



## Division of Drinking and Ground Waters Response to Comments

### Draft Guidance Documents

Guidelines for Lead Mapping for Distribution Systems

Guidelines for Mapping Lead Plumbing and Fixtures for Individual Buildings

### Agency Contact

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Ohio EPA issued public notice and requested comments for the period of Sept. 22, 2016 to Oct. 21, 2016 on the draft guidance documents. This document summarizes the comments and questions received during the comment period.

Ohio EPA reviewed and considered all comments received during the comment period.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. The name of the commenter follows the comment in parentheses.

### General Comments

**Comment 1:** “In response to LSL mapping, I wanted to let you know that we probably have very little if any water line mains with any lead in them. The only parts that might have lead are in the minimal amount of ductile steel that we have. Our older homes (mine included) have copper water lines with soldered connections.

Whatever the case, this seems like it would be a monumental task for us to identify, verify, and gps potential lead locations. With our part-time operator and volunteer Board, it seems that it would be a significant additional cost for our organization. I don’t know how we would determine potential lead hazards in households with our present staff. We would certainly need assistance in the research to locate lead potential.

We have approximately 450 customers and many miles of water line. Hope this is helpful.” (Jim Gertz, President of Winesburg Area Development Corp public water system)

“Please consider. The ORC’s want to cooperate as much as we can, but this type of enforcement needs to be enforced on the health department. They actually

have the initial right to inspect internal plumbing. It seems burdens continue to be placed on the ORC's which takes their time away from managing operations." (Village of Camden)

"Any PWS like ours, that has shown in the past to not have an issue with lead in the water, through regular sampling and corrosion control programs should be exempt from this program." (Gary D. Donat, Paulding W/WTP)

"Having it explained to me the problem I see you want every single business listed. How is that going to work on a map." (Scott L. Schultz, Village of Archbold)

"In regard to the LSL Mapping rule, I believe that the 6 month timetable for compliance is unrealistic and a undue burden on the CWS personnel. Not all cities have accurate historical records. If they do, they may not be able to compile and map in the small window provided by the rule. Yes lead is a problem in this country. Yes we should be working to abate the problems. Yes we should work towards total removal. But, before we as a country can remove the lead all together, we will still be using chemical treatment for lead lines. The lead solder found in almost every home built through the 1960's and 70's will take decades to remove. We do have to start somewhere, and treatment is the answer. For a total removal endeavor which will take possibly 100 years or more, 6 months is unrealistic, and an arbitrary amount of time to comply. Thank you.) "Dave Rothgery, City of Elyria Water Distribution Dept.)

**Response 1:**

While there will be some difficulty in obtaining information within the allotted time frame, the Ohio Revised Code (ORC) section 6109.121 (F) mandates this information be provided within six months of the law's effective date (Sept. 9, 2016) and does not establish exemption criteria for systems without lead service lines. The Division of Drinking and Ground Waters (DDAGW) worked on this guidance to assist water systems and anticipates the maps will improve over time.

DDAGW encourages water systems to work with your local building authority, and review permits, building records, tap cards, etc. to obtain information available to assist with completing the map and report. The Agency is not asking for GPS locations or verification of information at this time, but to identify what is listed in the guidance document to the best of your ability. The type of map produced is not a one-fits-all map, as each water system is unique and may consist of a building and not have an extensive distribution system. The division staff are available to help water systems identify an acceptable map format and narrow down the details to be included. DDAGW expects the maps initially submitted to be updated over time, as more information is discovered by the water system itself or provided by consumers and so forth.

Lastly, while corrosion control is an important part of compliance, treatment can only be deemed effective if the appropriate, highest risk sites are evaluated. The maps are to be used as a tool for water systems in identifying tier 1 sampling sites, as well as demonstrating appropriate site selection. In addition, whether a system has lead service lines or not, identifying what line materials consist of and

where there are potential buildings with lead fixtures, piping and solder remains important for compliance with identifying sample sites.

