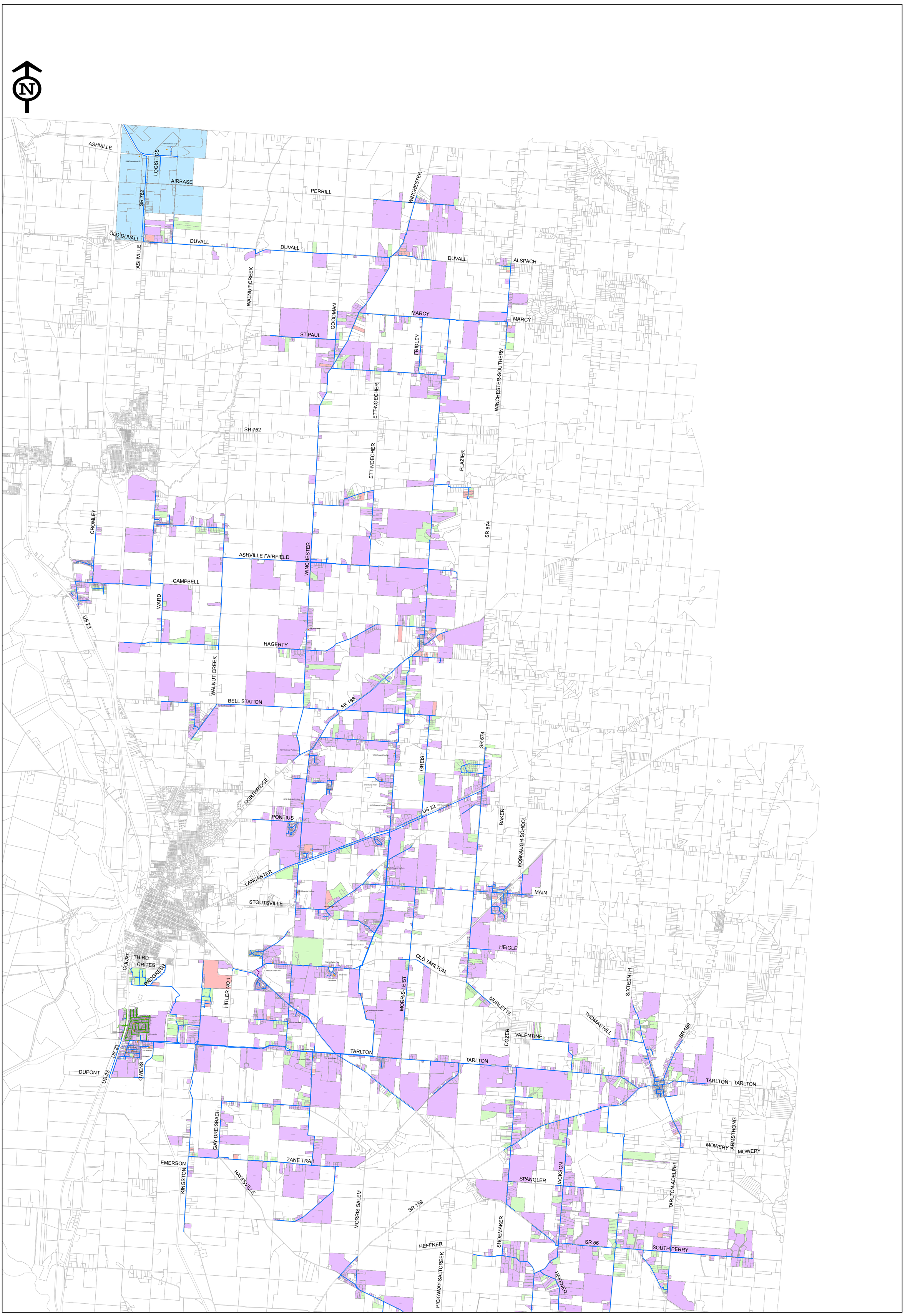

HOMES CONSTRUCTED PRIOR TO 1999 AND HAVING COPPER PLUMBING HAVE A GREATER RISK OF LEAD EXPOSURE

HOMES CONSTRUCTED BETWEEN 2000 - 2013 AND HAVING COPPER PLUMBING HAVE LESS RISK OF LEAD EXPOSURE THAN HOMES CONSTRUCTED PRIOR TO 1999

