

# ENF Environmental Notification Form

*For Office Use Only*  
*Executive Office of Environmental Affairs*

EOEA No.: 13583  
MEPA Analyst: Beriony Angus  
Phone: 617-626-1029

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 Supply Well at Test Well Site 10-04</b>		
Street: <b>Old Chatham Road</b>		
Municipality: <b>Dennis</b>	Watershed: <b>Cape Cod</b>	
Universal Tranverse Mercator Coordinates: <b>x=405177.72; y=4617836.0</b>	Latitude: <b>41°42'24"</b> Longitude: <b>70°08'23"</b>	
Estimated commencement date: <b>Fall 2005</b>	Estimated completion date: <b>Summer 2006</b>	
Approximate cost: <b>\$500,000</b>	Status of project design: <b>25%complete</b>	
Proponent: <b>Dennis Water District</b>		
Street: <b>80 Old Bass River Road</b>		
Municipality: <b>South Dennis</b>	State: <b>MA</b>	Zip Code: <b>02660</b>
Name of Contact Person From Whom Copies of this ENF May Be Obtained: <b>Maura Callahan</b>		
Firm/Agency: <b>Earth Tech</b>	Street: <b>196 Baker Avenue</b>	
Municipality: <b>Concord</b>	State: <b>MA</b>	Zip Code: <b>01742</b>
Phone: <b>(978) 371-4008</b>	Fax: <b>(978) 371-2468</b>	E-mail: <b>Maura.Callahan@earthtech.com</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 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

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 New Source Approval and Water Management**)  No

List Local or Federal Permits and Approvals:  
**New Source Approval (BRP WS 19),**  
**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 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 <i>(including Legislative Approvals) – Specify:</i>
Total site acreage	55 acres	0	55 acres	
New acres of land altered	0	0.2 acres	0.2 acres	
Acres of impervious area	0	0	0	
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	
<b>STRUCTURES</b>				
Gross square footage	0	200 sq. ft.	200 sq. ft.	
Number of housing units	0	0	0	
Maximum height (in feet)	0	20	20	
<b>TRANSPORTATION</b>				
Vehicle trips per day	1	0	1	
Parking spaces	1	0	1	
<b>WATER/WASTEWATER</b>				
Gallons/day (GPD) of water use	0	0	0	
GPD water withdrawal	0	1.0 MGD (maximum)	1.0 MGD (maximum)	
GPD wastewater generation/ treatment	0	0	0	
Length of water/sewer mains (in miles)	0	0.11 mile	0.11 mile	

**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 \_\_\_\_\_ )  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.*)

The Dennis Water District is proposing to construct a municipal water supply well at Test Well Site 10-04. A pitless adaptor and vault will be built to house the pump and cover the well. The adaptor allows a submersible pump to sit in the well casing and connect to a water main below the ground surface. Approximately 2-feet of well casing and a well cover will remain above ground. Six hundred linear feet of 8-inch diameter water main will connect the new gravel-packed well to an existing corrosion control facility located at the District's Well No. 12. A locus map and surveyed site plan are included in Appendix A.

#### Purpose

The proposed well will add capacity, flexibility and reliability to the District's water supply system. Proposed Well No. 24 (at Site 10-04) will ease heavy seasonal pumping demands on existing supply wells and spread potential environmental impacts out over the aquifer. The District aims to improve water quality by decreasing use of older wells and reducing pumping times which tend to increase iron and/or manganese concentrations. An additional source of supply will allow the District to reduce pumping from individual wells, preserve water quality and reduce local environmental impacts due to excessive drawdown.

#### Site Location and Description

Test Well Site 10-04 is located on the USGS topographic Dennis Quadrangle at latitude 70°08'23" and 41°42'24" on a 55-acre parcel owned by the Water District in Dennis, Massachusetts. The well site is located 510 feet north of Old Chatham Road, 4,000 feet east of Airline Road and 1,500 feet west of the Dennis/Brewster town line. The Water District's Pumping Stations No. 10 and 12 are located approximately 1,950 feet to the north and 600 feet to the east, respectively.

