STATE OF CONNECTICUT

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

# ENVIRONMENTAL ASSESSMENT SUMMARY

**Date:** January 26, 2018

**Municipality:** Town of Fairfield

**Staff Contact:** Ann Straut

**Project Name:** Wastewater Facilities Plan for the Town of Fairfield

# This assessment is being conducted in conformance with the generic Environmental Classification Document for Connecticut State Agencies to determine Connecticut Environmental Policy Act (CEPA) obligations.

**Project Description:** The Fairfield Water Pollution Control Facility (WPCF), owned by the Town of Fairfield, is located at One Rod Highway, Fairfield, CT. The WPCF operates under National Pollutant Discharge Elimination System (NPDES) permit CT0101044 and is permitted for a design flow rate of 9.0MGD and discharges effluent to the Long Island Sound.

The Wastewater Facilities Plan for the Town of Fairfield, Connecticut proposes improvements to the town’s wastewater treatment infrastructure. The Water Pollution Control Facility (WPCF) has a design annual average flow rate of 9 million gallons per day (MGD) and a peak flow rate of 24 MGD and currently processes an annual average flow rate of 8.64 MGD with peaks over 33 MGD. The WPCF was originally constructed in 1950 and was expanded in 1968 and 1972 to meet the needs of a growing Town and expansion of the sewer collection system. Additions were made in 1980 to improve biosolids dewatering and a composting facility for beneficial reuse of plant sludge was added in 1988. In 1996 and 2002, modifications to the plant’s aeration system were completed to allow the plant to achieve nitrogen removal per the permit. In the past 5 years, flows have been increasing and the WPCF has been receiving flows greater than 90% of the design flow rate for the previous 180 days consistently since April 2017 and intermittently prior to that.  The WPCF receives and treats an annual average inflow and infiltration flow of 4.0MGD which will be addressed separately from this project.

The study evaluated alternatives for providing improvements to the existing WPCF to meet the long-term needs of the town. The evaluation considered current regulatory requirements, the age and condition of the existing equipment, the capacity of existing unit processes to meet projected flows and loads, and process reliability. Major components of the recommended plan include the following:

* Improvements to preliminary and primary treatment facilities new concrete flow distribution structures to improve flow splitting to the primary settling tanks and to the Zone A aeration tanks.
* Improvements to the secondary treatment processes including modifications to the aeration system, replacement of mechanisms and drives in the final settling tanks, and improvements to process reliability and improved energy efficiency.
* Improvements to effluent disinfection and pumping to handle peak hour flows.
* Improvements to the solids handling system to account for increased flows and loadings.
* Improvements to the compost facility to improve operator health and safety concerns.
* Improvements to existing Building Systems.
* Upgrading the instrumentation and controls and SCADA system.
* Replacing the older electrical distribution equipment.
* Install new odor control systems for all process areas and refurbish Biofilter B to be maintained for the compost building exhaust.

# 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*
   1. *Air Quality –* The entire State of Connecticut, including the project area, is currently in non-attainment for 8-hour ozone. The project area, along with the rest of the State of Connecticut is in attainment for all other criteria air pollutants: particulate matter (<10 micrometers in diameter-PM10 or < 2.5 micrometers in diameter-PM2.5); sulfur dioxide (SO2); ozone (O3); nitrogen dioxide (NO2); carbon monoxide (CO); and lead (Pb). No new sources of stationary source air pollutant emissions should occur as a result of the project. Traffic should not increase as a result of the project, and therefore, there will be no increase in mobile source emissions of air pollutants.

Construction of a new building and upgrades to existing facilities will involve temporary emissions from construction equipment. Potential construction air quality impacts can occur due to the use of diesel-powered construction vehicles. Diesel air emissions include carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter. Emissions from construction equipment are anticipated to be significantly less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the National Ambient Air Quality Standards. Potential localized air quality impacts would be avoided or limited by proper operation and maintenance of construction equipment and adherence to State regulations limiting idling of engines.

Construction activities may involve dust emissions that will be contained via construction best management practices that may include: covering material stockpiles; limiting dust producing construction activities during high winds; and application of water or calcium chloride to control dust as required. Any project-related emissions will not interfere with the air quality goals for the State Implementation Plan. No negative impacts are anticipated.

* 1. *Water Quality –* The WPCF discharges to the Long Island Sound. Improvements to the WPCF will improve the water quality of the Long Island Sound by providing additional nitrogen removal from plant effluent and comply with new disinfection requirements. Any construction at the facility will take place within the existing fence line. All construction activities will include construction best management practices to protect the water supply. No negative impacts are anticipated, and a long-term benefit to water quality is anticipated from the WPCF improvements.
  2. *Ambient Noise Levels –* Use of heavy construction equipment during construction activities are a potential source of short-term noise impacts. Construction activity will occur during daytime hours and any adverse noise impacts due to construction activities will be temporary. In addition, construction noise is exempt from the state noise standards found at RCSA 22a-69-1 through 22a-69-7.4. No negative impacts are anticipated.

