

SAMPLING STATION LOCATIONS

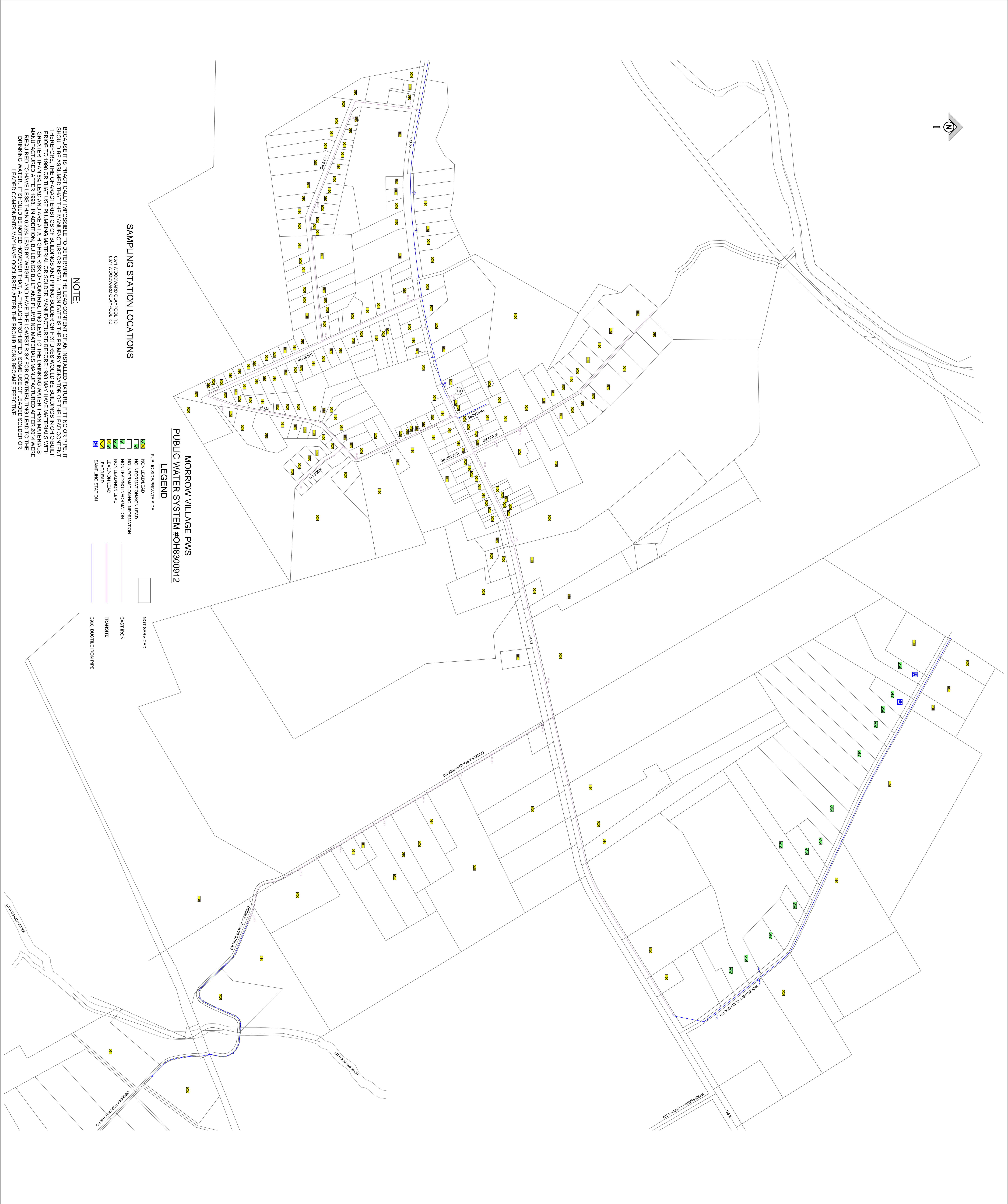
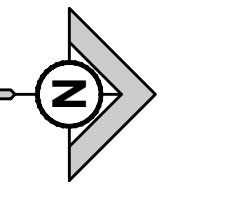
- 1331 E. PINE ST.
- 1110 W. PINE ST.
- 863 W. PINE ST.
- 1801 E. PINE ST.
- 3216 E. PINE ST.
- 5128 KNOLLWOOD DR.
- 523 MAIN ST.
- 191 SCHMIDT ST.

- LEGEND**
- Public side/private side
 - NOT SERVICED
 - CAST IRON
 - TRANSMITE
 - DUCTILE IRON PIPE
 - NON-LEAD
 - NO INFORMATION
 - NON-LEAD
 - NO INFORMATION
 - LEAD
 - NO INFORMATION
 - LEAD
 - NO INFORMATION
 - LEAD
 - NO INFORMATION
 - SAMPLING STATION

NOTE:

BECAUSE IT IS PRACTICALLY IMPOSSIBLE TO DETERMINE THE LEAD CONTENT OF AN INSTALLED FITTING OR PIPE, IT SHOULD BE ASSUMED THAT THE LEAD CONTENT OF FITTINGS AND PIPES IS THE SAME AS THE LEAD CONTENT OF THE MAIN LINE. THE LEAD CONTENT OF SOLE AND FACTORY MANUFACTURED PIPES 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 1989. 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 SOLDIER OR LEADED COMPONENTS MAY HAVE OCCURRED AFTER THE PROHIBITIONS BECAME EFFECTIVE.

