Annual Drinking Water Quality Report
North Central Rural Water Consortium II
2009

We're very pleased to provide you with this year's *Annual Drinking Water Quality Report.* We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is to provide you with a safe and dependable supply of drinking water. The North Central Rural Water Consortium II uses four water sources to provide drinking water to its customers. Source #1 is surface water from Lake Sakakawea purchased from the city of Riverdale. Source #2 is ground water purchased from the city of Minot. Source #3 is ground water purchased from North Prairie Rural Water District System III. Source #4 is ground water purchased from Central Plains Water District. If you are unsure which source of water you receive, please contact our office during normal business hours.

The North Dakota Department of Health has prepared a Source Water Assessment for the city of Riverdale, the city of Minot, North Prairie Rural Water District System III and Central Plains Water District. These documents are available upon request. 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 all four of our source waters are "moderately susceptible" to potential contaminants. No significant sources of contamination have been identified.

If you have any questions about this report or concerning your water utility, please contact Rick Anderson, at 701-547-3751. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. Contact Rick for the specific time, date and location for each monthly meeting. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Rick at the number listed above.

The North Central Rural Water Consortium II would appreciate it if large volume water customers would please post copies of the *Annual Drinking Water Quality Report* in conspicuous locations or distribute them to tenants, residents, patients, students, and/or employees, so individuals who consume the water, but do not receive a water bill, can learn about our water system.

The North Central Rural Water Consortium II routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2009**.** As authorized and approved by EPA, the state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data [e.g., for inorganic contaminants], though representative, is more than one year old.

The sources of drinking water (both tap 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 include:

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

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater, industrial or domestic wastewater discharges, oil 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 can also come from gas stations, urban stormwater runoff and septic systems.

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 that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Not Applicable (NA), No Detect (ND)

IDSE – Initial Distribution System Evaluation

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

Parts per billion (ppb) or Micrograms per liter (μg/l)- one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Picocuries per liter (pCi/l) - picocuries per liter is a measure of the radioactivity in water.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Maximum Contaminant Level - 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.

Maximum Contaminant Level Goal - The "Goal" (*MCLG*) is 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 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.

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.

TEST RESULTS FOR THE NORTH CENTRAL RURAL WATER CONSORTIUM II (Distribution System)								
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Units**	**Range**	**Date (year)**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Inorganic Contaminants								
Copper	1.3	AL=1.3	0.931 90th % Value	ppm	NA	2008	0 sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	0	AL=15	2.77 90th % Value	ppb	NA	2008	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits

Violation: *Lead & Copper Rule – Failure to Follow-up or Routine Monitor/Report Lead and Copper, January 1, 2009 through December 31, 2009*. We failed to take the required number of follow-up or routine samples for Lead and Copper during the monitoring period of January 1, 2009 through December 31, 2009. **Copper** is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor. Infants and young children are typically more vulnerable to lead in drinking water than the general population. Infants and children who drink water containing **lead** in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. 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 (1-800-426-4791). North Central Rural Water Consortium II is taking steps to correct this violation of the Lead & Copper Rule by returning to a normal testing routine.

TEST RESULTS FOR THE NORTH CENTRAL RURAL WATER CONSORTIUM (Central Plains Water District Source)								
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Unit Measurement**	**Range**	**Date (year)**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Inorganic Contaminants								
Barium	2	2	0.0418	ppm	NA	2008	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	1.23	ppm	NA	2008	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Radioactive Contaminants								
Gross Alpha, Including RA, Excluding RN &U	15	15	1.67	pCi/1	NA	2008	No	Erosion of natural deposits
Radium, Combined (226, 228)	NA	5	0.495	pCi/1	NA	2008	No	Erosion of natural deposits
Uranium, Combined	NA	30	0.495	ppb	NA	2008	No	Erosion of natural deposits
Disinfectants								
Chloramine Residual	MRDLG =4	MRDL =4.0	2.6	ppm	2.1-2.7	2009	No	Water additive used to control microbes

