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.: 14106
MEPA Analyst: Briony 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: *Sutton Wellfield Water Treatment Plant*		
Street: *Mendon Road*		
Municipality: *Sutton*	Watershed: *Blackstone*	
Universal Tranverse Mercator Coordinates: *Zone 19N X: 275818.6; Y: 4666611*	Latitude: *42° 7' 10.35" N* Longitude: *71° 43' 16.39" W*	
Estimated commencement date: *May 2008*	Estimated completion date: *September 2009*	
Approximate cost: *$5,000,000*	Status of project design: *30* %comple	
Proponent: *Whitinsville Water Company*		
Street: *44 Lake Street, P.O. Box 188*		
Municipality: *Whitinsville*	State: *MA*	Zip Code: *01588*
Name of Contact Person From Whom Copies of this ENF May Be Obtained: *James Petras*		
Firm/Agency: *Metcalf & Eddy*	Street: *701 Edgewater Drive*	
Municipality: *Wakefield*	State: *MA*	Zip Code: *01880*
Email: *james.petras@m-e.aecom.com*	Phone: *781-224-6012*	Fax: *781-224-6546*

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): *None.*

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

List Local or Federal Permits and Approvals:
Sutton Conservation Commission – Order of Conditions (MA Wetlands Protection Act)
Sutton Planning Board – Site Plan Review / Special Permit Review

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	*56.2*		
New acres of land altered		*1.6*	
Acres of impervious area	*0.47*	*+0.5*	*0.97*
Square feet of new bordering vegetated wetlands alteration		*0*	
Square feet of new other wetland alteration		*800*	
Acres of new non-water dependent use of tidelands or waterways		*0*	
STRUCTURES			
Gross square footage	*940*	*+3,300*	*4,240*
Number of housing units	*0*	*0*	*0*
Maximum height (in feet)	*10*	*25*	*25*
TRANSPORTATION			
Vehicle trips per day	*2*	*0*	*2*
Parking spaces	*1*	*+4*	*5*
WATER/WASTEWATER			
Gallons/day (GPD) of water use	*0*	*+40*	*40*
GPD water withdrawal	***1,000,000***	*0*	***1,000,000***
GPD wastewater generation/ treatment	*0*	*+40*	*40*
Length of water/sewer mains (in miles)	*0.07*	*+0.12*	*0.19*

State Permits & Approvals

- ☒ Order of Conditions
- ☐ Superseding 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:

MassDEP – Permit to Construct Treatment Facility (BRP WS 24)

MassDEP – Title 5 Permitting – Approval of a Tight Tank (BRP WP 64a)

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 Whitinsville Water Company (WWC) proposes to construct a new water treatment plant (WTP) near its Sutton Wellfield, located off Mendon Road in the town of Sutton.

The WWC serves a population of approximately 14,000 in Northbridge and approximately 1,100 additional customers in parts of Sutton. The water supply is classified as a groundwater supply which depends on a series of five reservoirs to recharge the groundwater near the WWC's two tubular wellfields, located adjacent to the reservoirs: Sutton Wellfield (along Mendon Road) and Whitin Wellfield (on the north shore of Meadow Pond). The Sutton Wellfield generally produces water of excellent quality; water from the Whitin Wellfield is considered to be somewhat lower quality because of naturally occurring iron and manganese concentrations.

Based on evaluations (microscopic particulate analyses) conducted in 2005, MassDEP determined that the groundwater extracted from the Sutton Wellfield is under the influence of surface water and therefore at risk of waterborne diseases, per the Massachusetts Drinking Water Regulations (310 CMR 22.00 et seq.). While the Whitin Wellfield is also recharged via the reservoirs, subsequent evaluations of the Whitin Wellfield have concluded that this influence is not strong enough to warrant filtration. In June 2006, MassDEP issued an Administrative Consent Order (ACO) mandating that water from the Sutton Wellfield be brought into compliance with the Surface Water Treatment Rule (SWTR), thereby requiring that a treatment plant be constructed and operational by September 2009.

Existing Conditions

The Sutton Wellfield consists of a series of driven wells (55 wells of 2.5" diameter and 4 wells of 3" diameter) interconnected by a suction header to a vacuum priming system located in a pump station, where two constant speed centrifugal pumps (one standby) lift the well water approximately 190 feet to the WWC's storage and distribution system. At the pump station, sodium hypochlorite and orthophosphate are injected for disinfection and corrosion control; potassium hydroxide is added for pH adjustment. The pump station is accessed via an approximately 1,000 foot long paved access road off Mendon Road.

Proposed Conditions

The new WTP will be constructed 500 feet to the north of the existing pump station within a partially cleared area surrounded by woodland. Approximately 500 linear feet of raw water main (10" diameter) will be installed to transport raw water to the WTP, and a parallel line will transport finished water from the WTP to a connection point near the existing pump station. Correspondingly, approximately 400 linear feet of new pavement will be placed, to extend the all-weather road surface, which currently ends just beyond the existing pump station, to the WTP. Approximately 600 linear feet of overhead electric lines will be installed along the access road, to supply power to the WTP. No work is proposed on/within the tubular wellfield itself.

