

**Minutes  
Of  
The Foxboro Water and Sewer Commissioners  
September 30, 2013**

Members in Attendance: Chairman M. Stanton, Vice Chairman R. Pacella, Clerk B. Garber, DPW Director R. Hill, Water Superintendent R. Worthley, Town Engineer R. Swanson, BOS G. Coppolla

The meeting was called to order at 7:00 p.m. by Chairman Stanton. The meeting was then moved to the Gala Meeting Room to accommodate the attendees.

The Board then opened the Public Hearing on Water, Reuse, Private Sewer and Sewer Rates. Mr. Garber read the Public Hearing notice.

The Board noted that the water infrastructure requires a lot of work in order to provide clean water; rehabilitation of the system is also needed. The Sewer is under a requirement by the EPA to upgrade the treatment plant. One option will cost \$18 million for the existing ratepayers and will not result in any additional capacity.

The town has two water treatment plants to help clean the water. The Board is in the process of developing infrastructure plans to 2030 or 2040. The water rates have been increasing by an average of 3-4% every year due to costs that can't be controlled.

Mr. Hill read from "A Brief History of the System" about the creation of the DPW and the development of the hydraulic model of the water system. He also noted that the 1937 tank is having problems and the model showed that it could be abandoned if 3,000 feet of new 12" water main is installed on Main Street to replace the existing 6" and 8" mains there. The model also showed that the unlined cast iron mains in town have high velocity during peak usage times and result in the black water experienced by customers in the area.

This past summer a new filtration plant has been under construction on Lamson Road which resulted in four wells in the area being shut down. This put the remaining wells under stress and resulted in many black water complaints. As soon as the plant is completed, the flushing program will continue until freezing conditions exist.

The department has also identified needed and necessary future improvements such as the rehab of the Hill Street reservoir, the replacement of 21 miles of cement asbestos pipe as well as unlined cast iron water mains. Other projects include the replacement of wells 2a and 3 and the construction of a new treatment plant at Pumping Station Road. They would also like to install antennas to eliminate the need to physically read the water meters and have the ability to alert customers of unaccounted for use increases to avoid large bills.

Mr. Hill also noted that the water rates will be affected by unfunded mandates by both the federal and state government. Required water restrictions also affect the department as this results in less revenue.

Roberta Rae-Jones of 56 Neponset Heights Avenue brought a sample of the black water she experienced in July. Arthur Balduf of 61 Neponset Heights Ave. brought a water filter from his house that was black after only three weeks of use. He stated that the water is worse whenever there

is an event at the stadium.

Mr. Stanton stated that the department is trying to find a solution to the problem of black water and is not shying away from it.

Arthur Coombs of 35 Connie Drive asked how the rates could be raised when they know there are all these problems.

John MacDonald of 5 Robert Street wanted to know if the town has ever considered a regional water district with surrounding towns similar to the sewer district.

Mr. Hill noted that there are things the department is doing or recently completed such as the transfer of services on Chestnut Street from Mechanic to Cocasset Streets to a new 12" line, there have been no complaints in that area since its completion. The other end of Chestnut Street also needs to be done as there is an old cast iron pipe there.

The treatment plant being constructed on Lampson Road should be completed and up and running in the next month.

In regards to Mr. Balduf's complaint, the stadium high pressure district drags the black water from the low pressure district but the town is mandated to supply water to the stadium.

Raffaella Zizza-Feinstein of 3 Standish Ave. asked if the state and federal regulations could be challenged.

Mr. Hill noted the recent fight with the Mass Water Resources Commission and their restrictions on the use of the Witch Pond Wells, they did not have the science to back up their claims that use of the well would dry up the nearby wetlands. The town is still required to monitor the wetlands though, at a cost of \$80,000 per year.

The town is also mandated to add chlorine to the system.

Mark Hewitt of 130 South High Street asked if there is a number that the department is working towards. The department is working on a capital plan and will present a number when all the facts are known.

Mr. Hill noted that the town does not currently have an asset management system and once one is developed it will help to control the rates as a structure can be developed in the rate system.

Warren McKay of 39 Bicknell Street and a former Water Superintendent asked if the Main Street tank is abandoned if the town will still have two tanks, thirty five years ago land was bought on Hill Street to build a new tank.

In regards to the sewer system, the town has been working on an Intermunicipal Agreement with the towns of Mansfield and Norton for the past five years. Currently there is no additional sewer capacity in town and the Planning Board has noted as part of their Master Plan work that the downtown suffers as a result of no available capacity. New developments like Foxfield Plaza and the Meditech building are also looking for capacity. If the town joins the IMA there will be additional

capacity available both for the town and for sale to commercial customers. If the town does not join the IMA, the EPA has mandated improvements to the existing plant that will cost \$18 million to the approximately 900 sewer ratepayers in town.

