BURR OAK REGIONAL WATER DISTRICT
PWS #OH0501311
Lead Mapping Narrative

February 2017

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, Burr Oak Regional Water District (BORWD), PWS #OH0501311, worked with their engineering consultant to produce an overall water system map. The map includes approximate location of the distribution system with color coded lines that indicate type of main line material and labeling that shows the approximate year of installation and other system features. The map also includes lead and copper sample site locations.

EPA guidance provides the following: Based on amendments to the Safe Drinking Water Act (SDWA) and Ohio Plumbing Code, the age of a building or the age of a re-plumbing are indicators of the plumbing materials. **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 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 Burr Oak Regional Water District's distribution system extends into four counties (Athens, Hocking, Morgan and Perry) and serves 18 Satellite Systems, who resale the water, in addition to approximately 275 active ¾" residential services. Distribution line age varies from the years 1960 to 2016. The distribution water line material consists of asbestos cement (AC), poly vinyl chloride (PVC) and high density polyethylene (HDPE) pipe, ranging from 8" to 18" in size. The distribution description is broken down into sections to address line size changes, intersections where tees are in place to add additional lines serving alternate areas, and to address varying ages and waterline material of the system.

Two types of service line material are in use in the BORWD system (roll copper and PE). Roll copper which is often referred to as "K" copper. This material is connected by flaring the ends and utilizing a compression style fitting. No solder is used in the process of connecting roll copper. Roll copper was used for all taps initially installed upon the AC main line placed into service in 1959 and 1960. The majority of service connections in the BORWD system utilize ¾" polyethylene (PE) to the meter pits. Service line material from the meter pits to the residential structures has not been verified by BORWD, and are considered UNKOWN at this time.

SECTION # 1 (South WTP to Trimble – Finished Waterline)

The distribution system entry point begins at 9860 Monserat Rd, Millfield, OH. This 13,200 ft section of 18" HDPE waterline installed in 2010 transports potable water North, within the Village of Trimble, where a tee connection sends water to the North and West to serve areas of the distribution. No residential taps are installed upon this section.

SECTION # 2 (East Tank and Waterline)

An 18" HDPE waterline installed 2011 extends 6,000 ft North from section #1 to a 904,000 gal storage tank and 12,000 ft beyond to a connection with a 12" AC line located just North of the Glouster corporation limit. No residential services exist on this section of distribution line.

SECTION # 3 (Original South Loop)

The 12" AC line installed in 1959 extends 12,700 ft adjacent to St. Rt. 13 and provides water to the 300,000 gal clear wells at the former surface water facility. Twenty (20) ¾" residential services exist on this section. Eight (8) were installed using roll copper with the remaining twelve (12) using ¾" PE to the meter pits. The service line material is UNKNOWN from the meter pit to the residence.

SECTION # 4 (Original North Loop)

Installed in 1976, 22,800 FT of 12"AC line continues North from the former surface water facility, parallel to St. Rt. 13, where it tees to a 16" HDPE line (no services on this line) supplying water to the 750,000 gallon # 4 storage tank. Twenty-eight (28) ¾" services are installed on this referenced section of AC line. Nine (9) services are installed using roll copper with the remaining nineteen (19) ¾"service connections from the waterline to the meter pit utilizing PE. Service line material from the meter pit to the residence on this section is UNKNOWN.

SECTION # 5 (Tank #4 waterline extension)

Continuing from the tank connection point, referenced SECTION #4, installed in 2007, 2,900 ft of 16" HDPE waterline extends to a multiple connection point within the Village of Corning. No residential taps exist on this section of water line.

SECTION # 6 (Crooksville Interconnect)

Installed in 2010, 21,000 ft of 12" HDPE waterline extends from the referenced multiple connection point, referenced in section# 5, north to a connection with the Crooksville Booster Station. No residential service connections exist on this section of waterline.

SECTION # 7 (Crooksville Interconnect)

Also installed in 2010, 22,000 ft of 12"HDPE waterline extend from the Crooksville Booster Station to the connection point with the Village of Crooksville. This section also includes the 220,000 gal storage tank. Four (4) ¾" residential services utilizing PE service line, from the main line to the meter pit, exist on this section. Service line material from the meter pit to the residence is UNKNOWN.

