Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Red Mill Road Water Treatment Plant		
Street Address: 12 Red Mill Road		
Municipality: Easton	Watershed: Taunton	
Universal Transverse Mercator Coordinates:	Latitude: 42.007320 Longitude: -71.150216	
Estimated commencement date: Oct. 2021	Estimated completion date: Mar. 2023	
Project Type: Water	Status of project design: 25 %complete	
Proponent: Town of Easton		
Street Address: 136 Elm Street		
Municipality: Easton	State: MA	Zip Code: 02356
Name of Contact Person: Sarah Price		
Firm/Agency: Environmental Partners Group, Inc.	Street Address: 1900 Crown Colony Dr., Suite 402	
Municipality: Quincy	State: MA	Zip Code: 02169
Phone: 617-657-0200	Fax: 617-657-0201	E-mail: sfp@envpartners.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you 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
(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

- 11.03(4)(b)4: Water – Construction of a new drinking water treatment plant with a capacity of 1,000,000 or more gpd.

Which State Agency Permits will the project require?

- Department of Environmental Protection: BRP WS 24 – Approval to Construct a Water Treatment Facility greater than or equal to 1 MGD
- Department of Environmental Protection: BRP WPS Form 3 – Wetlands Protection

Act Notice of Intent
- Department of Environmental Protection: BRP WS 06 Underground Injection Control Registration
- Department of Environmental Protection: Certification Form for Emergency Units (Installation Completion Certification)
- Environmental Protection Agency: National Pollutant Discharge Elimination System Construction Stormwater General Permit

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.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	13.3		
New acres of land altered		+3.51	
Acres of impervious area	0.39	+0.93	1.32
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	813	+6,964	7,777
Number of housing units	0	0	0
Maximum height (feet)	9.5	22	22
TRANSPORTATION			
Vehicle trips per day	4	0	4
Parking spaces	0	+4	4
WASTEWATER			
Water Use (Gallons per day)	0	25,701	25,701
Water withdrawal (GPD)	1,690,000 (WMA Average Annual Day Withdrawal Rate)	0	1,690,000 (WMA Average Annual Day Withdrawal Rate)

Wastewater generation/treatment (GPD)	0	25,659 (backwash wastewater to lagoons) + 42 (sanitary wastewater to septic tank)	25,659 (backwash wastewater to lagoons) + 42 (sanitary wastewater to septic tank)
Length of water mains (miles)	0.32	0.19	0.51
Length of sewer mains (miles)	0	0	0
Has this project been filed with MEPA before? ☐ Yes (EEA #_____) ☒No			
Has any project on this site been filed with MEPA before? ☐ Yes (EEA #_____) ☒No			

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

Describe the existing conditions and land uses on the project site:

The site selected for the proposed water treatment plant (WTP) is an undeveloped, wooded area located at #12 Red Mill Road, Easton, MA (Map 17R, Parcel 5). The parcel is owned by the Town of Easton (Town) and zoned for municipal use. The site is located northeast of existing Well Stations 5 and 7, and south of existing Well Station 3. The project will also consist of utility work at existing Well Stations 3 and 5. Well Station 3 consists of a paved access road, grassed area, and an approximately 300 square foot building. Well Station 5 consists of a paved access road, grassed area, and an approximately 502 square foot building. Existing conditions plans are included in Attachment C.

A bordering vegetated wetland resource area, classified as a deciduous wooded swamp by the MassDEP, is located west of the proposed WTP site. A bordering vegetated wetland resource area and an isolated vegetated wetland resource area, classified as deciduous wooded swamps by MassDEP, are located west and northeast of Well Station 3, respectively. Two bordering vegetated wetland resource areas, classified as deciduous wooded swamps by MassDEP, are located west and east of Well Station 5.

Part of the Well Station 3 site and the proposed WTP site are located within the Well 3 Zone I Wellhead Protection Area (WPA), and the proposed work at Well Station 5 is located within the Well 5 Zone I WPA. The entire site is located within the limits of the Canoe River Aquifer, which is classified as an Area of Critical Environmental Concern (ACEC) by the Massachusetts Department of Conservation and Recreation (DCR). The proposed WTP site and the Well Stations 3 and 5 sites are located outside the limits of the 100-year flood plain as defined by the Federal Emergency Management Agency (FEMA).

Red Mill Road currently serves as the Town's primary access to existing Well Stations 3, 5, and 7. The road from the intersection of Norton Avenue to the access drive for Well Station 5 and 7 is paved, transitioning to gravel after the Well Station 5 and 7 access road. The Red Mill Road right-of-way is owned and maintained by the Town. The proposed WTP site is currently accessible from the paved portion of Red Mill Road. A locked steel swing gate restricts vehicular access to the existing Well Stations to Town-approved vehicles only. West of the steel gate, Red Mill Road is accessible to residents east of the steel gate at all times. Red Mill Road remains open to pedestrians utilizing walking paths that meander throughout the town-owned property.

