

**State of Connecticut, Department of Public Health
Drinking Water Section, Drinking Water State Revolving Fund (DWSRF)
ENVIRONMENTAL ASSESSMENT SUMMARY**

Date:	December 2, 2014	Staff Contact:	Eric McPhee
Applicant PWS Name:	Groton Utilities	Town:	Groton
Project Name:	Groton Water Treatment Plant Upgrade		
PWSID:	CT0590011		
Funding Source:	DWSRF		
State Funds:	\$34,000,000.00		

This assessment is being conducted in conformance to the generic Environmental Classification Document for Connecticut state agencies to determine Connecticut Environmental Policy Act (CEPA) obligations

Groton Utilities (GU) proposes to upgrade its existing Poquonnock Water Treatment Plant (WTP) to address water quality issues. The WTP was originally constructed in 1938 with capacity expansions occurring in 1947 and 1962. The latest renovations to the WTP occurred in 1989 and consisted of major modifications to the chemical feed systems. Realizing that the majority of the WTP components are antiquated, improvements to the facility are crucial for infrastructure sustainability. GU currently provides water to the residents (45,000 people) of the City of Groton and has existing commitments to supply water to several municipalities including Noank Fire District, Groton Long Point, Ledyard, Montville, and Aquarion Water serving Mystic. The plant currently has an approved production capacity of 14 million gallon per day (MGD) and has a maximum flow rate of 20 MGD. However, the City of Groton has incurred a reduction in industrial water demand in recent years. As a result of this reduction, the proposed upgrades will reduce the plant's capacity from 14 MGD to 12 MGD while allowing the City to meet its existing water supply commitments and the water demands of its existing service area for the next 30 to 50 years.

The project within the Poquonnock Water Treatment Plant is proposing modifications to the existing low lift pumping station and coagulation mixing process, addition of a building to accommodate dissolved-air flotation (DAF) and granular activated carbon (GAC) filtration processes, retrofitting the existing unit 3 filters with a manganese adsorption process, replacing the existing vertical turbine pumps in-place with lower horsepower intermediate pumping, retrofitting the existing unit 1 settling basin with new high lift and backwash pumping, addition of two (2) new 1 million gallon water storage tanks, converting the existing unit 2 settling basins to backwash recycle tanks, modified residuals management, chemical feed system upgrades, new yard piping, safety upgrades, automation, electrical upgrades including but not limited to standby power generation facilities, and building envelope and building systems improvements including architectural, structural, mechanical/HVAC and electrical, all with a focus on energy efficiency, sustainability and green energy alternatives.

The footprint of the DAF/GAC addition to the existing WTP is 110-feet by 132-feet or approximately 14,534 square feet. The water storage tanks will be 77-foot in diameter and 35-foot high each.

Regulations of Connecticut State Agencies (RCSA) Section 22a-1a-3 Determination of environmental significance (direct/indirect)

