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Water Resources Department

February 22, 2017

Ohio EPA Northeast District Office  
Division Drinking Water and Ground Waters  
Laurel Ljubi, Environmental Specialist II  
2110 East Aurora Road  
Twinsburg, Ohio 44087

Entity: Portage County Shalersville  
Doc Type: PEPWA  
Doc Subtype: DDAGW  
Program: Portage  
County: Portage  
Secondary ID: OH6702812  
edc inc/ny

PWS ID OH6702812

Re: Lead Line Mapping In Distribution Systems for the Brimfield Public Water System, the Rivermoor Public Water System and the Shalersville Public Water System

Dear Ms. Ljubi,

Per Section 6109.121 of the Ohio Revised Code (ORC), Portage County Water Resources (PCWR) is submitting the requirements of the Lead Line Mapping in Distribution Systems as outlined in the Ohio Environmental Protection Agency's (Ohio EPA) Final Guidelines (Guidelines) issued January 6, 2017.

BACKGROUND

Lead piping has been used for plumbing systems because of materials unique characteristic to resist pinhole leaks, while being soft enough to shape. When the health effects of lead were discovered in the 20<sup>th</sup> Century manufacturers voluntarily took steps to reduce the amount of lead in the pipes.

In 1986, the Safe Drinking Water Act (SDWA) prohibited the use of lead in pipes for public water systems (PWS), residential plumbing, and in plumbing for a nonresidential facility which provides water for human consumption. Therefore, homes built after 1986 are assumed to not have lead in plumbing or service lateral piping.

In 1996, the SDWA adjusted the law to include water fittings and fixtures in commercial/industrial facilities to be "lead free", unless the use was for manufacturing or industrial purposes. At the time, "lead free" was defined as having less than 8.0% lead.



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"To provide public water and wastewater services in order to preserve and promote the health and safety of the Portage County Community."



In 2011, in addition to other changes, the SDWA Section 1417 amended the "lead free" definition to reduce the lead content from 8.0% to a weighted average of 0.25% in plumbing fittings and fixtures. This amendment became effective January 4, 2014. Therefore, as defined by the Guidelines, buildings constructed after 2014 are the least likely to have plumbing containing lead.

As required by the Ohio EPA Guideline's, PCWR developed maps showing the age of the water transmission and distribution piping and used the customer's parcel to symbolize the age of the connected structure. The enclosed maps use color-coding of the water mains to designate the installation date of the pipe. A red line indicates the water pipe was installed on or before 1986, a green line indicates the pipe was installed after 1986, and a yellow line indicates an unknown installation date. It is assumed that the water service line would not be installed prior to the installation of the connecting water transmission or distribution main. Therefore, the color of the transmission or distribution pipe represents the installation era the service line was installed.

#### RESIDENTIAL STRUCTURES LEAD LINE MAPS

In areas where the transmission and distribution pipes were installed before 1986, the date the house was built was evaluated. The age of the house was obtained from the Portage County Auditor Records. To illustrate the age of the house, the parcel associated with the structure was colored red if it was built on or before 1986, colored green if it was built after 1986, or colored grey with an orange outline if the year it was built is unknown. If a house was remodeled, the original construction date was used to estimate the lead risk classification.

#### COMMERCIAL STRUCTURES LEAD LINE MAPS

The maps generated for the Commercial, Industrial, or Institutional Buildings show color-coding of the buildings parcels indicating the building installation date based on Portage County Auditors Records. According to the Guidelines, buildings installed prior to 1998 have the greatest risk of having lead fittings or fixtures (colored red), buildings installed between 1998 and 2014 have less risk (colored yellow) and buildings installed post 2014 have no risk (colored green). Commercial customers with residential buildings such as motels or multiple residential buildings were classified based on the residential guidelines.