Describe the proposed project and its programmatic and physical elements:
NOTE: The project description should summarize both the project's direct and indirect impacts (including construction period impacts) in terms of their magnitude, geographic extent, duration and frequency, and reversibility, as applicable. It should also discuss the infrastructure requirements of the project and the capacity of the municipal and/or regional infrastructure to sustain these requirements into the future.

This project consists of the construction of a WTP, including utility work near Well Station 3 and a new generator at Well Station 5; a residuals management lagoon system; and minor modifications to interior piping at Well Stations 3, 5, and 7. Proposed conditions plans are included in Attachment D. Project components are detailed below:

Proposed Water Treatment Plant (WTP)
The proposed WTP site includes a pre-engineered metal building; below-grade finished water clear well; access road; two residuals handling lagoons; three stormwater bioretention areas; and a wrap-around site access driveway sized for a WB-50 intermediate semi-trailer truck (to accommodate a fire truck or chemical deliveries). The facility will be confined to approximately 3.5 acres to limit tree clearing and maintain a vegetative buffer around the site. Some of the site modifications are within the Well 3 Zone I Wellhead Protection Area (refer to Attachment D).

The WTP will be an approximate 6,900+ square foot pre-engineered metal building with lower brick or ground-face concrete masonry unit (CMU) veneer and slab on grade. The building will include a “process area” and an “administrative area”. The “process area” will include vertical pressure filters; chemical feed and storage; piping; pumps and motors; an air scour blower; and a future PFAS treatment area. The “administrative area” includes a control room/laboratory; an ADA accessible toilet room with lockers; a mechanical room; and an electrical room. The paved area around the building provides 360-degree vehicular access around the building. The paved area will include four parking spaces, including one handicap accessible space.

An access drive off Red Mill Road to the proposed WTP will be located on the 12 Red Mill Road parcel before the existing Well Station 3 access road. This access drive shall have an approximate curb cut of 50 feet with a 40-foot wide paved surface bound by 5-foot wide gravel buffer strips in order to accommodate bulk chemical delivery trucks and emergency vehicles turning into the site. Approximately 250 feet of Red Mill Road in front of the proposed WTP site will be re-graded and resurfaced. Resurfacing of Red Mill Road will extend from the intersection of Norton Avenue to the Well Station 3 access drive.

Runoff from the building’s metal roof and the surrounding paved area will be directed to swales. All paved areas will be sloped so that runoff flows to grass swales and directed to one of three proposed bioretention areas. Bioretention basins are located based on existing and proposed site grades. One bioretention basin is located in the southeast portion of the site and is outside of the Zone 1 WPA. Two bioretention basins, located on the northern portion of the site, are located within the Zone 1 WPA for Well 3. Slopes on graded landscape or unpaved areas shall not exceed 3:1 (H:V).

A 2,000-gallon septic tank, soil absorption area, and reserve area will be installed to the southwest of the WTP. The septic tank shall collect all sanitary waste from the WTP, including floor drains, the toilet room, and the laboratory sink. Septic tank effluent is distributed to the soil absorption system area located to the rear of the septic tank. A reserve area is included for redundancy to the soil absorption system in accordance with Title 5 requirements. A manhole provides access to clean the septic tank. The access manhole will be accessible to septic hauler from the WTP driveway. The septic tank shall be rated for H-20 loading. The septic tank, soil absorption system, and reserve area are located outside the Well 3 Zone I WPA.

An 8-foot diameter drywell, located south of the WTP will collect all process flow waste discharged from the analyzers and WTP Control Room/Laboratory sample sink. All proposed analyzers are reagent-less; and no sanitary waste will be discharged to the drywell. A redundant overflow drywell adjacent to the primary well accommodates any overflow. The drywells shall have a 24-inch diameter access manhole. The process discharge dry wells are located outside the Well 3 Zone I WPA.

Underground electric will be installed to the WTP, originating from an existing utility pole. A

standby generator west of the WTP, adjacent to the driveway, will provide standby power. Standby power service shall extend from the generator and enter the WTP building via an underground conduit. The generator will also provide standby power to the existing Well Station 3. The existing underground gas main on Red Mill Road will be extended to the WTP.

The WTP is designed to operate at an average flow of 1.69 MGD, with a maximum hydraulic capacity of 2.07 MGD. The treatment plant will include sodium hydroxide, sodium hypochlorite, and polyaluminum chloride chemical feed systems and catalytic media pressure filters. Raw water from Wells 3, 5, and 7 will be piped from the well stations to the proposed WTP. Raw water from Wells 3, 5, and 7 will combine on Red Mill Road via existing distribution mains. The existing 12-inch ductile iron water main on Red Mill Road will be tapped to provide raw water to the WTP. Raw water will be conveyed to the rear of the WTP via a 12-inch ductile iron water main and enter the WTP on the south side of the WTP building. Polyaluminum chloride, sodium hydroxide, and sodium hypochlorite will be added to the blended water for enhanced metals removal, pH adjustment, and chemical oxidation/disinfection/media regeneration, respectively. Sodium hydroxide and sodium hypochlorite will be added after filtration and prior to the clear well, as necessary, to maintain the required finished water pH and chlorine residual, respectively, prior to entering the Town's drinking water distribution system. The WTP design includes space for future PFAS treatment technologies, if needed.