SECTION # 8 (St Rt 155 Original North Loop)

Resuming from SECTION # 5, nearly 36,400 ft of 12" AC waterline (1975) with1,100 ft of 16" HDPE and 1,000 ft of 12" PVC (1980), extend from the Corning Booster Station adjacent to St Rt 155, ending at the intersection of St Rt 155 and St Rt 93. This section supplies the 300,000 gal #3 storage tank, in addition to nine (9) ¾" residential services installed using PE service line from the main to the meter. Service line material from the meter to the residence could not be confirmed and will be considered UNKNOWN.

SECTION # 9 (Original South Loop)

Installed in 1960: 8,500 FT of 8" AC waterline extends from the intersection of St Rt 155 & St Rt 93, installed adjacent to St Rt 93 extending south to the Village of New Straitsville corporation. Thirteen (13) ¾" PE services exist on this section installed from the main to the meter. Service line material from the meter to the residence is UNKNOWN.

SECTION # 10 (Kennedy Road Extension)
Resuming from SECTION # 1, 2,000 ft of 18" HDPE(installed in 2010) line with an additional 9,800 ft of 12" HDPE(installed in 2002), parallel to Kennedy Rd, extending north to the intersection of Kennedy Rd and St Rt 78 in the Glouster corporation. No residential taps exist on this section of waterline.

SECTION # 11 (10" line section - South Loop)
Installed in 1960, waterline extending from Glouster, 5,000 ft of 10"AC line extends west paralleling St Rt 78 to a multiple connection point to provide water to the Glouster #1, 750,000 gal storage tank. No residential taps exist on this section of waterline.

SECTION # 12 (Original South Loop)
Installed in 1960, extending from the connection point referenced in SECTION # 11, an 8" AC line continues to parallel St Rt 78 for 11,300 ft connecting to the Hollister Booster Station. Currently, twenty-eight (28) ¾" residential services, installed with roll copper (no solder connections) and/or PE from the main line to the meter pits, exist in section # 12 of waterline. Service line material from the meter to the residence is UNKNOWN.

SECTION #13 (Original South Loop)
Installed in 1960, extending from the Hollister Booster Station, through Athens, Hocking and Perry Counties, 36,000 of 8" AC waterline, including short sections of 12" HDPE line, provide water to a multiple connection point, where the #2 storage tank is located. One (1) ¾" service line exists on this section, installed using PE service line from the main line, through the meter pit to the residence.

SECTION #14 (Tank #2 to New Straitsville)
Continuing westerly from the connection point referenced in SECTION # 13, (adjacent to the #2 storage tank): In 2003, 5,500 ft of 12" HDPE pipe was installed cross country to where it intersects and crosses St Rt 595 in New Straitsville. No services exist on this section.

SECTION #15 (New Straitsville – South Loop)
Continuing northwest within the New Straitsville corporation limit: Extending from St Rt 595, 3,400 FT of 8"AC pipe (installed in 1960), with a 400 ft section of 12" HDPE (installed in 2016) extends north to a connection point referenced in SECTION # 9 connecting to 8" AC waterline. Four (4) ¾" residential services lines installed with roll copper (no solder connections) from the main to the meter pit exist on this section. Service line material from the meter to the residence is UNKNOWN.

SECTION #16 (Shawnee to Perry Co booster station - Perry Co. Extensions)
Resuming from section # 9: Installed in 2008, 12,000 ft of 12" HDPE waterline, with an additional 13,000 ft of 8" PVC waterline was installed adjacent to St Rt 93, CR 38, and CR 39, extending to a booster pump station in Perry County. No residential services exist on this section of water line.

SECTION #17 (Perry County Extensions)
Installed in 2008, 21,000 ft of 8" PVC line extends from the booster pump station, adjacent to the county roads, continuing to the intersection of CR 7(Dutch Ridge Rd) and CR 11(Marietta Rd).

SECTION #18 (Perry County Extensions – CR 11)
Continuing from section 17, installed in 2008, 5,200 ft of 8" PVC extend adjacent to CR 11(Marietta Rd) terminating at the 183,000 gal storage tank. Six (6) ¾" residential services, consisting of PE service line from the main to the meter exist on this section. Service line material from the meter to the residence is UNKNOWN.

SECTION #19 (Perry County Extensions)
Connected to section 18 at the intersection of CR 11 (Marietta Rd) and TR 131B, installed in 2008, 9,600 ft of 8" PVC waterline extend to the intersection of TR 131A and CR 57(Mainesville Rd). Six (6) ¾" residential services consisting of PE service line from the main to the meter exist on this section. Service line material from the meter to the residence is UNKNOWN.

