

Greater Ramsey Water District (GRWD), as required by the federal Safe Drinking Water Act (SDWA), has prepared and is distributing to our customers this year's annual drinking water quality report. This is our opportunity to share information on the quality of water we provide to your home, farm, apartment or business. In addition, this report is an educational tool that allows us to inform you of the source of our water, our treatment facilities, and processes. It is our daily goal to provide you with a safe and dependable supply of drinking water.

If you have questions regarding this report, please call Nels Halgren, manager, at 701-662-5781 or toll-free at 1-888-223-0090. Questions will also be answered at our regularly scheduled board meetings held on the first Thursday of the month at 8 a.m. at the GRWD office, 915 5th St SE in Devils Lake, N.D. Call for an appointment if you wish to be on the agenda at any meeting. If you are aware of non-English speaking individuals who need help with the appropriate language translation, call Mr. Halgren at the number listed above.

GRWD requests that large volume customers post copies of this report in conspicuous locations or distribute them to tenants, residents, students, and/or employees, so individuals consuming the water, but not receiving a water bill can learn about our water system.

This report has required definition of terms, language requirements, tables of water quality data, and other pertinent information you will hopefully find interesting and educational.

- A . Sources of Greater Ramsey Water District's water: We use two sources of water – "Ramsey Water" refers to the users that receive water from GRWD's treatment facilities. "Carrington Water" refers to those users receiving water originating from the City of Carrington. Contact our office if you are unsure of the source of your water.**

**Ramsey Water:** Greater Ramsey Water District uses three wells that draw from the Spiritwood Aquifer. Our treatment plant uses a process to remove the iron and manganese from the water. Prior to leaving the plant, chlorine is added for disinfection, fluoride to help prevent tooth decay, and a chemical to help prevent problems associated with lead and copper plumbing often present in older homes.

**Carrington Water:** For users on the Carrington system, Greater Ramsey Water District purchases water from the City of Carrington. Carrington uses two wells that draw from the Carrington Aquifer.

- B . Source water assessment:**

**Ramsey Water:** Our public water system, in cooperation with the North Dakota Department of Health, has completed the delineation and contaminant/land use inventory elements of the North Dakota Source Water Protection Program. Based on the information from these elements, the North Dakota Department of Health has determined that our source water is not likely susceptible to potential contaminants. Information from the wellhead protection plan is available for review at our office during normal business hours.

**Carrington Water:** The City of Carrington also participates in the Wellhead Protection Plan. A delineation and contaminant/land use inventory has been completed by Carrington and based on this information, the source water has been determined to be susceptible to potential sources of contamination. The City of Carrington has a wellhead protection plan report available at its office for review.

- C . Contaminants which may reasonably be expected to be found in drinking water and bottled water:**

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 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 source water:

1. *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

2. *Inorganic contaminants*, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
3. *Pesticides and herbicides*, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
4. *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
5. *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) 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 contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

#### **D . Some people are more vulnerable to contaminants:**

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/Center 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.

#### **E . Required definitions:**

*Maximum Contaminant Level Goal or 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.

*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.

*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 that 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.

#### **F . Table of detected regulated contaminants**

The data presented is for 2008 or the most recent in accordance with state and federal regulations.

### **Key for Sections F and G**

AL – Action Level

MCL – Maximum Contaminant Level

MCLG – Maximum Contaminant Level Goal

MRDLG – Maximum Residual Disinfectant Level Goal

MRDL – Maximum Residual Disinfectant Level

IDSE – Initial Distribution System Evaluation

n/a – Not applicable

nd – None detected

pCi/l – Picocuries per liter (a measure of radioactivity)

unho/cm – Micromhos per centimeter (a measure of conductivity)

obsvns – Observations/field at 100 power

ppm – Parts per million, or milligrams per liter (mg/l) – One part per million corresponds to one minute in two years or a single penny in \$10,000.

ppb – Parts per billion, or micrograms per liter (µg/l) – One part per billion corresponds to one minute in 2,000 years or a single penny in \$10 million.

TT – Treatment technique

Highest Compliance Level – The highest level of that contaminant used to determine compliance with a National Primary Drinking Water Regulation.

Range of Detections – The lowest to the highest result value recorded during the required monitoring timeframe for systems with multiple entry points.

## TEST RESULTS FOR RAMSEY WATER

### Lead/Copper

Contaminant	Violation Yes/No	Date	# Samples	Action Level (AL)	90th Percentile	Samples Exceed AL	Units	Likely Source of Contamination
Copper 90th percentile	No	8-5-08	10	1.3	0.982	0	ppm	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead 90th percentile	No	8-5-08	10	15	1.54	1	ppb	Corrosion of household plumbing systems, erosion of natural deposits

Contaminant	Violation Yes/No	Date	MCLG	MCL	Highest Compliance Level	Unit of Measurement	Range of Detection	Likely Source of Contamination
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### Inorganic Contaminants

Arsenic	No	10-15-07	0	10	3.45	ppb	n/a	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium	No	2-19-08	2	2	0.0431	ppm	n/a	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits
Fluoride	No	2-19-08	4	4	1.36	ppm	n/a	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories

### Disinfection By-products

HAA5	No	12-31-10	60		4	ppb	n/a	By-product of drinking water disinfection Samples were taken during 1-1-2008 – 12-31-2010 monitoring period
TTHM	No	12-31-10	80		1	ppb	n/a	By-product of drinking water disinfection Samples were taken during 1-1-2008 – 12-31-2010 monitoring period

