

ARROWHEAD LANE WATER FILTRATION FACILITY



The completion of this treatment facility provides water district residents with up to 1.28 million gallons per day (MGD) of good quality water. The facility treats four (4) existing wells, King Philip No. 3A and 3B along with two wells from the First Street wellfield and a new on site well.

The facility is primarily designed to remove high levels of iron and manganese from the well water using greensand filtration. An existing packed tower aerator was modified to accommodate the total design flow. The aerator drives off carbon dioxide, thereby raising the pH of the water to improve its treatability. The aerator also drives off volatile organic contaminants and radon, if they enter the raw water.

The project included the installation of a 600 foot deep rock well with a yield of 0.78 MGD.

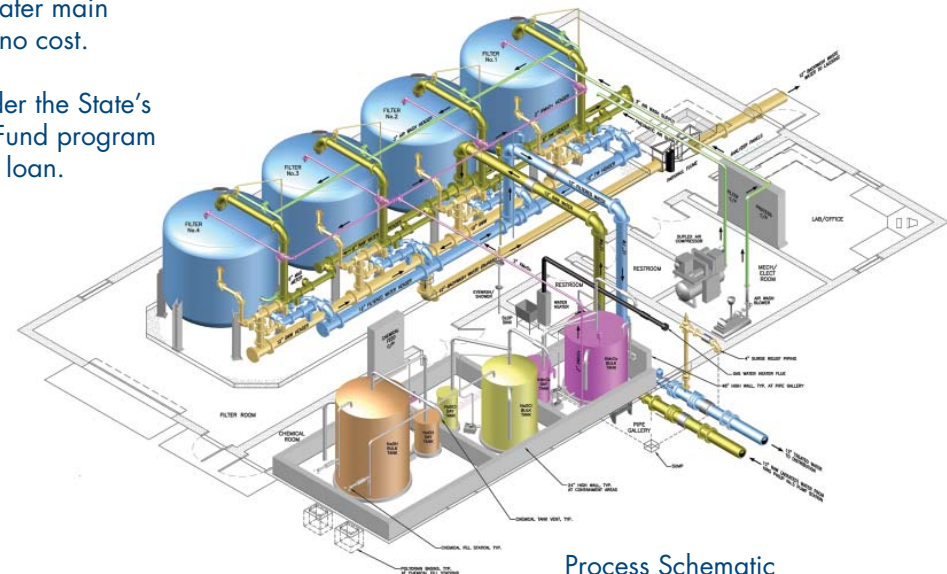
It is one of the few rock wells being used for a public water supply in Massachusetts. The water district's other wells are shallow (less than 40 feet) and are located in the sand and gravel overburden.

Part of this project was the installation of about 4,400 feet of 8 inch raw water main to bring the water from the First Street wells to the treatment facility. The water district negotiated with the Aquaria project owners (a private utility project) to have 1,800 feet of this raw water main installed on King Philip Street at no cost.

The project received funding under the State's Drinking Water State Revolving Fund program consisting of a 2 percent interest loan.

Key Project Features

- New 3,750 square foot treatment facility
- Four greensand pressure filters to treat 1.28 MGD
- 250 KW L.P. generator
- New rock well with a capacity of 0.78 MGD
- 4,400 feet of new 8 inch raw water mains
- Renovation of an existing pumping station
- Upgraded SCADA system



Process Schematic



Board of Water Commissioners

Steven Dyer, Chairman
Michael Lalli
Robert Chase

Superintendent

Arthur Bendinelli
Phone: 508.824.0520

Consulting Engineer

Stantec
Westford, MA

Contractor

Winston Builders, Corp.
Westboro, MA

Project Cost

\$4,350,000

Funded by

Drinking Water SRF No. 3008

Arrowhead Lane Water Filtration Facility
North Raynham Water District
Raynham, Massachusetts

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North Raynham
Water District
Raynham, MA
2009