SECTION # 20 (Park Waterline)
Installed in 2004, 10,000 ft of 8" HDPE waterline extend from the former surface water plant (Jenkins Dam Rd) and terminates at the 150,000 gal Park water storage tank. Twenty-four (24) ¾" residential services consisting

of PE service line from the main to the meter exist on this section. Service line material from the meter to the residence is UNKNOWN.

SECTION #21 (Hollister System)

The Hollister water system was installed in 1968 and become part of the BORWD system in 2009. The system connects along St. Rt. 78 (to section #12) and includes 2,800 ft of 6" AC waterline and 16,500 ft of 6" through 1-1/4" PVC waterline. Another one hundred, twenty (120) ¾" residential services with PE service lines from the main to the meter exist in this system. Service line material from the meter to the residence is UNKNOWN.

SECTION #22 (Five Points to Junction City)

Installed in 1997 as part of the Northern Perry County Water system, this section become part of the BORWD system in 2008. The waterline is 23,750 ft. of 6" PVC that connects to Section #18 and runs along CR 11 and SR 668 to provide service to Junction City. Thirty-three (33) ¾" residential services consisting of PE service line from the main to the meter exist on this section. Service line material from the meter to the residence is UNKNOWN.

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)

Kent Nichols 3-2-17

Signature of Responsible Person Date

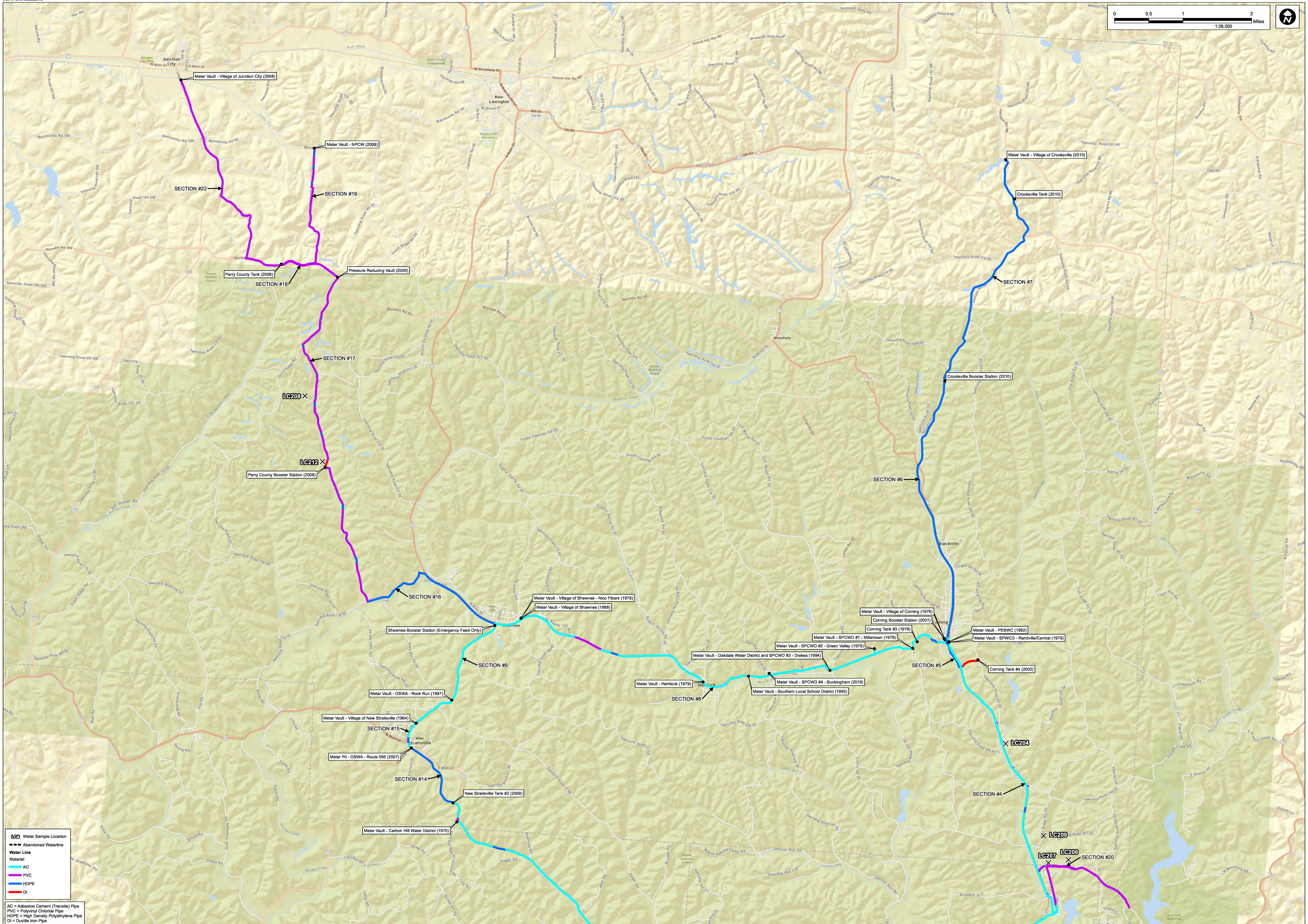
KENT NICHOLS

Printed Name and Title of Responsible Person

PWS NAME: BURR OAK WATER
PWS ID: OH 0501311
COUNTY: ATHENS

For Ohio EPA use only:

Date Verification Rec'd: _____



0 0.5 1 2 Miles
1:28,000
Water Sample Location
Abandoned Waterline
Water Line
Material
AC
PVC
HDPE
DI
Meter Vault - Village of Junction City (2008)
Meter Vault - NPCW (2008)
SECTION #22
SECTION #19
Perry County Tank (2008)
SECTION #18
Pressure Reducing Vault (2009)
