



# XENIA RURAL WATER DISTRICT 2020 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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# 2020 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    | 1.90<br>90 <sup>th</sup>   | 2019         | 0 – 6                                  | No        | Corrosion of household plumbing systems; erosion of natural deposits |
| Chlorine (ppm)<br>Boone (east) 950  | MRDLG<br>=4.0 | MRDL=4.0 | 2.6                        | 2020<br>RAA  | 0.9 – 3.40                             | No        | Water additive used to control microbes                              |
| Chlorine (ppm)<br>Boone (west) 952  | MRDLG<br>=4.0 | MRDL=4.0 | 1.3                        | 2020<br>RAA  | 0.89 – 2.4                             | No        | Water additive used to control microbes                              |
| Copper (ppm)  | 1.3           | AL=1.3   | 0.0126<br>90 <sup>th</sup> | 2019         | 0.0 – 2.250<br>1 sample exceeded<br>AL | No        | Corrosion of household plumbing systems; Erosion of natural deposits |
| TTHM (ppb)<br>[Total trihalomethanes]<br>Boone Distribution (east)<br>950 | N/A           | 80       | 66.60<br>LRAA              | 11/18/2020   | NA                                     | No        | By-products of drinking water disinfection                           |
| Haloacetic Acids<br>(HAA5) (ppb)<br>Boone Distribution (east)<br>950      | N/A           | 60       | 17.5<br>LRAA               | 11/18/2020   | NA                                     | 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       | 0.18<br>100% of<br>samples met<br>requirements | 2020         | 0.02 – 0.18                 | No        | Soil runoff   |
| Fluoride (ppm)                        | 4             | 4        | 0.87   | 2020         | 0.59 – 0.87                 | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| TTHM (ppb)<br>[Total trihalomethanes] | N/A           | 80       | 46<br>LRAA                                     | 2020         | 28 - 74                     | No        | By-products of drinking water disinfection  |
| Haloacetic Acids<br>(HAA5) (ppb)      | N/A           | 60       | 11<br>LRAA                                     | 2020         | 10 – 12                     | No        | By-products of drinking water disinfection  |
| Chlorine (ppm)                        | MRDLG<br>=4.0 | MRDL=4.0 | 1.6  | 2020<br>RAA  | 0.67 – 2.19                 | No        | Water additive used to control microbes   |
| Nitrate [as N] (ppm)                  | 10            | 10       | 5.2  | 2020         | 0.3 – 5.2                   | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Sodium (ppm)                          | N/A           | N/A      | 9.9  | 7/13/2020    | N/A                         | No        | Erosion of natural deposits; Added to water during treatment process  |
| Total Organic Carbon (TOC)<br>(ppm)   | N/A           | TT       | % Removal Range<br>21 - 42                     | 2020         | % Removal<br>Required<br>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           |

## OTHER VIOLATIONS

In June 2020 we failed to monitor for nitrite (as N). Adverse health effects, if any, are not known. Monitoring procedures have been corrected to avoid future violations

# 2020 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 groundwater under the influence of surface water and 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    | 1.50<br>90 <sup>th</sup>   | 2020         | 0 – 2              | No        | Corrosion of household plumbing systems; erosion of natural deposits |
| Chlorine (ppm)                        | MRDLG =4.0 | MRDL=4.0 | 2.5                        | RAA          | 1.8 – 3.7          | No        | Water additive used to control microbes                              |
| Copper (ppm)                          | 1.3        | AL=1.3   | 0.0118<br>90 <sup>th</sup> | 2020         | 0 – 0.0244         | No        | Corrosion of household plumbing systems; Erosion of natural deposits |
| TTHM (ppb)<br>[Total trihalomethanes] | N/A        | 80       | 42                         | 9/30/2020    | 42 – 42            | No        | By-products of drinking water disinfection                           |
| Haloacetic Acids (HAA5) (ppb)         | N/A        | 60       | 18                         | 9/30/2020    | 18 – 18            | No        | By-products of drinking water disinfection                           |

