



XENIA RURAL WATER DISTRICT 2018 CONSUMER CONFIDENCE REPORTS

Each year, per EPA regulations and enforced by the Iowa Department of Natural Resources, the Water Quality Results from the previous year are made available to our customers. To determine your water source, refer to your monthly statement. The code for the water source serving your residence is below your service address in the upper, right corner of the statement.

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2018 WATER QUALITY REPORT FOR Xenia Rural Water District – Boone System

This report contains important information regarding the water quality in our water system. All water provided by Xenia Rural Water District in this system is purchased from Boone Water Works. The source of Boone's water is groundwater and groundwater under the influence of surface water. Our water quality testing shows the following results:

Xenia Rural Water Districts Water Quality Results:

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	1.80 90 th	2016	0 – 18 1 sample exceeded AL	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm) Boone (east) 950	MRDLG =4.0	MRDL=4.0	2.7	RAA	1.1 – 3.2	No	Water additive used to control microbes
Chlorine (ppm) Boone (west) 952	MRDLG =4.0	MRDL=4.0	2.7	RAA	0 – 2.7	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.0167 90 th	2016	0.0026 – 2.490 1 sample exceeded AL	No	Corrosion of household plumbing systems; Erosion of natural deposits
TTHM (ppb) [Total trihalomethanes] Boone Distribution	N/A	80	62 LRAA	6/30/2018	50 – 71	No	By-products of drinking water disinfection

Water Quality Results Provided by Boone Waterworks (Supply ID ia0819033)

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Turbidity (NTU)	N/A	TT	0.22	2018	0.02 – 0.22	No	Soil runoff
Fluoride (ppm)	4	4	0.92	2018	0.53 – 0.92	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
TTHM (ppb) [Total trihalomethanes]	N/A	80	53 LRAA	2018	42 – 62	No	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	22 LRAA	2018	15 – 29	No	By-products of drinking water disinfection
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	1.4	RAA	0.54 – 2.02	No	Water additive used to control microbes
Nitrate [as N] (ppm)	10	10	6.6	2018	2.1 – 6.6	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	N/A	N/A	9.7	7/02/2018	N/A	No	Erosion of natural deposits; Added to water during treatment process
Total Coliform	0	5%	0.7%	2018	0.0 – 0.7 %	No	Naturally present in the environment
Total Organic Carbon (TOC) (ppm)	N/A	TT	% Removal Range 11 – 50	2018	% Removal Required 15	No	Naturally present in the environment

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains some or all of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies.

Original Supply ID	Original Supply Name
IA0819033	Boone Water Works

This water supply obtains water from one or more surface waters. Surface water sources are susceptible to sources of contamination within the drainage basin.

Surface Water Name	Susceptibility
Des Moines river	High

2018 WATER QUALITY REPORT FOR Xenia Rural Water District – Des Moines System

This report contains important information regarding the water quality in this water system. All of the water for this system is purchased from Des Moines Water Works and their source is surface water. Our water quality testing shows the following results:

Xenia Rural Water Districts Water Quality Results:

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	2.40 90 th	2017	0 – 11	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	2.4	RAA	1.0 – 3.2	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.0326 90 th	2017	0 – 0.0350	No	Corrosion of household plumbing systems; Erosion of natural deposits
TTHM (ppb) [Total trihalomethanes]	N/A	80	41	9/30/2018	41 – 41	No	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	8	9/30/2018	8 – 8	No	By-products of drinking water disinfection

