West Central Iowa Rural Water Association

2025 WATER QUALITY REPORT

2024 Testing Results

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

The source of our water is groundwater. Some of the water is purchased. Purchased water comes from the Denison Municipal Utility's (DMU) water supply. WCIRWA has three subsystems: Boyer, Denison and Nishnabotna. All of the water for the Denison Subsystem is purchased from DMU and some of the water for the Nishnabotna Subsystem is purchased from DMU. Our water quality testing shows the following results:

BOYER SUBSYSTEM TEST RESULTS

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)		Yes/No	
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	LRAA	45.00 (45 – 45)	09/30/2024	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	49.00 (49 – 49)	09/30/2024	No	By-products of drinking water disinfection
Lead (ppb)	AL=15 (0)	90th	1.70 (ND – 3)	2023	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	0.7067 (0.0661 – 1.6763) 1 sample(s) Exceeded AL	2023	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
950 - DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.2 (1 – 1.4)	12/31/2024	No	Water additive used to control microbes
01 - WELLS 2 & 3 @ TREATMENT PLANT LAB TAP						
Fluoride (ppm)	4 (4)	RAA	0.45 (0.3930 – 0.4640)	03/31/2024	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2 (2)	SGL	0.149	08/03/2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Arsenic (ppb)	10 (0)	SGL	1.00	08/03/2021	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Sodium (ppm)	N/A (N/A)	SGL	11.63	07/24/2024	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	0.11	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
NISHNABOTNA #1400902 - WELLS 1, 3, 5R, 6-10 @ WATER PLANT						
Gross Alpha, inc (pCi/L)	15 (0)	SGL	6.4	02/28/2022	No	Erosion of natural deposits
Barium (ppm)	2 (2)	SGL	0.121	12/07/2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4 (4)	RAA	0.59 (0.5150 - 0.7290)	12/31/2024	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Selenium (ppb)	50 (50)	SGL	6.00	12/07/2021	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (ppm)	N/A (N/A)	SGL	17.97	10/08/2024	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	2.52 (1.71 – 2.52)	2024	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.

DENISON SUBSYSTEM TEST RESULTS

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)		Yes/No	
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	LRAA	46.00 (45 – 48)	09/30/2024	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	18.00 (17 – 19)	09/30/2024	No	By-products of drinking water disinfection
Lead (ppb)	AL=15 (0)	90th	0.70 (ND – 3)	2022	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	0.0246 (0.0021 – 0.1787)	2022	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
950 - NORTH DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.2 (1.1 - 1.4)	12/31/2024	No	Water additive used to control microbes
951 - SOUTH DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.1 (0.9 – 1.2)	12/31/2024	No	Water additive used to control microbes
PURCHASED WATER - 2424027 - DENISON WATER SUPPLY 02 - WELLS 1-3, 5,7, 9-16 & 2A @ WATER PLANT						
Gross Alpha, (pCi/L)	15 (0)	SGL	2	04/06/2020	No	Erosion of natural deposits
Fluoride (ppm)	4 (4)	SGL	0.3	04/26/2022	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2 (2)	SGL	0.0249	04/26/2022	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	27.4	01/25/2023	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	0.600	07/24/2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria	TT (TT)	RTCR	2 Sample(s) positive	5/31/2024	No	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water.

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

NISHNABOTNA SUBSYSTEM TEST RESULTS

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)		Yes/No	
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	LRAA	36.00 (33-39)	09/30/2024	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	21.00 (20 – 22)	09/30/2024	No	By-products of drinking water disinfection
Lead (ppb)	AL=15 (0)	90th	1.70 (ND – 2)	2023	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	0.5385 (0.0008 – 1.1391)	2023	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

950 - DISTRIBUTION SYSTEM-WCIRW						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.4 (1 – 1.9)	9/30/2024	No	Water additive used to control microbes
951 - DISTRIBUTION SYSTEM-DENISON						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.2 (0.9 – 1.3)	12/31/2024	No	Water additive used to control microbes
01 - WELLS 1, 3, 5R, 6-10 @ WATER PLANT						
Gross Alpha, inc (pCi/L)	15 (0)	SGL	6.4	02/28/2022	No	Erosion of natural deposits
Fluoride (ppm)	4 (4)	RAA	0.59 (0.5150 - 0.7290)	12/31/2024	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Selenium (ppb)	50 (50)	SGL	6.00	12/07/2021	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Barium (ppm)	2 (2)	SGL	0.121	12/07/2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	17.97	10/08/2024	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	2.52 (1.71 – 2.52)	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
PURCHASED WATER - 2424027 - DENISON WATER SUPPLY 02 - WELLS 1-3, 5,7, 9-16 & 2A @ WATER PLANT						
Gross Alpha, (pCi/L)	15 (0)	SGL	2	04/06/2020	No	Erosion of natural deposits
Fluoride (ppm)	4 (4)	SGL	0.3	04/26/2022	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2 (2)	SGL	0.0249	04/26/2022	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	27.4	01/25/2023	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	.600	07/24/2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria	TT (TT)	RTCR	2 Sample(s) positive	5/31/2024	No	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water.

