

CITY OF MUNDEN

Consumer Confidence Report – 2023

Covering Calendar Year – 2022



This brochure is a snapshot of the quality of the water that we provided last year. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. If you would like to observe the decision-making process that affect drinking water quality, please call HOLLY ALDRIDGE at 785-527-1305.

Our drinking water is supplied from another water system through a Consecutive Connection (CC). Your water comes from :

Buyer Name	Seller Name
CITY OF MUNDEN	REPUBLIC CO RWD 2

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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).

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 poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) included 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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in sources water before we treat it include:
Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock operations and wildlife.
Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water run-off, agriculture, and residential users.
Radioactive contaminants, which can be naturally occurring or the result of mining activity.
Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulation which limits the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Our water system is required to test a minimum of 2 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

Water Quality Data

The following tables list all of the drinking water contaminants which were detected during the 2022 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31, 2022. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. **The bottom line is that the water that is provided to you is safe.**

Terms & Abbreviations

Maximum Contaminant Level Goal (MCLG): the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): the "Maximum Allowed" MCL is 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.

Secondary Maximum Contaminant Level (SMCL): recommended level for a contaminant that is not regulated and has no MCL.

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

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

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.

Non-Detects (ND): lab analysis indicates that the contaminant is not present.

Parts per Million (ppm) or milligrams per liter (mg/l)

Parts per Billion (ppb) or micrograms per liter (µg/l)

Picocuries per Liter (pCi/L): a measure of the radioactivity in water.

Millirems per Year (mrem/yr): measure of radiation absorbed by the body.

Monitoring Period Average (MPA): An average of sample results obtained during a defined time frame, common examples of monitoring periods are monthly, quarterly and yearly.

Nephelometric Turbidity Unit (NTU): a measure of the clarity of water.

Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.

Running Annual Average (RAA): an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.

Locational Running Annual Average (LRAA): Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Testing Results for the City of Munden

The City of Munden had no violations of drinking water regulations in 2022.

Disinfection Byproducts	Monitoring Period	Highest RAA	Range (low/high)	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2018 - 2020	8	7.8	ppb	60	0	By-product of drinking water disinfection
TTHM	2018 - 2020	26	26	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Monitoring Period	90 th Percentile	Range (low/high)	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2020 - 2022	0.38	0.13 - 0.48	ppm	1.3	0	Corrosion of household plumbing
LEAD	2020 - 2022	6.7	0 - 10	ppb	15	0	Corrosion of household 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. Your water system 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>.

Chlorine/Chloramines Maximum Disinfection Level	MPA	MPA Units	RAA	RAA Units
2022 - 2022	1.5000	MG/L	1.2	MG/L

There are no additional required health effects notices.

There are no additional required health effects violation notices.

Some or all of our drinking water is supplied from another water system. The table below lists all of the drinking water contaminants, which were detected during the 2022 calendar year from the water systems that we purchase drinking water from.

Regulated Contaminants	Collection Date	Water System	Highest Value	Range (low/high)	Unit	MCL	MCLG	Typical Source
ARSENIC	3/9/2020	REPUBLIC CO RWD 2	3.9	3.9	ppb	10	0	Erosion of natural deposits
BARIUM	3/9/2020	REPUBLIC CO RWD 2	0.29	0.29	ppm	2	2	Discharge from metal refineries
CHROMIUM	3/9/2020	REPUBLIC CO RWD 2	3.8	3.8	ppb	100	100	Discharge from steel and pulp mills
COMBINED RADIUM (-226 & -228)	7/12/2021	REPUBLIC CO RWD 2	1.06	1.06	PCI/L	5	0	Erosion of natural deposits
FLUORIDE	3/9/2020	REPUBLIC CO RWD 2	0.13	0.13	ppm	4	4	Natural deposits; Water additive which promotes strong teeth.
NITRATE	10/18/2022	REPUBLIC CO RWD 2	11	10 - 11	ppm	10	10	Runoff from fertilizer use
SELENIUM	3/9/2020	REPUBLIC CO RWD 2	7.4	7.4	ppb	50	50	Erosion of natural deposits

Secondary Contaminants	Collection Date	Water System	Highest Value	Range (low/high)	Unit	SMCL
ALKALINITY, TOTAL	3/9/2020	REPUBLIC CO RWD 2	230	230	MG/L	300
CALCIUM	3/9/2020	REPUBLIC CO RWD 2	110	110	MG/L	200
CHLORIDE	3/9/2020	REPUBLIC CO RWD 2	45	45	MG/L	250
CONDUCTIVITY @ 25 C UMHOS/CM	3/9/2020	REPUBLIC CO RWD 2	710	710	UMHO/CM	1500
CORROSIVITY	3/9/2020	REPUBLIC CO RWD 2	0.19	0.19	LANG	0
HARDNESS, TOTAL (AS CaCO3)	3/9/2020	REPUBLIC CO RWD 2	310	310	MG/L	400
IRON	3/9/2020	REPUBLIC CO RWD 2	0.046	0.046	MG/L	0.3
MAGNESIUM	3/9/2020	REPUBLIC CO RWD 2	11	11	MG/L	150
NICKEL	3/9/2020	REPUBLIC CO RWD 2	0.018	0.018	MG/L	0.1
PH	3/9/2020	REPUBLIC CO RWD 2	7.4	7.4	PH	8.5
PHOSPHORUS, TOTAL	3/9/2020	REPUBLIC CO RWD 2	0.12	0.12	MG/L	5
POTASSIUM	3/9/2020	REPUBLIC CO RWD 2	2.9	2.9	MG/L	100
SILICA	3/9/2020	REPUBLIC CO RWD 2	49	49	MG/L	50
SODIUM	3/9/2020	REPUBLIC CO RWD 2	22	22	MG/L	100
SULFATE	3/9/2020	REPUBLIC CO RWD 2	18	18	MG/L	250
ZINC	3/9/2020	REPUBLIC CO RWD 2	0.017	0.017	MG/L	5

Please Note: Because of sampling schedules, results may be older than 1 year.

During the 2022 calendar year, the water systems that we purchase water from had the below noted violation(s) of drinking water regulations.

Water System	Type	Category	Analyte	Compliance Period
REPUBLIC CO RWD 2	LEAD CONSUMER NOTICE (LCR)	RPT	LEAD & COPPER RULE	12/31/2020 - 6/23/2022
REPUBLIC CO RWD 2	MCL, SINGLE SAMPLE	MCL	NITRATE	4/1/2022 - 6/30/2022 and 10/1-12/31/2022