Mr. McKay wanted to know what amount the department will be buying from the IMA. The department will be purchasing 170,000 gallons per day and there will be no additional costs to the existing ratepayers for this additional capacity, it will be passed on to the new customers.

The department will be asking for acceptance of a Sewer District at the upcoming Town Meeting. This is a necessary step towards the IMA. There will be no betterments and no one will be forced to join the district. The District shows all of the existing users plus the downtown area that was added by the Planning Board.

Mr. Coombs asked if there would be a charge for sewer line connection if the line goes past your house. Mr. Hill explained that there is enough industrial demand for capacity that no betterments will be necessary. The ratepayers will still own the system, it will still be an enterprise system.

Janet Kennedy of 45 Cocasset Street asked about unpaid water bills and if those people would be offered payment plans. The department is working towards monthly billing.

A motion to close the Public Hearing was approved 3-0.

A motion to raise the water rates by 6% effective immediately was approved 3-0.

A motion to raise the sewer rates by 6% effective immediately was approved 3-0.

A motion to raise the reuse rates by 6% effective immediately was approved 3-0.

A motion to approve the minutes of September 16, 2013 was approved 3-0.

Mr. Worthley reported that a customer who had a noisy meter replaced on Chestnut Street sent an email of thanks to the department and noted the professionalism of Arthur Reynolds.

The pumps will be installed at Lamson Road tomorrow. There was a project meeting last Thursday and the work is expected to be completed in 14 days.

The meeting was adjourned at 8:10 p.m.

Respectfully Submitted,

Diana Gray

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These minutes of September 30, 2013 were approved as amended on October 28, 2013.

  
Robert Garber, Clerk

**Bob Worthley**


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**From:** William E Geary <William\_E\_Geary@raytheon.com>  
**To:** carol geary <cgeary@emersonswan.com>  
**Cc:** 'bworthley@town.foxborough.ma.us' <bworthley@town.foxborough.ma.us>  
**Date:** 09/25/13 6:53 AM  
**Subject:** Re: Chestnut St pipe work

Mr. Worthley,

My name is Bill Geary, husband of the resident who wrote you an email earlier this month concerning issues we had with noise every time we flushed our toilets or ran our washing machine (see email below). I want to apologize for not getting this return email out to you sooner, but as with all of us, I've been pretty busy the last week or so.

The reason for this email is to thank you and your staff at the Foxborough Water Dept., specifically Art Reynold's. Art got in touch with me immediately after your office received my wife's email. We set up an appointment for the following Monday (Sept. 16) so Art could hear the problem and make a comprehensive decision on the cause. Although it took us some calls back and forth to get connected on that date, we did finally get together on Monday at 3:00 PM and by 3:10PM our issue was resolved thanks to Art. He immediately determined the cause was the meter that needed to be replaced and thankfully Art had one available in his truck.

It's been nice and quite in the Geary household thanks to the efforts of the Foxborough Water Department, for that I thank you very much and I would deeply appreciate it if you would thank Art for me as well

Sincerely,

Bill Geary,  
 Foxborough Resident and friend  
 185 Chestnut St.

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# FOXBOROUGH WATER

## 2013 OUTLOOK

### BRIEF HISTORY OF THE SYSTEM

The Town of Foxborough has had a water department for many years. In the early 1900s a steam powered vacuum system and three wells were installed at Pumping Station Road off Chestnut Street. A distribution system consisting mostly of unlined cast iron pipe served the customer base at that time. After World War II, the vacuum system was insufficient to supply adequate pressure, and was replaced with electric powered turbine pumps in each well. The original stand pipe that maintained pressure on the system was found to be inadequate and a new tank was installed on Main Street in 1937.

As the Town grew, additional wells and water mains were installed. The water mains installed after WWII were installed using asbestos-cement (AC) pipes, which were heavily advertised to resist corrosion and not produce brown and black water complaints, unlike the unlined cast iron at that time. New well fields were installed at Sprague Road off South Street and at Lamson Road off Oak Street. The system continued to grow with a well off Route 1, and later a well west of Mechanic Street. Finally, in 2007 two wells were installed at Witch Pond, along with the Town's first treatment plant to remove iron and manganese, which are heavy constituents of all ground water in southeastern Massachusetts.

In the '70s the Town began the use of ductile iron pipe for water mains. In the '70s, '80s and '90s the Town experienced black water conditions at various times. Concurrently, the Mass. Department of Environmental Protection and its predecessors began to implement safe drinking water standards and to regulate groundwater withdrawals throughout the state. Each year that passes, the regulations get more stringent and more numerous.

Early on, the Town was required to provide disinfection of water by injection of chlorine. Iron and manganese in the groundwater are in solution, not solid particles. Once chlorine is injected into the water system, it converts much of the dissolved iron and manganese to solid particles, which travel through pumps and pipes in the water system. It is these particles that are the primary cause of brown and black water in the system. This is one of the main reasons that in 2007 the Town built their first treatment plant at Witch Pond and in 2012 began construction of a second treatment plant at Lamson Road, which will be completed in October, 2013.

