

Pennyroyal Road PWS OH8301803

Lead Mapping in Distribution System: System Overview Map 2017

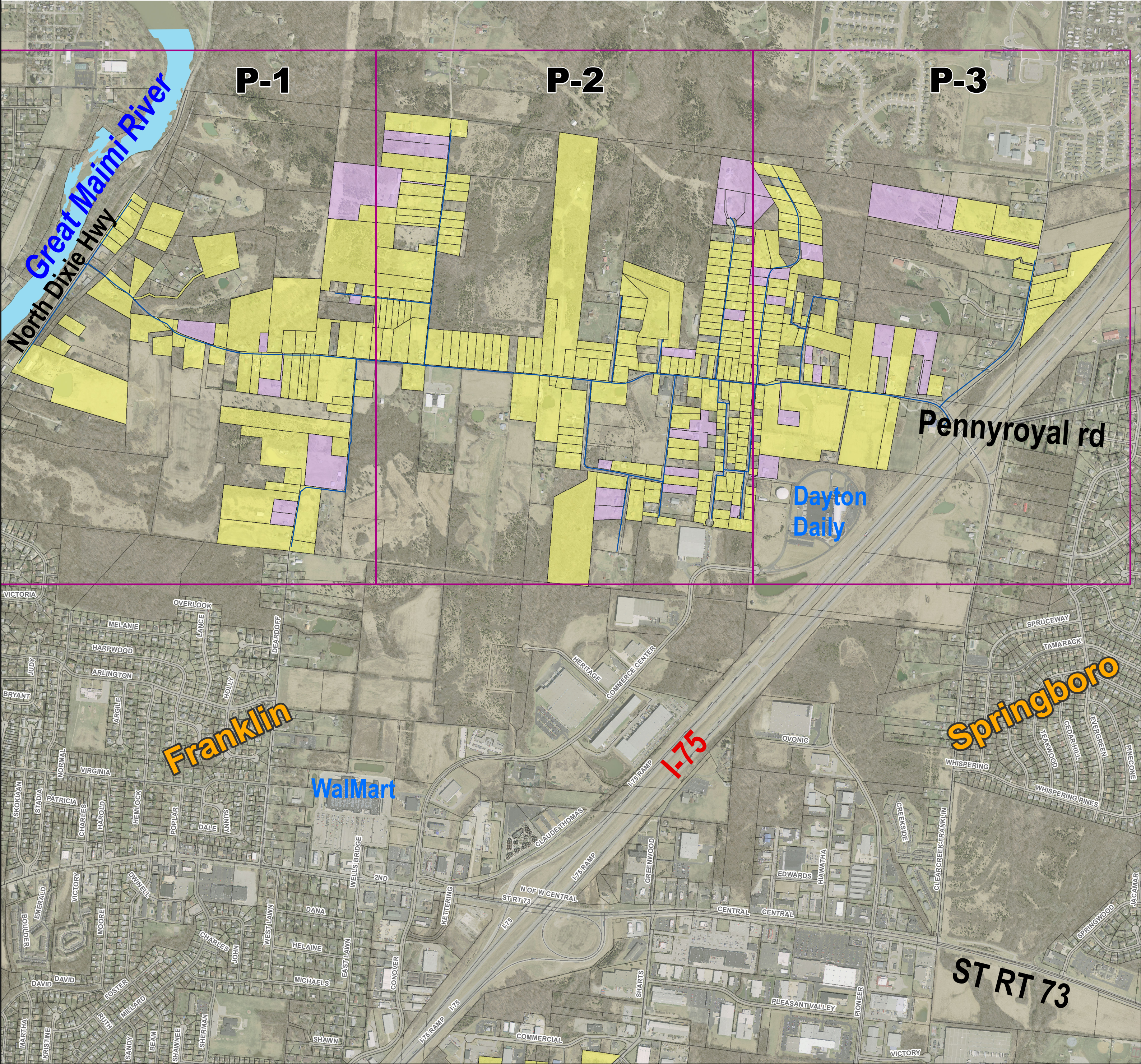


Legend

- Lakes_Rivers
- Private Side before1988_may contain lead bearing solder & fixtures
- Private Side 1988 through 2013_may contain lead bearing fixtures
- Private Side 2014 and after_no lead

NOTE: Some public side brass fittings may contain a small amount of lead prior to 2014. The use of lead pipe and lead bearing solder was banned in 1987. Our expectation is that the public side water services in this area are typically K type copper with brass fittings and meters. Refer to the Narrative for this PWS for additional information.

