



NEW WATER TREATMENT PLANT

Owner:
Town of Falmouth, MA

Technology:
Water Treatment Plant

Engineer:
Tata & Howard

Consulting Engineer:
CH2M Hill, Inc.

Project Value:
\$ 46.5 Million

CONSTRUCTION OF 8.4 MGD WATER TREATMENT PLANT

Methuen Construction was the General Contractor for the construction of the new 8.4 million gallon per day (mgd) water treatment plant (WTP) at the existing Long Pond surface water supply in Falmouth, MA. The plant will utilize coagulation, mixing, flocculation, dissolved air flotation, and dual media filtration. The plant will also utilize granular activated carbon above sand, chemical feed systems, and an intermediate ozone feed.

Building components for the plant include HVAC, plumbing, fire sprinkler, gas and electrical service. The project included demolition of equipment and site piping at the existing water treatment facility. The project also included site work, exterior piping systems, exterior above and below ground tanks, sludge holding lagoons, construction of a garage, new raw water intake and pump station, and directional drilling of raw water intake mains.



The Town of Falmouth gets 60% of its water from the Long Pond WTP.



PROJECT HIGHLIGHTS

The new Long Pond Treatment facility utilizes a filtration process that meets stringent EPA and MassDEP regulations.





The new Long Pond Water Treatment Plant allows Falmouth to meet stringent EPA and MassDEP regulations including Stage 2 Disinfectants/Disinfection-by-Product Rule (S2 D/DBPR) and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR).

The existing Long Pond Water Treatment Facility experienced water quality issues since it relied on high doses of chlorine rather than filtration to maintain water quality. However, the high doses of chlorine needed to maintain water disinfection reacted with the organics in the raw water to form disinfection by-products, which did not meet new EPA and MassDEP standards.

The new treatment plant relies less on chemical disinfection and more on a filtration process (Dissolved Air Flotation (DAF) clarification, intermediate ozone followed by filtration) to meet the state and federal regulations.

"The project team was committed to meeting Falmouth's DEP obligation to construct and bring online a new filtration plant to replace the aging Long Pond Pump Station... To avoid schedule creep, the project team was willing to extend working hours or days whenever necessary."

In 40 years of working as a project manager, project director and owner's project manager, Methuen Construction's performance on this project stands out as an excellent example of project control, performance, and quality."

Stephen Rafferty
Water Superintendent
Long Pond Water Treatment Plant

