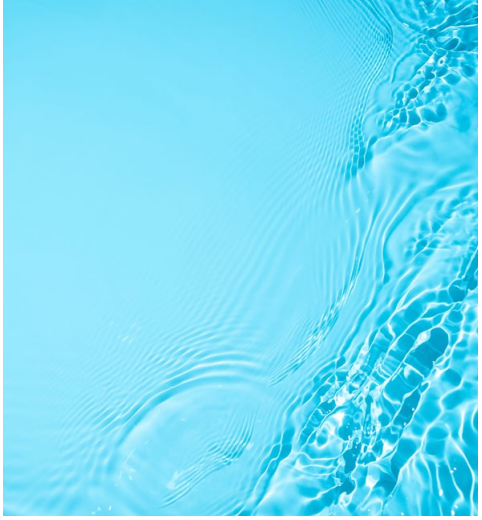


ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By
West Des Moines Water Works

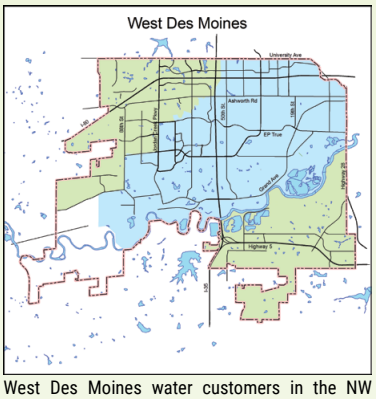
PWS ID#: IA7785007

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best advocates.

Where Does My Water Come From?

West Des Moines Water Works obtains a portion of its water from 17 shallow wells (all between 40 and 50 feet deep) that draw water from the Raccoon River alluvial aquifer. Water is also obtained from four wells drilled into the much deeper Jordan aquifer (2,500 feet deep). In addition, some West Des Moines water is purchased from Des Moines Water Works (DMWW). This is treated and purified water from the Raccoon and Des Moines Rivers; in certain locations, it is blended with treated water from West Des Moines Water Works. Approximately 25 percent of West Des Moines Water Works customers (see map) receive their water solely from Des Moines Water Works.



West Des Moines water customers in the NW and SE portion of the city, noted in green, receive purchased water from the Des Moines Water Works. Areas in blue receive water produced from West Des Moines Water Works A.C. Ward Water Treatment Plant.

Important Health Information

Nitrate in drinking water at levels above 10 parts per million (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 advice from your health care provider.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 at (800) 426-4791 or water.epa.gov/drink/hotline.

Source Water Assessment

West Des Moines Water Works obtains some of its water from the sand and gravel of an alluvial aquifer. The alluvial aquifer was determined to be highly susceptible to contamination because its characteristics and overlying materials provide little protection from contamination at the land surface. The alluvial wells are highly susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application.

West Des Moines Water Works also obtains some of its water from the sandstone and dolomite of the Jordan aquifer, which is part of the Cambrian-Ordovician aquifer. The Cambrian-Ordovician aquifer was determined to have low susceptibility to contamination because its characteristics and overlying materials provide natural protection from contaminants at the land surface. The Cambrian-Ordovician wells have low susceptibility to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application.

West Des Moines Water Works 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.

Des Moines Water Works obtains water from one or more surface sources susceptible to contamination or pollution within the Raccoon and Des Moines River watersheds. Laboratory results for both utilities are listed in this report.

A detailed evaluation of our source water was completed by the Iowa Department of Natural Resources and is available from the water plant operator at (515) 222-3465.

Community Participation

You are invited to participate in our public meetings and voice your concerns about your drinking water. The West Des Moines Water Works Board of Trustees typically meets at 4:00 p.m. on the third Wednesday of each month. Visit wdmww.com for the most up-to-date meeting schedule.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Mitch Pinkerton, Water Production Manager, at (515) 222-3465.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Water Stress

Water stress occurs when the demand for water exceeds the amount available during a certain period or when poor water quality restricts its use. Water stress causes deterioration of freshwater resources in terms of quantity (aquifer overexploitation, dry rivers) and quality (eutrophication, organic matter pollution, saline intrusion).

According to the World Resources Institute (WRI; wri.org), the Middle East and North Africa remain the most water-stressed regions on Earth. However, several states in the western half of the U.S. are similarly experiencing extremely high levels of water stress from overuse. It is clear that even in countries with low overall water stress, individual communities may still be experiencing extremely stressed conditions. For example, South Africa and the United States rank 48 and 71 on WRI's list, respectively, yet the Western Cape (the state home to Cape Town) and New Mexico experience extremely high stress levels.

