

WATER TREATMENT FACILITY FILTER MEDIA PILOT STUDY

CLAREMONT, NEW HAMPSHIRE



Dufresne Group (DG) completed a filter media pilot investigation at the Claremont Water Treatment Plant in an attempt to document the treatment capabilities of the existing filters. The results showed that the existing filters, if renovated, would produce water in accordance with State and Federal standards. This finding showed substantial savings by negating the need for a complete filter replacement project.

The City of Claremont obtains drinking water from surface sources including the Dole Reservoir and the Sugar River. The City uses two filters to treat this surface water to meet State and Federal standards. The existing filters have been used since 1980 and have been rebuilt several times due to equipment failure. The City was considering a recommendation to replace both filters. DG suggested modifications to the existing filters to improve performance and reliability and recommended an on-site pilot test be performed to document the improved filters would perform as suspected. Small versions of the filters were constructed with the proposed improvements and monitored for results.

The pilot testing confirmed that the proposed filter improvements would produce water of superior quality and would meet all State and Federal requirements. The project was bid on April 19, 2005 and the low bid received from US Filter was \$649,745 as compared to the estimated construction cost of \$630,000 with contingencies to \$724,000. The project was completed in December of 2005.

KEY FEATURES

- On-site pilot activity documented existing process could continue at a savings of \$7,000,000.
- Proposed a new traveling bridge filter design with filtered water to waste.
- Proposed system without underdrain plates, which eliminated possibility of plate failure.
- On-site pilot investigations documented use of GAC filter as a particulate removal device.