### Disinfectants

Chlorine	No	3-31-08	MRDL =4	MRDL =4	0.9	ppm	0.33 to 1.93	Water additive used to control microbes
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Number of sites that exceeded the action level for lead and copper – 1 (lead)

# TEST RESULTS FOR CARRINGTON WATER

## Lead/Copper

Contaminant	Violation Yes/No	Date	# Samples	Action Level (AL)	90th Percentile	Samples Exceed AL	Units	Likely Source of Contamination
Copper 90th percentile	No	7-14-08	5	1.3	0.02	0	ppm	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead 90th percentile	No	7-14-08	5	15	1	0	ppb	Corrosion of household plumbing systems, erosion of natural deposits

Number of sites that exceeded the action level for lead and copper – 0.

Contaminant	Violation Yes/No	Level Detected	Range	Date (Year)	Unit	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants</b>								
Arsenic	No	2.81	n/a	2007	ppb	0	10	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production waste
Barium	No	0.0164	n/a	2008	ppm	2	2	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits
Fluoride	No	1.1	n/a	2008	ppm	4	4	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories
Nitrate Nitrite	No	0.06	n/a	2008	ppm	10	10	Erosion of natural deposits, runoff from fertilizer use, leaching from septic tanks, sewage
Selenium	No	1.55	n/a	2008	ppb	50	50	Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines
<b>Disinfection By-products</b>								
Total Haloacetic Acids (HAA5)	No	7	4.57 to 10.68	2008	ppb	n/a	60	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)	No	54	35.78 to 94.63	2008	ppb	n/a	80	By-product of drinking water chlorination
<b>Disinfectants</b>								
Chlorine	No	1.3	0.66 to 1.65	2008	ppm	4	4.0	Water additive used to control microbes
<b>IDSE – Initial Distribution System Evaluation</b>								
(HAA5) - IDSE		8.88	n/a	8-21-06	ppb		No MCL	By-product of drinking water chlorination
(TTHM) - IDSE		99.46	n/a	8-21-06	ppb		No MCL	By-product of drinking water chlorination

## G. Table of Unregulated Contaminants

The data presented is for 2008 or the most recent in accordance with state and federal regulations.

<b>TEST RESULTS FOR RAMSEY WATER</b>						
Contaminant	Date	MCLG	MCL	Highest Compliance Level	Unit of Measurement	Range of Detections
<b>Unregulated Contaminants</b>						
Alkalinity, Total	2-19-08			272	ppm	n/a
Bicarbonate as HCO <sub>3</sub>	2-19-08			331	ppm	n/a
Calcium	2-19-08			25.1	ppm	n/a
Chloride	2-19-08			29.6	ppm	n/a
Conductivity @ 25 C umhos/cm	2-19-08			679	umho/cm	n/a
Hardness, Total (As CaCO <sub>3</sub> )	2-19-08			103	ppm	n/a
Magnesium	2-19-08			9.8	ppm	n/a
Manganese	2-19-08			0.014	ppm	n/a
PH	2-19-08			7.28	PH	n/a
Potassium	2-19-08			4.8	ppm	n/a
Sodium	2-19-08			98.1	ppm	n/a

Contaminant	Date	MCLG	MCL	Highest Compliance Level	Unit of Measurement	Range of Detections
Sodium Adsorption Ratio	2-19-08			4.2	obsvns	n/a
Sulfate	2-19-08			34	ppm	n/a
TDS	2-19-08			366	ppm	n/a
Zinc	2-19-08			0.405	ppm	n/a

<b>TEST RESULTS FOR CARRINGTON WATER</b>						
	Date	MCL	MCLG	Level Detected	Units	Range
<b>Unregulated Contaminants</b>						
Alkalinity, Total	2008			36	ppm	n/a
Alkalinity, Carbonate	2008			10	ppm	n/a
Bicarbonate as HCO <sub>3</sub>	2008			25	ppm	n/a
Calcium	2008			55.8	ppm	n/a
Chloride	2008			35.5	ppm	n/a
Conductivity @ 25 C umhos/cm	2008			692	omho/cm	n/a
Hardness, Total (as CaCO <sub>3</sub> )	2008			228	ppm	n/a
Iron	2008			0.195	ppm	n/a
Magnesium	2008			21.5	ppm	n/a
Nickel	2008			0.00309	ppm	n/a
PH	2008			8.13	PH	n/a
Potassium	2008			7.8	ppm	n/a
Sodium	2008			50.9	ppm	n/a
Sodium Adsorption Ratio	2008			1.47	obsvns	n/a
Sulfate	2008			259	ppm	n/a
TDS	2008			433	ppm	n/a
Zinc	2008			0.00186	ppm	n/a

## **H. Violations:**

As you can see by the tables, results from testing our water (the highest compliance level column) are much lower for both Ramsey and Carrington water systems than the amounts allowed (the MCL column). Our systems had **no violations**. We're proud that our drinking water meets or exceeds all federal and state requirements. We have learned through monitoring and testing that some contaminants have been detected. The EPA has determined that our water **IS SAFE** at these levels.

## **I. Health Effects Language**

**Lead** – 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. Greater Ramsey Water District is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. **Use water from the cold tap for drinking and cooking. 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 drinking 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>.