SECTION #17
LC208
LC212
Perry County Booster Station (2008)
SECTION #16
Meter Vault - Village of Shawnee - Nico Fibers (1978)
Meter Vault - Village of Shawnee (1998)
Shawnee Booster Station (Emergency Feed Only)
SECTION #9
Meter Vault - OSWA - Rock Run (1997)
Meter Vault - Village of New Straitsville (1964)
SECTION #15
Meter Pit - OSWA - Route 595 (2007)
SECTION #14
New Straitsville Tank #2 (2009)
Meter Vault - Carbon Hill Water District (1970)
Meter Vault - Village of Crooksville (2010)
Crooksville Tank (2010)
SECTION #7
Crooksville Booster Station (2010)
SECTION #6
Meter Vault - Village of Corning (1976)
Corning Booster Station (2001)
Corning Tank #3 (1976)
Meter Vault - PEBWC (1992)
Meter Vault - SPWCD - Rendville/Central (1979)
Meter Vault - SPCWD #1 - Millertown (1979)
Meter Vault - SPCWD #2 - Green Valley (1979)
Meter Vault - Oakdale Water District and SPCWD #3 - Drakes (1994)
Meter Vault - Hemlock (1979)
Meter Vault - SPCWD #4 - Buckingham (2016)
Meter Vault - Southern Local School District (1993)
SECTION #8
SECTION #5
Corning Tank #4 (2002)
LC204
SECTION #4
LC209
LC207
LC206
SECTION #20

AC = Asbestos Cement (Transite) Pipe
PVC = Polyvinyl Chloride Pipe
HDPE = High Density Polyethylene Pipe
DI = Ductile Iron Pipe

Notes:
1. WATER MAIN LOCATION AND MATERIAL IS BASED ON KNOWLEDGE AND RECORDS PROVIDED BY THE DISTRICT. THIS MAP ILLUSTRATES APPROXIMATE LOCATION OF WATER MAINS ONLY.
2. THE SERVICE LINE MATERIAL ON THE PUBLIC SIDE IS EITHER POLYETHYLENE (PE) OR ROLLED COPPER. SERVICE LINE MATERIAL ON THE PRIVATE SIDE IS UNKNOWN AT THIS TIME.
3. SEE SYSTEM NARRATIVE FOR FUTHER DESCRIPTION OF MATERIALS, YEAR INSTALLED AND WATER SERVICE INFORMATION FOR EACH SECTION NOTED.
4. 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 CONTRIBUTING LEAD TO DRINKING WATER. IT SHOULD BE NOTED HOWEVER THAT, ALTHOUGH PROHIBITED, SOME USE OF LEADED SOLDER OF LEADED COMPONENTS MAY HAVE OCCURRED AFTER THE PROHIBITIONS BECAME EFFECTIVE.