PURCHASED WATER INFORMATION

Water Quality Results Provided by Des Moines Water Works

7727031 – DES MOINES WATER WORKS							
03 – MCMULLEN AFTER TREATMENT							
Fluoride (ppm)	4	4	0.86	2018	0.20 – 0.86	No	Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories
Sodium (ppm)	NA	NA	13.2	4/02/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.10	2018	Minimum removal ratio 1	No	Naturally present in the environment
Nitrate [as N] (ppm)	10	10	8.65	2018	0.20 – 8.65	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU)	NA	NA	0.44	2018	0.02 – 0.44	No	Soil runoff
04 – RACCOON, DES MOINES & GALLERY FLEUR							
Alpha Emitters(pCi/L)	0	15	1.6	2/24/2010	N/A	No	Erosion of natural deposits
Fluoride (ppm)	4	4	0.78	2018	0.17 – 0.78	No	Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories
Sodium (ppm)	NA	NA	18.2	4/02/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.86	2018	Minimum removal ratio 1	No	Naturally present in the environment
Nitrate [as N] (ppm)	10	10	8.73	2018	2.49 – 8.73	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Cis-1,2 Dichloroethylene (ppb)	70	70	0.5	2018	0 – 0.5	No	Discharge from industrial chemical factories
Turbidity (NTU)	NA	NA	0.18	2018	0.03 – 0.18	No	Soil runoff

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
05 – LP MOON ASR S/EP AFTER TREATMENT							
Sodium (ppm)	NA	NA	32.62	8/06/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Arsenic (ppb)	0	10	ND	2018	0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Fluoride (ppm)	4	4	1.40	2018	0.61 – 1.40	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate [as N] (ppm)	10	10	4.99	2018	2.32 – 4.99	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
06 – MCMULLEN ASR S/EP							
Sodium (ppm)	NA	NA	21.43	8/06/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Fluoride (ppm)	4	4	0.86	2018	0.20 – 0.86	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Arsenic (ppb)	0	10	ND	2018	0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Nitrate [as N] (ppm)	10	10	8.24	2018	2.46 – 8.24	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
07 – SAYLORVILLE S/EP (AFTER TREATMENT)							
Fluoride (ppm)	4	4	0.92	2018	0.13 – 0.92	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2	2	0.1	2011	NA	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	NA	NA	15.8	2/05/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Nitrate [as N] (ppm)	10	10	2.66	2018	0.26 – 2.66	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.60	2018	Minimum removal ratio 1	No	Naturally present in the environment
Turbidity (NTU)	NA	NA	0.30	2018	0.02 – 0.29	No	Soil runoff
08 – ARMY POST ASR (AFTER TREATMENT)							
CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Gross Alpha, inc (pCi/L)	0	15	11.1	10/08/2018	NA	No	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	2.2	10/08/2018	NA	No	Erosion of natural deposits
Uranium (ppb)	0	30	1.9	10/08/2018	NA	No	Erosion of natural deposits
Gross Alpha, exc (pCi/L)	0	15	9.8	10/08/2018	NA	No	Erosion of natural deposits

Antimony (ppb)	6	6	5	10/08/2018	NA	No	Discharge from petroleum refineries; fire retardants; ceramics; electronic; solder
Sodium (ppb)	NA	NA	28.93	8/13/2018	NA	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10	10	6.60	2018	2.63 – 6.60	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Dichloromethane (ppb)	0	5	1.9	10/08/2018	NA	No	Discharge from pharmaceutical and chemical factories

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

OTHER VIOLATIONS

In February 2018 we had a Lead Consumer Notice (Pb/Cu) violation for Lead & Copper Rule.

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains some or all of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies.

Original Supply ID	Original Supply Name
IA7727031	Des Moines Water Works

2018 WATER QUALITY REPORT FOR Xenia Rural Water District – Madrid System

This report contains important information regarding the water quality in our water system. All water for this system is purchased from the Madrid Water Department and the source of this water is groundwater under the influence of surface water. Our water quality testing shows the following results:

Xenia Rural Water District Water Quality Results

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	0.00 90 th	2016	0 – 2	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	1.20	RAA	0.53 – 1.92	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.0155 90 th	2016	0.0044 – 0.0161	No	Corrosion of household plumbing systems; Erosion of natural deposits
TTHM (ppb) [Total trihalomethanes]	N/A	80	80 LRAA	6/30/2018	72 – 88	Yes	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	27 LRAA	3/31/2018	20 33	No	By-products of drinking water disinfection

Water Quality Results Provided by Madrid Water Department (Supply ID 0848015)

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Fluoride (ppm)	4	4	0.70	2018	0.49 – 1.03	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Turbidity	N/A	N/A	100% Meeting Requirements	2018	N/A	No	Soil runoff
Sodium (ppm)	N/A	N/A	16.6	8/07/2018	N/A	No	Erosion of natural deposits; Added to water during treatment process
Total Organic Carbon (TOC)	N/A	TT	19%	2017	19 – 38%	No	Naturally present in the environment
Barium (ppm)	2	2	.0107	8/07/2012	N/A	No	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Nitrate [as N] (ppm)	10	10	<0.1	4/09/2018	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains some or all of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies.

