

ENF Notification Form

<i>For Office Use Only</i> Executive Office of Environmental Affairs	
EOEA No.:	<u>13878</u>
MEPA Analyst:	<u>Anne Canaday</u>
Phone:	617-626- <u>1035</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: Assabet Well No.3 and Water Treatment Plant		
Street: High Street		
Municipality: Acton	Watershed: Assabet River Basin	
Universal Transverse Mercator Coordinates: 19 03 00 273 E 47 02 004 N	Latitude: 42° 26' 48" N	Longitude: 71° 25' 43" W
Estimated commencement date: April 2008	Estimated completion date: August 2009	
Approximate cost: \$5,000,000	Status of project design: 1	%complete
Proponent: Acton Water District		
Street: 693 Massachusetts Avenue, PO Box 953		
Municipality: Acton	State: MA	Zip Code: 01720
Name of Contact Person From Whom Copies of this ENF May Be Obtained: David G. Harwood		
Firm/Agency: Stantec	Street: 5 Lan Drive	
Municipality: Westford	State: MA	Zip Code: 01886
Phone: 978-692-1913	Fax: 978-692-4578	E-mail: dharwood@stantec.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 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): **There will be no financial assistance or land transfer from the Commonwealth for this project.**

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

Yes (Specify: **MA DEP and MA DEM**) No

List Local or Federal Permits and Approvals: **New Source Approval, Water Management Act Permit Amendment, Order of Conditions, NPDES General Permit for Stormwater Discharges from Construction Activities and MA DEP Approval to Construct a Facility to Treat Greater than 1 MGD**

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
LAND				<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 checked="" type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i> NPDES General Permit to Discharge Stormwater from Construction Activities MA DEP Approval to Construct a Facility to Treat Greater than 1 MGD
Total site acreage	72			
New acres of land altered		1		
Acres of impervious area	0.09	0.07	0.16	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		0		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage	3770	3050	6820	
Number of housing units	0	0	0	
Maximum height (in feet)	20	0	20	
TRANSPORTATION				
Vehicle trips per day	1	0	1	
Parking spaces	2	0	2	
WATER/WASTEWATER				
Gallons/day (GPD) of water use	0	0	0	
GPD water withdrawal	1,360,000	140,000	1,500,000	
GPD wastewater generation/ treatment	0	0	0	
Length of water/sewer mains (in miles)	0.4	0.2	0.6	

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 **In accordance with MassGIS NHESP data layers (2005) the project site is not located within Priority Habitat or Estimated Habitat (Figure 2).**

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 **(See Appendix 2 for agency**

correspondence)

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.*)

In order to plan for future water demand, to improve the quality of the water to its customers, and to add operational flexibility, the Acton Water District (District) is proposing the reactivation of an existing well and the replacement /upgrade of an existing Water Treatment Plant (WTP) at the Assabet well site in Acton, Massachusetts. The project exceeds the MEPA review thresholds at 310 CMR 11.03 (4) (b) (1) new withdrawal or expansion in withdrawal of 100,000 GPD from a water source that requires new construction, and 11.03 (4) (b) (4) construction of a new drinking water treatment plant with a capacity of 1 MGD or more. The Water Management Act requires a Water Withdrawal Permit Amendment to add the source to the District's existing permit. There will be no overall increase in permitted water withdrawal as a result of this project.

The project site is located on District property which was once part of the W.R. Grace Superfund site. According to the September 2005 Record of Decision (ROD) by the EPA, the W.R. Grace site was the former location of the American Cyanamid Company and the Dewey & Almy Chemical Company. These companies produced sealant products, latex products, plasticizers, resins, and other products. W.R. Grace purchased the properties and operations in 1954 and produced materials used to make concrete, container sealing compounds, latex products and battery separators. Effluent wastes from the manufacturing processes were disposed of into several unlined lagoons and solid and hazardous wastes were buried in or placed onto an on-site industrial landfill and several other disposal areas. Water supply wells owned and operated by the District are located in two areas near the Grace property. The Assabet well field, consisting of Assabet 1 and Assabet 2, is located to the south of the Grace property (Figure 1). The School Street wellfield, comprised of the Christofferson and Lawsbrook gravel-packed wells and the Scribner pumping station which now pumps from a group of gravel-packed wells, is located approximately 3,700 feet northeast of the Grace property. Organic contaminants were first found in the Assabet 1 and Assabet 2 wells in 1978 and in the Christofferson, Lawsbrook, and Scribner wells in 1980. Specifically, sampling of Assabet 1 and 2 by the Town of Acton in 1978 indicated that these two municipal wells contained detectable concentrations of 1,1-dichloroethene or vinylidene chloride (1,1 DCE or VDC). In recent years, VDC concentrations in the Assabet 1, Assabet 2, and Christofferson wells have been below Maximum Contaminant Levels (MCLs), while data from the Lawbrook and Scribner wells have shown some VDC concentrations above the MCL. Ground water from all of the District's water supply wells is currently being treated by air stripping for VOC removal before being pumped into the distribution system.