### PURCHASED WATER INFORMATION

Our water system purchases water from the systems below. Their water quality is as follows:

| 7727031 – DES MOINES WATER WORKS         |     |    |                              |      |                            |    |   |
|--|-----|----|------------------------------|------|----------------------------|----|---|
| 03 – MCMULLEN AFTER TREATMENT            |     |    |                              |      |                            |    |   |
| Fluoride (ppm)                           | 4   | 4  | 0.92                         | 2020 | 0.12 – 0.92                | No | Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories |
| Sodium (ppm)                             | NA  | NA | 30                           | 2020 | 9.86 – 30                  | No | Erosion of natural deposits; added to water during treatment process  |
| Total Organic Carbon (TOC)               | N/A | TT | Annual removal ratio<br>2.13 | 2020 | Minimum removal ratio<br>1 | No | Naturally present in the environment  |
| Nitrate [as N] (ppm)                     | 10  | 10 | 8.39                         | 2020 | 0.07 – 8.39                | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Turbidity (NTU)                          | NA  | NA | 0.36                         | 2020 | 0.01 – 0.36                | No | Soil runoff   |
| 04 – RACCOON, DES MOINES & GALLERY FLEUR |     |    |                              |      |                            |    |   |
| Alpha Emitters(pCi/L)                    | 0   | 15 | ND                           | 2019 | N/A                        | No | Erosion of natural deposits   |
| Fluoride (ppm)                           | 4   | 4  | 0.93                         | 2020 | 0.13 – 0.93                | No | Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories |
| Sodium (ppm)                             | NA  | NA | 31.2                         | 2020 | 11.8 – 31.2                | No | Erosion of natural deposits; added to water during treatment process  |
| Total Organic Carbon (TOC)               | N/A | TT | Annual removal ratio<br>3.36 | 2020 | Minimum removal ratio<br>1 | No | Naturally present in the environment  |
| Nitrate [as N] (ppm)                     | 10  | 10 | 7.7                          | 2020 | 0.06 – 7.7                 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Cis-1,2 Dichloroethylene (ppb)           | 70  | 70 | 0.6                          | 2020 | 0.5 – 0.6                  | No | Discharge from industrial chemical factories  |
| Turbidity (NTU)                          | NA  | NA | 0.21                         | 2020 | 0.03 – 0.21                | No | Soil runoff   |

| CONTAMINANT                                    | MCLG | MCL | DETECTED LEVEL            | DATE SAMPLED | RANGE OF DETECTION      | VIOLATION | SOURCE  |
|--|------|-----|---------------------------|--------------|-------------------------|-----------|---|
| <b>05 – LP MOON ASR S/EP AFTER TREATMENT</b>   |      |     |                           |              |                         |           |   |
| Sodium (ppm)                                   | NA   | NA  | 19.31                     | 2020         | NA                      | No        | Erosion of natural deposits; added to water during treatment process  |
| Arsenic (ppb)                                  | 0    | 10  | ND                        | 2020         | 0                       | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes                     |
| Fluoride (ppm)                                 | 4    | 4   | 1.44                      | 2020         | 0.68 – 1.44             | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Nitrate [as N] (ppm)                           | 10   | 10  | 6.03                      | 2020         | 3.26 – 6.03             | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Gross Alpha, inc (pCi/L)                       | 0    | 15  | 6.2                       | 2020         | NA                      | No        | Erosion of natural deposits   |
| Atrazine (ppb)                                 | 3    | 3   | ND                        | 2020         | NA                      | No        | Runoff from herbicide used on row crops   |
| <b>06 – MCMULLEN ASR S/EP</b>                  |      |     |                           |              |                         |           |   |
| Sodium (ppm)                                   | NA   | NA  | 28.4                      | 2020         | 10.5 – 28.4             | No        | Erosion of natural deposits; added to water during treatment process  |
| Fluoride (ppm)                                 | 4    | 4   | 0.90                      | 2020         | 0.39 – 0.90             | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Arsenic (ppb)                                  | 0    | 10  | ND                        | 2020         | 0                       | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes                     |
| Nitrate [as N] (ppm)                           | 10   | 10  | 8.39                      | 2020         | 0.26 – 8.39             | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| <b>07 – SAYLORVILLE S/EP (AFTER TREATMENT)</b> |      |     |                           |              |                         |           |   |
| Fluoride (ppm)                                 | 4    | 4   | 0.76                      | 2020         | 0.51 – 0.76             | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Barium (ppm)                                   | 2    | 2   | 0.07                      | 2020         | NA                      | No        | Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits                              |
| Sodium (ppm)                                   | NA   | NA  | 18.6                      | 2020         | 12.0 – 18.6             | No        | Erosion of natural deposits; added to water during treatment process  |
| Nitrate [as N] (ppm)                           | 10   | 10  | 1.84                      | 2020         | 0 – 1.84                | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Total Organic Carbon (TOC)                     | N/A  | TT  | Annual removal ratio 2.11 | 2020         | Minimum removal ratio 1 | No        | Naturally present in the environment  |
| Turbidity (NTU)                                | NA   | NA  | 0.4                       | 2020         | 0.02 – 0.68             | No        | Soil runoff   |
|  |      |     |                           |              |                         |           |   |

