RE: Forest Village
Report
Drinking Water Program
Hardin County
PWS ID: OH3300312

WATER DISTRIBUTION SYSTEM
LEAD MAPPING SUBMITTAL

PREPARED FOR:
VILLAGE OF FOREST
PUBLIC WATER SYSTEM ID: OH3300312
211 W. LIMA STREET
FOREST, OH 45843

PREPARED BY:
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MARCH 6, 2017

VILLAGE OF FOREST, OHIO

PWS ID: OH3300312

Lead Mapping Narrative 2017

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Introduction

In June 2016, House Bill (HB) 512 was passed to enact section 6109.121 of the Ohio Revised Code to create requirements governing lead and copper testing for community and non-transient non-community public water systems and to revise law governing lead contamination from plumbing and fixtures. The new law also requires community water systems to identify and map areas of their distribution systems that are known or likely to contain lead service lines. The community water systems must also identify and provide a description of the characteristics of buildings served by the system that may contain lead solder, fixtures or pipes.

In accordance with HB 512, the Village of Forest (Village), Public Water System ID# OH3300312, worked with engineering consultant, Hull & Associates (Hull), to produce an overall water system map. The map shows the approximate location of the distribution system and identifies areas of the City that are known or likely to contain lead service lines. For this submittal, the map depicts areas of general service line information and only indicates the likelihood of lead in the publicly owned portion of the service lines (the portion from the water main to the water meter). At this time, information on the lead content of the private side of the service lines are generally unknown.

Mapping Areas with Lead Service Lines

To develop the map, Hull interviewed Village officials knowledgeable of the water distribution system, reviewed the available water distribution map which also identifies service line locations, reviewed the service line log books which describe all service line work and replacements from 1939 to present, and determined approximate dates of construction for developed areas. The wells that supply the water system were installed in 1930 and 1932. It appears from review of the log books that the Village began an effort in 1939 to replace any lead service lines with copper pipe/tube with compression or flared type fittings, either as routine repairs were needed or as a pro-active effort on an individual parcel basis. Of the approximate 580 services, only 10 are reported in these log books to have portions of lead materials remaining in the public side of the service lines. The log book records do not typically describe the private side of the services, and therefore it is assumed that all private sides of the services lines have the potential to contain lead materials.

The materials of water main pipe installed in the Village appear to have originally been of cast iron or galvanized pipe. Cast iron water main pipes may contain lead-oakum joints. Since 1992, the Village has replaced several water main sections with C900 PVC plastic pipe which is lead-free material. The map shows the PVC piping as green lines, and all other mains shown yellow as potential lead material . The Village has a master plan to replace more of the older piping with C900 PVC pipe over the next 9 years in four phases of construction: 2017, 2020, 2022, and 2025.

Characteristics of Buildings with Lead Piping, Solder, or Fixtures

Regarding the requirement to identify characteristics of buildings with lead piping, solder or fixtures, the Ohio EPA guidance provides the following:

> "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."**

Since most of the Village was developed prior to 1998, it is likely that plumbing materials inside the buildings (the private customer side) contain components that exceed 8% lead. Less than 10 new residential buildings have been constructed between 1986 and 2014 and may contain valves and fixtures that could contain between 0.25% and 8% lead. One new home was built in 2016 and two new homes are being built in 2017. All buildings are assumed to have potential lead- containing materials in the plumbing and fixtures, except for those built post-2014 as noted.

The Village will continue to maintain records of changes to the distribution piping and public side service lines for future updates to the map as may be required by Ohio EPA.

Attachments: Water System Lead Map

Copy of Ohio EPA Sample Monitoring Point ID Sheet