**Comment 2:** “My testimony before the House and Senate committee hearings noted that mapping is two step process of determining age of piping or buildings, and then testing (“scratch test” with a penny or attraction of a magnet), and the guidelines follow this priority.

The guidelines need to be practical and conservative. Given a six month implementation period for mapping, emphasis should be given to the first priority of comparing the age of piping and buildings to the local plumbing code or drinking water purveyor standard for setting lead piping threshold dates. Municipalities should be able to note on the maps where there are records of water main replacement with concurrent lead service line replacement, or proactive lead service line replacement. This will generate maps with few false negatives (reporting no lead service lines when there actually are lead service lines). Anecdotes without records should be used cautiously.

The guidelines for lead-containing solder, fittings and fixtures inside buildings should be clear regarding using the regulatory dates for reduced lead in these articles. For example, all submitters should note on their maps whether buildings were constructed before 1986 (no limits on lead), between 1986 and 2014 (lead solder banned and lower lead in brass), and after 2014 (low lead), the dates of changes to Federal and Ohio regulations. Qualitative descriptions such as unregulated, reduced and minimal lead exposure should be coupled with the construction dates, so that the categorization is consistent across the state.

Currently, there are no proven technologies for identifying buried lead piping without digging. There is development work underway to improve existing technology to locate and identify from ground level without digging. I will keep the Agency informed regarding progress. If this, or other, technology becomes viable, guidelines for updating the lead maps in five years should be reviewed and possibly revised.” (Alan J. Olson, P.E. – resident Westlake, Ohio)

**Response 2:** DDAGW appreciates the comments and suggestions. The guidance for individual buildings will be revised to suggest the option of water systems noting the construction dates of buildings. We agree a more detailed map is better and Ohio EPA would certainly accept a map with that detail. The guidance documents were drafted to be more conservative and less burdensome to water systems, requiring them to map construction prior to 2014. We anticipate maps will be more representative of the worst case scenario (more lead than is actually present), allowing water systems the time to review the map for accuracy and improve it based on what is learned about replacements (e.g., lines or fixtures).

**Comment 3:** This comment address language in the draft document, *Guidelines for Lead Mapping in Distribution Systems*. “Page 4, section IV reads as if we have to map areas of the distribution system that contains lead solder or fixtures... HB512 only requires us to identify the characteristics of buildings that could have them, not

to map them..." (Ohio Water Utility Council, Ohio Section American Water Works Association)

**Response 3:** The division agrees with the comment and the language mentioned was an oversight. The document will be corrected to reflect the requirements in House Bill 512.

**Comment 4:** The City of Perrysburg submitted comments during Early Stakeholder Outreach for the Lead and Copper Rule Amendments (held from June to July 2016) about the requirement for community PWSs to identify and map areas of their system known or likely to contain lead service lines and identify characteristics of buildings served by their system that may contain lead piping, solder or fixtures. "These comments remain relevant to identifying characteristics of buildings with lead piping, solder or fixtures.

*The City of Perrysburg doesn't see the value in 'identifying the characteristics... that may contain lead piping, solder or fixtures' within the PWS service area. The age of the building may be a factor, however, if remodeling and corresponding plumbing upgrades have been made, the age of the building is no longer relevant in this context. Yes, private property owners should be educated about the risks of lead fixtures and should be provided information about how to determine if their private property contains lead plumbing content. However, the education effort should be directed as widely as possible to include all building owners and occupants, including those on private wells. At that point, the task expands well beyond the realm of the PWS and may rightly belong in a building or plumbing code that applies Statewide.*

The City of Perrysburg has concerns about potential liability, even while exercising reasonable care, to carry out this responsibility to identify the characteristics of buildings with lead piping, solder or fixtures. The City also has concerns about the appearance of transferring responsibility to local governments for identifying lead content in private property plumbing fixtures that more likely rests instead with the private property owner." (City of Perrysburg, Alice Godsey)

**Response 4:** Please see the response to comment #1. In addition, Ohio EPA agrees that providing information to all customers is valuable, but requires more resources. This allows systems to prioritize based on the risk criteria.