During manufacturing activities at the site, groundwater from an on-site production well, WRG-3 was utilized as part of the manufacturing process. As part of the 1987 settlement between W.R. Grace and the District, ownership of well WRG-3 and its surrounding area was transferred to the District. The District is proposing reactivation of this well, to be renamed Assabet 3, and the construction of a replacement WTP to treat water from this well, and the Assabet 1 and Assabet 2 wells.

As mitigation for the groundwater contamination to the Assabet wells, the Assabet River, Fort Pond Brook and various other water bodies, an Aquifer Restoration System (ARS) was installed and operated beginning in 1985. The system pumps

contaminated groundwater and then removes VOC contaminants via air stripping/volatilization. The ARS was also designed to accelerate the removal of contaminants from groundwater, and thus return the aquifer to a fully usable condition. All treated groundwater is discharged to Sinking Pond. In accordance with the Amended Monitoring Plan (CDM, 1996) the discharge to Sinking Pond creates a localized groundwater flow barrier that diverts contaminated groundwater away from the Assabet wells. In addition, surface water levels in Muskrat and Turtle Ponds are maintained at equal elevations to reduce the horizontal hydraulic gradient in groundwater beneath the ponds, thereby helping to shield the Assabet wells from contaminated groundwater that is east of the two ponds. The treatment system effectiveness is evaluated through the collection and analysis of water samples from the influent and effluent stream of the air-stripping tower, and surface water samples from the inlet to Sinking Pond. Samples are collected quarterly. The air-stripping tower influent and effluent samples are analyzed for VOCs and dissolved metals. Samples from the inlet to Sinking Pond are analyzed for dissolved metals, and samples from Sinking Pond are analyzed for color and turbidity. In 2003, the total VOC concentration in the influent to the main air stripping tower was less than 50 ppb. Since September 1993, with the exception of two samples in 2002, the total VOC concentration in the influent to the air-stripping tower has been less than 100 ppb. Since July 1988, the VDC concentration in the air stripper influent has been less than 50 ppb. In all samples collected in 2003, dissolved iron concentrations at the inlet to Sinking Pond were greater than the Amended Monitoring Plan limit of 0.3 mg/L. In accordance with the ROD, water in the vicinity of WRG-3 no longer shows elevated levels of groundwater contaminants and the modeling efforts for WRG-3 that were performed by W.R. Grace in response to the District's request are described in the ROD. Under the selected remedy, none of the former source areas, nor any plumes of contaminated groundwater are within the capture zone of WRG-3 when it is pumped at the District's proposed rate of 0.5 MGD.

The 24" x 18" gravel-packed, Assabet Well No. 3 (WRG-3) was originally installed in September of 1965 and a pump test was completed on the well in October of 1965. During the original pumping test the well was pumped at approximately 505 gpm. The future proposed yield from this site by the District is 350 gpm. In 1989 the Water Management Act Division of DEP registered W.R. Grace to withdraw 0.58 MGD from its Acton location. This registered withdrawal includes the water withdrawn from all three W.R. Grace gravel-packed wells. The Assabet Well No. 3 site is located in the "Zone II" area of the Water Resource Protection Overlay. This area was delineated as part of the 1989 "Municipal Aquifer Study" by Goldberg-Zoino and Associates, Inc. This Zone II area is a combined Zone II area for both the District's Wells and the withdrawal from the Grace site. The pumping rates used for this delineation are as follows: Assabet 1: 0.5 MGD; Assabet 2: 0.5 MGD; Assabet 3 (WRG-3): 0.43 MGD; and ARS, 0.6826 MGD.

Another prolonged pumping test will be conducted in accordance with DEP New Source Approval regulations for the proposed Assabet 3 in the winter of 2006/2007. DEP approval of the pumping test will be required for reactivation of the gravel-packed production well at an appropriate yield. The Water Management Act requires a Water Withdrawal Permit Amendment to add this withdrawal point to the District's existing permit. There will be no increase in water withdrawal as a result of this project, only an additional source of withdrawal for the District. Therefore, there should be no new or increased environmental impact as a result of the withdrawal.

As shown on the enclosed plan, the reactivation of the well and the construction of the replacement of the existing water treatment plant will require the demolition of the existing WRG-3 pump station, improvement of the existing gravel access road and chain link fence; the construction of a 100' x 50' WTP, and the installation of associated utilities to connect the wells to the WTP and the treated water to the existing distribution system. The existing treatment facility will be demolished.

There are no identified off-site alternatives associated with this project. This site has proven favorable hydrogeologic conditions, and an off-site well alternative is considered impractical for this project. The current use of groundwater at the site and surrounding area is as a public drinking water supply. The aquifer underlying the site is classified as GE-1 under DEP regulations because portions of it are currently used as a drinking water supply and the remainder of it is considered a Potential Drinking Water Supply Area. Only 1 acre of the 72 acre site will be disturbed as it is the goal of public drinking water supplies to leave areas surrounding wells as natural as possible.

In summary, the Assabet 3 well is an existing withdrawal that will be reactivated as a public water supply after completing the DEP New Source Approval requirements. More than 20 years of active remediation and passive natural attenuation has essentially eliminated groundwater contamination within the capture zone of the proposed withdrawal. Treatment of the water before it enters the distribution system is proposed only as a precautionary measure. The project will not result in an increase in permitted water withdrawal and will only improve the quality and reliability of safe drinking water for the Town of Acton.