1,000 500 0 1,000 Feet



Pennyroyal Road PWS OH8301803

Lead Mapping in Distribution System: Detail Map P-1 2017

P-1



Legend

- Lakes_Rivers
- Private Side before1988_may contain lead bearing solder & fixtures
- Private Side 1988 through 2013_may contain lead bearing fixtures
- Private Side 2014 and after_no lead

NOTE: Some public side brass fittings may contain a small amount of lead prior to 2014. The use of lead pipe and lead bearing solder was banned in 1987. Our expectation is that the public side water services in this area are typically K type copper with brass fittings and meters. Refer to the Narrative for this PWS for additional information.

Great Maimi River

North Dixie Hwy

Pennyroyal Rd

Deardoff Rd

400 200 0 400 Feet



Pennyroyal Road PWS OH8301803

Lead Mapping in Distribution System: Detail Map P-2 2017

P-2

Staley Rd

Pennyroyal Rd
School

McGuire Ln
Church

Deardoff Rd

Huhtamaki

Legend

- Lakes_Rivers
- Private Side before1988_may contain lead bearing solder & fixtures
- Private Side 1988 through 2013_may contain lead bearing fixtures
- Private Side 2014 and after_no lead

NOTE: Some public side brass fittings may contain a small amount of lead prior to 2014. The use of lead pipe and lead bearing solder was banned in 1987. Our expectation is that the public side water services in this area are typically K type copper with brass fittings and meters. Refer to the Narrative for this PWS for additional information.

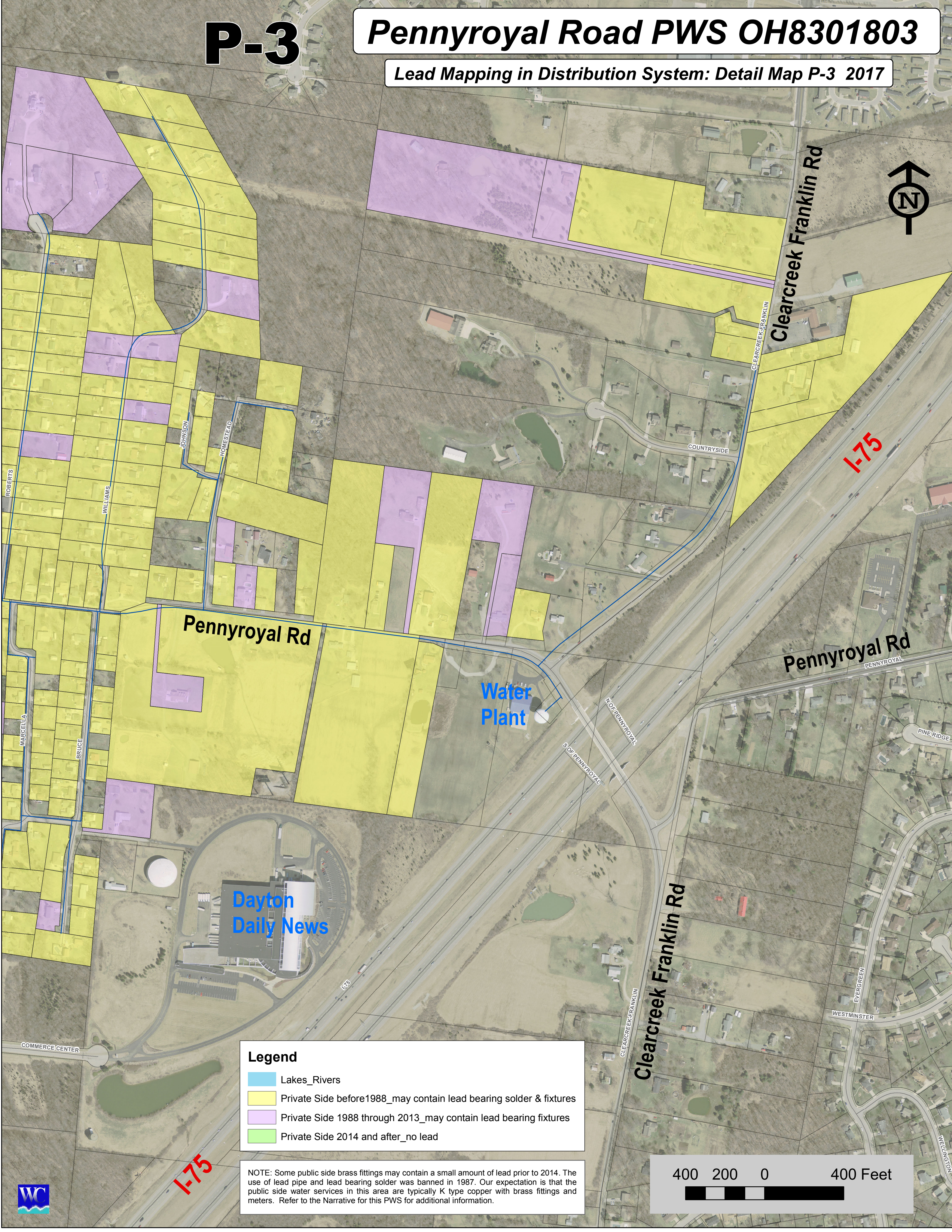
400 200 0 400 Feet




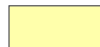


P-3

Pennyroyal Road PWS OH8301803

Lead Mapping in Distribution System: Detail Map P-3 2017



Legend

-  Lakes_Rivers
-  Private Side before 1988_may contain lead bearing solder & fixtures
-  Private Side 1988 through 2013_may contain lead bearing fixtures
-  Private Side 2014 and after_no lead