TEST RESULTS FOR THE NORTH CENTRAL RURAL WATER CONSORTIUM II (Riverdale Source)								
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Units**	**Range**	**Date (year)**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Microbiological Contaminants								
Turbidity*	NA	TT	0.04*	NTU	N/A	2009	100% of samples met turbidity limits	Soil runoff
Inorganic Contaminants								
Arsenic	0	10	1.57	ppb	NA	2007	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Nitrate-Nitrite (as Nitrogen)	10	10	0.14	ppm	NA	2009	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants								
Gross Alpha, Including RA, Excluding RN & U	15	15	0.6365	pCi/1	NA	2009	No	Erosion of natural deposits
Radium, Combined (226, 228)	NA	5	0.94	pCi/1	NA	2009	No	Erosion of natural deposits
Uranium, Combined	NA	30	0.95	ppb	NA	2009	No	Erosion of natural deposits
Disinfection Byproducts								
Total Haloacetic Acids (HAA5)	NA	60	32	ppb	19.25-39.6	2009	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	NA	80	63	ppb	43.8-78.13	2009	No	By-product of drinking water chlorination
Disinfectants								
Chloramine Residual	MRDLG =4	MRDL =4.0	2.2	ppm	1.6-2.8	2009	No	Water additive used to control microbes
Total Organic Carbon Removal								
Alkalinity, Total	NA	NA	157	mg/l	144-157	2009	No	Natural erosion, certain plant activities, certain industrial wastewater discharges
Carbon, Total	NA	NA	3.18	ppm	2.18 - 3.18	2009	No	Naturally present in the environment
Unregulated Contaminants								
Alkalinity, Carbonate	NA	NA	2	ppm	ND-2	2009	No	Natural erosion, plant activities, and certain industrial waste discharges
Bicarbonate as HCO_3	NA	NA	192	ppm	172-192	2009	No	Natural erosion, plant activities, and certain industrial waste discharges
N-nitrosodimethyl-amine	NA	NA	0.00462	ppb	0.00361 - 0.00734	2009	No	NA

*Turbidity is a measure of the cloudiness of the water. The city of Riverdale monitors it because it is a good indicator of the effectiveness of their filtration system. Turbidity is measured every four hours during treatment plant operations. 100% of samples met turbidity limits. The highest single turbidity measurement in 2009 was 0.04 NTU.

TEST RESULTS FOR THE NORTH CENTRAL RURAL WATER CONSORTIUM II (Minot Source)								
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Unit**	**Range**	**Date**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Inorganic Contaminants								
Arsenic	0	10	1.63	ppb	NA	2007	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Nitrate-Nitrite (as Nitrogen)	10	10	0.12	ppm	NA	2009	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants								
Gross Alpha, Including RA, Excluding RN & U	15	15	1.52	pCi/1	NA	2009	No	Erosion of natural deposits
Radium, Combined (226, 228)	NA	5	0.00919	pCi/1	NA	2009	No	Erosion of natural deposits
Uranium, Combined	NA	30	0.722	ppb	NA	2009	No	Erosion of natural deposits
Disinfection Byproducts								
Total Haloacetic Acids (HAA5)	NA	60	12	ppb	10.61-11.45	2009	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	NA	80	50	ppb	25.21-60.11	2009	No	By-product of drinking water chlorination
Disinfectants								
Chloramine Residual	MRDLG =4	MRDL =4.0	1.4	ppm	1.1-1.5	2009	No	Water additive used to control microbes
Unregulated Contaminants								
Gross Alpha, Incl. Radon & U	NA	NA	2	pCi/L	NA	2009	No	Natural erosion, certain plant activities, certain industrial wastewater discharges

TEST RESULTS FOR THE NORTH CENTRAL RURAL WATER CONSORTIUM (North Prairie Rural Water District System III Source)								
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Unit Measurement**	**Range**	**Date (year)**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Inorganic Contaminants								
Barium	2	2	0.14	ppm	NA	2007	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	0.062	ppm	NA	2007	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate-Nitrite (as Nitrogen)	10	10	0.06	ppm	NA	2009	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	1.59	ppb	NA	2007	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Disinfectants								
Chloramine Residual	MRDLG =4	MRDL =4.0	1.6	ppm	1.2-2.5	2009	No	Water additive used to control microbes

EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the tables above are the only contaminants detected in your drinking water.

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. The North Central Rural Water Consortium II 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 2 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.

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.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Please call Rick Anderson, at 701-547-3751 if you have questions concerning your water system. The North Central Rural Water Consortium II works diligently to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our system, our way of life and our children's future.

Quality On Tap!
Our Commitment Our Profession