

March 5th, 2017

Ohio Environmental Protection Agency (OEPA) Division of Drinking and Ground Waters 2110 East Aurora Road Twinsburg, Ohio 44087

Re: City of Painesville, Ohio PWS ID No. OH4301611 Lead and Copper Mapping of Water Services on a GIS Based Distribution Map

In June 2016 State House Bill 512 was passed with the resulting regulation, Ohio Revised Code 6109.121 requesting that community public water systems comply with lead and copper mapping of water services within their distribution system. The City of Painesville water operator and engineer submit this lead and copper report, lead and copper sampling plan locations and GIS distribution water map identifying lead and copper services with an OEPA requested disclaimer for your review and acceptance.

The Mr. Dan Schaefer met with the OEPA's on Friday March 3rd, 2017 to perform a checklist review of the necessary documents to insure that requirements for the lead and copper per this regulation are met. We were advised to proceed and given strong support of our efforts to date. We understand that violation letters could be mailed out on Tuesday, March 7th, 2017 to any PWS not submitting a mapping plan and report so this report and plan is being submitted at this time to eliminate any potential violation letter sent to the City.

The comments below describe the City's best effort on the location, identification as to material type and status of lead and copper service branches in the City's water system. This below information and disclaimer has been placed on the Lead and Copper Map of Water Services for the City.

The City of Painesville is the county seat of Lake County, Ohio and is located along the Grand River which discharges northward directly into Lake Erie. The City obtains its water supply from intakes located in Lake Erie and treated at their one water treatment plant along the lake shore. During the American Revolutionary War, General Edward Paine (1746-1841) who served as captain in the Connecticut militia during the war arrived in 1800 with six settlers among the first in the Western Reserve. He later represented the region in territorial legislature of the Northwest Territory. The Village was incorporated in 1832 in honor of General Paine, naming this portion of the territory as "Painesville" and then named the county seat in 1852. The community of Painesville attained City status in 1902.

The City grew to about 11,800 by 1935 primarily in the historic area as shown on this map. Some of the remaining buildings still exist and are identified on this map. The buildings and services indicated in the historic area may have existing lead pipe and leaded pipe materials or components. Records are not available to specifically determine which building or water service used lead pipe. A review of available Painesville water services have identified water services older and newer than 1982. It is generally understood that water services installed between 1935 and 1982 and 1982 and 1998 are copper pipe that use lead solder for joining pipes. The newer pipes in these years may have a higher risk of lead joints leaching into these copper pipes because of less normal water mineral buildup inside these pipes.



Today, the Painesville Water Works provides water supply for not only the City of Painesville, but also for the Village of Grand River and the Townships of Painesville and Concord. The City owns and operates this water system providing water service to a population in excess of 31,700. The current water service branches or taps within the Painesville water system are shown on this map. Water services installed after approximately 1940 used copper pipe and joint compounds that contained leaded components.

In summary, water services installed after 1935 are assumed to be copper pipe with some brass piping used prior to 1940. Water services installed from 1935 to 1982 to 1998 may have used the 8% lead solder that could leach into the water through joints on services in the street portion (public) and or within the home or business (private side). The property owner should verify lead content issues on the private side.

Public and private water mains constructed from 1880 through 1960 in general were constructed of cast iron hub and spigot pipe generally in 18 foot sections joined together using lead joint materials. These cast iron pipes (used with water mains, fire hydrant piping, fire hydrants, and valves) are connected using yarn and lead or leadite (Sulphur based additive for easier lead pour) for each pipe joint. These leaded joint water mains are being replaced but many of these pipes exist throughout the water system, typically for Ohio water systems. Water mains generally installed in the late 1950's were installed using mechanical joint pipe with bolted connections. However, around 1960, compression joint pipe was introduced eliminating bolted and poured lead joint connections on pipe. These newer water main piping materials including PVC since about1960 in the public water system did not use lead joints on water mains.

Disclaimer for Lead and Copper Services for the City of Painesville, Ohio Because it is practically impossible to determine the lead content of an installed fixture, fitting or pipe, it should be assumed that the manufacture or installation date is the primary indicator of the lead content. Therefore, the characteristics of buildings and piping solder or fixtures would be buildings in Ohio built prior to 1998 or that used plumbing material or solder manufactured before 1998. Such materials may have lead content with greater than 8% lead and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998. In addition, buildings built and plumbing materials manufactured after 2014 were required to have less than 0.25% lead by weight and have the lowest risk for contributing lead to the drinking water. It should be noted however that, although prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective. Actual lead pipe services are generally assumed to be possible prior to 1935. The Historic Area as highlighted shows where possible lead pipes may still exist but cannot be confirmed through existing records and should be verified on both sides for each water service tap or branch through approved OEPA testing methods.

If the OEPA should have any questions or require any follow up information or corrections, please do not hesitate to contact this below team.

Sincerely,

Frank McKeon, WTP Operator

Dan Schaefer P.E., Water Engineer, Brandstetter Carroll Inc.







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PAINESVILLE, OHIO PUBLIC SIDE / PRIVATE SIDE

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Madison Ave

PAINESVILLE TOWNSHIP

Bre Count

305 Madison Ave

Overlook Rd

Nelmar Dr

Painesville Country Club

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Arbor Glen Dr

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