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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 Co - Brimfield
Doc Type: REPORT
Doc Subtype: _____
Program: DDACW
County: Portage
Secondary ID: OH 6706012
EDA inc/AN

PWS ID OH 6706012

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 20th 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.



8116 Infirmary Road ♦ Ravenna, Ohio 44266 ♦ 330.297.3670 ♦ 330.297.3689 (fax)

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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.





BRIMFIELD PUBLIC WATER SYSTEM

The Brimfield Water Treatment Plant (WTP) supplies the Brimfield PWS which includes Brimfield Township, a portion of Franklin Township, the southern portion of Rootstown Township, and the Aqua Water Company. The Brimfield WTP treats groundwater to supply the areas and has a 0.83 million gallon per day (mgd) capacity. The distribution system contains approximately 84 miles of distribution main ranging in size from 2-inches to 16-inches.

The Brimfield PWS water mains were installed between 1946 and 2016, and provide service to both residential and commercial customers. Residential customers that are served by water mains installed pre-1986, or by an unknown installation date have color-coded parcels shown in Exhibit 1. There are 194 commercial customers in the Brimfield PWS. Commercial buildings were installed between 1900 and 2013. Although the water distribution main may have been installed post 1986, Exhibit 1A shows all of the Brimfield PWS commercial customers color-coded for potential lead plumbing risk. The area served by the Aqua Water Company was not evaluated or included in the mapping since Brimfield PWS provides bulk water to the area and the area's lines and customers are served by Aqua.

RIVERMOOR PUBLIC WATER SYSTEM

The Rivermoor WTP, in Suffield Township, supplies the Rivermoor PWS. The Rivermoor WTP treats groundwater to supply the area and has a 0.043 mgd capacity. The distribution system contains approximately 2.2 miles of distribution main ranging in size from 2-inches to 8-inches. The Rivermoor water mains were primarily installed between 1976 and 1992, and serve both residential and commercial customers. However, the majority of the customers are residential. Residential customers served by mains installed pre-1986, or by an unknown installation date have color-coded parcels shown in Exhibit 2. There are approximately 103 residential customers in the Rivermoor PWS. Houses were built between 1901 and 2000. There are approximately four (4) commercial customers in the system, including the PCWR owned Rivermoor WTP. Commercial buildings were installed between 1964 and 1990. Exhibit 2A shows all of the Rivermoor PWS commercial customers color-coded for potential lead plumbing risk.