**MORROW VILLAGE PWS
PUBLIC WATER SYSTEM #OH8300912**



**MORROW VILLAGE PWS
PUBLIC WATER SYSTEM #OH8300912**

- SAMPLING STATION LOCATIONS**
- 8877 WOODWARD CLAYPOOL RD.
 - 8877 WOODWARD CLAYPOOL RD.
- LEGEND**
- Public Separate Side
 - NOT SERVICED
 - CAST IRON
 - TRANSITE
 - C900 DIUCTILE IRON PIPE
 - NON LEAD/LEAD
 - NO INFORMATION/NO INFORMATION
 - NO INFORMATION/NO INFORMATION
 - NON LEAD/NO INFORMATION
 - LEAD/NO INFORMATION
 - LEAD/LEAD
 - SAMPLING STATION

NOTE:
BECAUSE IT IS PRACTICALLY IMPOSSIBLE TO DETERMINE THE LEAD CONTENT OF AN INSTALLED FITTURE, 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 FITTURES WOULD BE BUILDINGS IN OHIO BUILT GREATER THAN 1998 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.

<p>VILLAGE OF MORROW, OHIO WATER DISTRIBUTION</p> <p>Jwci Jones Warner Consultants, Inc.</p> <p>JONES WARNER CONSULTANTS, INC. FRANKLIN - CINCINNATI CARROLLTON - JACKSON TOLL FREE: (855) 704-5924 EMAIL: JWC@JONESWARNER.COM WEB: WWW.JONESWARNER.COM</p>		<p>VILLAGE OF MORROW LEAD MAPPING PROJECT</p>		<p>DESIGNED BY: SJS</p> <p>DRAWN BY: SJS</p> <p>REVIEWED BY: GLM</p> <p>FINAL REVIEW BY: TSC</p>	<p>MORROW WATER SYSTEM MAP ORIGINAL DATA FROM BRANDSTETTER CARROLL INC 2005</p>	<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION OF REVISION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION OF REVISION	1			2			3		
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<p>DATE: 3/8/17</p> <p>PROJECT NO.: 8014-2017</p> <p>SCALE: 1" = 300'</p> <p>SHEET NO.: 2</p>																		

**Village of Morrow Water Systems Narrative
for
Lead, Solder & Fixtures**

The information contained in this narrative and the system map provided was developed from Warren County GIS, village employees, as-built drawings, knowledge of current and past Village of Morrow employees.

Water Mains

The map depicts three categories of water mains. Category 1 is comprised of cast iron water mains, Category 2 is comprised of asbestos concrete water mains, and Category 3 are those constructed of Ductile Iron Pipe and PVC C-900.

Category 1 water mains are depicted on the map. These are made of cast iron and the joints of these mains and taps are packed with oakum and lead. Because of the potential of lead being present at sleeves, joints, and/or near service lines for properties tapping into cast iron mains, we feel that these mains are likely to contain lead regardless of the service line material.

Category 2 water mains are also depicted on the map. These are asbestos concrete, more commonly known as ac or transit pipe. While the mains do not contain lead, lead solder, or flux in joints or sleeves, due to the timeframe of the installation of these mains, we are confident that a portion of the taps and service lines most likely have some lead content at least to the meter pit, if not some actual lead service lines.

Category 3 water mains are also depicted on the map. These are newer lines within the village and are comprised of either ductile iron pipe or plastic (C900) pipe. Based on our knowledge of these mains, we are confident that the mains and taps contain no lead. Also, due to the timeframe of installation, we are confident that the service taps and service lines are continuous copper or plastic and contain no lead from the tap to the meter pit.

Service Lines

To the best of our knowledge, service lines connected to Category 1 and Category 2 water mains may still contain lead on both the public and private side. There are many actual lead service lines in these areas. As of the last year or so, as any lead service lines on the public side that are discovered will be replaced with continuous copper. As for the private side, based on the age of the homes, we assume that there is a potential for lead, lead solder, and flux.

The service lines connected to Category 3 water mains are all of a newer nature. The new subdivisions along Morrow Woodville Road, Morrow Blackhawk Road, as well as a segment of main with new services along Pike Street (aka U.S. 22) contain no lead, lead solder, or fixtures

on the public side at all. With regards to the private side of these areas, we suspect the vast majority of those service lines are free of lead content as well, due to the age of the homes being post-2010. There is a small percentage that are pre-2014, starting in 2010, and, while there is no lead content on the public side, there is a potential on the private side. The balance of services in the Category 3 area are factually unknown and, due to the age of the homes, the potential for some form of lead content exists.

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 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.

Summary

In 2008, 100% of the water meters and pits were replaced with radio read meters. While no directive to the installing contractor was given about identifying lead, it is noted that lead solder was present as well as lead services, primarily in the Category 1 and Category 2 service areas.

Most buildings served by the three categories were constructed before 2008, with the exception of the new developments previously mentioned, the new gas station and grocery store, and a handful of other buildings. While we are directly unaware of any lead service lines on the private side, in all three categories, except for the aforementioned exceptions, are likely to contain lead, regardless of the material used in the installation of individual service lines.

We believe this approach complies with the Agency's requirement for "community water systems to be conservative in their estimates and assume that lead could have been used for service line materials unless the age of the area or specific information exists to rule out lead."

Respectfully submitted,

Jones-Warner Consultants, Inc. on behalf of

The Village of Morrow