurisdiction of the Massachusetts Department of Public Safety.

5. Building Permit, Massachusetts Department of Public Safety
   A Building Permit is required for the construction of a state owned building.

6. Bureau of Resource Protection-Watershed Management 09, Massachusetts Department of Environmental Protection
   The MassDEP process to review projects with existing or proposed stormwater discharges to surface waters of the Commonwealth of Massachusetts that are designated as Outstanding Resource Waters (ORWs), and are subject to coverage under EPA's NPDES Storm Water Multi-Sector General Permit for Industrial Activities ("MSGP") or the NPDES General Permit for Storm Water Discharges from Construction Activities ("Construction General Permit").

7. 401 Water Quality Certification, Massachusetts Department of Environmental Protection
   Activities requiring a 401 Water Quality Certification under 314 CMR 9.00 include dredging in or any activity resulting in any discharge of dredged or fill material to any Outstanding Resource Water. The Open Channel, a Class A ORW, will be filled with1323 sq ft of rip rap.

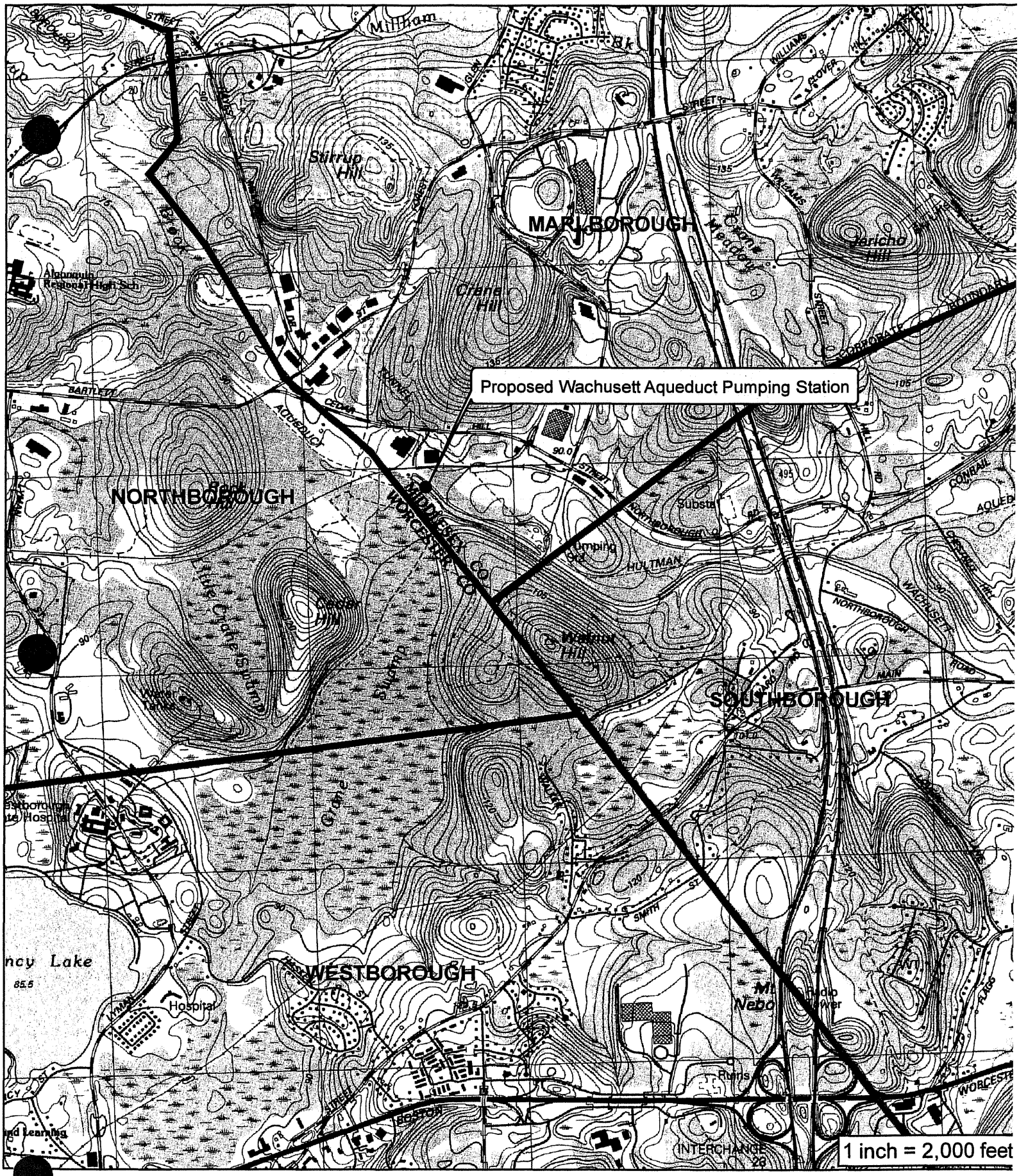
Federal Permits

1. Category 1 General Permit, Army Corps of Engineers
   Review under Section 404 of the Clean Water Act is required in order to regulate the discharge of dredged and fill material into waters of the United States. This project will trigger the Category 1 general permit under Section I. Inland Waters and Wetlands: Less than 5000 sq ft inland waterway and/or wetland fill and associated secondary impacts. There will be 1323 sq ft of permanent fill in the Open Channel.

2. National Pollutant Discharge Elimination System General Permit, U.S. Environmental Protection Agency
   The U.S. Environmental Protection Agency regulates discharges to waters of the U.S. under the National Pollutant Discharge Elimination System Program. As the project site is less than five acres but more than one acre, it is subject to the Phase II Rule regarding stormwater regulation for small construction activities. As the receiving surface waters are Outstanding Resource Waters, DEP approval of the NPDES Stormwater Pollution Prevention Plans for Construction or Industrial General Permits Discharging to Outstanding Resource Waters BRP WM 09 is required.