Produced using ArcGIS 10.3

Jobes Henderson
A HULL COMPANY
59 Grant Street
Newark, Ohio 43055
Phone: (740) 344-5451
Fax: (740) 344-8659
www.hullinc.com

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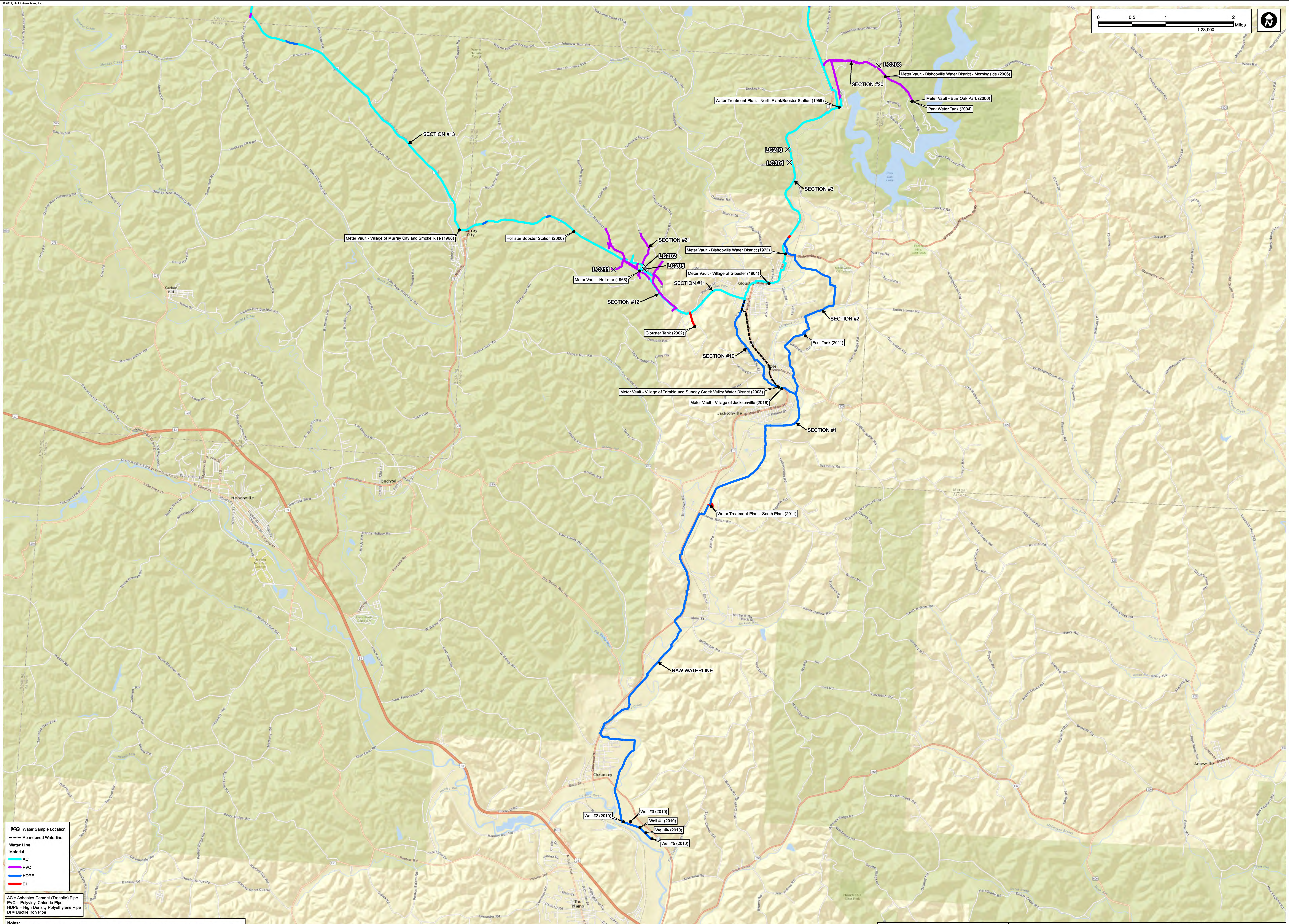
February 2017
Burr Oak Regional Water District

Water System Map (Perry County)

Figure
1A

File Name: BOK001_02_Fig01A_WaterSystemPer.mxd
Edited: 2/28/2017 By: mopel



LC# Water Sample Location
Abandoned Waterline
Water Line
Material
- AC
- PVC
- HDPE
- DI

AC = Asbestos Cement (Transite) Pipe
PVC = Polyvinyl Chloride Pipe
HDPE = High Density Polyethylene Pipe
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Jobes Henderson
A HULL COMPANY
59 Grant Street
Newark, Ohio 43055
Phone: (740) 344-5451
Fax: (740) 344-8659
www.hullinc.com

February 2017

Burr Oak Regional Water District

Water System Map (Hocking & Athens Counties)

Figure 1B

File Name: BOK001_02_Fig01B_WaterSystemHocAth.mxd

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