TOWN OF HINGHAM
MASSACHUSETTS

Water Supply Committee

MAY 16, 2016	A posted meeting of the Hingham Water Supply Committee (the Committee) was held on Monday May 16, 2016 in the East Hearing room, 210 Central St., Hingham, MA. The meeting was called to order by Mr. Mullen at 7:42PM.
MEMBERS PRESENT	Sam Mullen, Chairman Kirk Shilts, Secretary Maureen Doran, Member Matthew Greene, Member Ron Kirven, Member Adam White, Member
OFFICIALS PRESENT	John Walsh Aquarion Water Co. (Aquarion) Ronit Goldstein, Aquarion John Herlihy, Aquarion
AGENDA	Mr. Mullen reviewed the posted agenda with the Committee. **Thereafter, the agenda was established as posted.**
MINUTES	The Committee reviewed the prior meeting minutes of October 26, 2015. Thereafter, a Motion was made Mr. Green and Seconded by Mr. Kirven and it was VOTED (unanimous); **to approve the meeting minutes of 10/26/16 as drafted.**
AQUARION UPDATE:	Mr. Walsh reviewed with the Committee a hand-out about organizational changes at Aquarion, water supply issues, water quality standards, and infrastructure investments. He also provided the Committee with a copy of Aquarion's 2014 Water Quality Report.
▪ WATER SUPPLY WITHDRAWAL	Mr. Walsh said Aquarion's 2015 raw water withdrawal was 3.41mg/d., which was slightly less than its 2014 withdrawal. The 2015 withdrawal corresponds to 97% of the state-registration allowed limit.
▪ LEAK DETECTION	Mr. Walsh said leak detection performed in April of this year identified about sixteen (16) leaks. Hydrants continue to be the primary found culprit.
▪ UNACCOUNTED-FOR-WATER	Mr. Walsh said Aquarion's 2015 unaccounted-for-water was 21%, which was down from the 23% it reported in 2014. He said that main & service line leaks is the likely reason for

most of this loss but meter reading errors also account for a notable percentage.

Mr. Walsh said Aquarion is moving ahead with the long-proposed installation of district zone meters across its service network to identify areas experiencing unexpected flow volumes.

Mr. Walsh said Aquarion is lowering service pressure in some areas in Hull experiencing high water pressures that can stress an aged infrastructure and leads to leaks. He also reported that winter bleeder flows (used to keep shallow supply lines from freezing) and hydrant use flows will be better documented.

▪ WATER RESTRICTIONS

Mr. Walsh said mandatory annual outdoor water use restrictions began on May 1st and run through October 15th. Customer irrigation system watering is only allowed twice per week, unless additional restrictions are imposed.

▪ WATER QUALITY ISSUES

Mr. Herlihy described three groups of water quality items that Aquarion currently monitors.

(1) Turbidity, chlorine (which is added), pH (which is adjusted by additives) and fluoride (which is added) are <u>continuously</u> monitored at the treatment plant and also weekly in the field. These basic water quality issues must meet required federal standards.
(2) Thirty-some environmental pollutants and naturally-occurring minerals are <u>periodically</u> monitored at various locations in Aquarion's network. These water quality issues must also adhere to established public safety standards. As an example, he said that bacteria levels are measured weekly at a dozen different sites across the system.
(3) About a dozen other water quality characteristics are periodically measured but <u>not</u> held to any required state or federal standard.

Mr. Herlihy said lead and copper are interesting water quality problems because they are not problematic components of raw groundwater but rather leach from homeowner copper water pipes, lead service pipes and lead-based solder into the drinking water due to the corrosiveness of the water. He said this testing is typically on a three-year schedule and involves water samples taken at customer homes and schools.

<u>Lead Testing</u>:
Mr. Herlihy said lead testing results in Hingham are within a safe range at around 3ppb. The maximum safe lead content cannot exceed 15ppb. Lead is a known neurotoxin. He said customer homes are selected for sampling based on the presence of a lead service line entering the home, or if the

home was built between 1983-85 when lead content in plumbing solder was at its greatest.

Copper Testing:
Mr. Herlihy reminded the Committee that last year, sampling revealed elevated copper in Hingham's drinking water. Typically copper concentrations average around 0.65ppm and may not exceed 1.3ppm. Elevated copper can be detected in drinking water by its bitter taste. In 2015, copper levels were measured at 3.1ppm in violation of drinking water standards. This resulted in required public notifications and additional water sampling. Aquarion must now perform biannual testing for copper at double the number of homes (60 rather than 30) across its network. Elevated copper in predisposed children can cause Wilson's disease, which can affect liver and brain functions.

Mr. Walsh said the change in corrosiveness that resulted in last-year's elevated customer copper levels was the result of plant operators adjusting the pH at the beginning of the treatment process to improve one aspect of water quality but not re-adjusting the pH at a later stage of the treatment process. He said in all, eight (8) different chemicals are added to Hingham's drinking water at various stages of the treatment process. The pH (corrosiveness) is lowered by the introduction of lime or elevated by adding sodium bicarbonate.

Mr. White expressed concern about the process of customer home field-testing for lead contamination. He hoped Aquarion's sample size and selection criteria could be more broad-based and diverse.

▪ CAPITAL PLANNING

Mr. Walsh said Aquarion invested $3.5 million in capital projects in 2015, one-third of which went into water main replacements.

Mr. Walsh said 2016 planned expenditures include a number of treatment plant upgrades and raw water system improvements. He said Aquarion is also planning water storage tank re-painting projects, zone metering installation, and investigating a practical new supply source.

Mr. Greene expressed concern about Aquarion's prioritization of capital projects that are not focused on the system's most pressing deficiency, which is the high unaccounted-for-water problem.

COMMITTEE GOVERNANCE

Mr. Mullin asked for committee officer nominations for the upcoming 2016/17 annual term.

Dr. Shilts nominated Mr. Mullin to continue as chairman.

Thereafter, a Motion was made by Dr. Shilts and Seconded by Mr. White and it was VOTED (unanimous);
to elect Mr. Mullin as Committee chairman for the 2016/17 annual term.

No nominations for secretary were offered.

Thereafter, a Motion was made by Ms. Doran and Seconded by Mr. White and it was VOTED (unanimous);
to elect Dr. Shilts as Committee secretary for the 2016/17 annual term.

SCHEDULE — The Committee planned its next meeting for September 2016.

ADJOURNMENT — The May 16, 2016 meeting of the Hingham Water Supply Committee meeting adjourned at 9:28PM.

Respectfully submitted,

Kirk Shilts, D.C.
Secretary
Hingham Water Supply Committee