Appendix B

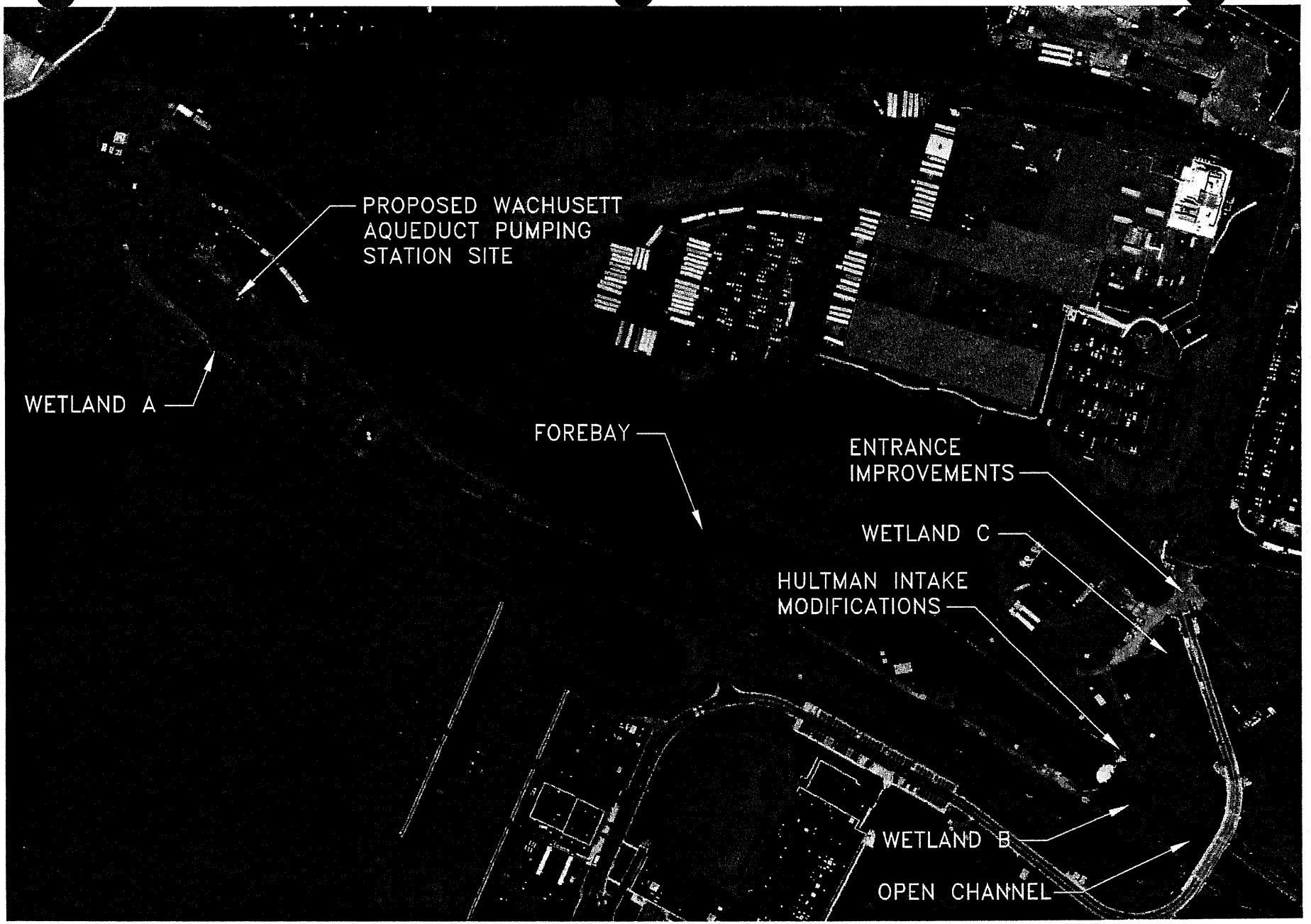
USGS Locus Map



Environmental Notification Form
Appendix B: USGS Locus Map
Wachusett Aqueduct Pumping Station
Massachusetts Water Resources Authority

