



TOWN OF SHREWSBURY

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July 26, 2018

TO: Shrewsbury Water Department Customers

FROM: Kevin J. Mizikar, Town Manager
Robert Tozeski, Water Superintendent
Jeffrey Howland, Department of Public Works Director

SUBJECT: Shrewsbury Water Quality

Background

The Town of Shrewsbury derives their municipal water supply from a series of eight ground water wells in which mineral deposits of iron and/or manganese are present. Shrewsbury's wells contain manganese and very low levels of iron which have been treated with a sequestering agent to keep the manganese in solution since December 1989. Despite the sequestering agent and other approaches, over time these minerals have accumulated in various aspects of the water distribution system.

With concerns over rising manganese levels and potential effects on our residents, the Town pilot tested various technologies for manganese removal and committed to building a full-size biological treatment facility to treat all well sources at a central location. The plant construction started in July 2017 and has progressed on an aggressive completion schedule of late September to early October 2018. However, the filtration plant will not address the minerals that have already accumulated in the water mains and other aspects of the distribution system.

In 2016 and 2017, the Town began scouring the largest water mains to remove mineral deposits. This work was very time consuming but effective. Since the start of construction of the new treatment plant in July 2017 we have not continued these activities since we will have to redo the mains over again once the new filtration plant begins operating.

To learn more about manganese, please visit <https://shrewsburyma.gov/manganese>

Recent and Ongoing Events

In certain areas of the water distribution system, there are mineral accumulations greater than others that have yet to be scoured. In these areas, now even routine activities like exercising valves, installing new connections and opening hydrants are causing acute and widespread

discolored water. Impacts are even more significant when a main fails or other significant disturbance occurs. The breadth of these impacts has caught the Town off guard and will require us to change how we communicate and what activities we permit within and to the distribution system.

Communications

From the date of this memorandum, the Town will significantly broaden the areas we notify when work is being performed on the water system. Communications for planned events will occur at least 24 hours in advance of work. Information for unforeseen events like water main breaks will be issued when staff can safely and effectively provide the information. Information will be shared through the following sources:

- Town's homepage www.shrewsburyma.gov
- Twitter account @ShrewsburyMAGov
- Water Department Webpage www.shrewsburyma.gov/water
- Notify ME email notification system www.shrewsburyma.gov/list.aspx (one must sign up for these notifications)
- Emergency Notification System CodeRed <https://public.coderedweb.com/CNE/en-US/00BD6AD08E67> (one must sign up for these notifications)

In addition, the Water Department's telephone system will be enhanced to handle larger call volumes to better service our customers. The telephone number to the Water Department is 508-841-8506.

Short-Term Solutions

For the areas of the distribution system that are experiencing a disproportionate amount of discolored water, system flushing and more intensive cleaning will begin in late August or early September. Warm weather months place the greatest demand for water on the system. This demand limits the amount of cleaning that can be completed because all cleaning techniques require significant amounts of water. This work will be completed as soon as we can ensure the wells can keep pace with the demands.

These areas include but are not limited to neighborhoods surrounding:

- Gulf Street
- Boylston Street
- Prospect Street
- Main Street near and east of Boylston Street

The Town will be removing mineral deposits scouring the mains using a process known as ice-pigging, flushing mains, robotically vacuuming holding tanks and other means.

When unfortunate events occur like a water main break, the Town will work to flush the system through a unidirectional approach to clear the disturbed materials. Flushing never completely removes materials from the distribution system. As customers draw water, materials will be pulled in from the mains. Therefore, individual system flushing is required. The Town can provide assistance when individual customers are disproportionately impacted.

Longer Term Solutions for the Water System

As previously mentioned the new water treatment plant is nearing completion. Dry environment pressure testing at the plant started the week of July 23, 2018. Wet environment testing will begin in early August and continue for two to three weeks. Upon the completion of testing, treated water will slowly be introduced into the distribution system as we redirect the water flows into the new treatment plant. The new plant will be the sole distribution source for the entire Town by the end of October 2018.

Upon the completion of the treatment plant a comprehensive scouring plan and regular system flushing schedule will be utilized. The system will be scoured to remove the bulk of all deposits within the mains. This process will take a year or perhaps slightly longer to complete. Increased flushing will occur in conjunction with and in addition to the scouring. With minerals being treated at the main treatment plant and excess deposits removed, the Town will develop a regular cleaning and maintenance schedule to maintain ideal conditions within the entire distribution system. Throughout this process, the schedule of events will be shared with residents through the sources identified above.

Tips for Mitigating Impacts within your Home and Business

Through the information provided above it becomes evident that residents may experience discoloration into the near future. The following tips are intended to reduce the impacts when experiencing discolored water:

- Run water from an outside faucet nearest to your water meter until clear
 - Then be sure to run water from each faucet within your home to until it's clear
- Impacts may be intermittent
 - After events and activities that disturb the system, fluctuation in demand causes irregular amounts of minerals to be moved through the system
- Disturbances may be far reaching
 - For the most part the entire distributions system is connected. A water main break in one section of Town may cause discoloration miles away.
- Impacts may be delayed
 - Changes in demand and the movement of water through the mains over some distance means that discoloration may begin days after something disturbs the system

- Customers should avoid using water after notification of an event or activity in accordance with the information provided by the Town

Closing Matters

The Town of Shrewsbury is working diligently to eliminate the ongoing water quality challenges of recent years. We are confident the approach that is underway is the best long-term solution.

Unfortunately, we have not communicated effectively. Please be assured that this is not because we are not concerned about our customers or the issues at hand. As described above, activities and disturbances are now having a greater impact on the system. On several occasions we have underestimated this impact and were ineffective in communicating.

We always encourage customers to reach out to Town officials directly to be sure we are aware of the problems. The Town does not monitor social media pages. While sharing information with neighbors and friends is helpful to them, it does not guarantee the Town is aware of the issue.