

February 6, 2016

Sue F. McCormick, CEO
Great Lakes Water Authority

Town Hall Meeting
Royal Oak Senior Center

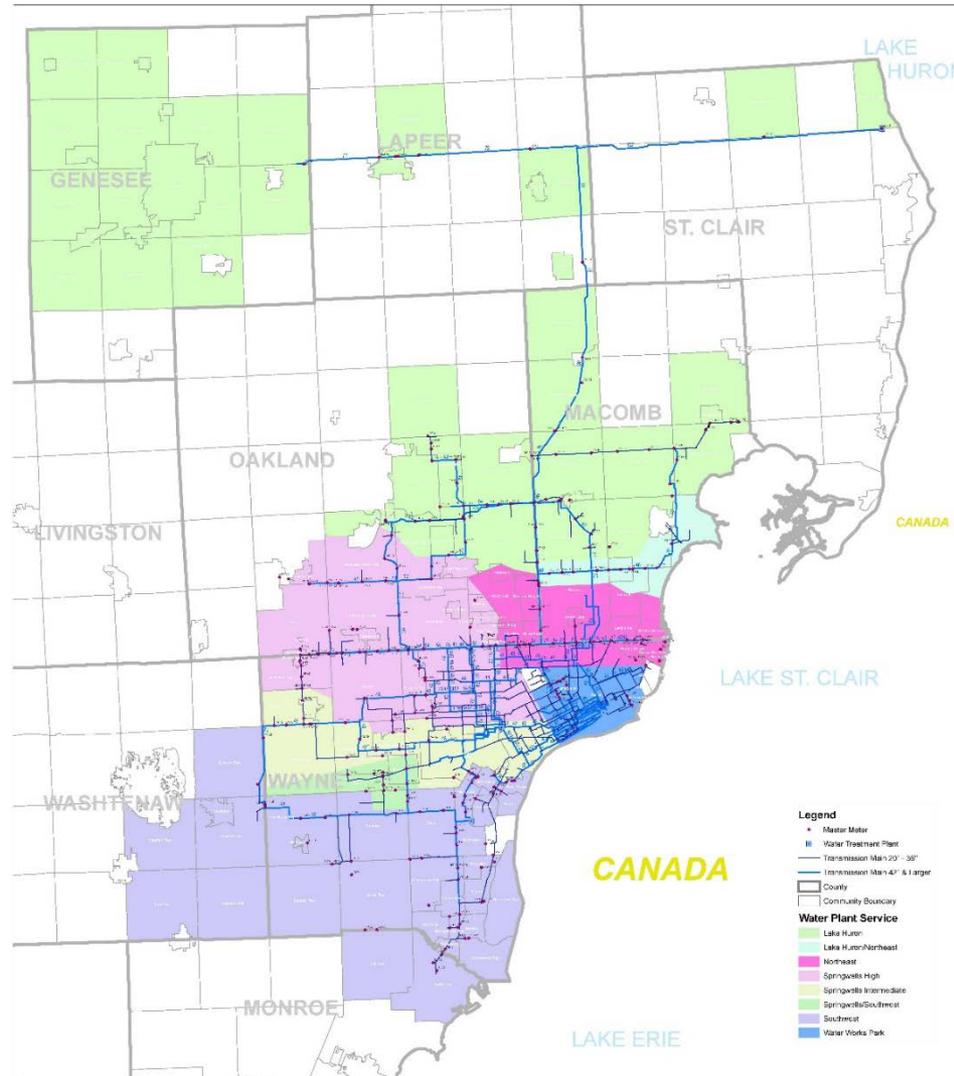


Agenda

- Overview of the GLWA Water System
- DWSD/GLWA's Water Service to the City of Flint
- The Safe Drinking Water Act and Lead and Copper Rule
- Summary and Conclusions
- Questions



GLWA Regional Water Supply System Overview





GLWA Regional Water Supply System Overview (cont.)

- System is comprised of water treatment plants, pump stations, reservoirs and large diameter pipes called “transmission” pipes
- Corrosion control measures to address concerns with lead service leads and site plumbing were implemented in the regional system decades ago in compliance with federal and state regulations with demonstrated success
- The system transmits water to customers who are municipalities or water authorities (Customer Communities)





GLWA Water Supply System Overview (cont.)