1. *Impact on a public water supply system or serious effects on groundwater, flooding, erosion, or sedimentation*
   1. *Water Supply –* The project is not within a public water supply source area, therefore, no negative impacts are anticipated.
   2. *Groundwater –* No significant negative impacts are anticipated. Construction Best Management Practices will be followed during construction to prevent any groundwater impacts.
   3. *Flooding –* The proposed project property boundaries include area located in flood zones AE (100-year flood) and Zone X (500-year flood). The majority of the work will take place outside the flood plain, however, the lower clarifier pump station and associated piping will be partially located with Zone X. A flood management certificate will be applied for and all recommendations incorporated into the final construction plans. The Town has constructed a berm around the treatment plant and adjacent town facilities to 3.25-feet above the 100-year flood level to protect the WPCF from flood waters. No negative impacts are anticipated.
   4. *Coastal Zone* – The project is located within a Coastal Boundary and therefore will need to obtain the required local Coastal Site Plan review and any necessary State permits and comply with all applicable requirements for coastal zone management.
   5. *Aquifer Protection* – The site is not located within an Aquifer Protection District.
   6. *Inland Wetlands –* There are wetlands adjacent to the project, however, there are no anticipated direct or indirect impacts to wetlands identified by the National Fish and Wildlife National Wetlands Inventory. Any work performed within 100-feet of any wetland or watercourse will require an Inland Wetlands Permit and all recommendations in the permit will be included as part of the project final design. Requirements for Construction Best Management Practices including hay bales, silt fences will be included as part of final design to comply with *Connecticut Guidelines for Erosion and Sedimentation Control*.
2. *Effect on natural land resources and formations, including coastal and inland wetlands, and the maintenance of in-stream flows –* The project is located along the Long Island coast adjacent to tidal wetlands. All work will take place in previously disturbed areas Detailed wetlands mapping will be delineated by a soil scientist during the preliminary design phase to properly locate wetlands boundaries and the contractor will be required to implement and maintain proper erosion and sediment control procedure during construction. Portions of the work may fall within the local 50-foot setback review area for the Pine Creek watershed. Applicable permits will be obtained and any requirements followed.
3. *Disruption or alteration of an historic, archeological, cultural, or recreational building, object, district, site, or its surroundings –* The project location is within a previously disturbed site, therefore no negative impact to historical or archaeological resources will occur as a result of the project.
4. *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 project location does not have any State or Federal Listed Species or Significant Communities shown on the CT DEEP maintained Natural Diversity Database Map.*
5. *Use of pesticides, toxic or hazardous materials or any other substance in such quantities as to create extensive detrimental environmental impact –* The project includes polymer feed systems where all chemicals will be stored and maintained in a manner so as to contain any spills. Measures will be taken during the construction process to avoid spills of fuel of other potentially hazardous materials during equipment operation. No negative impact is expected.
6. *Substantial aesthetic or visual effects –* The project is not expected to cause a negative impact as the project is at the site of an existing Water Pollution Control Facility in an industrial area of town.
7. *Consistency 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 –* Based on areas identified on the Interactive Location Guide Map for the 2013-2018 State Conservation and Development Policies Plan, the project is located within a Priority Funding Area. Also, the draft *Adopted Plan of Conservation and Development 2015-2025* shows the area as “infrastructure”. The project is consistent with the policies of the 2013-2018 State Conservation and Development Policies Plan and the draft Adopted Plan of Conservation and Development 2015-2025. No negative impact is expected.
8. *Disruption or division of an established community or inconsistency with adopted municipal and regional plans –* The Town of Fairfield’s *Plan of Conservation and Development* Adopted November 15, 2016, shows the project area as an industrial zone. The project is entirely within the existing Water Pollution Control Facility existing site and will not disrupt or divide the community and is consistent with the adopted municipal and regional plans. No negative impact is expected.
9. *Displacement or addition of substantial numbers of people –* This project does not involve the displacement of people or result in a population increase in the project area; no negative impact is expected.
10. *Substantial increase in the congestion (traffic, recreational, other) –* This project may increase truck traffic for a brief time during construction, however, truck traffic should be the same or reduced at the completion of construction. No negative impact is expected.
11. *A substantial increase in the type or rate of energy use as a direct or indirect result of this action –*There will be very little increase in energy use, if any, due to utilization of new, energy efficient equipment (e.g. lights and pumps). No significant impact is expected.
12. *The creation of a hazard to human health or safety –* All work will remain within the existing treatment plant footprint. No negative impact is expected.
13. *Any other substantial impact on natural, cultural, recreational or scenic resources –* No negative impact is expected.

# The Following Comments Were Received During the Scoping Process:

1. *OPM letter inquiring if the plan had considered relocating the treatment facility. DEEP’s response is also attached.*

# Conclusion:

Based on the DEEP’s environmental assessment of this project, it has been determined that the project does not require the preparation of an Environmental Impact Evaluation (EIE) under CEPA.

# 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.