HOMES CONSTRUCTED AFTER JANUARY OF 2014 HAVE THE LOWEST RISK OF LEAD EXPOSURE

DUVAL SERVICE AREA PWSID : OH6542812 CONSTRUCTED AFTER 2006

PUBLIC SIDE COPPER SERVICE LINES

LEAD SAMPLING POINT

PVC WATER MAINS

AC WATER MAINS

EARNHART HILL REGIONAL WATER & SEWER DISTRICT

PWSID : OH6500812 PWSID : OH6542812

LEAD SERVICE LINE AND FIXTURE MAPPING AS REQUIRED BY HB 512

SCALE : 1" = 4000'

DATE : 02/24/17

DRAWN BY : C BENNETT

Lead Service Line and Fixture Mapping as Required by HB 512
Earnhart Hill Regional Water and Sewer District
February 28, 2017
Lead Mapping Narrative

Background

This map, narrative, and sampling point list is intended to meet the requirements of HB 512. The map reflects two primary service areas: The Earnhart Hill Regional Water Sewer District Class 1 distribution system (OH6500812) and the Northern Pickaway County Jedd Area (Duvall Service area) distribution system (OH6542812). The latter is an industrial area served by a master meter account with the City of Columbus. The purpose of combining the two service areas under one narrative and map is to avoid confusion from a member of the general public or Health District trying to discern which Earnhart water district serves them.

Earnhart Hill Regional Water and Sewer District is organized under 6119 of the Ohio Revised Code. The water and sewer district is relatively new with the first part of the District being constructed in the late 1960's and early 1970's with subsequent expansions in the years since. The District now services over 3,800 accounts representing over 10,000 people in eastern Pickaway and two villages in Fairfield county, being Stoutsville and Tarlton.

In 2006 the District entered into a contract with the City of Columbus to serve the Rickenbacker area, more specifically the Joint Economic Development District (JEDD) within northern Pickaway County. For practical purposes the current service area is Rickenbacker Parkway, Intermodal Ct, Logistics Ct, and the northern portion of State Route 762 (AKA Ashville Pike).

Lead Service Lines

Lead service lines have never been permitted in the District. The vast majority of services are made of PVC or HDPE tubing. A few services on the older part of the system found in the Logan Elm Village area are constructed with copper. Inside plumbing varies through the district, being both copper and PVC. No lead household plumbing has been observed by District employees. As a result, the District has signed the "No Lead Service Line" verification form supplied by the Ohio EPA.

Map Details

Due to the fact the District has not permitted lead service lines and none have been observed by maintenance crews the map is being used to define, at a parcel by parcel level, the probability of having lead solder and/or fixtures. The properties served the District are sorted by date ranges which correspond to guidance provided by the OEPA. Buildings constructed prior to 1999 have the greatest risk of lead exposure, followed by buildings constructed between 2000 to 2013, and the lowest risk to lead exposure are buildings constructed after 2013. The background for the date ranges are found in the following section.

Identifying characteristics of buildings with lead exposure potential

In 1986, the Safe Drinking Water Act (SDWA) was amended to ban the use of lead solders which contain more than 0.2% lead. The lead ban provisions of the act became effective in Ohio Plumbing Code on March 30, 1998. SDWA amendments also required the use of lead free flux, pipes, and fittings in new installations and repairs of public water systems, or any plumbing within a residential or nonresidential facility which provides water for human consumption. Lead free was defined at the time as having no more than 8.0% lead (note this 8.0% was lowered to 0.25% in 2014).

In 1996, the SDWA was further amended to state the following is unlawful:

1. For any person to introduce into commerce any pipe, pipe fitting, plumbing fitting or plumbing fixture, that is not lead free, except for a pipe that is used in manufacturing or industrial processing; or
2. Any person engaged in the business of selling plumbing supplies; except manufacturers, to sell solder or flux that is not lead free; or
3. Any person to introduce into commerce any solder or flux that is not lead free unless the solder or flux bears a prominent level stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption.

In 2011, SDWA Section 1417 was amended for the prohibition on use and introduction into commerce of lead pipe, solder and flux. These new requirements became effective on January 1, 2014. The amendments specifically modified the applicability of the prohibitions by creating exemptions for certain non-potable applications, changed the definition of “lead-free” by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material (primarily affecting brass/bronze), eliminated the provision that required certain products to comply with “voluntary” standards for lead leaching, and established a statutory requirement for calculating lead content.

The exemptions to the SDWA Section 1417 are pipes, pipe fittings, plumbing fittings or fixtures, including backflow preventers, which are used exclusively for non-potable services, such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption. The exemption also applies to toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution

main gate valves that are 2-inch diameter or larger. In addition the SDWA, the Community Fire Safety Act of 2013 exempted fire hydrants from this requirement.

As a result of these amendments, buildings constructed after 2014 are the least likely to have plumbing containing lead materials, so these consumers are at the lowest risk of exposure to lead from drinking water.