There are undeniably worrying trends in water quality. But by taking action now and investing in better management, we can solve water issues before it's too late.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or www.epa.gov/safewater/lead.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

				West Des Moines Water Works A.C. Ward Municipal Water Treatment Plant		Des Moines Water Works McMullen Plant		Des Moines Water Works Fleur Drive Plant			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2023	15	0	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2023	10	0	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2022	3	3	NA	NA	ND	NA	0.2	NA	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2023	[4]	[4]	1.2	0.06–2.1	NA	NA	NA	NA	No	Water additive used to control microbes
Cis-1,2-Dichloroethylene (ppb)	2023	70	70	NA	NA	ND	NA	0.5	NA	No	Discharge from industrial chemical factories
Combined Radium (pCi/L)	2023	5	0	1.3	NA	NA	NA	NA	NA	No	Erosion of natural deposits
Dalapon (ppb)	2022	200	200	NA	NA	0.2	NA	ND	NA	No	Runoff from herbicide used on rights-of-way
Dichloromethane (ppb)	2022	5	0	NA	NA	NA	NA	NA	NA	No	Discharge from pharmaceutical and chemical factories
Fluoride (ppm)	2018	4	4	1.2	NA	0.94[1]	0.09–0.94[1]	0.9[1]	0.56–0.90[1]	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2023	10	10	0.32	NA	5.61	0.06–5.61	7.15	ND–7.15	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	44	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection
Turbidity[2] (NTU)	2023	TT	NA	NA	NA	0.21	NA	0.18	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	100	NA	No	Soil runoff

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	LP Moon ASR Well AMOUNT DETECTED	LP Moon ASR Well RANGE LOW-HIGH	McMullen Plant ASR Well AMOUNT DETECTED	McMullen Plant ASR Well RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2023	15	0	2.3	NA	5.1	NA	No	Erosion of natural deposits
Arsenic (ppb)	2023	10	0	ND	NA	ND	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2022	3	3	ND[1]	NA	ND[1]	NA	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2023	[4]	[4]	NA	NA	NA	NA	No	Water additive used to control microbes
Cis-1,2-Dichloroethylene (ppb)	2023	70	70	NA	NA	NA	NA	No	Discharge from industrial chemical factories
Combined Radium (pCi/L)	2023	5	0	ND	NA	1.7	NA	No	Erosion of natural deposits
Dalapon (ppb)	2022	200	200	NA	NA	NA	NA	No	Runoff from herbicide used on rights-of-way
Dichloromethane (ppb)	2022	5	0	NA	NA	NA	NA	No	Discharge from pharmaceutical and chemical factories
Fluoride (ppm)	2018	4	4	1.39[1]	0.72–1.39[1]	0.94[1]	0.6–0.94[1]	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2023	10	10	3.34	0.88–3.34	5.21	0.09–5.21	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection
Turbidity[2] (NTU)	2023	TT	NA	NA	NA	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	NA	NA	NA	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2023	1.3	1.3	0.01	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2023	15	0	ND	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Des Moines Water Works AMOUNT DETECTED	Des Moines Water Works RANGE LOW-HIGH	Army Post ASR AMOUNT DETECTED	Army Post ASR RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2023	15	0	NA	NA	9.0	NA	No	Erosion of natural deposits
Arsenic (ppb)	2023	10	0	NA	NA	2	ND–2	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2022	3	3	NA	NA	ND[1]	NA	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2023	[4]	[4]	0.9	0.22–1.4	NA	NA	No	Water additive used to control microbes
Cis-1,2-Dichloroethylene (ppb)	2023	70	70	NA	NA	NA	NA	No	Discharge from industrial chemical factories
Combined Radium (pCi/L)	2023	5	0	NA	NA	1.8	NA	No	Erosion of natural deposits
Dalapon (ppb)	2022	200	200	NA	NA	NA	NA	No	Runoff from herbicide used on rights-of-way
Dichloromethane (ppb)	2022	5	0	NA	NA	1.2	NA	No	Discharge from pharmaceutical and chemical factories
Fluoride (ppm)	2018	4	4	NA	NA	1.6[1]	0.93–1.6[1]	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2023	10	10	NA	NA	1.65	0.22–1.65	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	67	NA	NA	NA	No	By-product of drinking water disinfection
Turbidity[2] (NTU)	2023	TT	NA	NA	NA	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	NA	NA	NA	NA	No	Soil runoff

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	West Des Moines Water Works A.C. Ward Municipal Water Treatment Plant AMOUNT DETECTED	West Des Moines Water Works A.C. Ward Municipal Water Treatment Plant RANGE LOW-HIGH	Des Moines Water Works McMullen Plant AMOUNT DETECTED	Des Moines Water Works McMullen Plant RANGE LOW-HIGH	Des Moines Water Works Fleur Drive Plant AMOUNT DETECTED	Des Moines Water Works Fleur Drive Plant RANGE LOW-HIGH	LP Moon ASR Well AMOUNT DETECTED	LP Moon ASR Well RANGE LOW-HIGH	McMullen Plant ASR Well AMOUNT DETECTED	McMullen Plant ASR Well RANGE LOW-HIGH	Des Moines Water Works AMOUNT DETECTED	Des Moines Water Works RANGE LOW-HIGH	Army Post ASR AMOUNT DETECTED	Army Post ASR RANGE LOW-HIGH	TYPICAL SOURCE
Lithium (ppb)	2023	380	NA	25	ND–25	28	ND–28	NA	NA	NA	NA	24	NA	NA	NA	NA
Metolachlor (ppb)	2022	NA	NA	ND	NA	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (ppm)	07/21/2021	200	NA	35[1]	14–35[1]	48[1]	15–48[1]	80[1]	21–80[1]	35[1]	16–35[1]	NA	NA	105[1]	26–105[1]	Erosion of natural deposits; Added to water during treatment process
Yttrium (ppb)	2023	89.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	95.1	NA	NA	NA	NA

[1] Sampled in 2023.

[2] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.