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



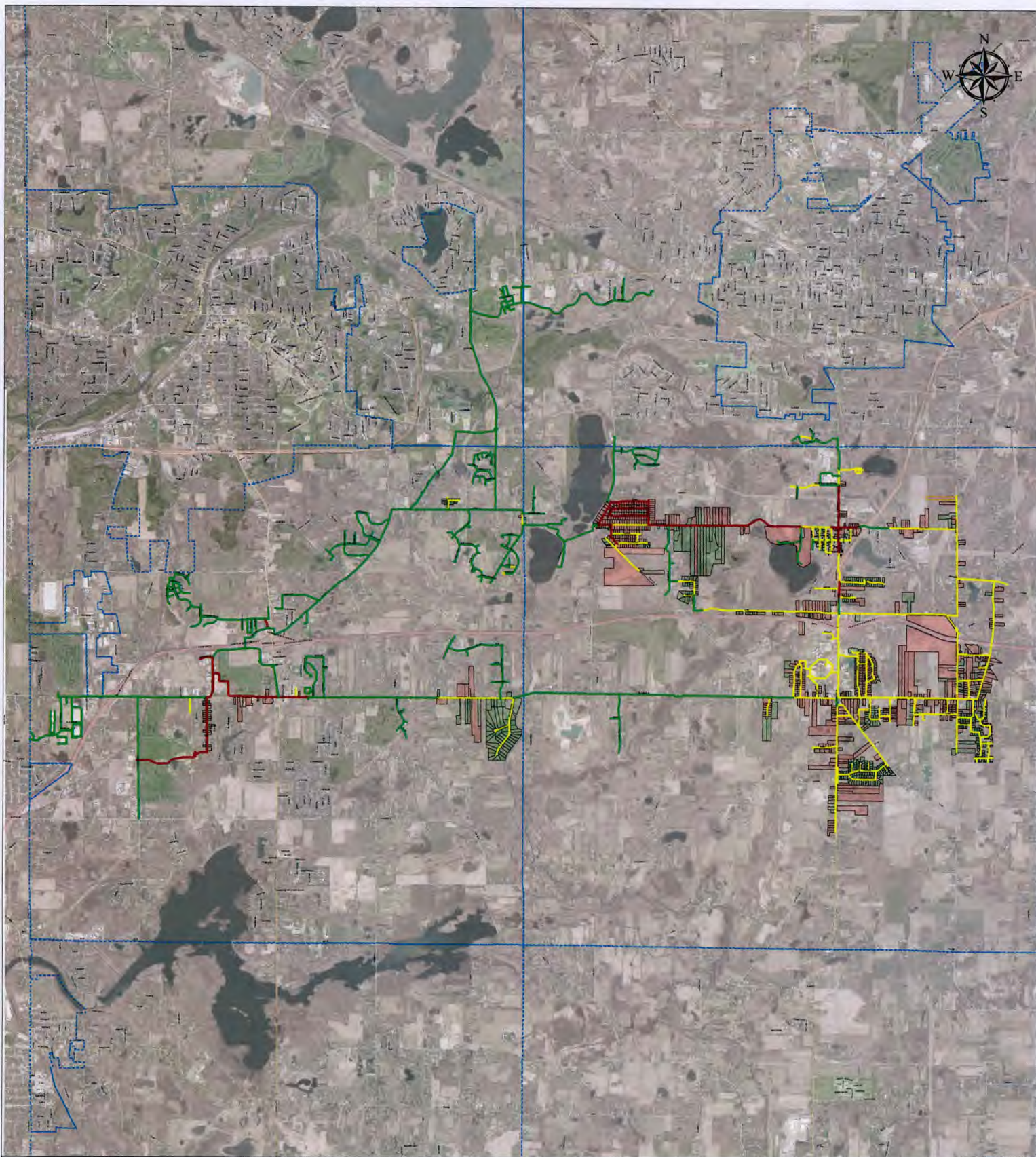
Eugene K. Roberts, PE
Director

(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

Water Main

- Installed pre-1986
- Installed post-1986
- Unknown Install Date
- Jurisdictional Boundary

Estimated Lead Risk

- High Risk
- Low Risk
- No Risk
- No Information

PORTAGE COUNTY WATER RESOURCES

BRIMFIELD PUBLIC WATER SYSTEM

RESIDENTIAL LEAD LINE MAP

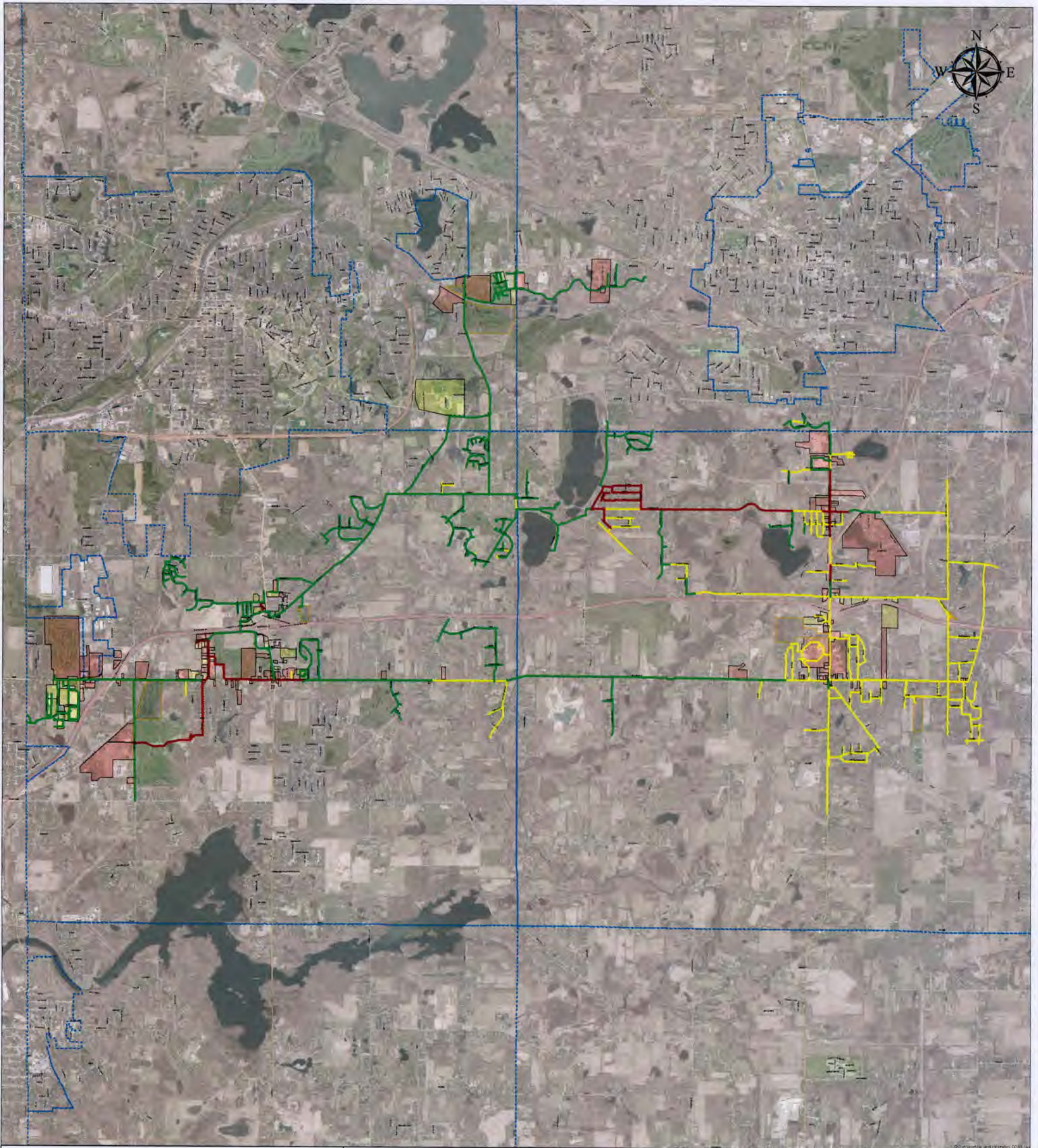
EXHIBIT 1

MARCH 2017



0 1,500 3,000 6,000 9,000
Feet

1 inch = 1,600 feet



Legend

Water Main

- Installed pre-1986
- Installed post-1986
- Unknown Install Date
- Jurisdictional Boundary

Estimated Lead Risk

- High Risk
- Low Risk
- No Risk
- No Information

PORTAGE COUNTY WATER RESOURCES

BRIMFIELD PUBLIC WATER SYSTEM

COMMERCIAL LEAD LINE MAP

EXHIBIT 1A

MARCH 2017



1 inch = 1,600 feet