In the '70s and '80s the asbestos cement piping began to exhibit periodic failure. This is due to the acidic groundwater depleting the cement matrix in the piping, weakening the pipe and resulting in breakage and pipe failure.

When Gillette Stadium and later Patriot Place came along, a decision was made to maintain a high pressure zone along Route 1 due to the high ground elevation, and a new high pressure tank (the EBAY tank) was required to be built at the stadium to maintain high pressure there and along route 1. Also a booster pumping station was built at Ashcroft Road off North Street to add water to the high pressure system when needed.

In late 2011 the Town combined the Water & Sewer Department, Highway Department and Tree and Park Department as a Department of Public Works. A Director and new Water Superintendent were employed. Under direction of the Water and Sewer Commission, the first electronic control systems were installed to remotely monitor and control pumps and water amounts in storage tanks. A major improvement that this system provides is the required chemical feed control, and alarming. Through a grant the new Water superintendent acquired about forty five thousand dollars' worth of electrical control equipment.

In late 2012 the first computer hydraulic model the water system was installed. This is an electronic model that can predict velocities and pressures in the water mains under variable valve closings and openings. The initial use of that hydraulic model revealed many shortcomings with the existing water system. Among these are:

- There was no way to implement an effective main flushing program due to lack of sufficient hydrants on the largest water mains in town, thus sufficient flushing velocity could not be achieved in those mains.
- The Main Street tank, constructed in 1937 and showing signs of future problems could be abandoned if 3,000 feet of new 12 inch water main replaced existing 6 inch and 8 inch mains on Main Street, saving approximately \$ 650,000, which could then be used to rehab the 3 million gallon reservoir on Hill Street.
- All unlined cast iron mains in town had such high velocity during peak water usage that the black water condition was nearly constant to the customers on those mains, and a huge problem.
- Fire pressures at various locations in town were found to be lower than desirable.

As we continue to use the model, it will assist in developing effective placement of new valves, hydrants and water mains to enable an effective flushing program that will minimize the black water conditions.

The summer of 2013 has been particularly difficult because during the construction of the new filtration plant at Lamson Road, the four wells at that location had to be shut down and rehabilitated. This has stressed the remaining wells during peak demand, and made it impossible to do significant flushing, resulting in the many black water complaints.

As soon as the new plant is completed and on line, we will begin a very aggressive flushing program in the areas that are experiencing black water until freezing conditions curtail that flushing. The new plant will supply clean water to the system and hopefully abate the black water sufficiently to give us the time to replace the 6 inch unlined cast iron mains that contribute greatly to that problem.

In addition to the improvements already on line or in progress, we have identified many needed and necessary future improvements, among which are:

- Cleaning, rehabilitation and modernizing the 3 million gallon reservoir off Hill Street.
- Replacement and abandonment of 21 miles of existing asbestos cement pipe, virtually all that type of pipe in the system.
- Replacement, abandonment or relining unlined cast iron water mains.
- Replacement of well number 3 at Pumping Station Road.
- Construction of a new treatment plant at pumping station road.
- Replacement of well 2A at Pumping Station Road.
- Installation of antennas at four locations in the town to once and for all eliminate the need to read water meters. The antenna system coupled with software will enable us to read and monitor water use at every connection and alert customers to any unaccounted for increases. Customers will then be able to identify and repair leaks before running up a huge water bill.
- Development of monitoring and leak detection to minimize lost water.

The implementation of these measures will take place over several years. Each year that passes without some improvements will result in serious and expensive future problems. Construction and material costs continue to escalate at rates that far exceed the cost of living index, which only increase the price of delaying these improvements.

## WHY ARE WATER RATES RISING?

Federal and State drinking water rules and standards have continually become more stringent and more complicated since the 1970s. Along with these changes, the ability to measure contaminant or potential contaminant levels of elements and compounds in solution has evolved to where it is now possible to measure to parts per billion, unheard of 30 years ago. This has resulted in the need for water treatment to a much higher degree than earlier in time.

The costs of providing treatment effect the entire rate structure, for example we now have much higher electrical costs, not only because of the cost of fossil fuels, but due to the need for many more pumps in the system. Chemicals required for treatment continue to escalate in cost. Piping and other needed supplies rise at rates much higher than the cost of living.

Unfunded regulations mandated by the Federal and State government require asset management of the entire water system, something that has never been done in Foxborough. Asset management will require the valuation of all components within the water system and a long range program to fund the maintenance, rehabilitation and replacement when required of all assets. The cost of implementing this is part of the reason rates will continue to rise.

In addition, watering restrictions required to be imposed during summer months reduce revenues, thus rates must account for this reduction even though mandated by the state.