1. Impact on air and water quality or on ambient noise levels

- a. Air Quality – The proposed project is not expected to cause significant adverse air quality effects.
 - b. Water Quality—The recommendations contained in the Department of Energy and Environmental Protection (DEEP) letter dated November 7, 2014 will be implemented as appropriate.
 - c. Ambient Noise Levels - The proposed project is not expected to cause significant noise in the immediate area;
2. Impact on a public water supply or serious effects on groundwater, flooding, erosion, or sedimentation
 - a. Water Supply – Portions of the project may be located on Class I or II water company land; GU should consult with the Drinking Water Section Source Protection and Assessment Unit for a determination on whether a permit pursuant to Connecticut General Statutes section 25-32 is required. The proposed project will enhance Groton Utilities’ ability to treat the water from its reservoir system prior to distribution to its customers.
 - b. Groundwater – No significant impact expected.
 - c. Flooding – The eastern periphery of the water treatment facility is within the 100-year flood zone on the community's Flood Insurance Rate Map. It appears that a segment of one of the proposed yard pipes may impinge on the flood zone. If any State-funded project elements are within the 100-year flood zone, below elevation 10’ (NAVD88), they must be certified by the DPH as being in compliance with flood and stormwater management standards specified in section 25-68d of the Connecticut General Statutes (CGS) and section 25-68h-1 through 25-68h-3 of the Regulations of Connecticut State Agencies (RCSA) and receive approval from the Department. For further information, contact the Inland Water Resources Division at 860-424-3706. A fact sheet regarding floodplain management and the certification form can be downloaded at: [Flood Management](#).
 - d. Erosion and Sedimentation— In order to protect wetlands and watercourses on and adjacent to the site, strict erosion and sediment controls should be employed during construction. The Connecticut Guidelines for Soil Erosion and Sediment Control prepared by the Connecticut Council on Soil and Water Conservation in cooperation with DEEP is a recommended source of technical assistance in the selection and design of appropriate control measures. The 2002 revised edition of the Guidelines is available online at: [Erosion Control Guidelines](#).
 3. Effect on natural land resources and formations, including coastal and inland wetlands, and the maintenance of in-stream flows—No significant impact expected.
 4. Disruption or alteration of an historic, archeological, cultural or recreational building, object, district, site or surroundings—No significant impact expected.
 5. Effect on natural communities and upon critical species of animal or plant and their habitats: interference with the movement of any resident or migratory fish or wildlife species – The Natural Diversity Data Base, maintained by DEEP, does not anticipate negative impacts to state listed species (RCSA Sec. 26-306) resulting from the proposed activity at the site.
 6. Use of pesticides, toxic or hazardous materials or any other substance in such quantities as to create extensive detrimental environmental impact - No significant impact expected.
 7. Substantial aesthetic or visual effects - The project is not expected to cause substantial aesthetic or visual impacts in the area.

8. Inconsistency with the written and/or mapped policies of the statewide Plan of Conservation and Development and such other plans and policies developed or coordinated by the Office of Policy and Management or other agency—The project is consistent with the statewide Plan of Conservation and Development as documented in the Consistency Determination dated January 2, 2014.
9. Disruption or division of an established community or inconsistency with adopted municipal or regional plans- No significant impact expected.
10. Displacement or addition of substantial numbers of people - No significant impact expected.
11. Substantial increase in congestion (traffic, recreational, other) – The proposed project is not expected to create substantial traffic congestion in the area.
12. A substantial increase in the type or rate of energy use as a direct or indirect result of the action - No significant impact expected.
13. The creation of a hazard to human health or safety –No significant impact expected.
14. Any other substantial impact on natural, cultural, recreational or scenic resources - No significant impact expected.

Conclusions:

Based on the DPH’s environmental assessment of this project which includes comments provided by the DEEP dated July 2, 2014 and July 7, 2014, it has been determined that the project does not require the preparation of an Environmental Impact Evaluation (EIE) under CEPA. The DPH will coordinate with GU to ensure that the recommendations by the DEEP are implemented.

Recommendations:

Prior to starting the project construction, the following best management practices should be considered:

1. **Construction Maintenance:** No construction should take place before erosion and sedimentation controls are installed. These controls should be properly installed, maintained, inspected regularly, and remain in place until the project construction is completed. During construction and until a vegetative cover is reestablished, the project area should be inspected daily and after rainfall to verify erosion control measures are properly functioning. Any defects on the structure must be immediately repaired.
2. **Emergency Response Plan:** Develop an Emergency Spill Response Plan before construction begins. Spill response equipment should be available on-site at all times along with personnel trained in the proper use of such equipment.
3. **Hazardous Materials Storage:** Hazardous materials should be removed from the site during non-work hours or otherwise stored in a secure area to prevent vandalism. Place covered trashcans and recycling receptacles around the site. Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under a roof or cover with tarps or plastic sheeting. Never clean a dumpster by hosing it down on site.
4. **Vehicles and Machinery:** Methods and locations of refueling, servicing, and storage of vehicles and machinery should be addressed and included as notes on the final site plans. All equipment fueling or

minor repairs should occur on a fueling pad. Onsite fuel storage for heavy equipment should have containment and be located in a secure area where it will not be vandalized or struck by equipment or vehicles on the job site.