The WTP will pump finished water from the clear well and exit the north side of the WTP building. A 12-inch ductile iron finished water main will tee at the intersection of the access drive and Red Mill Road. One branch of the tee will connect the 12-inch ductile iron water finished water main to the distribution system on Red Mill Road. The second branch of the tee will continue via a new 12-inch ductile iron water west on Red Mill Road; and turn north onto the Well Station 3 access road to make a secondary connection to the distribution system near Well Station 3.

Proposed Residuals Management Lagoon System

Two lined lagoons are located on the site to facilitate drying of WTP iron and manganese residuals generated during pressure filter backwashing. The two lagoons are identical in size, material, and functionality. Each lagoon can store a total of approximately 258,400 gallons of residual backwash waste. A single lagoon can accommodate a volume ten times the total quantity of backwash water discharged during any 24-hour period in accordance with the MassDEP Guidelines for Public Water Systems, Chapter 5 – Treatment. The residuals management lagoon systems include: backwash waste pipe inlet with flapper valve, inlet dissipation, rip rap side slopes, sand drainage layer, underdrain system consisting of polyvinyl chloride piping and crushed stone bedding, high density polyethylene liner, and drywells.

A 10-inch ductile iron pipe conveys residual backwash waste from the WTP to each lagoon. The Town can divert flow to each lagoon by operating gate valves located within the paved driveway area south of the WTP. Each waste pipe discharges residual backwash from the WTP to the lagoons at an invert 3-feet below grade. A 6-inch air gap between the inlet elevation and the maximum residuals backwash elevation provides cross connection control.

The lagoons have a total depth of 10.5 feet and surface area of 12,240 sf (60-feet wide x 204-feet long). The lagoon depth includes 7 feet of usable storage; a 6-inch air gap; and 3 feet of freeboard. The additional one foot of freeboard, along with the standard 2-foot freeboard, ensures the backwash waste pipe has sufficient coverage depth at the WTP. A flapper check valve, located at the end of the backwash waste pipe, prevents debris and

vectors from entering the inlet pipe. Rip rap at the pipe inlet dissipates backwash waste flow.

Each lagoon is earthen in material with 2:1 (H:V) side walls. Side walls are comprised of 12-inch graded rip rap lined with 40-mil textured HDPE liner to prevent infiltration.

Residual backwash shall pool uniformly along the base of the lagoon, allowing for solids to settle and liquids to infiltrate through a 12-inch sand drainage layer. A series of perforated PVC underdrains captures water that infiltrates to the base of the lagoon and discharges to a series of drywells. The lagoon drywells were sized based on the hydraulic conductivity of sand and an estimated infiltration rate of 2 inches per minute. Percolation testing will be completed during final design to confirm drywell sizing.

A vinyl-coated chain linked fence surrounds the entire lagoon area to prevent intrusion. A 20-feet wide access gate is located along the north side of the fence near the WTP. Fifteen-foot wide gravel access ways surround the lagoons to provide adequate space for sludge removal equipment. Rubber tracked excavators shall enter the lagoon via a 12-foot wide gravel access ramp with a 5:1 slope on the south side of the lagoons.

Proposed Well Stations Modifications
Interior modifications to Well Stations 3, 5, and 7 includes the demolition and replacement of process piping. In addition, a new pump, motor, and variable frequency drive (VFD) will be provided at Well Station 3. The doors at Well Station 3 will be demolished and replaced. Proposed work at Well Station 5 includes the installation of a generator. A new gas pipe will extend from the existing liquid propane pipe to the generator. An electric conduit will run from the generator to the Well Station 5 building.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:
NOTE*: The purpose of the alternatives analysis is to consider what effect changing the parameters and/or siting of a project, or components thereof, will have on the environment, keeping in mind that the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. Examples of alternative projects include alternative site locations, alternative site uses, and alternative site configurations.*

Wells 3, 5, and 7 are registered (Wells 3 and 5) and permitted (Well 7) public water sources with a combined Massachusetts Department of Environmental Protection (MassDEP) issued withdrawal rate of 1.69 million gallons per day (MGD). The Town is currently experiencing declining source water quality in Wells 3 and 5. In recent years, manganese levels in both Wells 3 and 5 have exceeded the Secondary Maximum Contaminant Level (SMCL) of 0.05 mg/L. Iron levels in Well 5 have exceeded the corresponding SMCL of 0.30 mg/L. Additionally, the Town has reported that Well 5 experiences elevated levels of organics during the summer months, noting that the color in the Well 5 raw water exceeds the SMCL of 15 color units. As a result, the Town has decreased its use of Well 5 between 2014 and 2019. The Town has maintained finished water quality by blending these sources with Well 7, which currently has superior water quality, and operating at a reduced capacity.

Four alternatives were considered for the project to meet the Town's goals for the treatment of raw water from Wells 3, 5, and 7 as described below.

Alternative 1, the preferred alternative, includes the construction of a water treatment plant on the town-owned parcel #12 Red Mill Road. This parcel is currently undeveloped, forested land. Although some of the site is within the Well 3 Zone I WPA, a majority of the