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

UNREGULATED CONTAMINANTS

The U.S. Environmental Protection Agency developed an Unregulated Contaminant Monitoring program to better understand the existence of contaminants in the environment that are not regulated by the national Primary Drinking Water regulations, which are known or anticipated to occur at public water systems and may warrant regulation under the safe Drinking Water act. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. WCIRWA, Nishnabotna Subsystem was selected to test for numerous contaminants at three different sites in 2018. Those results indicate the following:

UNREGULATED CONTAMINANTS RESULTS: WCIRWA NISHNABOTNA SUBSYSTEM

NISHNABOTNA DISTRIBUTION Location: N23-36-01 & N18-35-01

Analyte	Unit	Average Value	Date
HAA5	µg/L (ppb)	9	12/11/2018
HAA6Br	µg/L (ppb)	8.40	06/05/2018
HAA9	µg/L (ppb)	14.78	12/11/2018

NISHNABOTNA PLANT TP Entry Point #1

Analyte	Unit	Average Value	Date
Manganese	µg/L (ppb)	9	06/04/2018

NISHNABOTNA WELL Entry Point #1

Analyte	Unit	Average Value	Date
Bromide	µg/L (ppb)	32	12/11/2018

OTHER SAMPLING:

NISHNABOTNA PLANT TP Entry Point

Analyte	Unit	Average Value	Date
Manganese	mg/L (blm)	< 0.05	07/23/2019

NISHNABOTNA 951 - DISTRIBUTION SYSTEM-DENISON

Analyte	Unit	Average Value	Date
Manganese	mg/L (blm)	< 0.05	10/16/2019

BOYER PLANT TP Entry Point

Analyte	Unit	Average Value	Date
Manganese	mg/L (blm)	< 0.005	07/16/2019

DENISON 950 – NORTH DISTRIBUTION SYSTEM

Analyte	Unit	Average Value	Date
Manganese	mg/L (blm)	< 0.05	09/25/2019

DEFINITIONS

- 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
- µg/L - Micrograms per liter or parts per billion (ppb). Parts of contaminant per billion parts of water. One part per billion is equivalent to a single penny in ten million dollars.

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. WEST CENTRAL IOWA RURAL WATER ASSOCIATION 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

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

SOURCE WATER ASSESSMENT INFORMATION

The WCIRWA's Boyer System obtains its water from the North Raccoon River sand and gravel of the alluvial aquifer. The alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. Alluvial wells will be highly susceptible to surface contaminants such as leaking underground storage 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 the Manager at 712-655-2534 or 888-844-2614. The water supply is filtered, disinfected, and fluoridated. Incorporated towns that can be served from the Boyer Subsystem include Lidderdale, Westside, and Vail. Also, the Town of Arcadia can be served either from the Boyer Subsystem or the Denison Subsystem.

The WCIRWA's Denison System is served water from the Denison Municipal Utilities (DMU), Supply ID IA2424027 in Denison as a consecutive water supply. This water supply obtains water from an alluvial formation along the Boyer River bottom. The aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. The alluvial wells will be highly susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of the source water was completed by the Iowa Department of Natural Resources and is available from DMU at (712) 263-4458. The water supply is filtered, disinfected, and fluoridated and softened through a cold lime softening process. Incorporated towns that can be served from the Denison Subsystem include Arthur, Charter Oak, Dow City, Kiron, and Schleswig. The incorporated towns of Aspinwall, Arion, Buck Grove and Ricketts are franchised by WCIRWA and are served with DMU water. Also, the Town of Arcadia can be served either from the Boyer Subsystem or the Denison Subsystem.

Denison Municipal Utility (DMU) is participating in a special monitoring program. During the past year DMU was required to conduct a level 1 coliform assessment to determine the cause of bacteria in the distribution system. Corrective actions have been, or will be taken to address these issues. If a health concern is present, the public will be notified.

The WCIRWA's Nishnabotna System obtains its water from the West Nishnabotna sand and gravel of the Alluvial aquifer. The Alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. The Alluvial wells will be highly susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of the source water was completed by the Iowa Department of Natural Resources and is available from the Manager at 712-655-2534 or 888-844-2614. The water supply from the Nishnabotna System is filtered, disinfected and fluoridated. This System also obtains some or of its water from Denison Municipal Utilities, Supply ID IA2424027. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies. Incorporated towns that can be served from the Nishnabotna Subsystem include Halbur, Irwin, Dedham, and Templeton. The incorporated towns of Aspinwall and Gray is also served through a franchise agreement with WCIRWA.

OTHER INFORMATION

Implementation of a well head protection program is implemented for the Nishnabotna Subsystem with the assistance of the Iowa Rural Water Association and the Natural Resource Conservation Service. A well head protection program allows for an area of up to 2,000 feet around a public well to be put into set-aside areas. It is a known fact that native grasses will filter surface runoff and contaminants. Currently, WCIRWA is working with several landowners to achieve this type of protection around our wells. The program is administered through the county NRCS in a similar fashion to the filter strip program along streams and creeks.

CONTACT INFORMATION

For questions regarding this information, please contact Jason Meredith at 1-888-844-2614 or 712-655-2534 during the following hours 7:30 a.m. to 4:30 p.m., closed over the lunch hour, Monday through Friday.

Decisions regarding the water system are made at the board meetings held on second Thursday of each month at 1607 Enterprise Street in Manning, Iowa. Please call 1-888-844-2614 to be placed on the agenda.
