

CLAREMONT, NEW HAMPSHIRE



Operations and Maintenance of the Water & Wastewater Treatment System including onsite composting

APPLICATION: Municipal

CAPACITY: 1.5 MGD

LOCATION: Claremont, NH

COMMENCED: 2012

TECHNOLOGY: Activated Sludge

CONTACT DETAILS:

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BACKGROUND

H₂O Innovation has provided O&M services to the City of Claremont, NH since 2012. After the conclusion of the first 5-year contract, H₂OI successfully competed for, and was awarded, a new 5-year agreement. We originally transitioned 5 full time operators and still maintain a staff of 5 full time operators. The facilities are class III STP and class III WTP.

SCOPE OF WORK

We operate the Claremont Wastewater, 1.5 MGD (designed for 3.8 MGD), activated sludge plant. The facility consistently achieves 97% pollutant removal while minimizing energy and sludge costs. Typical effluent criteria are BOD 3mg/l, TSS of 4 mg/l, ammonia 0.2 mg/l and TP of 0.4 mg/l. The plant contains primary treatment, activated sludge in plug flow mode with year-round nitrification. Use and optimization of VFDs on aerators, coupled with very close DO control and mixed liquor process testing simultaneously optimize costs and performance.

Waste sludge aerobically digested and is dewatered with belt filter presses with further treatment through onsite composting. The compost we produce is a low metal, Class A biosolids compost stabilized by aerated static pile composting on-site. Sawdust/Wood Ash and dewatered sludge are mixed (in a Kuhn Knight Reel Auggie) and then processed in piles where air is introduced into the mixture. Bacteria biodegrade the rich organic content of the raw sludge and utilize the sawdust as a carbon source. This activity generates temperatures in excess of 55 degrees Celsius for several days, killing pathogenic (disease causing) organisms. Recommended uses are land reclamation cover, potting soil and farming applications among others.

We also operate the Claremont surface Water Plant, 1.2 million gallons per day (designed for 3 MGD), with processes: coagulation, settling, filtration, chlorination to remove pathogens, pH control, and corrosion control. Coagulation, settling, and filtration remove impurities in the water and the carbon filtration takes care of the taste and odor. There are approximately 4,000 connections served by the water treatment plant with an average of 1.2 MGD treated and delivered into the distribution system.

