

# ENF Environmental Notification Form

For Office Use Only Executive Office of Environmental Affairs	
EOEA No.:	<u>14343</u>
MEPA Analyst:	<u>Nick ZAVOLAS</u>
Phone:	617-626- <u>1030</u>

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: <b>Municipal Water Supply at Mill Pond Well Site</b>		
Street: <b>Mill Hill Road</b>		
Municipality: <b>Chatham</b>	Watershed: <b>Cape Cod</b>	
Universal Transverse Mercator Coordinates: <b>21B (414607 E, 4616609 N) 21D (414674 E, 4616624 N)</b>	Latitude: <b>21B 70° 01' 37.2"; 21D 70° 01' 31.8"</b> Longitude: <b>21B 41° 41' 48"; 21D 41° 41' 48.7"</b>	
Estimated commencement date: <b>Spring 2009</b>	Estimated completion date: <b>2010</b>	
Approximate cost: <b>\$ 1.6 Million</b>	Status of project design: <b>60</b> %complete	
Proponent: <b>Chatham Water Department</b>		
Street: <b>127 Old Harbor Road</b>		
Municipality: <b>Chatham</b>	State: <b>MA</b>	Zip Code: <b>02633</b>
Name of Contact Person From Whom Copies of this ENF May Be Obtained: <b>Maura Callahan</b>		
Firm/Agency: <b>Callahan Consulting Inc.</b>	Street: <b>PO Box 741</b>	
Municipality: <b>Acton</b>	State: <b>MA</b>	Zip Code: <b>01720</b>
Phone: <b>978-394-4245</b>	Fax: <b>N/A</b>	E-mail: <b>maura.callahan@comcast.net</b>

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 301 CMR 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

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): Not applicable

Are you requesting coordinated review with any other federal, state, regional, or local agency?

Yes (Specify DEP's New Source Approval and Water Management Act)  No

List Local or Federal Permits and Approvals: New Source Approval (BRP WS 19) and Water Management Act Permit Amendment (BRP WM 02)

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

- |   |                                       |  |
|---|---------------------------------------|--|
| <input type="checkbox"/> Land             | <input type="checkbox"/> Rare Species | <input type="checkbox"/> Wetlands, Waterways, & Tidelands      |
| <input checked="" type="checkbox"/> Water | <input type="checkbox"/> Wastewater   | <input type="checkbox"/> Transportation                        |
| <input type="checkbox"/> Energy           | <input type="checkbox"/> Air          | <input type="checkbox"/> Solid & Hazardous Waste               |
| <input type="checkbox"/> ACEC             | <input type="checkbox"/> Regulations  | <input type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
<b>LAND</b>				<input checked="" type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input checked="" type="checkbox"/> Water Management Act Permit <input checked="" type="checkbox"/> New Source Approval  <input type="checkbox"/> DEP or MWRA Sewer Connection/ Extension Permit <input type="checkbox"/> Other Permits (including Legislative Approvals) – Specify: _____ _____ _____ _____ _____
Total site acreage	38+	38+	38+	
New acres of land altered	0	0.357	0.357	
Acres of impervious area	0	0.024	0.024	
Square feet of new bordering vegetated wetlands alteration	0	0	0	
Square feet of new other wetland alteration	0	0	0	
Acres of new non-water dependent use of tidelands or waterways	0	0	0	
Gross square footage	0	1,060	1,060	
Number of housing units	0	0	0	
Maximum height (in feet)	0	10	10	
<b>TRANSPORTATION</b>				
Vehicle trips per day	0	1	1	
Parking spaces	0	2	2	
<b>WASTEWATER</b>				
Gallons/day (GPD) of water use	0	0	0	
GPD water withdrawal	0	1.0 MGD	1.0 MGD	
GPD wastewater generation/ treatment	0	0	0	
Length of water/sewer mains (in miles)	0	0.19	0.19	

**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 \_\_\_\_\_)  No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify \_\_\_\_\_)  No

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

Yes (Specify Adjacent to Pleasant Bay)  No The Mill Pond Well Site is **adjacent** to the Pleasant Bay ACEC.

**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.*)

The Chatham Water Department is proposing to develop a new municipal drinking water supply at the Mill Pond Well Site in northwestern Chatham. Two 12-inch test wells (TWs), 21B and 21D, were installed and tested on a large piece of town-owned property approximately 150 feet south of Mill Pond and 600 feet east of the municipal boundary with Harwich, as shown on the Locus Map and Site Plan (Attachment A).

The purpose of the proposed wells is to create flexibility and reliability in the Town's water supply system. Public drinking water supply is a public health issue. The new source will provide redundancy in case of emergencies and mechanical breakdowns and is intended to provide enhancements to water quality as well as reduce local environmental impacts from prolonged pumping of existing wells. An Alternatives Analysis is included in Attachment B.