**Comment 5:** The following are comments from the Ohio Environmental Council & Ohio Environmental Action Fund, Melanie Houston & Trent Dougherty.

"We have the following specific recommendations to further refine this guidance, and provide necessary transparency and protections for our local communities.

Need for Public Access to Lead Service Line Maps

We have a concern as to whether this guidance will result in the public being aware that new lead service line information exists, especially if it is incumbent

upon members of the public to request the information. While we think it is important that CWSs provide a copy of the lead service line maps to the Ohio Department of Health and the Department of Job and Family Services and to provide a report to the appropriate Division District office, it is equally important that members of the community are also provided access to these maps. Therefore, we urge the Division to create an additional requirement for CWSs to notify customers in the next billing cycle of the existence of the new lead service line information and routinely alert customers (either by mail or electronically) of the availability of these maps.

Clear Delineation of Schools and Child Day-Care Centers

It was quite clear that major purpose of HB 512, beyond fixing the weaknesses of the current regulatory structure, was to provide protection for school children. The bill establishes new purposes for the Director of OEPA regarding the regulation of lead within CWSs. Specifically, pursuant to newly enacted Revised Code Sec. 6109.121(I), 'an owner or operator of a nontransient noncommunity water system that is a school or child day-care center shall collect additional tap water samples in buildings identified in the map required to be completed...'. Unfortunately, the guidance does not provide any direction to CWSs as to how to identify these schools and child-care centers. We urge the Division to address the issue of identifying schools and child-care centers and the Director to require the proper additional testing of those schools and child-care centers in at-risk areas of the map.

Case Studies of Successful Lead Service Line Mapping

Finally, we would like to share, as a resource, what two of the nation's large cities have done to address lead mapping in their distribution systems. Both cities have created electronic lead service line maps as a reaction to the Flint water crisis – although there is no law requiring them to do so – and have made them freely accessible to the public. Additionally, in both cities there is some government financial assistance for lead service line replacement but the replacement price still remains high for homeowners.

Washington DC Lead Service Line Mapping

In June 2016, Washington DC announced an interactive map that covers 125,390 water service lines in the city of 650,000 people. Washington DC had its own scare of lead-contaminated water in the early 2000s, when lead levels in drinking water were reported to be highest in the nation.

*[Detailed description of data gathered for Washington DC map and the map's interactive functions omitted from this summary.]*

Due to its comprehensive nature and user-friendly color coding system, we would highly recommend Washington DC's interactive map as a model for Ohio.

Boston, MA Lead Service Line Mapping

The city of Boston has also created and interactive lead service line map. Although it is not nearly as detailed as Washington DC's map, it shows properties in yellow that have lead pipes on the private side. They have not yet included

information on the city-owned portion of service lines. A resident can use this map by searching for his or her address or searching the map by neighborhood. The map shows private residences and commercial properties.

If a Boston resident or the owner of a commercial property wishes to replace a lead pipe servicing his or her home, he or she can apply for the Lead Replacement Incentive Program. This program provides the resident with a grant of up to \$2,000 as well as the ability to cover the remainder of the cost of the replacement using a loan which is interest-free for 48 months. The Boston Water and Sewer Commission also operates a hotline for residents and owners of properties with lead service lines.”

**Response 5:**

Re: Need for Public Access to Lead Service Line Maps

At this time, DDAGW will not mandate but encourage water systems to provide the map to consumers. However, the map is a public record and a copy is required to be provided to the department of health and to the department of job and family services. Currently, there are Ohio water systems with maps made accessible to consumers (e.g., The City of Cleveland and Greater Cincinnati Water Works). DDAGW believes over time, more communities will make these maps accessible and prefer they do so on a voluntary basis.