- GLWA assures water quality produced at each of five water treatment plants (plant taps), in the transmission system and at points of connection with its Customer Communities
- The water quality sampling program consists of:
 - Source water monitoring
 - Plant tap monitoring
 - Distribution/Transmission Main sampling
- GLWA provides sampling and analysis on a service basis to customer communities upon request





GLWA Customer Communities Water Systems....

- GLWA Customer Communities distribute the drinking water to their customers and residents
- Each GLWA Customer Community has responsibility for water quality within its own distribution system
- The lead concerns in Flint are at the individual taps in homes, etc., not in the water in the Flint distribution system or mains
- The water within the City of Flint's local system is physically prevented from flowing back into the GLWA transmission system



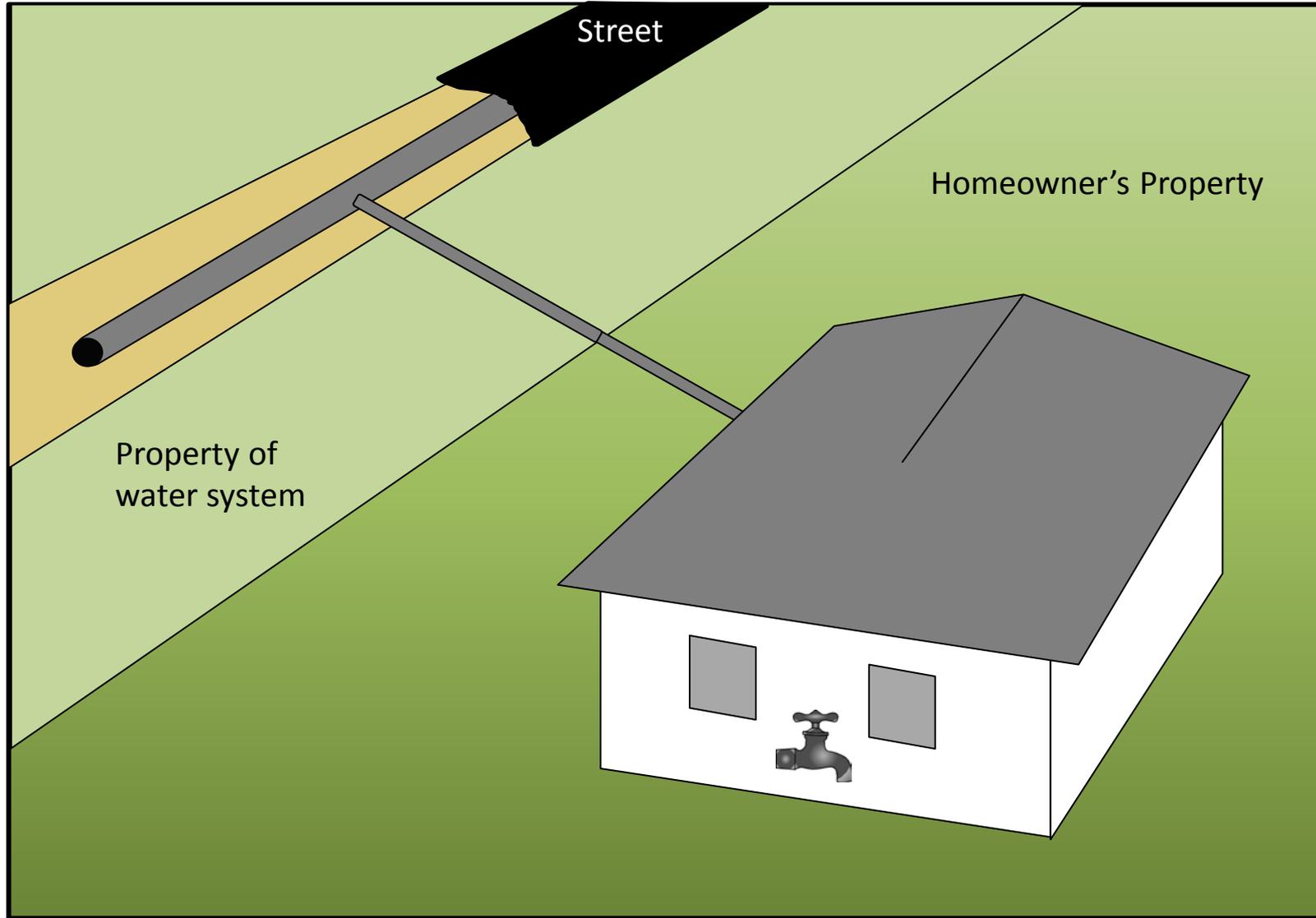


Regional Water System Service to the City of Flint

- The City of Flint began being served by the Detroit Water and Sewerage Department in 1965
- Flint resumed operation of the Flint Water Plant and use of the Flint river when Flint chose to come off the regional water supply system on April 29, 2014
- Use of the Flint River was intended to continue until the completion of the Karegnondi Water Authority's system which would provide Flint source water from Lake Huron
- At Flint's request, service from the Regional Water System was restored to the City of Flint on October 16, 2015 and is continuing presently with GLWA



Lead and Copper Rule





The Lead and Copper Rule (LCR) from www.epa.gov

- Lead and copper enter drinking water primarily through plumbing materials. Exposure to lead and copper may cause health problems ranging from stomach distress to brain damage.
- The *treatment technique* for the rule requires systems to monitor drinking water at customer taps. If lead concentrations exceed an action level of 15 ppb or copper concentrations exceed an action level of 1.3 ppm in more than 10% of customer taps sampled, the system must undertake a number of additional actions to *control corrosion*.
- If the action level for lead is exceeded, the system must also inform the public about steps they should take to protect their health and may have to replace lead service lines under their control.





Summary and Conclusions

- The GLWA regional water system is large and serves many customer communities
- Corrosion control measures have been optimized in the regional system water treatment in compliance with regulations