Appendix C

Existing Conditions & Environmental Constraints Plan



MASSACHUSETTS WATER RESOURCES AUTHORITY
WACHUSETT AQUEDUCT PUMPING STATION

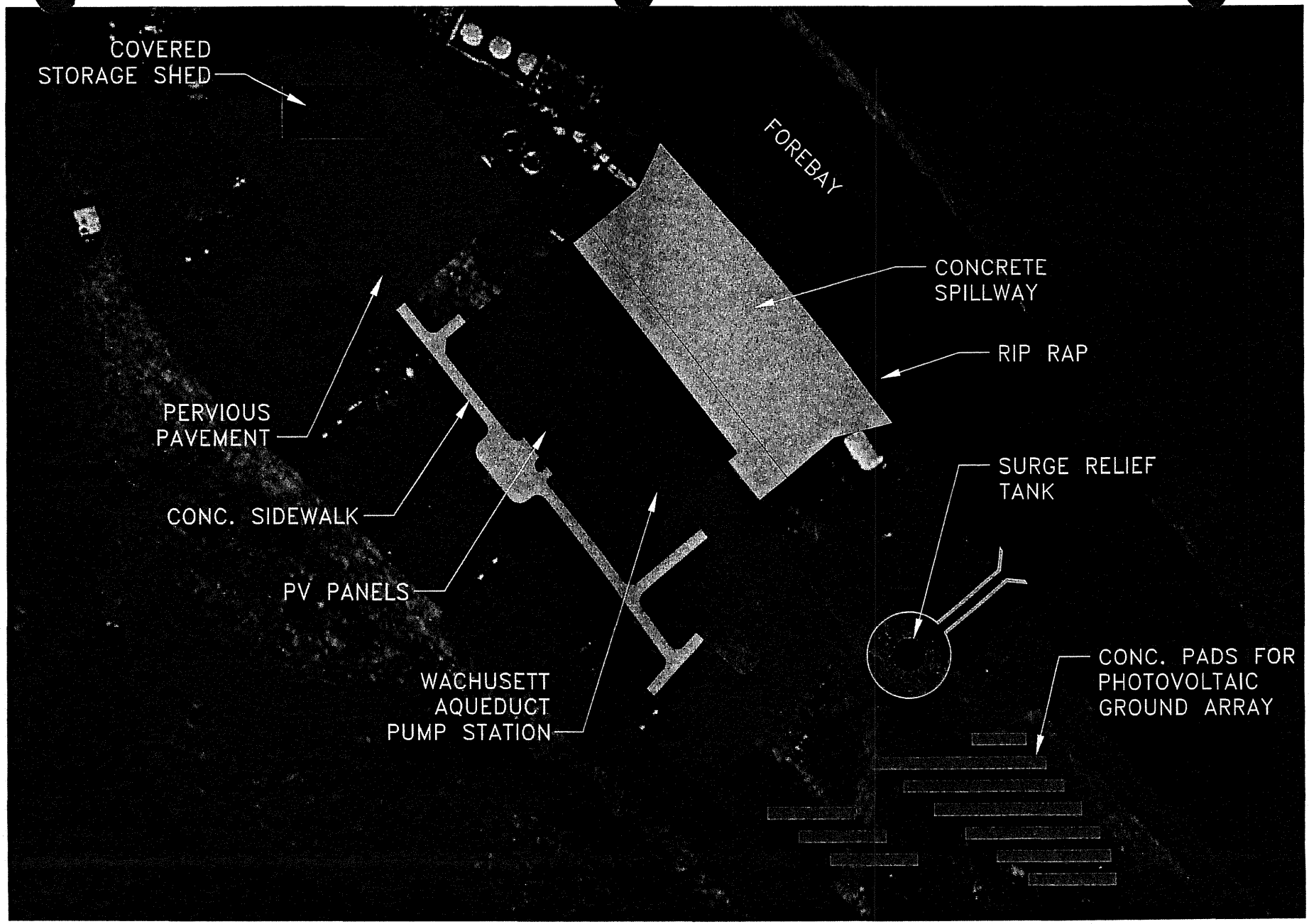
WETLAND RESOURCE AREAS

ENGINEERS FST Since 1914

MARCH 2014
SCALE: NA

Appendix D

Proposed Conditions Plans

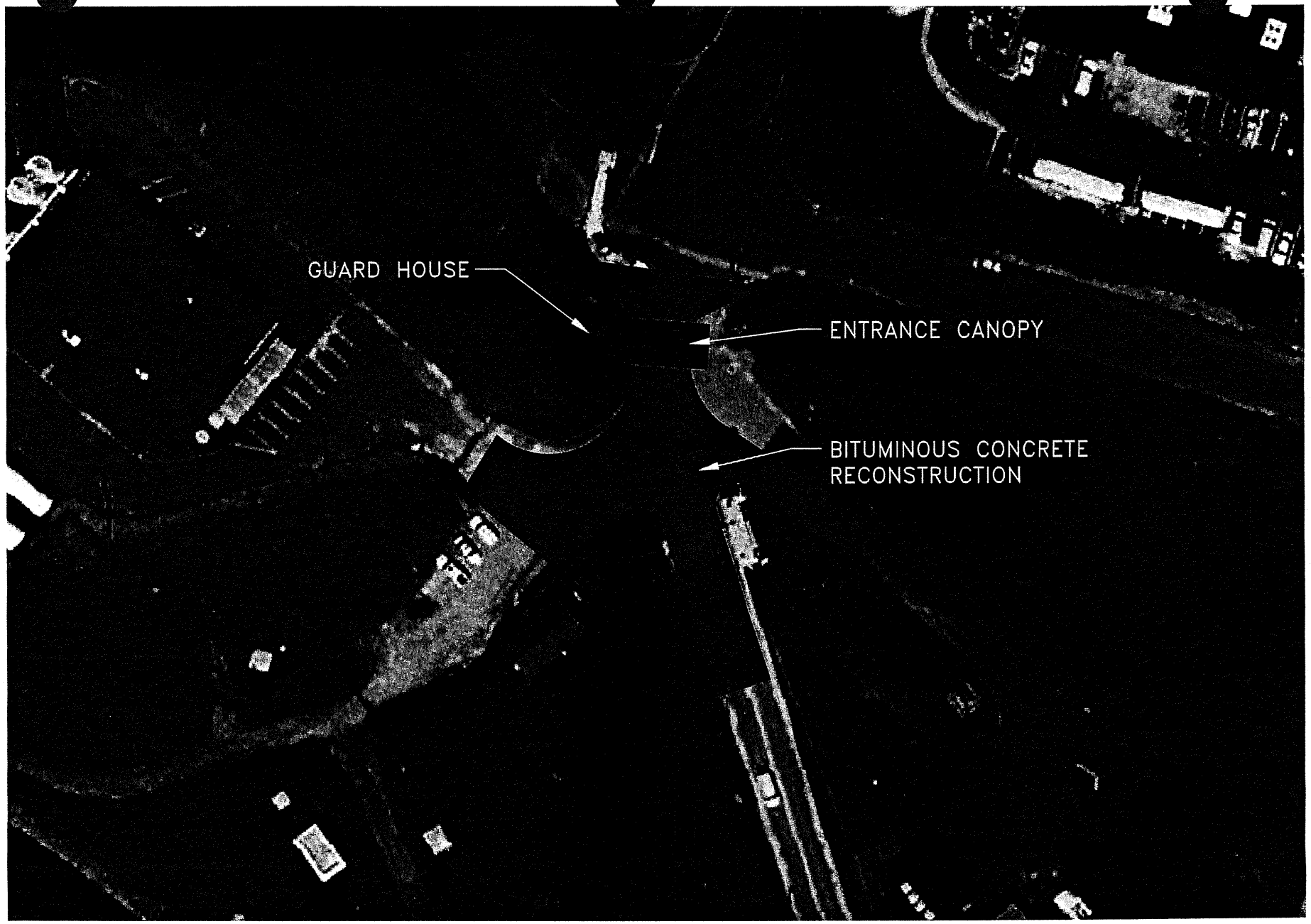


MASSACHUSETTS WATER RESOURCES AUTHORITY
WACHUSETT AQUEDUCT PUMPING STATION

WACHUSETT AQUEDUCT PUMPING STATION SITE

ENGINEERS FST Since 1914

MARCH 2014
SCALE: 1"=60'
FIGURE: 1

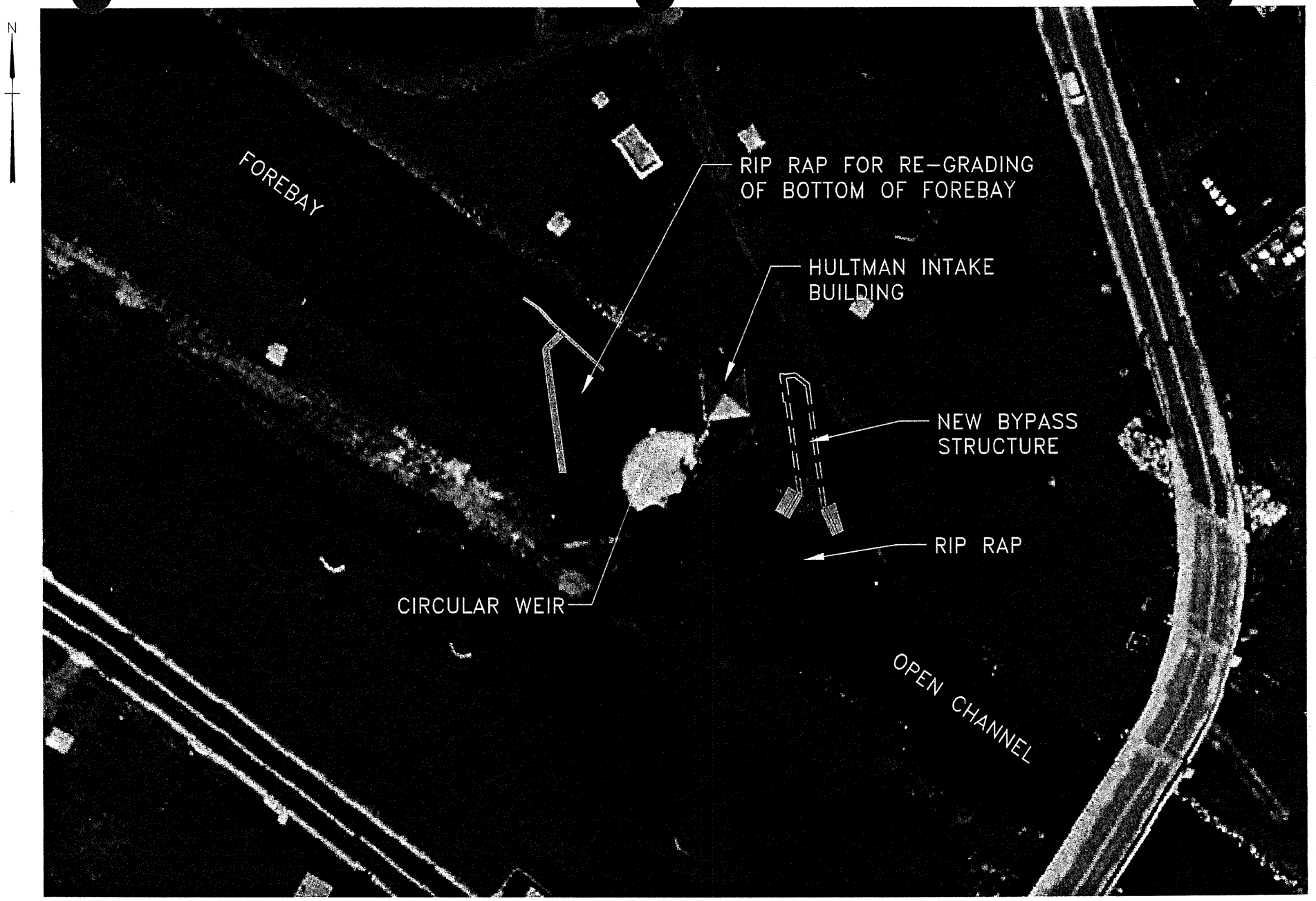


MASSACHUSETTS WATER RESOURCES AUTHORITY
WACHUSETT AQUEDUCT PUMPING STATION

ENTRANCE GATE IMPROVEMENTS

ENGINEERS FST Since 1914

MARCH 2014
SCALE: 1"=60'
FIGURE: 2



MASSACHUSETTS WATER RESOURCES AUTHORITY
WACHUSETT AQUEDUCT PUMPING STATION

HULTMAN INTAKE MODIFICATIONS

ENGINEERS FST Since 1914

MARCH 2014
SCALE: 1"=60'
FIGURE: 3

Appendix E

ENF Circulation List

Appendix E - Environmental Notification Form Circulation List

Secretary Richard K. Sullivan, Jr.
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Department of Environmental Protection
Commissioner's Office
One Winter Street
Boston, MA 02108

DEP/Central Regional Office