NOTE: Some public side brass fittings may contain a small amount of lead prior to 2014. The use of lead pipe and lead bearing solder was banned in 1987. Our expectation is that the public side water services in this area are typically K type copper with brass fittings and meters. Refer to the Narrative for this PWS for additional information.

400 200 0 400 Feet






Narrative: PWS OH8301803 Pennyroyal System Lead Mapping

The structures served by this PWS are grouped into three (3) distinct categories based on the date of construction listed in the Warren County Auditor's Records and the following interpretation of the general end dates of eras after which lead solder was banned, lead content was limited, or lead content was essentially eliminated.

Because it is practically impossible to determine the lead content of an installed fixture, fitting or pipe, it is assumed that the date of installation (first listed date of home construction) and age of water main servicing those buildings will be used as the two (2) primary indicators of potential lead content. Buildings constructed in OHIO prior to 1988 could contain lead pipe and/or lead based solder, buildings constructed prior to 1998, or utilized plumbing materials or solder manufactured before 1998 may contain materials with greater than 8% lead content and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998. In addition, buildings constructed after 2014 which incorporated plumbing materials manufactured after 2014, which were required to contain less than 0.25% lead by weight, will have the lowest risk for contributing lead to the drinking water. It should be noted that, although prohibited by law, some use of leaded solder or lead bearing components may have occurred after the prohibition became effective.

Based on this criteria, we have identified (by map color code) the following divisions of potential for private side lead component content:

-  Homes Constructed Before 1988 on Water Line installed after 1960
-  Homes Constructed After 1988 but Before 2014
-  Homes Constructed After 2014

Warren County has historically identified the public portion of the service lines to be comprised of the water mains, tapping device, waterline from the main to the meter pit, the meter pit, the water meter, and support devices including angle valves, shut-off valves and corp stops; and the private side of the service consist of the water service lateral from the outbound side of the meter pit to the home (structure). Also, all of the plumbing inside the home (structure) including water line, solder, fittings, fixtures, and appurtenances are considered private side as well. All private side waterline and appurtenances from the outbound side of the water meter pit are the property of the owner and must be maintained appropriately under that ownership.

In the context of these Lead Maps prepared for the OEPA, the color coding is mostly indicative of the first date of construction found for each home. It does not directly indicate presence or absence of Lead piping in the home or in the yard (private side service line). Homes indicated in yellow on the map were constructed before 1988.

Investigation into existing records on water taps/service lines has proven fruitless with regard to original service line installation records or legislative acts banning the use of Lead in this PWS. According to the mainstream literature, as well as suggested in the OEPA "Guidelines for Lead Mapping in Distribution Systems" (published 01/06/2017), use of Lead service lines was discontinued around the end of the 1950's. Therefore, due to the date of construction (1962 or later) the public side of the supply system in this PWS is most likely cast iron, ductile iron or plastic mains with service laterals to the meter pit consisting of K Type copper tubing with brass corp stops, angle valves, water meters and other appurtenances.

Further designation of homes constructed between 1988 and 2014, as designated in pink shading, most likely do not contain any lead pipe or lead based solder, but may have plumbing fittings and fixtures in the home which contain a portion of lead, up to 8%. The homes constructed after 2014 most likely utilized plumbing components considered to be essentially lead free, and are indicated with green shading.

Warren County tests for Lead content in water samples obtained inside private residences in this PWS, every third year. This is a reduced sampling schedule as allowed by current OEPA regulation due to the very low levels of Lead detected in each sampling round. All volunteer sampling sites have met a most stringent review of criteria to become the newest approved locations for proper OEPA Lead & Copper testing.

In summary, this PWS's Lead Map is color coded to identify potential for private side Lead content based on the age of construction of the home. All homes in this PWS constructed prior to 1988 have the highest risk of having some portion of the private water service lines contain lead pipe, lead solder or lead bearing fixtures. All of the public side brass valves, meters, and appurtenances installed from 1962 (inception of the Warren County Water Department) through 2013 have the potential to contain some Lead. Historical record shows the measured Lead levels, on average, are very low in homes in this PWS.

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