Original Supply ID	Original Supply Name
IA0848015	Madrid Water Department

2018 WATER QUALITY REPORT FOR Xenia Rural Water District – North System

This report contains important information regarding the water quality in our water system. The source of the water for this system is groundwater. Our water quality testing shows the following results:

Xenia Rural Water District Water Quality results:

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	1.10 90 th	2017	0 – 14	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	1.20	RAA	0.46 – 2.18	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.0181 90 th	2017	0 – 0.0627	No	Corrosion of household plumbing systems; Erosion of natural deposits
Total Coliform Bacteria	0	Presence of coliform bacteria in >5% of monthly samples	N/A	2018	0 Samples Exceeded	No	Naturally present in the environment
TTHM (ppb) [Total trihalomethanes]	N/A	80	77	9/30/2018	77 – 77	No	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	18	9/30/2018	18 – 18	No	By-products of drinking water disinfection
Sodium (ppm)	N/A	N/A	12.9	6/20/2018	N/A	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10	10	1.900	2018	1.900	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium (ppm)	2	2	0.0546	6/11/2014	N/A	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Antimony (ppb)	6	6	1.10	6/11/2014	N/A	No	Discharge from petroleum refineries; fire retardants; ceramics; electronic; solder
Selenium (ppb)	50	50	1.90	6/11/2014	N/A	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Gross Alpha, inc (pCi/L)	0	15	3	3/11/2015	N/A	No	Erosion of Natural Deposits
Arsenic (ppb)	0	10	1.10	6/11/2014	N/A	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Fluoride (ppm)	4	4	0.6	RAA	N/A	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

2018 WATER QUALITY REPORT FOR Xenia Rural Water District – SVC Area 8 (SV8)

This report contains important information regarding the water quality in this water system. All of the water for this system is purchased from Des Moines Water Works and their source is surface water. Our water quality testing shows the following results:

Xenia Rural Water Districts Water Quality Results:

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	2.40 90 th	2017	0 – 11	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	2.4	RAA	1.0 – 3.2	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.0326 90 th	2017	0 – 0.0350	No	Corrosion of household plumbing systems; Erosion of natural deposits
TTHM (ppb) [Total trihalomethanes]	N/A	80	41	9/30/2018	41 – 41	No	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	8	9/30/2018	8 – 8	No	By-products of drinking water disinfection

PURCHASED WATER INFORMATION

Water Quality Results Provided by Des Moines Water Works

7727031 – DES MOINES WATER WORKS							
03 – MCMULLEN AFTER TREATMENT							
Fluoride (ppm)	4	4	0.86	2018	0.20 – 0.86	No	Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories
Sodium (ppm)	NA	NA	13.2	4/02/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.10	2018	Minimum removal ratio 1	No	Naturally present in the environment
Nitrate [as N] (ppm)	10	10	8.65	2018	0.20 – 8.65	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU)	NA	NA	0.44	2018	0.02 – 0.44	No	Soil runoff
04 – RACCOON, DES MOINES & GALLERY FLEUR							
Alpha Emitters(pCi/L)	0	15	1.6	2/24/2010	N/A	No	Erosion of natural deposits
Fluoride (ppm)	4	4	0.78	2018	0.17 – 0.78	No	Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories
Sodium (ppm)	NA	NA	18.2	4/02/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.86	2018	Minimum removal ratio 1	No	Naturally present in the environment
Nitrate [as N] (ppm)	10	10	8.73	2018	2.49 – 8.73	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Cis-1,2 Dichloroethylene (ppb)	70	70	0.5	2018	0 – 0.5	No	Discharge from industrial chemical factories
Turbidity (NTU)	NA	NA	0.18	2018	0.03 – 0.18	No	Soil runoff

