



**The City of Lowell
Lowell Regional Water Utility
815 Pawtucket Boulevard
Lowell, MA 01854**

**Mark A. Young
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TO: Eileen Donoghue, City Manager *EMD*
FROM: Mark A. Young, Executive Director
DATE: June 20, 2019
RE: M. Samaras – Req. The City Mgr. Instruct Water Department Provide A Report On The Conditions Of The Drinking Water Distribution Network In The City of Lowell.

The City's drinking water distribution network was designed to bring treated finished water from the treatment plant at 815 Pawtucket Blvd. to all areas of the city for residential, commercial, and industrial use and to provide water for fire protection.

Mains in the water distribution system range in size from 1½ inch to 36 inches with mains dating from the 1850's to the present day.

There are approximately 220 miles of water mains with roughly 3900 gates. Gates are a critical piece of water infrastructure that allow for sections of water main to be isolated to minimize impacts to homes and businesses when water mains are repaired.

The Water Utility has recently started a gate exercise program ensuring gates are properly maintained and damaged gates are either repaired or replaced.

The City has three large storage tanks to provide water and adequate pressure to areas of the city that are at a high elevation. Five pump stations help in the distribution of the water throughout the system and keep it maintained at adequate pressures. There are also eight river crossings for distribution through the city's various neighborhoods. The distribution system also has approximately 2800 fire hydrants. On a yearly basis older fire hydrants are replaced as they are identified.

As mandated by Massachusetts Department of Environmental Protection (MADEP) regulations the Water Utility performs corrosion control of the water mains by the addition of Zinc Orthophosphate. This is added to coat water mains to prevent internal corrosion and to sequester lead so that it does not leach into the drinking water. Sodium Bicarbonate is used to control Alkalinity and maintain a PH of the drinking water from 7.5 to 8.5.



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Lead detected in Lowell's drinking water is a result from older pipes not the treated river water. Lead levels in the river water are extremely low. In fact, MADEP has allowed Lowell to have a reduced lead monitoring schedule of 50 samples per year randomly taken from various areas throughout the City.

Deferred maintenance and upgrade projects to increase the reliability of the system for the residences and businesses will be addressed with the recent passage of the \$45M loan order.