| CONTAMINANT                                 | MCLG | MCL | DETECTED LEVEL | DATE SAMPLED | RANGE OF DETECTION | VIOLATION | SOURCE  |
|---|------|-----|----------------|--------------|--------------------|-----------|---|
| <b>08 – ARMY POST ASR (AFTER TREATMENT)</b> |      |     |                |              |                    |           |   |
| Gross Alpha, inc (pCi/L)                    | 0    | 15  | 7.8            | 2019         | 1.9 – 7.8          | No        | Erosion of natural deposits   |
| Combined Radium (pCi/L)                     | 0    | 5   | 1.4            | 2019         | ND – 1.4           | 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   | ND             | 2020         | NA                 | No        | Discharge from petroleum refineries; fire retardants; ceramics; electronic; solder          |
| Sodium (ppb)                                | NA   | NA  | 42.5           | 2020         | 20.1 – 42.5        | No        | Erosion of natural deposits; Added to water during treatment process                        |
| Nitrate [as N] (ppm)                        | 10   | 10  | 5.05           | 2020         | 1.43 – 5.05        | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Dichloromethane (ppb)                       | 0    | 5   | 0.013          | 2020         | 0 – 0.013          | No        | Discharge from pharmaceutical and chemical factories  |

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   |
| IA7727031          | Des Moines Water Works |

# 2020 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:

**During 2020 we used water from the Xenia Boone System emergency connection. See the Xenia Rural Water District – Boone System CCR for more info on your water.**

**Xenia Rural Water District Water Quality Results**

| CONTAMINANT                           | MCLG       | MCL      | DETECTED LEVEL             | DATE SAMPLED | RANGE OF DETECTION | VIOLATION | SOURCE   |
|---------------------------------------|------------|----------|----------------------------|--------------|--------------------|-----------|--|
| Lead (ppb)                            | 0          | AL=15    | 1.60<br>90 <sup>th</sup>   | 2019         | ND – 2             | No        | Corrosion of household plumbing systems; erosion of natural deposits |
| Chlorine (ppm)                        | MRDLG =4.0 | MRDL=4.0 | 1.20                       | 2020<br>RAA  | 0.51 – 1.85        | No        | Water additive used to control microbes                              |
| Copper (ppm)                          | 1.3        | AL=1.3   | 0.0136<br>90 <sup>th</sup> | 2019         | ND – 0.0448        | No        | Corrosion of household plumbing systems; Erosion of natural deposits |
| TTHM (ppb)<br>[Total trihalomethanes] | N/A        | 80       | 80<br>LRAA                 | 6/30/2020    | 60 – 111           | Yes       | By-products of drinking water disinfection                           |
| Haloacetic Acids (HAA5) (ppb)         | N/A        | 60       | 25<br>LRAA                 | 12/31/2020   | 18 – 30            | 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                              | 2020<br>RAA  | 0.39 – 0.93        | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Turbidity                        | N/A  | N/A | 0.41<br>100% Meeting Requirements | 2020         | 0.06 – 0.41        | No        | Soil runoff   |
| Sodium (ppm)                     | N/A  | N/A | 14.9                              | 7/13/2020    | N/A                | No        | Erosion of natural deposits; Added to water during treatment process  |
| Total Organic Carbon (TOC)       | N/A  | TT  | 15%                               | 2020         | 15% - 47%          | No        | Naturally present in the environment  |
| Nitrate [as N] (ppm)             | 10   | 10  | 0.4                               | 2020         | NA                 | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Di (2-ethylhexyl)phthalate (ppb) | 0    | 6   | 1.30                              | 2019         | NA                 | No        | Discharge from rubber and chemical factories  |