The site is located on the U.S. Geological topographic map of the Harwich Quadrangle. TW 21B is located at 70°01'37.2" west longitude and 41°41'48" north latitude and TW 21D at 70°01'31.8" west longitude and 41°41'48.7" north latitude. The test wells are located in the Monomoy Lens, which is part of Cape Cod's Sole Source Aquifer.

Chatham is currently permitted (9P-4-22-055.01) by the State under the Water Management Act to withdraw a daily annual average of 0.47 million gallons per day (MGD) and registered (42205501) to withdraw 0.70 MGD, for a total authorized volume of 1.17 MGD. The proposed wells are intended to augment the Town's existing supply wells and Chatham will not request an increase in authorized withdrawals.

The area around Mill Pond was originally tested for water supply purposes in 1995. At the recommendation of their consultant, the Town of Chatham purchased the property and preserved it for the purpose of future water supplies, watershed protection, conservation and open space. Mill Pond is part of the Pleasant Bay Area of Critical Environmental Concern (ACEC) and thus designated by the State as an Outstanding Resource Waters (ORWs).

In February and March 2008, 12-inch diameter test wells were installed at TW 21B and TW 21D. A prolonged pumping test was conducted in July 2008 to evaluate the suitability of the site as an additional source of public water supply. The pumping test indicated that two permanent gravel-packed wells at the site could yield a combined 700 gallons per minute (gpm). Water-quality testing indicated that the water meets applicable drinking water standards. The wells will not require treatment at this time, except for corrosion control purposes.

The Cape Cod Commission reports that Mill Pond's maximum depth is 10 feet in the western lobe (nearest the well sites), and 15 feet in its eastern lobe. Earth Tech installed five shallow drive points along the southern shore of the pond. These driven points (referred to as DP-21A, B, C, D(S) and D(D) and shown on the Site Plan), along with two seepage meters, were observed throughout the two pumping tests to evaluate the potential impacts of pumping on the pond. The field data indicates that the pond is not in direct communication with the underlying aquifer. The pond bottom sediments observed were sandy cohesive muck and peat with a vertical hydraulic conductivity computed to be 0.1 to 0.2 ft/d. During the

prolonged pumping test, pond levels did not respond to pumping, while the aquifer directly beneath the pond drew down nearly 1.5 feet. Additionally, groundwater modeling completed as part of the Zone II delineation, indicated that the fine-grained materials and peat on the bottom of the pond act as a semi-confining unit. For a more in depth discussion on the potential impacts of pumping on Mill Pond, refer to Insert 1, taken from the Prolonged Pumping Test Report (Earth Tech, 2008).

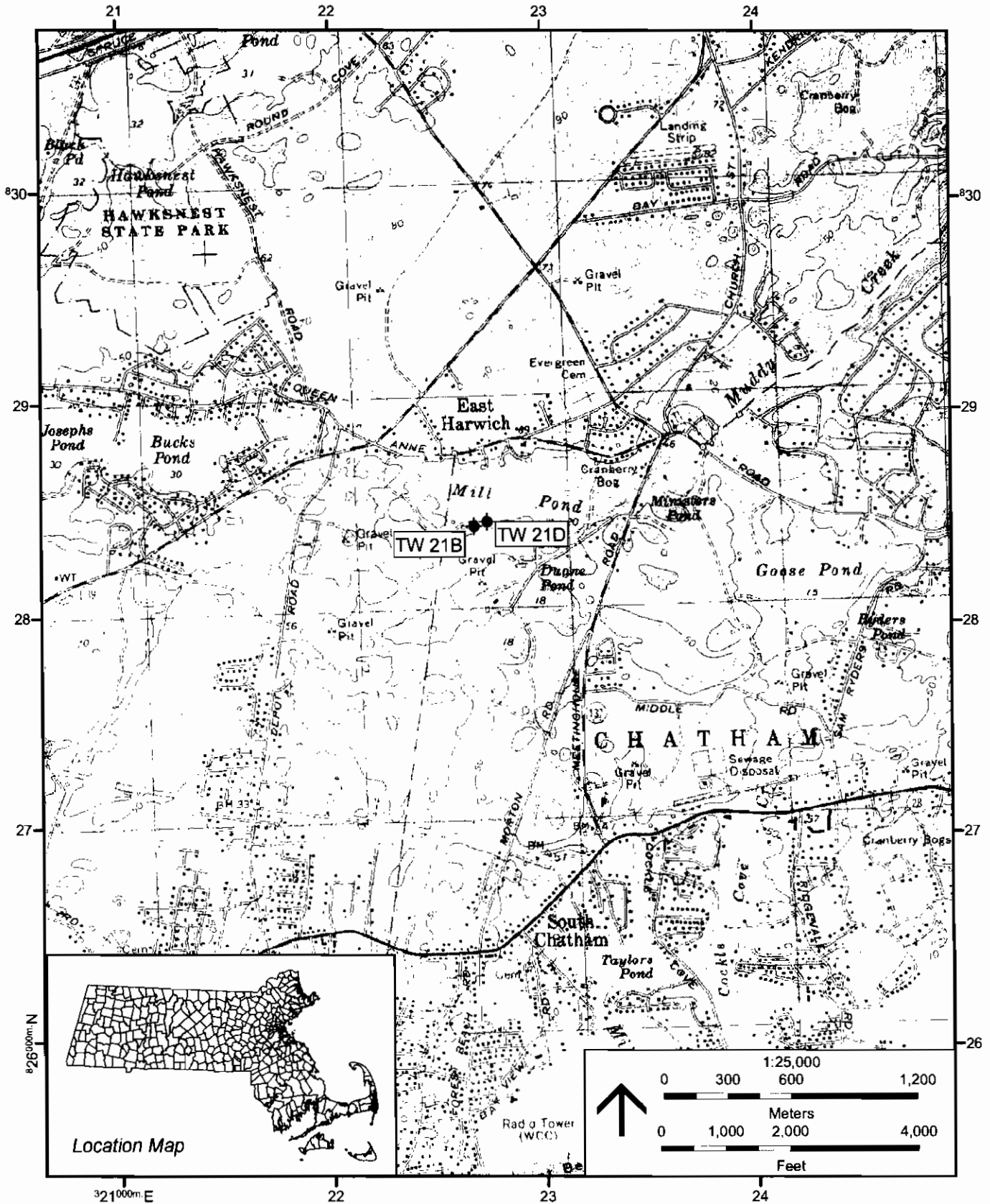
The Mill Pond wells will be operated in a rotation with eight other Town wells. In a normal day, the Mill Pond wells will be pumped for a period of 8 to 16 hours depending on the water demand. Like most wells in Chatham, these wells exhibited rapid recovery upon "shut-down". Given the tendency toward rapid recovery and the cyclical nature of pumping, under normal pumping conditions, long-term impacts to Mill Pond are expected to be minor. However, it is recommended that water levels in the pond be monitored regularly to develop a better understanding of groundwater and surface water interactions. Earth Tech prepared a long-term monitoring plan for the Town in their report.