Attn: Phil Nadeau
627 Main Street
Worcester, MA 01608

Massachusetts Department of Transportation
Public/Private Development Unit
10 Park Plaza
Boston, MA 02116

Massachusetts DOT
District #3
Attn: MEPA Coordinator
403 Belmont Street
Worcester, MA 01604

Massachusetts Historical Commission
Attn: Ed Bell
The MA Archives Building
220 Morrissey Boulevard
Boston, MA 02125

Central Mass. Regional Planning Commission
2 Washington Square
Union Station- 2nd Floor
Worcester, MA 01604-4016

Mayor Arthur Vigeant
Marlborough City Hall
140 Main Street
Marlborough, MA 01752

City Council
Marlborough City Hall
140 Main Street
Marlborough, MA 01752

Planning Board
Marlborough City Hall
140 Main Street
Marlborough, MA 01752

Marlborough Conservation Commission
Marlborough City Hall
140 Main Street
Marlborough, MA 01752

Board of Health
255 Main Street
Walker Building, Room 101
Marlborough, MA 01752

Board of Selectman
Northborough Town Hall
63 Main Street
Northborough, MA 01532

Planning Department
Northborough Town Offices
63 Main Street
Northborough, MA 01532

Northborough Conservation Commission
Northborough Town Offices
63 Main Street
Northborough, MA 01532

Board of Health