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 |

# 2020 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    | 2.6<br>90 <sup>th</sup>    | 2020         | 0 – 4              | No        | Corrosion of household plumbing systems; erosion of natural deposits  |
| Chlorine (ppm)                        | MRDLG =4.0 | MRDL=4.0 | 1.30                       | 2020<br>RAA  | 0.54 – 2.02        | No        | Water additive used to control microbes   |
| Copper (ppm)                          | 1.3        | AL=1.3   | 0.0366<br>90 <sup>th</sup> | 2020         | 0 – 0.0767         | No        | Corrosion of household plumbing systems; Erosion of natural deposits  |
| TTHM (ppb)<br>[Total trihalomethanes] | N/A        | 80       | 44                         | 9/30/2020    | 44 – 44            | No        | By-products of drinking water disinfection  |
| Haloacetic Acids (HAA5) (ppb)         | N/A        | 60       | 27                         | 9/30/2020    | 27 – 27            | 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       | 2.4                        | 2020         | 2.4                | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Fluoride (ppm)                        | 4          | 4        | 0.66                       | 2020<br>RAA  | 0.21 – 1.30        | 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.

# 2020 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 groundwater under the influence of surface water and 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    | 1.50<br>90 <sup>th</sup>   | 2020         | 0 – 2              | No        | Corrosion of household plumbing systems; erosion of natural deposits |
| Chlorine (ppm)                        | MRDLG =4.0 | MRDL=4.0 | 2.5                        | RAA          | 1.8 – 3.7          | No        | Water additive used to control microbes                              |
| Copper (ppm)                          | 1.3        | AL=1.3   | 0.0118<br>90 <sup>th</sup> | 2020         | 0 – 0.0244         | No        | Corrosion of household plumbing systems; Erosion of natural deposits |
| TTHM (ppb)<br>[Total trihalomethanes] | N/A        | 80       | 42                         | 9/30/2020    | 42 – 42            | No        | By-products of drinking water disinfection                           |
| Haloacetic Acids (HAA5) (ppb)         | N/A        | 60       | 18                         | 9/30/2020    | 18 – 18            | No        | By-products of drinking water disinfection                           |

### PURCHASED WATER INFORMATION

Our water system purchases water from the systems below. Their water quality is as follows:

| 7727031 – DES MOINES WATER WORKS         |     |    |                              |      |                            |    |   |
|--|-----|----|------------------------------|------|----------------------------|----|---|
| 03 – MCMULLEN AFTER TREATMENT            |     |    |                              |      |                            |    |   |
| Fluoride (ppm)                           | 4   | 4  | 0.92                         | 2020 | 0.12 – 0.92                | No | Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories |
| Sodium (ppm)                             | NA  | NA | 30                           | 2020 | 9.86 – 30                  | No | Erosion of natural deposits; added to water during treatment process  |
| Total Organic Carbon (TOC)               | N/A | TT | Annual removal ratio<br>2.13 | 2020 | Minimum removal ratio<br>1 | No | Naturally present in the environment  |
| Nitrate [as N] (ppm)                     | 10  | 10 | 8.39                         | 2020 | 0.07 – 8.39                | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Turbidity (NTU)                          | NA  | NA | 0.36                         | 2020 | 0.01 – 0.36                | No | Soil runoff   |
| 04 – RACCOON, DES MOINES & GALLERY FLEUR |     |    |                              |      |                            |    |   |
| Alpha Emitters(pCi/L)                    | 0   | 15 | ND                           | 2019 | N/A                        | No | Erosion of natural deposits   |
| Fluoride (ppm)                           | 4   | 4  | 0.93                         | 2020 | 0.13 – 0.93                | No | Water additive which promotes strong teeth: Erosion of natural deposits: Discharge from fertilizer and aluminum factories |
| Sodium (ppm)                             | NA  | NA | 31.2                         | 2020 | 11.8 – 31.2                | No | Erosion of natural deposits; added to water during treatment process  |
| Total Organic Carbon (TOC)               | N/A | TT | Annual removal ratio<br>3.36 | 2020 | Minimum removal ratio<br>1 | No | Naturally present in the environment  |
| Nitrate [as N] (ppm)                     | 10  | 10 | 7.7                          | 2020 | 0.06 – 7.7                 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Cis-1,2 Dichloroethylene (ppb)           | 70  | 70 | 0.6                          | 2020 | 0.5 – 0.6                  | No | Discharge from industrial chemical factories  |
| Turbidity (NTU)                          | NA  | NA | 0.21                         | 2020 | 0.03 – 0.21                | No | Soil runoff   |



| CONTAMINANT                                    | MCLG | MCL | DETECTED LEVEL            | DATE SAMPLED | RANGE OF DETECTION      | VIOLATION | SOURCE  |
|--|------|-----|---------------------------|--------------|-------------------------|-----------|---|
| <b>05 – LP MOON ASR S/EP AFTER TREATMENT</b>   |      |     |                           |              |                         |           |   |
| Sodium (ppm)                                   | NA   | NA  | 19.31                     | 2020         | NA                      | No        | Erosion of natural deposits; added to water during treatment process  |
| Arsenic (ppb)                                  | 0    | 10  | ND                        | 2020         | 0                       | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes                     |
| Fluoride (ppm)                                 | 4    | 4   | 1.44                      | 2020         | 0.68 – 1.44             | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Nitrate [as N] (ppm)                           | 10   | 10  | 6.03                      | 2020         | 3.26 – 6.03             | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Gross Alpha, inc (pCi/L)                       | 0    | 15  | 6.2                       | 2020         | NA                      | No        | Erosion of natural deposits   |
| Atrazine (ppb)                                 | 3    | 3   | ND                        | 2020         | NA                      | No        | Runoff from herbicide used on row crops   |
| <b>06 – MCMULLEN ASR S/EP</b>                  |      |     |                           |              |                         |           |   |
| Sodium (ppm)                                   | NA   | NA  | 28.4                      | 2020         | 10.5 – 28.4             | No        | Erosion of natural deposits; added to water during treatment process  |
| Fluoride (ppm)                                 | 4    | 4   | 0.90                      | 2020         | 0.39 – 0.90             | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Arsenic (ppb)                                  | 0    | 10  | ND                        | 2020         | 0                       | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes                     |
| Nitrate [as N] (ppm)                           | 10   | 10  | 8.39                      | 2020         | 0.26 – 8.39             | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| <b>07 – SAYLORVILLE S/EP (AFTER TREATMENT)</b> |      |     |                           |              |                         |           |   |
| Fluoride (ppm)                                 | 4    | 4   | 0.76                      | 2020         | 0.51 – 0.76             | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Barium (ppm)                                   | 2    | 2   | 0.07                      | 2020         | NA                      | No        | Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits                              |
| Sodium (ppm)                                   | NA   | NA  | 18.6                      | 2020         | 12.0 – 18.6             | No        | Erosion of natural deposits; added to water during treatment process  |
| Nitrate [as N] (ppm)                           | 10   | 10  | 1.84                      | 2020         | 0 – 1.84                | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Total Organic Carbon (TOC)                     | N/A  | TT  | Annual removal ratio 2.11 | 2020         | Minimum removal ratio 1 | No        | Naturally present in the environment  |
| Turbidity (NTU)                                | NA   | NA  | 0.4                       | 2020         | 0.02 – 0.68             | No        | Soil runoff   |
|  |      |     |                           |              |                         |           |   |