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
05 – LP MOON ASR S/EP AFTER TREATMENT							
Sodium (ppm)	NA	NA	32.62	8/06/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Arsenic (ppb)	0	10	ND	2018	0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Fluoride (ppm)	4	4	1.40	2018	0.61 – 1.40	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate [as N] (ppm)	10	10	4.99	2018	2.32 – 4.99	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
06 – MCMULLEN ASR S/EP							
Sodium (ppm)	NA	NA	21.43	8/06/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Fluoride (ppm)	4	4	0.86	2018	0.20 – 0.86	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Arsenic (ppb)	0	10	ND	2018	0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Nitrate [as N] (ppm)	10	10	8.24	2018	2.46 – 8.24	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
07 – SAYLORVILLE S/EP (AFTER TREATMENT)							
Fluoride (ppm)	4	4	0.92	2018	0.13 – 0.92	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2	2	0.1	2011	NA	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	NA	NA	15.8	2/05/2018	NA	No	Erosion of natural deposits; added to water during treatment process
Nitrate [as N] (ppm)	10	10	2.66	2018	0.26 – 2.66	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.60	2018	Minimum removal ratio 1	No	Naturally present in the environment
Turbidity (NTU)	NA	NA	0.30	2018	0.02 – 0.29	No	Soil runoff
08 – ARMY POST ASR (AFTER TREATMENT)							
CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Gross Alpha, inc (pCi/L)	0	15	11.1	10/08/2018	NA	No	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	2.2	10/08/2018	NA	No	Erosion of natural deposits
Uranium (ppb)	0	30	1.9	10/08/2018	NA	No	Erosion of natural deposits
Gross Alpha, exc (pCi/L)	0	15	9.8	10/08/2018	NA	No	Erosion of natural deposits

Antimony (ppb)	6	6	5	10/08/2018	NA	No	Discharge from petroleum refineries; fire retardants; ceramics; electronic; solder
Sodium (ppb)	NA	NA	28.93	8/13/2018	NA	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10	10	6.60	2018	2.63 – 6.60	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Dichloromethane (ppb)	0	5	1.9	10/08/2018	NA	No	Discharge from pharmaceutical and chemical factories

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

OTHER VIOLATIONS

In February 2018 we had a Lead Consumer Notice (Pb/Cu) violation for Lead & Copper Rule.

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains some or all of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies.

Original Supply ID	Original Supply Name
IA7727031	Des Moines Water Works

2018 WATER QUALITY REPORT FOR Xenia Rural Water District – Woodward System

This report contains important information regarding the water quality in our water system. The source of our water is groundwater. Our groundwater is drawn from Buried Sand and Gravel aquifer(s).

In 2018 we changed the classification of the connection to the Xenia Des Moines System from emergency to active to allow us better operation of the treatment facilities and distribution system. Please also see Xenia Rural Water District – Des Moines System 2018 Water Quality Report for information on your water.

Our water quality testing shows the following results:

Xenia Rural Water Districts Water Quality Results:

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	4.00 90 th	2016	0 – 15	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	2.80	RAA	1.80 – 3.80	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.0213 90 th	2016	0 – 0.0230	No	Corrosion of household plumbing systems; Erosion of natural deposits
Arsenic (ppb)	0	10	6.4	8/29/2018	6.4	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
TTHM (ppb) [Total trihalomethanes]	N/A	80	30	10/29/2018	30 - 30	No	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	14.4	10/29/2018	14.4 – 14.4	No	By-products of drinking water disinfection
Nitrite [as N] (ppm) Distribution System	1	1	0.290	2018	0 – 0.290	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [as N](ppm) Well 1 or 2 after treatment	1	1	0.160	2017	0 – 0.160	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	N/A	N/A	41.7	8/25/2016	N/A	No	Erosion of natural deposits; Added to water during treatment process
Fluoride (ppm)	4	4	0.6	RAA	N/A	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

OTHER VIOLATIONS

In April 2018 we failed to monitor for Haloacetic Acids (HAA5). Adverse health effects, if any are not known. Monitoring procedures have been corrected to avoid future violations.