Re: Clear Delineation of Schools and Child Day-Care Centers

DDAGW only has authority over schools and day cares that are public water systems. Water systems serving schools and day cares are required by statute to identify buildings that may contain lead piping and fixtures which could include schools. Identifying these buildings should assist in targeting information on reducing lead risks. In addition, the State of Ohio is providing up to \$15,000.00 per school to identify and replace fixtures.

Re: Case Studies of Successful Lead Service Line Mapping

DDAGW will add references in the guidance documents to the case studies mentioned.

**Comment 6:**

“In reference to the newly enacted ORC Section 6109.121 (F), we acknowledge that a PWS should be able to identify the location of all publically-owned lead and copper service lines. Through tap cards or other utility records, most PWSs will be able to map the service lines as well. However, going beyond that and requiring that mapping be developed for private service lines and any homes/buildings that may or may not contain lead piping, solder, or fixtures is an excessive request for information. PWSs may reasonably be able to develop mapping to show the age of a structure through building permit construction records that are maintained on a County Auditor’s GIS system; but beyond that, Building Inspection Departments are the local governmental entity that regulate the plumbing systems within a home, and the Department of Commerce is the State entity that regulates commercial plumbing systems. PWSs should not be required to inspect or regulate the replacement of any private plumbing system component. That is a burden that will present a hardship to PWSs and will potentially create jurisdictional regulatory issues with Building Inspection Departments and the Department of Commerce. Placing this burden on PWSs

seems to be the least practical approach to dealing with this aspect of the challenge." (The Toledo Metropolitan Area Council of Governments)

**Response 6:** ORC 6109.121 does not require water systems to map private service lines, but DDAGW does believe systems should consider how to reach private owners who want to provide this information. In addition, a recommendation for water systems to work with their local building authority was added to the guidance documents. Last of all, while water systems are not required to inspect and replace the portion of service line privately owner, they are required in accordance with Ohio Administrative Coder rule 3745-81-84 to notify the owner of the line of the water system's replacement schedule and offer them the option of replace their portion of the line at cost.

**Comment 7:** It was recommended that Ohio EPA should either require or encourage lead service line information be incorporated into a utility asset management program. (U.S. EPA, Region V)

It was recommended the Agency be more specific than requiring "generally used file types" in the guidance document and list common and interoperable GIS file type options because electronic dataset reporting will make future updates and submissions easier and more useful. (U.S. EPA, Region V; Ohio Department of Health (ODH), Bureau of Environmental Health)

**Response 7:** Thank you for your comments. DDAGW agrees lead service line information is important when making resource decisions. DDAGW will consider incorporating the comments into asset management guidance, but will not include it in the mapping guidance. Also, while DDAGW agrees it would be easier to have common and interoperable GIS file types from water systems, the division is not going to mandate it at this time due to burden it would be for some utilities. However, DDAGW will revise the mapping section to recommend using mapping software when possible.

**Comment 8:** Information from the Ohio Board of Building Standards was provided regarding when Ohio adopted provisions of the 1986 Safe Drinking Water Amendments or SDWA, banning the use of lead solder containing more than 0.2% of lead, into Ohio Plumbing Code. While the SDWA provisions were effective several years earlier, this provision was not in Ohio Plumbing code until March 30, 1998.

It was recommended the Agency revise the guidance to include the following details in the maps with the intent of increasing their usefulness to ODH when conducting investigations of lead poisoned children. (ODH, Bureau of Environmental Health)

- A uniform system for indicating the different types of service line, including color schemes, naming conventions and for community systems, information known about private service lines.
- Identify parcels, buildings, streets, street names and labeling service connections.

- Include building characteristics, such as the layout of hot and cold water distribution.
- Request systems in buildings with isometric schematics for the distribution system (e.g., hospitals) or safety plans (e.g., schools) to use these as a map base.

**Response 8:** The guidance documents will be revised to reflect when the Ohio Plumbing Code adopted the provisions from the SDWA since it is likely what propelled changes in Ohio residential and commercial buildings. In addition, the guidance will be updated to incorporate ODH's suggestions to the mapping requirements as recommendations.

**End of Response to Comments**