Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only
Executive Office of Environmental Affairs
EOEA No.: 14392
MEPA Analyst: Anne Canaday
Phone: 617-626-1035

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **Town Brook Dam Removal – Plymco and Off-Billington Street**		
Street: *Off-Billington Street*		
Municipality: *Plymouth*	Watershed: *Town Brook*	
Universal Tranverse Mercator Coordinates:	Latitude: *41d56'50.22" N* Longitude: *-70d40'26.11" E*	
Estimated commencement date: *Fall 2009*	Estimated completion date: *Fall 2010*	
Approximate cost *$1,250,000*	Status of project design: *30%* %complete	
Proponent: *Town of Plymouth, MA*		
Street: *11 Lincoln Street*		
Municipality: *Plymouth*	State: *MA*	Zip Code: *02360*
Name of Contact Person From Whom Copies of this ENF May Be Obtained: ***Elsa Loehmann***		
Firm/Agency: *Milone & MacBroom, Inc.*	Street: *99 Realty Drive*	
Municipality: *Cheshire*	State: *CT*	Zip Code: *06410*
Phone: *(203) 271-1773*	Fax: *(203) 272-9733*	E-mail: *ElsaL@MiloneandMacbroom.com*

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

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

Has any project on this site been filed with MEPA before? ☐Yes (EOEA No._____) ☒No

Is this an Expanded ENF (see 301 CMR 11.05(7)) 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: In the event that the Secretary deems it preferable not to grant a waiver from a full EIR, we respectfully request that a Single EIR be granted.

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 Riverways Program $81,000***

Are you requesting coordinated review with any other federal, state, regional, or local agency? ☐Yes(Specify_____) ☒No

List Local or Federal Permits and Approvals:
No approvals to date. Permits required:
<u>State and Federal</u>
U.S. Army Corps of Engineers' Permit Category II – Dredge and Fill
Federal Consistency Statement – Massachusetts Coastal Zone Management
401 Water Quality Certification – Commonwealth of Massachusetts
Memorandum of Agreement (Section 106 NHPA) – Commonwealth of Massachusetts
<u>Local</u>
Order of Conditions (Plymouth Conservation Commission)
Special Permit for Work in a Floodplain
Building Permit
Zoning Permit

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- ☐ Land
- ☒ Water
- ☐ Energy
- ☐ ACEC
- ☐ Rare Species
- ☐ Wastewater
- ☐ Air
- ☐ Regulations
- ☒ Wetlands, Waterways, & Tidelands
- ☐ Transportation
- ☐ Solid & Hazardous Waste
- ☒ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	*6.631 ac*		
New acres of land altered		*3.620 ac*	
Acres of impervious area	*0.779 ac*	*±0 ac*	*0.779 ac*
Square feet of new bordering vegetated wetlands alteration		*0 sf*	
Square feet of new other wetland alteration		*89,210 sf*	
Acres of new non-water dependent use of tidelands or waterways		*n/a*	
STRUCTURES			
Gross square footage	*n/a*	*n/a*	*n/a*
Number of housing units	*n/a*	*n/a*	*n/a*
Maximum height (in feet)	*n/a*	*n/a*	*n/a*
TRANSPORTATION			
Vehicle trips per day	*n/a*	*n/a*	*n/a*
Parking spaces	*n/a*	*n/a*	*n/a*
WATER/WASTEWATER			
Gallons/day (GPD) of water use	*n/a*	*n/a*	*n/a*
GPD water withdrawal	*n/a*	*n/a*	*n/a*
GPD wastewater generation/ treatment	*n/a*	*n/a*	*n/a*
Length of water/sewer mains (in miles)	*n/a*	*n/a*	*n/a*

State Permits & Approvals

- ☐ Order of Conditions
- ☐ Superceding Order of Conditions
- ☒ Chapter 91 License
- ☒ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☐ DEP or MWRA Sewer Connection/ Extension Permit
- ☒ Other Permits (*including Legislative Approvals*) – Specify:

Massachusetts Historic Commission MOA in accordance with Federal Section 106

Chapter 253 Office of Dam Safety Permit

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☐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 Town Brook Historic and Archaeological National Register District (Town Brook NR District) was listed to the National Register of Historic Places in 1995. The Off-Billington Street and Plymco Dams, as well as the Standish Worsted Weave Shed present at the site, are contributing resources to the Town Brook NR District. The project impact area contains eight historic resources that are listed in the National Register as contributing elements to the Town Brook NR District. The Plymco Impoundment, Plymco Dam, Pump House, Plymco Factory, Coal Bin, Off-Billington Impoundment, Off-Billington Dam, and the Second Privilege Herring Run Ladder. The project impact area additionally includes seven structures that are listed in the National Register as contributing elements to the Town Brook NR District. These are the Inglee House, Mabbett Barn, 88 Billington Street, 74-76 Billington Street, 72 Billington Street, and 68 Billington Street. Additional information regarding these resources is included in the attachments.* ☐No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☒Yes (Specify:*) The proposed project involves partial horizontal /full vertical breaches at both the Off-Billington Street and Plymco Dams. Although the dam structures are listed as contributing elements, the existing spillways have been reconstructed or replaced with 20th century reinforced concrete. The impoundments will be converted to free flowing stream sections. The fish ladder at the Off-Billington Street dam, referenced as the Herring Run Ladder in historical documentation, has similarly been rebuilt using 20th century reinforced concrete. Other resources identified above will remain intact, or in the case of the Plymco Dam Pump House, potentially be relocated on site.* ☐No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*) *(See Attached Sheet 3a)*

The proposed project will restore fish passage from the Off-Billington Street Dam to the Billington Sea. Project elements include the following:

1. ***Remove the Off-Billington Street dam.***
2. ***Excavate a channel through the existing impoundment, approximately 600 feet long, through the impounded sediment behind the dam. This includes a riffle-pool type channel system with naturalized bank stabilization measures, and creation of aquatic and riparian habitat.***
3. ***Replace the existing bridge at the Off-Billington Street dam to provide enough width for bankfull flow to pass unobstructed with a riparian shelf.***
4. ***Remove approximately 150 feet of culvert and daylight channel through reach.***
5. ***Remove the Plymco dam.***

a.) Existing Conditions: (continued)
The project site consists of two aging dams, the Off-Billington Street and Plymco dams. The Off-Billington Street dam is the furthest downstream dam, located approximately 0.9 miles upstream of Plymouth Harbor. The Plymco dam is located approximately 0.2 miles upstream of the Off-Billington Street dam. The Off-Billington Street impoundment and the Plymco impoundment formed by the dams are approximately 550 feet long, and inundate approximately 1.2 acres, and 1.6 acres, respectively. They are separated by approximately 345 feet of artificially constrained stream channel, of which 150 feet is enclosed in a culvert.

Town Brook through the project reach has been extensively modified by human activity, and has historically been the power source of mills and factories. The dams no longer serve the functional purposes they were constructed for, and are falling into disrepair. They inhibit anadromous fish passage of resident species to upstream habitat and breeding areas, and pose safety hazards to downstream population if left in place without maintenance. The impoundments shows evidence of aggradation and are retaining silty and sandy sediments. Heavy sedimentation inside the slow-moving waters of the impoundments has perpetuated a transition to emergent marsh systems with low dissolved oxygen and high water temperatures. The existing impoundments have limited quality emergent marsh zones, and support only warm-water fish species such as large and smallmouth bass, chain pickerel, bluegill, pumpkinseed, and bullhead. These fish species are not found in cold-water riverine environments, which is the natural condition for this reach of Town Brook.

The Off-Billington Street Dam structure is in fair condition, and consists of an approximately 110-foot long earth embankment with a concrete and stone masonry spillway. The existing fishladder at the Off-Billington Street Dam has very limited functionality and is in poor condition. The embankment serves as an access road to the adjacent residential area. The Plymco Dam structure is in poor condition, and consists of an approximately 200-foot long earthen embankment with a concrete box spillway. Both a water service and a sewer service line run through the spillway structure. The existing fishladder is in fair condition with only minor evidence of cracking and seepage. This fishladder likely provides limited fish passage.

The project is contained within the Town Brook Historic and Archeological District, listed in the State and National Registers of Historic Places. A Reconnaissance Cultural Resources Survey was performed by Public Archeology Labs, Inc. (PAL) in 2008, and documented in the report entitled Technical Memorandum: Plymco and Off-Billington Street Partial Dam Removals and Town Brook Rehabilitation, Plymouth, Massachusetts Reconnaissance Cultural Resources Survey, appended with this submittal. Pre-Contact/Contact (Native American) Period Archaeological Sensitivity of intact belowground Native American resources at the site was determined to be low, due to extensive site modification associated with industrial and mill activities, installation of underground utilities, and sediment accumulation within the impoundments over the past 200 years. The original shorelines along the pre-dam brook channel were determined to be moderately sensitive for intact Native American Resources. However, bathymetric mapping of the impoundments does not indicate the location of the pre-dam brook channel, nor does a review of historic mapping. The post-contact archeological sensitivity of the project site is primarily related to the industrial mill land uses and built environment; significant belowground resources may also be present. Fifteen resources and/or structures listed in the National Register as contributing elements to the Town Brook NR district that could be impacted by the proposed activities were identified. Two additional resources were identified that have potential for inclusion on the National Register. Based on the findings of the Reconnaissance Cultural Resources Survey, intensive above and belowground archeological surveys were recommended to locate and identify potentially significant belowground elements associated with the historic dam and mill structures at the Plymco Dam, the Off-Billington Street Dam, and in the location of the Plymco factory building. These intensive investigations are scheduled for the spring of this year, as listed below in Section c.) project mitigation.

b.) The attached feasibility study analyzes alternatives to meet the project goals at both the Off-Billington Street and Plymco dams. The "No-Action" alternative would perpetuate the degradation of water quality and fish habitat imposed by the existing conditions. However, there are many alternatives available for providing fish passage at dams, including full and partial dam removals, roughened ramps, bypass channels, technical fishways, or a combination of these methods. Each was evaluated against the project goals. Of these, dam removal was found to provide the most efficient fish passage and the most complete restoration of riverine functions and values to their natural condition at both dam locations. This alternative provides fish passage, as well as passage of all riverine species and life stages, provides increased habitat connectivity, sediment and nutrient transport, and improved water quality in the impoundments. Through the analysis, partial dam removal was determined to provide similar benefits to full dam removal, but with decreased water quality benefits and habitat restoration. Installation of a technical fishway, bypass channel, or roughened ramp would not improve water quality within the impoundments, provide increased habitat connectivity, nor restore the original sediment and nutrient transport patterns. Off-site alternatives are not viable, as the project purpose is to restore the fish run of Town Brook in the vicinity of the two existing dams.

c.) Mitigation for the proposed project includes the following:

- Restoration of anadromous fish runs along Town Brook.
- Improvement to existing water and habitat quality through project reach.
- Provisions for continued upstream cranberry bog operations following the proposed activities.
- Intensive archeological investigations to be performed at the Plymco Dam, the Off-Billington Street Dam, and the Plymco Mill. Information gathered will be used to develop any needed strategies to avoid, minimize, or mitigate any adverse effects to historic and archaeological resources at the site.