## SHALERSVILLE PUBLIC WATER SYSTEM

The Shalersville WTP serves customers in the Shalersville Township, Franklin Township, the City of Aurora, and provides bulk water to the City of Streetsboro and to the City of Aurora as needed. The Shalersville WTP treats groundwater to supply the areas and has a 4.0 mgd capacity. The distribution system contains approximately 34.5 miles of distribution main ranging in size from 2-inches to 16-inches. The Shalersville water mains were primarily installed between 1973 and 2007, and serve both residential and commercial customers. There are 51 residential customers in the Shalersville PWS. Houses were built between 1957 and 2014. Residential customers served by mains installed pre-1986, or by an unknown installation date have color-coded parcels shown in Exhibit 3. There are seven (7) commercial customers in the system. The majority of these commercial properties are owned by the County including the PCWR owned Shalersville WTP. The Shalersville PWS also includes the Hattie Larlham Foundation, a convalescent Hospital, and a commercial property owned by the Ohio Turnpike Commission. The commercial buildings with known information were installed between 1952 and 1979. Exhibit 3A shows all of the Shalersville PWS commercial customers color-coded for potential lead plumbing risk. The City of Streetsboro and City of Aurora areas were not evaluated or included in the mapping since Shalersville PWS provides bulk water to these areas and the area's lines and customers are served by Streetsboro or Aurora.

## TIER I SAMPLING LOCATIONS

The three (3) PWS owned and operated by Portage County do not currently have any lead and copper Tier 1 sites that are tested. The Brimfield PWS currently has 23 sites that are tested for lead and copper. Of those locations, eleven (11) are Tier 2 sites and twelve (12) are Tier 3 sites. The Rivermoor PWS currently has eight (8) Tier 3 sites that are tested for lead and copper. The Shalersville PWS currently has eighteen (18) sites that are tested for lead and copper. Of those locations, five (5) are Tier 2 sites and thirteen (13) are Tier 3 sites.

Per Guideline requirements, in addition to the water system mapping, a list of Tier I sampling locations for each PWS should be submitted to Ohio EPA. Since all of PCWR water systems test for Tier II or Tier III, a Tier I site list is not applicable and is therefore not included.





If you should have any questions or require additional information, please contact Heather Ripley by phone at (330) 298-3036 or by email at hripley@portageco.com.

