



City of Greenville, Ohio
PWS ID: OH1900714

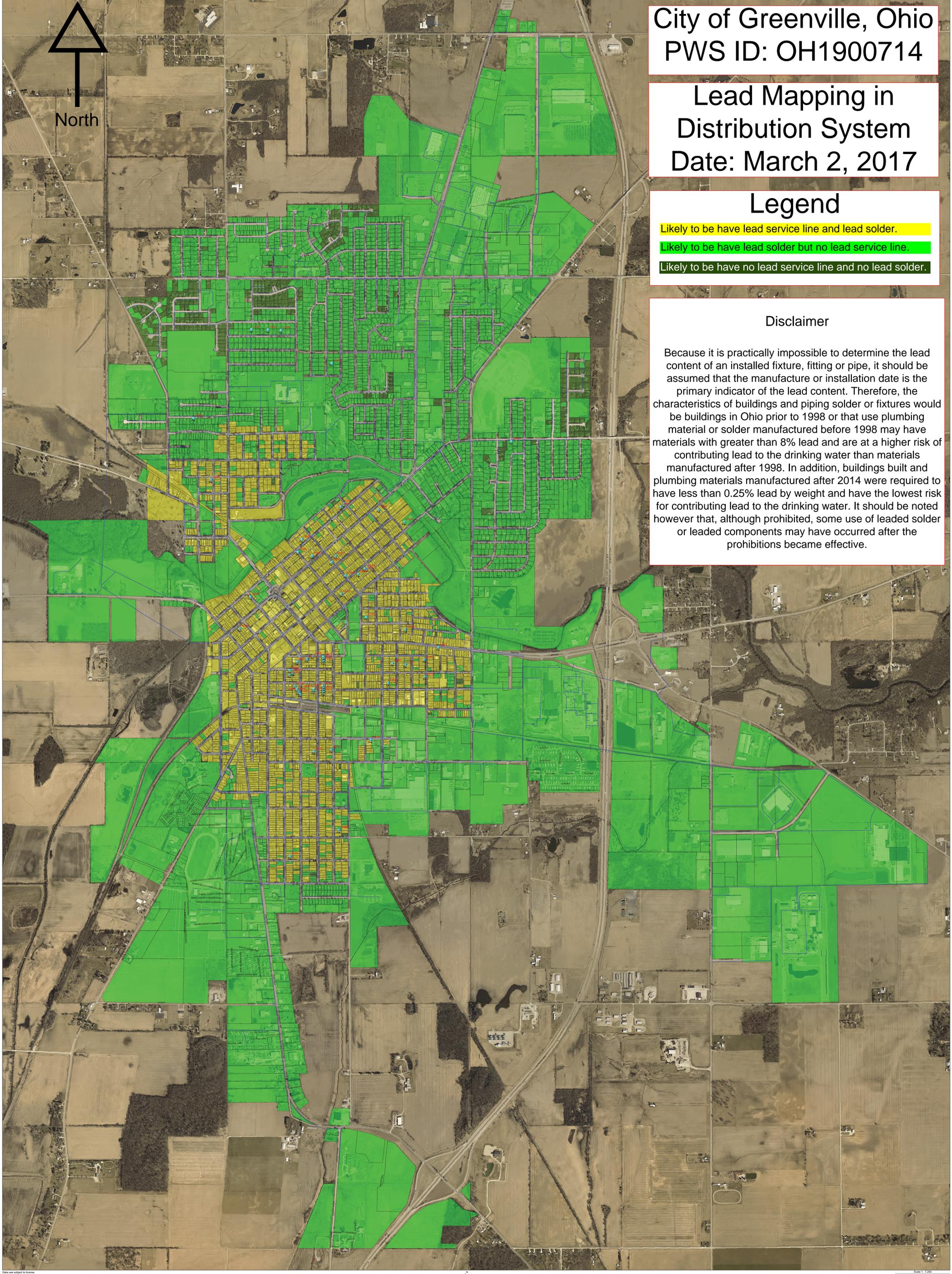
Lead Mapping in
Distribution System
Date: March 2, 2017

Legend

- Likely to have lead service line and lead solder.
- Likely to have lead solder but no lead service line.
- Likely to have no lead service line and no lead solder.

Disclaimer

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 prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials 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.





City of Greenville, Ohio
4160 State Route 502
Greenville, Ohio 45331
Water Department
Phone: 937-548-2415
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March 2, 2017

Ohio EPA SWDO
401 E. Fifth Street
Dayton, Ohio 45402

Lead Mapping in Distribution System – Narrative

Dear Mr. Verbsky,

HB512 enacting section 6109.121 of the Ohio Revised Code (ORC) requires the City of Greenville to complete a Lead Mapping project in the distribution system. To complete this task the City of Greenville has followed the OEPA document titled, "Guidelines for the Lead Mapping in Distribution Systems" dated January 6th, 2017, hereafter referred to as, "The Guideline".