The Town of Chatham proposes to construct two gravel-packed wells and associated pumping stations. The equipment associated with the wells will be housed in a 24 by 40 feet building at TW 21B. The building will house containment for potassium hydroxide, which will be used to adjust pH of the water before it is pumped into the distribution system. An emergency generator will be located in the station in case electric service is interrupted. A conventional propane storage tank will be installed outside the building to service this generator. A second smaller structure, approximately 10 by 10 feet, is proposed to house the well at TW 21D. Both stations will be one story structures approximately 10 feet in height.

An access road constructed of dense graded gravel will extend off Dusty Miller Road to the wells. Approximately 1,000 feet of 10 or 12-inch water main will be installed beneath the access road to connect the proposed wells to the existing distribution system. Electrical power to the site will be supplied overhead from Dusty Mill to TW 21D, from here it will be installed underground for 200 feet to reach TW 21B (refer to Proposed Site Plan in Attachment A). The access route was selected to reduce disturbance and gravel was chosen to reduce impervious surfaces and reduce run-off.

In pursuing this new supply, the Chatham Water Department has been careful to consider federal, state and local regulations, and to minimize environmental impacts. TWs 21B and 21D were placed outside wetlands and buffer zones to avoid direct impacts and minimize indirect impacts to wetlands. To meet Zone 1 restrictions, TWs 21B and 21D were situated on land controlled by the Chatham Water Department and Town of Chatham more than 400 feet from abutting properties. A Request for Site Exam and Prolonged Pumping Test Proposal was submitted to DEP's Southeast Regional Office on September 17, 2007. An Early Notice was published in the Environmental Monitor on September 14, 2007. A site exam was held on October 31, 2007. DEP approved the site for further testing in a letter dated January 4, 2008 (Attachment C). The Town filed an Abbreviated Notice of Intent with the Chatham Conservation Commission in April 2008 for the installation of observation well OW 21G which is in a 'shrub swamp' adjacent to Mill Pond. On July 2, 2008, the Conservation Commission approved the installation of OW 21G and determined that the well 'did not have a significant negative impact on the BVW or the pond' (Attachment C).

The proposed project will not result in the introduction of any pollutants into surface waters or groundwater. At all times during construction, hay bales and silt fencing will be located between the work and any nearby wetland resource area, as a means of sedimentation control and to define the limit of work. There are no hazardous particulate or soluble materials used in the installation of the well or water main. Refueling of all vehicles (except the drilling rig, which will be stationary, once erected) will take place outside of resource areas and their buffer zones. All areas temporarily disturbed by construction activities will be restored (mulched and seeded) prior to removal of the erosion control barrier. A Distribution List for this ENF is included in Attachment D.



Portion of Harwich and Chatham  
 7.5' USGS quadrangles.  
 Scanned quadrangles supplied by EOEA, MassGIS.  
 Date of quads: 1974.  
 10,000 Meter Grid Massachusetts State Plane NAD83.

**Legend**

◆ Proposed Well Site

**Figure 1**  
**Locus**  
**Proposed Mill Pond Well Site**  
**Chatham, MA**