The WTP will have a production capacity of 1.08 million gallons per day, thereby requiring MEPA review pursuant to 301 CMR 11.03(4)(b)(4). The WTP will comprise a single-story pre-engineered metal building (approximately 60' x 55'), housing a multi-cell, pre-packaged horizontal pressure filter; storage and feed equipment for coagulant aid, sodium hypochlorite, potassium hydroxide, and polyphosphate; an electrical room; a combined lab, control, records room; unisex bathroom; mechanical room; high lift finished water pumps; backwash pumps, and blowers. The

chlorine contact tank/clearwell will be located under the process area and form part of the building foundation. Solids from process wastes will be separated in a clarifier constructed adjacent to the WTP. Solids will be pumped to two sludge drying beds, approximately 40' x 70', for drying prior to disposal by landfill. Supernatant from the clarifier will be recycled through the WTP.

Additional improvements are proposed for the pump station; however, these are interior modifications, such as removal of existing pumps, engine, fuel tank, and electrical equipment, as well as chemical storage/feed equipment; and installation of new variable frequency drive (VFD) centrifugal pumps, each sized to pump raw water to meet pressure filter head requirements over a flow range of approximately 300 to 750 gallons per minute (gpm).

The new WTP is expected to be constructed without interference to the existing pump station operation. Once constructed, the WTP will operate automatically, with manual overrides available on all control functions. During emergencies, both the WTP and pump station would be powered by portable engine generators, if necessary. It is intended that the WTP be unmanned except for daily system checks and process adjustments. Backwash frequency will be either automatic (pressure differential, turbidity), time based, or manually activated.

Process wastes will consist primarily of spent backwash/filter-to-waste water and analyzer drain water. These streams will be recycled through the treatment process after solids are settled out in the clarifier. The clarification system will be designed to operate as a batch system allowing complete backwash volume to settle for several hours before pumping the supernatant back into the raw water inlet to the plant. Solids from the bottom of the clarifier will be pumped to one of two sludge drying beds, which have each been sized to accommodate one year's production of solids. Dried solids will be removed from alternate beds annually.

Alternatives Considered

A number of alternatives have been considered as the concept design for the WTP has developed. These alternatives span a variety of issues including treatment technology, tree/wetland impacts, and waste disposal.

Treatment Technology. The WWC assessed a number of potential treatment options, including UV disinfection in conjunction with a filtration waiver, membrane filtration, and pressure filtration. Of these alternatives, pressure filtration was considered to be the most cost-effective approach. As required by the ACO, the WWC conducted a pilot study to evaluate the performance of various filter media for treating raw water from the Sutton Wellfield. Of the media tested, the dual media (sand and anthracite) was considered the most economical and performed satisfactorily at loading rates up to and exceeding the WWC operational requirements. Thus, the selected treatment technology is dual media, pressure filtration.

Tree Clearing. Construction of the WTP and associated sludge drying beds will require some tree clearing. The location selected for the WTP represents the only sizable cleared or partially cleared area within reasonable distance of the raw water source, as the majority of the surrounding land cover is upland woodlot, wetland, or surface water. Consideration was given to reducing the amount of tree clearing necessary by possibly shifting the site further north; however, geotechnical investigations noted that the northern portion of the existing clearing consists primarily of unstable fill materials, which would not be suitable foundation for the WTP. The selected footprint minimizes the amount of tree clearing to the extent practicable, with respect to the requirements to ensure suitable geotechnical/structural foundation for the proposed WTP.

Wetlands. The WTP and associated sludge drying beds have been sited to avoid direct wetland impacts. Bordering Vegetated Wetlands (BVW) are located approximately 120 feet south and east of the proposed sludge drying beds. A separate BVW is located more than 200 feet north of the WTP itself. However, the extension of the access road and the raw/finished water pipes will cross an intermittent stream (i.e. the emergency spillway from Reservoir 4) located between the existing pump station and the proposed WTP. Presently, five side-by-side culverts (4 plastic, 1 RCP) convey the emergency spillway flows beneath an existing dirt road. The arrangement of these culverts makes excavation and installation of the raw/finished water pipes within the existing road alignment difficult. Thus, the WWC proposes to install the raw/finished water pipes beneath the bed of intermittent stream, approximately 20 feet downstream of the culverts' outlet. This excavation would be conducted when there is no streamflow in the channel to minimize the risk of erosion/sedimentation.

Sewage. Since the WTP will be unmanned, the facility will generate very little (< 40 gpd) domestic sewage. WWC evaluated a new connection to the municipal sewer, but this would have required construction of several miles of pipe. WWC also considered constructing a septic system on-site; however, this would have placed it within immediate proximity to a public water supply. Thus, WWC proposes to install a tight tank of 2000 gallons, which will be pumped out and transported to an approved off-site wastewater treatment plant for disposal, approximately once every month.