Sincerely,



Lee Benson  
Operations Manager



Eugene K. Roberts, PE  
Director

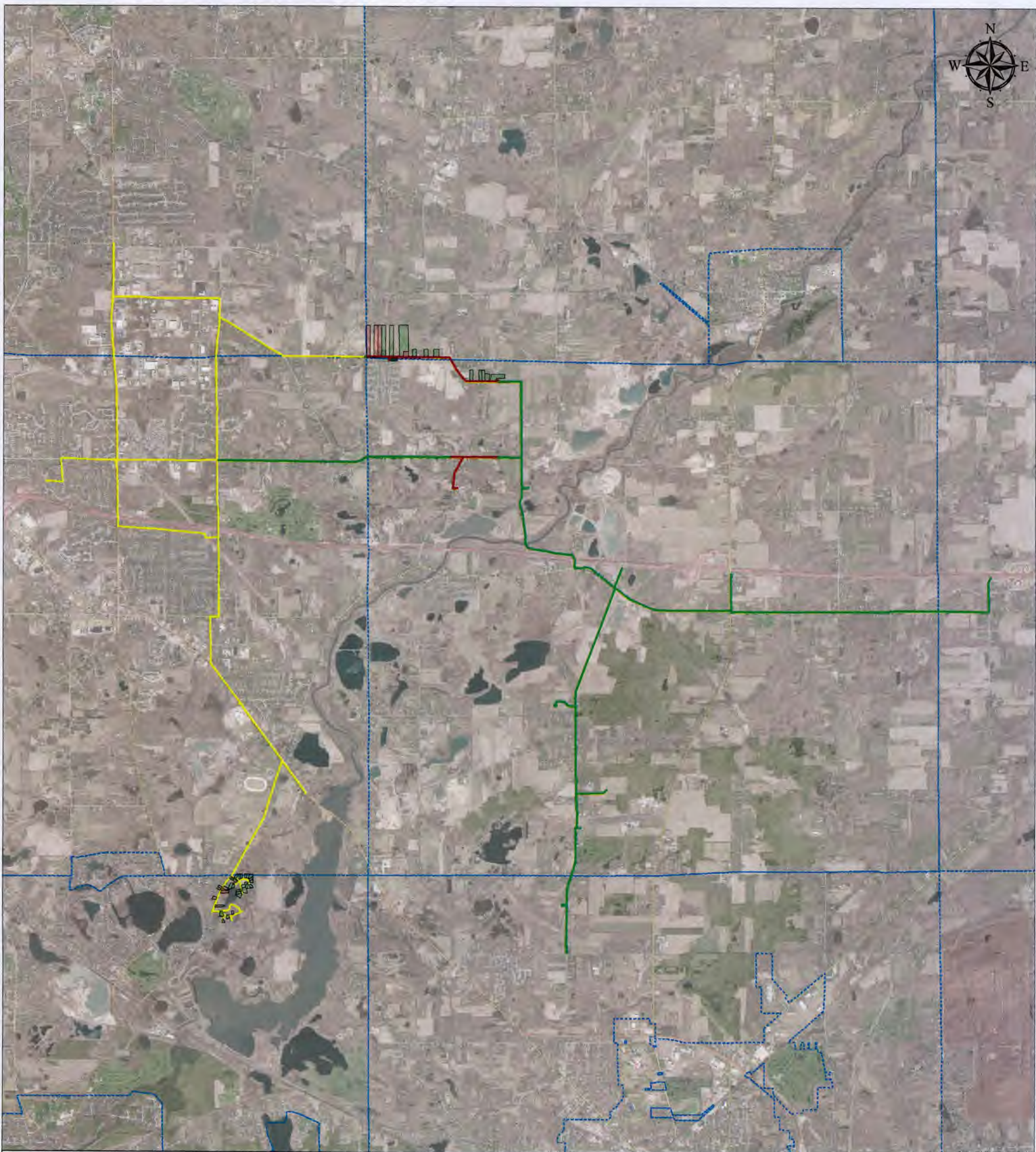
(6) Enclosures

1. Exhibit 1 - Brimfield Residential Lead Line Map
2. Exhibit 1A - Brimfield Commercial Lead Line Map
3. Exhibit 2 - Rivermoor Residential Lead Line Map
4. Exhibit 2A - Rivermoor Commercial Lead Line Map
5. Exhibit 3 - Shalersville Residential Lead Line Map
6. Exhibit 3A - Shalersville Commercial Lead Line Map

cc: Ohio Department of Health, Lead Program  
Ohio Department of Job and Family Services, Bureau of Child Care Licensing and  
Monitoring  
Portage County Health Department  
File







**Legend**

- |                           |                            |
|---------------------------|----------------------------|
| <b>Water Main</b>         | <b>Estimated Lead Risk</b> |
| — Installed pre-1986      | High Risk                  |
| — Installed post-1986     | Low Risk                   |
| — Unknown Install Date    | No Risk                    |
| — Jurisdictional Boundary | No Information             |

