CATEGORY: Government

Cheshire's $30 million wastewater plant is helping to improve the health of the Quinnipiac River.

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Cheshire realizes benefits of wastewater-plant upgrade

Cheshire Water Polution Control Authority

PROJECT ELEMENTS: Water; innovation

START DATE: Oct. 2013

COMPLETION DATE: Dec. 2015

After a decade of planning, Cheshire officials cut the ribbon 10 months ago on a $30 million upgrade of the town's wastewater treatment plant.

One of the driving factors for the $30 million overhaul of the Cheshire Water Pollution Control Plant (WPCP) was to meet more stringent regulatory limits for phosphorous discharge to the Quinnipiac River. A new removal system at the plant has reduced both the amount of phosphorus flowing into the river each year by 21,000 pounds.

Another reason for the project was that important systems in the WPCP had exceeded their service life.

WPCP's contractors rehabbed two anaerobic digesters, which are used to break down sewage, which had been inoperable for approximately five years. Now the plant dewaters and ships as much as 40 percent less undigested raw sludge to an off-site incinerator. That saves money and lowers air emissions.

The now-fixed digesters are also providing methane gas that used to heat some of the plant's facilities, which has reduced the need to use fossil fuels such as oil or natural gas for heat.

WPCP received $205,000 in efficiency rebates from Eversource to help pay for various pumps with more efficient motors, as well as aeration systems. Those items are projected to save over 800,000 kilowatt hours of electricity per year.

A new ultraviolet disinfection system also reduced the amount of sodium hypochlorite and sodium bisulfite used at the plant by a total of 43,000 gallons per year, which is better for the environment and has saved about $30,000 in chemical costs. The two hazardous chemicals are used to disinfect sewage and remove excess chlorine from effluent before it's discharged.

Replacement of underground fuel-oil tanks with above-ground, double-walled tanks has also lowered the risk of leaks.

The plant also doubled the size of its emergency generator, which will help during power outages as well as during times of peak grid demand.

WPCP's electricity usage has also fallen thanks to automated and LED lighting and an HVAC control system.