

Board of Water Commissioners:  
Donald T. Bates, Jr., Chairman  
Allin Thompson, Jr., Vice Chairman  
Water Superintendent:  
Craig Wiegand



Engineer:  
Polaris Consultants, LLC  
Contractor:  
Weston & Sampson CMR

## BRUCE CAHOON WATER TREATMENT FACILITY

### Project Overview

#### **Background:**

Since approximately 2004, the Water Department has experienced a progressive increase in the amount of iron and manganese in the water from our main well field on Chatham Road which supplies about 60% of our water. Although these compounds are not harmful to drink, they do affect the aesthetics of the water by discoloring it. Iron appears as a red color in the water, and manganese turns the water black. This condition has been overcome to a certain extent by blending the water with well water from our other wells although the concentrations have increased to the point where this is no longer effective. The secondary drinking water standards for iron and manganese are .30 mg/l and 0.05 mg/l, respectively. The concentrations of these compounds in some of the wells at Wellfield #1 are an order of magnitude greater than these standards (1.10 mg/L iron and 0.60 mg/l manganese), and water treatment is necessary to meet these standards to ensure that high quality water is produced and distributed to the Town's water users.

Due to these elevated levels of manganese and iron at Wellfield #1, the Town pursued a pilot study program to evaluate the effectiveness of chemical oxidation and pressure filtration for the removal of iron and manganese. After a successful pilot study was completed in the summer of 2008, the Town completed a Preliminary Design Report for the proposed water treatment facility and began the process of project planning and approval process.

The Water Department therefore made plans to construct a water treatment facility using a process known as Green Sand filtration that will remove the iron and manganese from the raw water and has a flow capacity of 6.5 Million Gallons per Day.

#### **Town Meeting Approval and Project Cost(s)**

The overall cost of the facility is projected to be \$4 Million. The first phase, to "Design and Engineer Greensand Water Treatment Facility" with an estimated cost of \$1,500,000, was presented and approved at Annual Town Meeting 2009 as Article 12. The second phase, "To Construct Greensand Water Treatment Facility" with an estimated cost of \$3,500,000 was presented and approved at Annual Town Meeting 2010 as Article 15.

#### **Phase One: Design and Engineer Greensand Water Treatment Facility Description:**

To engineer and design plans for a Greensand Treatment Facility at the T-2 site and to install a 16" transmission main between T2 (Depot Rd facility) and T1 (Chatham Rd facility).

Status: 100% COMPLETE

- Engineering and Design Plans – 100% complete
- Transmission Main – 100% complete (to be completed 5/31/10)

## **Phase Two: Construct Greensand Water Treatment Facility:**

Construct a Greensand Water Treatment Facility capable of treating 4.5 MGD expandable to 6.5 MGD, and to act fully thereon.

Status:

- RFP was awarded to Weston & Sampson.
- Project has begun and will take approximately one year to complete.

## **Questions and Concerns:**

We will notify customers via our voice broadcast system if we anticipate any disruption to area residents. Please be sure that we have your current phone number on file so you receive our message(s). You may also visit our website at [www.harwichwater.com](http://www.harwichwater.com) to play voice broadcast messages that have been recently sent by our Department.

Please contact our Department at 508-432-0304 if you have any questions or concerns regarding this project.