

ENF Environmental Notification Form

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| <i>For Office Use Only</i> Executive Office of Environmental Affairs | |
| EOEA No.: | <u>13750</u> |
| MEPA Analyst: | <u>Bill GAGE</u> |
| Phone: | <u>617-626-1025</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: Test Well Site 44-03 | | |
| Street: Off Old Post Road | | |
| Municipality: Marstons Mills <u>Marstable</u> | Watershed: Cape Cod | |
| Universal Transverse Mercator Coordinates: 414320E, 4615037N | Latitude: 41°39'28" Longitude: 70°26'14" | |
| Estimated commencement: Summer 2006 | Estimated completion date: Fall 2007 | |
| Approximate cost: \$1,300,000 | Status of project design: | 50 %complete |
| Proponent: Centerville-Osterville-Marstons Mills Water District | | |
| Street: 1138 Main Street, P.O. Box 369 | | |
| Municipality: Osterville | State: MA | Zip Code: 02655 |
| Name of Contact Person From Whom Copies of this ENF May Be Obtained: Maura Callahan | | |
| Firm/Agency: Watershed Hydrogeologic | Street: 600 Station Road | |
| Municipality: Amherst | State: MA | Zip Code: 01002 |
| Phone: (978) 394-4245 | Fax: | E-mail: maura.callahan@comcast.net |

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 New Source Approval, 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):

- 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 | State Permits & Approvals |
|--|----------|----------|----------|--|
| LAND | | | | <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 (including Legislative Approvals) – Specify: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> |
| Total site acreage | >250 | 0 | >250 | |
| New acres of land altered | 0 | 0.01 | 0.01 | |
| Acres of impervious area | 0 | 0.01 | 0.01 | |
| 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 | |
| STRUCTURES | | | | |
| Gross square footage | 0 | 600 | 600 | |
| Number of housing units | 0 | 0 | 0 | |
| Maximum height (in feet) | 0 | 10 | 10 | |
| TRANSPORTATION | | | | |
| Vehicle trips per day | 0 | 1 | 1 | |
| Parking spaces | 0 | 1 | 1 | |
| WASTEWATER | | | | |
| Gallons/day (GPD) of water use | 0 | 0 | 0 | |
| GPD water withdrawal | 0 | 0.98 MGD | 0.98 MGD | |
| GPD wastewater generation/ treatment | 0 | 0 | 0 | |
| Length of water/sewer mains (in miles) | 0 | 0.14 | 0.14 | |

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 Centerville-Osterville Marstons Mills Fire District's Water Department (District) is proposing to construct a municipal supply well at Test Well Site 44-03. Site 44-03 is located on a large piece of District-owned land in western Barnstable known as the "Hayden Well Field". The site is located on USGS topographic map of the Cotuit Quadrangle at 41°39'28" north latitude and 70°26'14" west longitude approximately 1,300 feet south of Marstons Mills Road and 1,800 feet northwest of the District's supply well at Pumping Station 22. TW Site 44-03 is near the base of a kettle hole approximately 400 feet east of Patty's Pond. With the exception of an abandoned cranberry bog 200 feet west of TW 44-03, Zone I is entirely forested. A Locus Map and Site Plan are included in Appendix A.

The purpose of the proposed well at Site 44-03 is five-fold: 1) to alleviate existing water-supply deficiencies, 2) to create flexibility and reliability in the distribution system, 3) to improve fire protection, 4) to meet future demands both in the long- and short-term, and 5) to take pressure off wells that have experienced a deterioration in water quality, either due to iron, manganese or nitrate. A detailed Alternative Analysis is included in Appendix B of this filing.

The District is currently authorized by the State under the Water Management Act to withdraw a total of 3.57 million gallons per day (MGD) on average over a calendar year. The new well is intended to augment the Town's existing supply wells and **will not** result in an overall increase in water withdrawals.

In pursuing this new supply, the Water Department has been careful to consider state, local and federal regulations, and to minimize environmental impacts. Well Site 44-03 was placed outside wetlands to avoid direct impacts and minimize indirect impacts to wetlands. To meet Zone I restrictions, TW 44-03 was situated on District land more than 400 feet from abutting properties. A Request for Site Exam and Prolonged Pumping Test Proposal for TW 44-03 were submitted to DEP's Southeast Regional Office in August 2004. A Site Exam was held on September 22, 2004. DEP approved the site for further testing in a letter of October 19, 2004 and the Pumping Test Proposal in a letter dated November 9, 2004. No local permits were required.

A prolonged pumping test was conducted in October 2005 to evaluate the suitability of TW Site 44-03 as a new water supply. The Prolonged Pumping Test Report was submitted to DEP in March 2006. The pumping test indicates that a permanent gravel-packed well at TW 44-03 could yield 686 gallons per minute (gpm). Water-quality testing indicates that the water meets applicable drinking water standards for those parameters tested. The well will not require treatment at the present time, except for corrosion control purposes.

-Project Description continued on next page-

A one-story pump station, approximately 10 feet in height, is proposed to house pumping equipment, meters, valves, and water-quality monitoring equipment. The building will house containment for potassium hydroxide, which will be used to adjust the pH of the water before it is pumped into the water 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. At present the final design has not been completed but it is anticipated that the foot print of the building will be approximately 20 by 30 feet.

An existing dirt access road extending from Old Post Road to Winslow Bog Road will be enhanced with gravel to provide access and power to the well site. The access route was selected to minimize disturbance and gravel was chosen to reduce impervious surfaces and reduce run-off. The District will install approximately 750 feet of water main in the ground to connect the proposed well to the existing distribution system at Sassafras Lane. Please refer to the Proposed Project Site Plan located in Appendix A for the proposed routes.

An abandoned cranberry bog is situated approximately 200 feet to the west of the TW 44-03. Peat is present in the near-surface soils beneath the bog ranging from about 1.5 feet thick on the wetland edge to more than 8 feet thick. To the west of the bog lies Patty's Pond about 450 feet from TW 44-03. Patty's Pond is roughly 7 acres in area. As part of the prolonged pumping test, shallow drive points were installed in the aquifer beneath the bog and pond and monitored for drawdown. Three shallow well points driven to a depth of six to nine feet below the ground surface at the edge of the old cranberry bog indicated the groundwater table was one to two feet below the ground surface. During the test, the groundwater beneath the bog drew down between 0.5 and 0.73 feet.

Two shallow well points and were driven into the bottom of Patty's Pond along the eastern shore. The data collected prior to pumping indicated pond recharge to the groundwater. At the end of the test (the test well was pumped continuously at 343 gpm for 5 days), the data implied that pumping produced 0.11-foot of drawdown beneath the pond. There were no measurable impacts on pond surface water levels during the pumping test. A more detailed discussion on the operation and results of the pumping test is included in the Prolonged Pumping Test Report submitted to DEP for review in March 2006 (Earth Tech).

The report inferred that although a permanent well at this site will be potentially pumped at a higher rate, it will have an imperceptible impact on groundwater beneath the pond. The well will be pumped in cycles, several hours on and several hours off. After each pumping cycle, groundwater levels will recover. For example, if the well is pumped 8 hours on one day and not pumped the remaining 16 hours, water levels would be expected to fully recover on that day. In addition, long-term records of groundwater levels in this area of Cape Cod show fluctuates as great as nine feet.

A review of the Priority Habitats Atlas of the Natural Heritage and Endangered Species Program indicate that no rare and endangered species have been identified in the area of the proposed well site. The project will not result in the introduction of any pollutants into surface water or groundwater. There are no hazardous particulate or soluble materials used in the installation of the well or water main. 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.. 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.