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.

The OEPA defines lead and copper testing priority based on a three Tier system, with Tier 1 sites having the highest priority. The definitions are as follows:

Tier 1 – Single family residences that contain copper pipes with lead solder installed after 1982 or contain lead pipe (Earnhart Hill does not have any lead service lines). Multiple family residences with such piping can be included in they are at least 20 percent of the structures served by the water system. Residences with point-of-use or point-of-entry devices, such as water softeners, are usually excluded.

Tier 2 – Buildings, including multiple-family residences that contain copper pipes with lead solder installed after 1982 or contain lead pipes; building including multiple-family residences, with lead service lines.

Tier 3 – Single family residences that contain copper pipes with lead solder installed before 1983.

As the reader will note from the definitions above the testing priority doesn't quite match up the likelihood of finding lead in household drinking water as outlined in the HB 512 mapping guidance. As is the case for Earnhart Hill, Tier 1 single family sites would be those with copper plumbing and lead solder constructed after 1982. However, per the mapping instructions provided by OEPA, the older sites (prior to 1998) would be the most likely to have an occurrence of lead in the drinking water. As a result the required triennial lead and copper testing will not always align with those structures having the greatest probability of an occurrence with lead in the drinking water.

Lead and Copper Sample Sites OH 6500812

The District is required to sample drinking water at point of use on a triennial basis. The last round of sampling was performed in 2016 for OH6500812. Thirty samples are required out of 48 identified sample locations. Consumers agreeing to be tested in 2016 are shown on the map. The results of the testing are in the table below.

Lead and Copper Sample Sites OH 6542812 (City of Columbus Master Meter Area)

The District is required to sample drinking water at point of use on a triennial basis. The last round of sampling was performed in 2015 for OH6500812. Five samples are required out of six identified sample locations. Consumers agreeing to be tested in 2015 are shown on the map. The results of the testing are in the table below.

Earnhart Hill Regional Water and Sewer District OH6542812					
2015 Lead and Copper Sampling					
NUMBER	**STREET**	**CITY**	**SAMPLE LOCATION**	**Copper ug/L**	**Lead ug/L**
[redacted]	[redacted]	Lockbourne	Men's Rest Room	<50	<5
[redacted]	[redacted]	Lockbourne	Woman's Rest Room	<50	<5
[redacted]	[redacted]	Lockbourne	Break Room	<50	<5
[redacted]	[redacted]	Lockbourne	Women's Rest Room	62	<5
[redacted]	[redacted]	Lockbourne	Men's Rest Room	65	<5
[redacted]	[redacted]	Lockbourne	Drinking Fountain	144	<5

VERIFICATION FORM FOR COMMUNITY PUBLIC WATER SYSTEMS CLAIMING NO LEAD SERVICE LINES

The owner or operator of all community public water systems must identify and map areas of their distribution system that are known or are likely to contain lead service lines. Systems must submit a copy of the applicable map to the Ohio Department of Health and the Ohio Department of Job and Family Services. Systems must also submit a report to the director containing at least both of the following: (1) The applicable map with narrative, and (2) A list of sampling locations used to collect samples as required by Ohio Revised Code (ORC) Section 6109.121 and any rules adopted thereunder, including contact information for the owner and occupant of each sampling site.

Should a water system determine no lead service lines exist in their distribution system, they must provide information stating they reviewed, at the minimum, historical permit records and local ordinances, distribution maintenance records and information pertaining to installation dates or materials for all services lines. This information must be verified below.

I HEREBY CERTIFY THAT THE FOLLOWING METHOD(S) WERE USED TO DETERMINE NO LEAD SERVICE LINES EXIST IN THIS WATER SYSTEM'S DISTRIBUTION SYSTEM, AS REQUIRED BY ORC 6109.121(F):

LEAD SERVICE LINE VERIFICATION
This PWS states they have no lead service lines and has reviewed the following information (select one or more of the following):
☒ Historical permit records and/or local ordinances
☐ Distribution maintenance records (i.e. meter replacement, waterline break repairs)
☒ Information pertaining to installation dates for all service lines (i.e. after 1986 when lead services lines were banned)
☒ Service line material of all service lines is known (i.e. all service lines are known to be PVC)

3-2-17

Signature of Responsible Person Date

Douglas L. Williams

Printed Name and Title of Responsible Person

PWS NAME: Fairhaven Hill Regional W&S Dist
PWS ID: OH 6542812
COUNTY: Pickaway

For Ohio EPA use only:

Date Verification Rec'd: _____

Lead Mapping Verification Form Revised 2/14/17