**PORTAGE COUNTY WATER RESOURCES  
SHALERSVILLE PUBLIC WATER SYSTEM  
RESIDENTIAL LEAD LINE MAP**

**EXHIBIT 3**

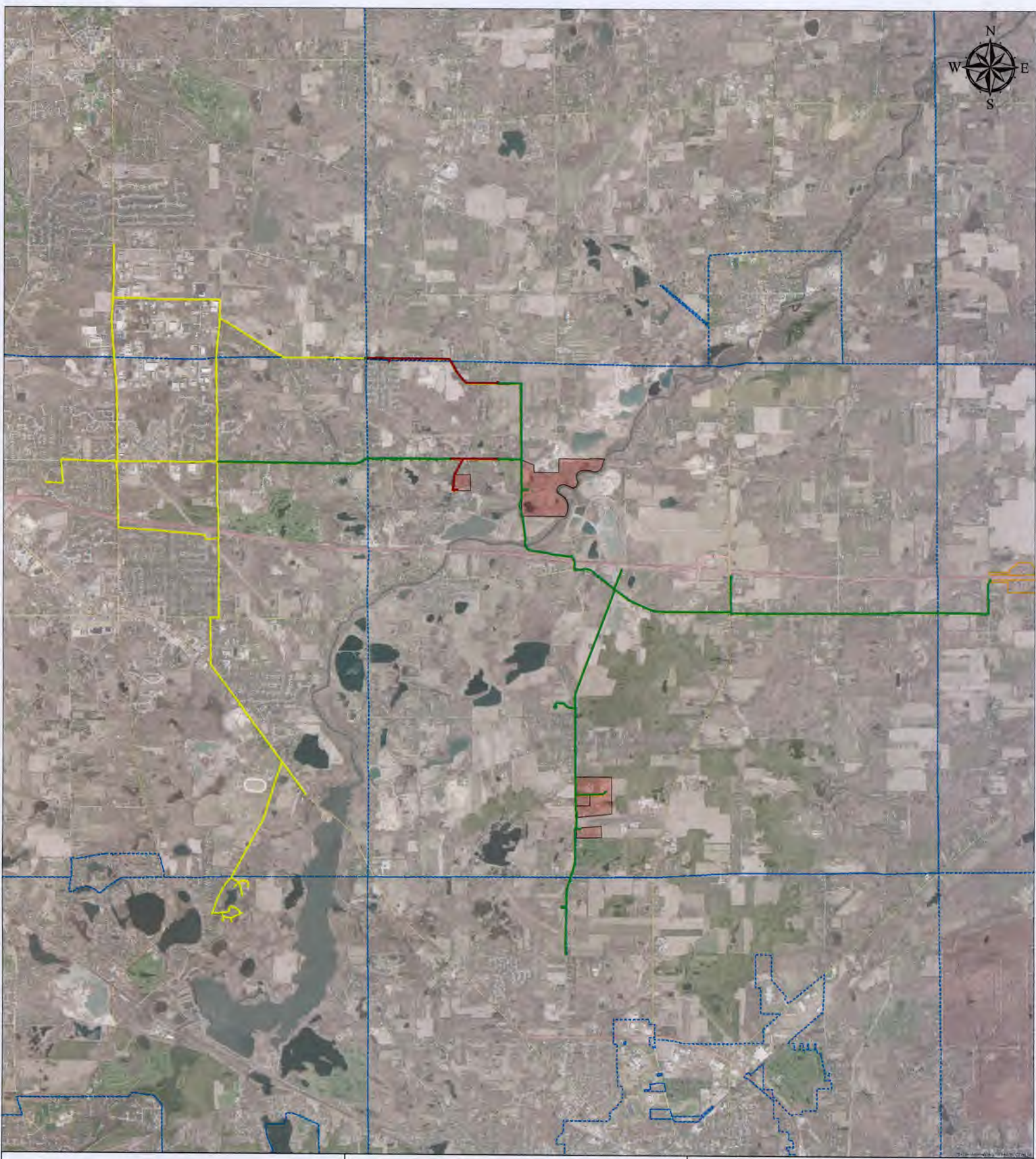
**MARCH 2017**



0 1,250 2,500 5,000  
Feet

1 inch = 1,600 feet





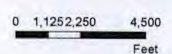
**Legend**

- |                         |                            |
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**PORTAGE COUNTY WATER RESOURCES  
SHALERSVILLE PUBLIC WATER SYSTEM  
COMMERCIAL LEAD LINE MAP**

**EXHIBIT 3A**

**MARCH 2017**



1 inch = 1,600 feet