The topography of the site is relatively flat with some low-lying areas. The land surrounding the proposed well site is undeveloped, forested land. A small low-lying area that collects surface water is located approximately 120 feet to the northeast of the site. The water table in the vicinity is about 16 feet below ground surface, so it appears that this low-lying area is perched with no connection to the water table. White Pond is located 2,000 to the southeast of the proposed well site. The low lying area and the pond were monitored during the prolonged pumping test at the proposed well site and results are discussed in the Zone II Delineation and New Source Final Report. The report concluded that because the well is being constructed within a confined aquifer, no impact is anticipated from pumping.

#### Regulatory Background

In pursuing this new supply, the Water Department has been careful to consider state, local and federal regulations, and to minimize environmental impacts. TW Site 10-04 was placed outside wetlands to avoid direct impacts and minimize indirect impacts to wetlands. Access to the site will occur along an existing access road, 600 hundred feet of additional road will be constructed to reach the new well site for maintenance. To meet Zone I restrictions, TW Site 10-04 was situated more than 400 feet from abutting properties.

The Request for Site Exam and Prolonged Pumping Test Proposal for the site were submitted to the Department of Environmental Protection (DEP) on October 19, 2004. The site was approved for further testing by the DEP in a letter dated June 4, 2005. A prolonged pumping test was conducted in March 2005 to evaluate the well yield, water quality, potential well interference and impacts to sensitive receptors. The Prolonged Pumping Test Report was submitted to DEP in July 2005.

Currently, the Dennis Water District is registered to withdraw 766.5 million gallons per year (MGY) and permitted to withdraw 365 MGY for a total authorized withdrawal of 1131.5 MGY of groundwater from the Cape Cod Basin. System wide demand is not projected to exceed this authorized withdrawal volume, thus no increase in withdrawal volumes are requested.

#### Alternatives

The District has been exploring for additional water supplies in Dennis since the 1940s. To date, over 150 test wells have been drilled throughout town. The most recent Source Alternatives Study completed in 2000 identified several potential sites for source development. In 2003, the District completed permitting and construction of wells at two of these sites, Wells 21 and 23. Test Well Site 10-04 was also identified in the study as a suitable supply source. A comprehensive alternatives analysis was completed for the Site Screening Analysis as part of the New Source Approval Process.

#### Well Installation

A gravel-packed well is proposed in the location of Test Well 10-04 (proposed Well No. 23). The well will consist of a 24-inch diameter steel well casing and screen installed to depth of 145 feet. The well will be installed using a conventional truck- or trailer-mounted "pull down" drill rig. A small excavator, dump truck, flatbed pipe truck and pickup trucks will also be onsite from time to time during well construction.

#### Pump Station

The proposed well will be designed with a pitless adapter. The adapter allows a submersible pump to sit in the well casing and connect to a water main below the ground surface. Approximately 2-feet of well casing and a well cover will remain above ground. All pumping, metering and treatment equipment will be housed in the existing water treatment facility located at existing Well No. 12 located 600 feet from the site.

#### Water Main Installation

In order to connect the new well to the existing corrosion control facility and water distribution system, the District will install 600 linear feet of 8-inch diameter water main. The main will extend from the well site eastward to join the existing treatment facility located at Well No. 12. The work will include trenching to a depth of 7 to 8 feet and backfilling after the installation is complete. An excavator will be utilized to complete this work. A direct route was selected with the goal of minimizing disturbance to the land surface and vegetation.