- Customer Communities of the regional system are responsible for water quality and monitoring within their own local systems
- The water within the City of Flint's distribution system is physically prevented from flowing back into the GLWA transmission system



Questions





The Safe Drinking Water Act and Lead and Copper Rule



The Safe Drinking Water Act

- The Safe Drinking Water Act (SDWA) is the principal federal law governing public drinking water systems
- Applies to every public water system in the US.
- Requires the EPA to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards. Most of the standards are measured as the water enters the distribution system
- The State of Michigan has 'Primacy' for the SDWA in Michigan which provides for State oversight for compliance with the Safe Drinking Water Act and Michigan Rules which must be at least as stringent





Safe Drinking Water Act (SDWA)

- The SDWA was initially enacted in 1974 with significant amendments in 1986 and 1996
- The 1986 amendments defined "lead-free" plumbing and prohibited the use of plumbing for public water supply that did not meet the new definition. The amendments also required EPA to set standards limiting the concentration of lead in public water systems





Safe Drinking Water Act (SDWA)

Lead and Copper Rule

- In 1991 the EPA adopted the Lead and Copper Rule (LCR) to minimize lead and copper in drinking water. The rule replaced the previous standard of 50 ppb, measured at the entry point to the distribution system.
- The rule established a maximum contaminant level goal (MCLG) of zero for lead in drinking water and a treatment technique to reduce corrosion of lead and copper within the distribution system.
- Revisions to the rule were made in 2000, 2004 and 2007
- Additional Revisions to the LCR have been anticipated



The Lead and Copper Rule (LCR)*

To help shape an updated Lead and Copper Rule, EPA has engaged with multiple stakeholders representing a wide range of expertise.

- **National Drinking Water Advisory Council (NDWAC) Lead and Copper Rule Working Group**

The NDWAC Lead and Copper Rule Working Group was convened beginning in March 2014 to provide advice to EPA in addressing the five issues listed below:

- Sample site selection criteria;
- Lead sampling protocols;
- Public education for copper;
- Measures to ensure optimal corrosion control treatment; and
- Lead service line replacement.

* <http://www.epa.gov/dwstandardsregulations/lead-and-copper-rule-long-term-revisions>



NDWAC LCR Working Group Status

On August 24, 2015 the Lead and Copper Working Group filed its report with findings and recommendations to the National Drinking Water Advisory Council (NDWAC)