The City of Greenville does not inspect or permit the installation of plumbing inside of buildings. That task is charged to the Darke County Health Department. The Darke County Plumbing Inspector specifically oversees the inspection of plumbing to make sure it meets the necessary regulations. Plumbing Inspector, Joe Nugent stated that lead service lines should have stopped being installed sometime during the 50's to 60's and as of 2014 all new installations would require the use of no lead components. No lead meaning 0.25% or less by weight instead of the previous 8% as was allowed by law. This timeframe corresponds to the timeframe given in The Guideline.

The City of Greenville has not previously recorded when lead lines were seen during maintenance activities. However, a system will be worked on to record such information. This updated information will of course aid in the future updates of the required map.

Due to time constraints, no public interaction could be utilized as is described in the Customer Self-Reporting section of The Guideline. In the future, this avenue may be explored to update the City's records. However, recent experience has shown that a customer can call a copper service line a lead line. This of course would be an erroneous record, which would not be helpful in determining areas with lead service lines.

To complete the map, since no actual records exist to determine which services may have lead on the City's side or the customers side, the City of Greenville had to turn to other information. Specially, the City of Greenville looked at County records of when homes were built in Greenville. A query was performed to find all houses built before 1955 as these homes are likely to have utilize lead service lines. It is assumed that if the City's side is lead, then the customers

side is lead also. The query that was run was then edited for locations likely not to be lead either because of time frame of water main installation or due to the size of the service line. The parcels that are highly likely to contain lead were then colored yellow on the map. The remainder was colored dark and light green indicating the highly likelihood of no lead. The ones colored yellow and light green also, have a likelihood to contain lead solder since they were built prior to 1998. The City of Greenville only constructed a map based on likelihood of lead present. This is not to say that some areas that are green on the map could have lead and some areas that are yellow on the map may not be lead service lines. If only the information that was truly known for sure with no assumptions then most of the map would be colored grey, which defeats the purpose of this process. Also, no attempt was made to try and depict the amount of lead in brass components, whether the household had lead in fixtures or if the homes have lead solder. This is beyond the scope of the City as those areas are governed by the Darke County Health Department. Even the Guideline states, "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 prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials 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."

The City of Greenville Public Water System began in 1893 as a pumping station. A main 14" waterline was run to town and reduced to a 12" at Water Street and then continued to the 1893 standpipe. Other mains of various sizes were branched off from there to serve the citizens of Greenville, Ohio. During this time the main waterlines were leaded together at the joints and at fittings. Lead was used for service lines from 5/8" to 2" in diameter. Cast Iron was used for pipes larger than 2" diameter. This continued for many years and has been observed when valves are uncovered and various fittings exposed. This original "old" part of town is where the highest probability of lead is located.

In 2016 the City of Greenville was required to perform the triennial monitoring for lead and copper. Prior to commencing with sampling John McDaniel with the Ohio EPA SWDO met with myself and emphatically stated that all the samples had better be from Tier 1 sample sites and that the Ohio EPA would not accept any from Tier 2 and Tier 3 sites as compliance samples. He said whatever happened in the past is the past but from this point forward it had better be right. After that conversation, I decided we had better review all our previous sample sites that were chosen by previous personnel who has since retired. After performing a desktop review it was clear that site visits were necessary as proper documentation to determine compliance was unavailable for most sites. The site review consisted of entering the residence and viewing what material the service line was made from where it entered the house. Also, if the house plumbing was copper then a test was performed on the solder to see if it was leaded solder. Once the site review was completed and data compiled it was determined that only 1 of the original sites met the Tier 1 requirement. One of the problems with this review was that a lot of

times the distribution workers have seen that the service line coming inside the house is galvanized but somewhere outside the house it transitioned to a lead service line back to the main. So, the next step in verification was to pot hole the service lines outside to verify if was lead or not. At the beginning, we started with the list that was tested previously. Once completed we could identify another 14 that met the Tier 1 requirement. Since we must test at least 30 sites and only 15 met the requirement we chose other sites to pot hole and verify inside plumbing. This gave us another 23 sites for a total of 38 sites that meet Tier 1 requirements. So, the 38 Tier 1 sites listed on the spreadsheet for lead and copper sample sites have been visually verified in 2016. All sample sites Tier 1 and Tier 3 have been identified by a pushpin and SMPID on the Lead Map.

In closing the City of Greenville has gathered all available relevant data to put together this first lead mapping of the Distribution system. I hope this will aid the OEPA, ODH and ODJFS in better understanding of the Public Water System. If you should have any questions or need additional information, please feel free to contact me.

Thank You,

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