| CONTAMINANT                                 | MCLG | MCL | DETECTED LEVEL | DATE SAMPLED | RANGE OF DETECTION | VIOLATION | SOURCE  |
|---|------|-----|----------------|--------------|--------------------|-----------|---|
| <b>08 – ARMY POST ASR (AFTER TREATMENT)</b> |      |     |                |              |                    |           |   |
| Gross Alpha, inc (pCi/L)                    | 0    | 15  | 7.8            | 2019         | 1.9 – 7.8          | No        | Erosion of natural deposits   |
| Combined Radium (pCi/L)                     | 0    | 5   | 1.4            | 2019         | ND – 1.4           | 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   | ND             | 2020         | NA                 | No        | Discharge from petroleum refineries; fire retardants; ceramics; electronic; solder          |
| Sodium (ppb)                                | NA   | NA  | 42.5           | 2020         | 20.1 – 42.5        | No        | Erosion of natural deposits; Added to water during treatment process                        |
| Nitrate [as N] (ppm)                        | 10   | 10  | 5.05           | 2020         | 1.43 – 5.05        | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Dichloromethane (ppb)                       | 0    | 5   | 0.013          | 2020         | 0 – 0.013          | No        | Discharge from pharmaceutical and chemical factories  |

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   |
| IA7727031          | Des Moines Water Works |

# 2020 WATER QUALITY REPORT FOR Xenia Rural Water District – Woodward System

This report contains important information regarding the water quality in our system. The source of our water is surface water and ground water. Some of the water is purchased. Purchased water comes from Des Moines Water Works. Our water quality testing shows the following results:

Please also see Xenia Rural Water District – Des Moines System 2020 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    | 2.00<br>90 <sup>th</sup><br>1 sample<br>exceeded AL | 2019         | 0 – 19             | No        | Corrosion of household plumbing systems; erosion of natural deposits  |
| Chlorine (ppm)                        | MRDLG =4.0 | MRDL=4.0 | 3.5   | 2020<br>RAA  | 1.3 – 4.1          | No        | Water additive used to control microbes   |
| Copper (ppm)                          | 1.3        | AL=1.3   | 0.0175<br>90 <sup>th</sup>                          | 2019         | 0 – 0.0999         | No        | Corrosion of household plumbing systems; Erosion of natural deposits  |
| Arsenic (ppb)                         | 0          | 10       | 7.7   | 7/22/2020    | 7.7                | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes                     |
| TTHM (ppb)<br>[Total trihalomethanes] | N/A        | 80       | 8   | 12/31/2020   | 5 – 14             | No        | By-products of drinking water disinfection  |
| Haloacetic Acids (HAA5) (ppb)         | N/A        | 60       | 7   | 12/31/2019   | 6 – 8              | No        | By-products of drinking water disinfection  |
| Sodium (ppm)                          | N/A        | N/A      | 37.9  | 7/24/2019    | N/A                | No        | Erosion of natural deposits; Added to water during treatment process  |
| Fluoride (ppm)                        | 4          | 4        | 0.68  | 2020<br>RAA  | 0.20 – 1.33        | 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.

|                    |                        |
|--------------------|------------------------|
| Original Supply ID | Original Supply Name   |
| IA7727031          | Des Moines Water Works |

# 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 (Raccoon and Des Moines Rivers) and ground water under the influence of surface water, an infiltration gallery (horizontal collection pipe along the Raccoon River), radial collector wells near the Raccoon and Des Moines Rivers, and a horizontal well 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 141<sup>st</sup> St.  
Bouton, Iowa 50039