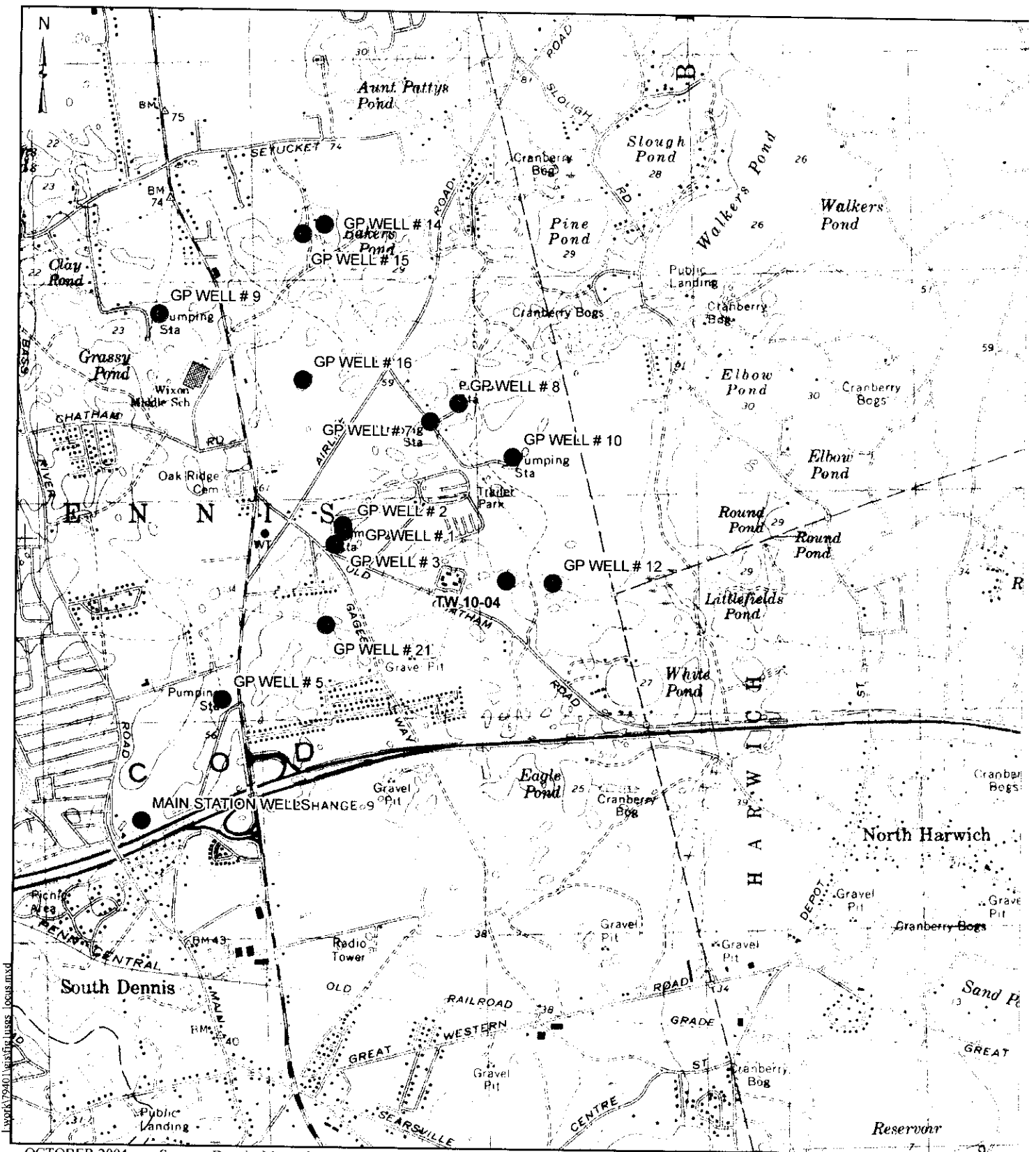
#### Access Road Construction

Access to the site will be made along an existing road. Approximately 600 additional feet of road will be constructed to connect the well site to the corrosion control facility at Well No. 12. The construction of this road will not require the clearing of any trees along the alignment, only minor regarding is anticipated. The road will be approximately 14-foot wide to accommodate water department vehicles. The water main will be located beneath the road. A direct route was selected to connect the proposed well to the existing water quality facility to minimize disturbance to the land surface and vegetation.

#### Proposed Mitigation Measures

An examination of the most recent Massachusetts Natural Heritage Atlas (effective June 1, 2003) indicates that there are no certified vernal pools or areas designated as Priority Habitats of Rare Species under the Massachusetts Endangered Species Act in the vicinity of Test Well Site 10-04. The project has been designed to avoid any work within any wetland resource or resource buffer zone. The direct route was selected for the connecting road and water main route with the goal of minimizing disturbance to the land surface and vegetation.

At all times during construction, hay bales and silt fencing will be located between the work and any wetland resource area, as a means of sediment control and to define the limit of work. Care will be taken during construction to minimize all disturbances to the buffer zones of wetlands. 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 reseeded) prior to the removal of the sedimentation and erosion control barrier.



OCTOBER 2004 Source: Dennis, Massachusetts USGS quadrangle scanned by MassGIS

0 1,000 2,000 Feet



- Test Well
- Public Water Supply Well

LOCUS MAP  
SITE 10-04  
DENNIS, MASSACHUSETTS



A Tyco Infrastructure Services Company