In April 2018 we failed to monitor for Total THM. Adverse health effects, if any are not known. Monitoring procedures have been corrected to avoid future violations.

Due to the change in source water the sampling frequency for Total THM and Haloacetic Acids was increased from annually to quarterly. Due to this change we missed the samples due in April. Corrections have been made to the sampling plan to ensure this does not happen again.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

SOURCE WATER



INFORMATION

- The Xenia Rural Water District– Boone System (**BNE**) obtains its water from the alluvial aquifer. The alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials allow contaminants to move through the aquifer fairly quickly. The wells will be most susceptible to activities such as dry cleaners, gas stations, industrial sites, and municipal wastewater dischargers. Water for the Boone System is purchased from the city of Boone.
- The Xenia Rural Water District — Des Moines System (**DMS**) obtains its water from surface water, including the Raccoon River, Des Moines River and an infiltration gallery (a series of underground pipes situated next to the Raccoon River located throughout Des Moines Water Works Park) and an innovative horizontal well formation located under the Raccoon River. All water is purchased from Des Moines Water Works.
- The Xenia Rural Water District – Madrid System (**MRD**) obtains its water from the alluvial aquifer. The alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials allow contaminants to move through the aquifer fairly quickly. The wells will be most susceptible to activities such as dry cleaners, gas stations, industrial sites, and municipal wastewater dischargers. Water for the Madrid System is purchased from the city of Madrid.
- The Xenia Rural Water District – North System (**NRT**) obtains its water from the alluvial aquifer. The alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials allow contaminants to move through the aquifer fairly quickly. The wells will be most susceptible to activities such as non-coal quarries. Water for the North System is produced at our Water Treatment Plant located outside of Stratford.
- The Xenia Rural Water District — Service Area 8 System (**SV8**) obtains its water from surface water, including the Raccoon River, Des Moines River and an infiltration gallery (a series of underground pipes situated next to the Raccoon River located throughout Des Moines Water Works Park) and an innovative horizontal well formation located under the Raccoon River. All water is purchased from Des Moines Water Works and is delivered to Xenia through a joint pipeline with Warren Water District.
- The Xenia Rural Water District - Woodward (**WRD**) system obtains its water from the buried sand and gravel of the Buried Sand and Gravel aquifer. The Buried Sand and Gravel aquifer was determined to be slightly susceptible to contamination because the characteristics of the aquifer and overlying materials provide moderate protection from contamination at the land surface. The Buried Sand and Gravel wells will be slightly susceptible to surface contaminants such as leaking underground tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources and is available from Xenia Rural Water District at 1-888-355-2619.

The Xenia Rural Water – Woodward System obtains some of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies.



DEFINITION OF TERMS

- Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Maximum Contaminant Level Goal (MCLG) -- The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- RAA – Running Annual Average
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- SGL – Single Sample Result
- RTCR – Revised Total Coliform Rule
- NTU – Nephelometric Turbidity Units

GENERAL INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Xenia Rural Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

ADDITIONAL HEALTH INFORMATION

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

OTHER INFORMATION

Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

Our water utility is making every effort to protect the water system from potential security threats. You, as customers, can also help. If you see any suspicious activity near the water towers, pump stations, treatment plant, wells or fire hydrants, please contact us at 1-888-355-2619 or the local police/sheriff department. We appreciate your assistance in protecting the water system.



Contact Information

For questions regarding this information, please contact
Dominic Hayden
Water Treatment Manager
1-888-355-2619 or 515-676-2117 during the hours of
8:00 a.m. - 4:30 p.m., Monday through Friday.

Regular monthly board meetings are typically held on
Thursday of the third full week of the month at

Xenia Rural Water District
23998 141st St.
Bouton, Iowa 50039