Northborough Town Offices
63 Main Street
Northborough, MA 01532

Appendix F

Massachusetts Historical Commission Correspondence

November 4, 2013

The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth

Massachusetts Historical Commission

Marianne Connolly
Senior Program Manager
Environment Review and Compliance
Massachusetts Water Resources Authority
100 First Avenue, Building 39
Boston, MA 02129

RE: Proposed Wachusett Aqueduct Pumping Station Project, Marlborough, MA. MHC #RC.55010.

Dear Ms. Connolly:

Thank you for providing the Massachusetts Historical Commission (MHC), the office of the State Historic Preservation Officer, with information regarding the proposed project referenced above.

The project is proposed for federal funding through the Drinking Water State Revolving Fund, as well as state agency permitting and funding.

The project proposes the demolition of the Westborough State Hospital Pumping Station, included in the MHC's Inventory of Historic Assets of the Commonwealth (MRB.1306). It is the opinion of the MHC that the 1975 structure does not meet the Criteria of Eligibility (36 CFR Part 60) for listing in the National Register of Historic Places.

Please notify the MHC of the date of demolition of the Westborough State Hospital Pumping Station so that the MHC can update its inventory files.

The area of potential effect for the project also includes the Wachusett Aqueduct Linear District (MRB.AR) part of the Water Supply System of Metropolitan Boston (MRB.AS), listed in the State and National Registers of Historic Places.

After review of the MHC's files and the information that provided, the MHC believes that the project as proposed will have no adverse effect (36 CFR 800.5(b), 950 CMR 71.07(2)(b)(2)) on the Wachusett Aqueduct Linear District (MRB.AR) part of the Water Supply System of Metropolitan Boston.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800) and MGL c. 9, ss. 26-27C (950 CMR 71). Please contact Edward L. Bell, Deputy State Historic Preservation Officer, if you have any questions.

Sincerely,

Brona Simon

Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

xc:
Secretary Richard K. Sullivan, Jr. EEA-MEPA Office
John Felix, DEP-SRF Program
Donald St. Marie, DEP
Eric Friedman, Mass. Dept. of Energy Resources-Leading By Example Program
Marlborough Historical Commission

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