

# **ANNUAL DRINKING WATER COMPLIANCE REPORT FOR 2011**

prepared by the

Drinking Water Program  
Municipal Facilities Division  
Environmental Health Section  
North Dakota Department of Health

July 2012

## **INTRODUCTION**

This Annual Compliance Report has been developed to meet the requirement of section 1414 of the 1996 Amendments to the Safe Drinking Water Act (SDWA). The time period covered in this report is January 1, 2011 through December 31, 2011.

### **The Drinking Water Program: An Overview**

The Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under the authority of the 1974 SDWA. Under the SDWA and the 1986 Amendments, EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs). For some regulations, EPA establishes treatment techniques in lieu of an MCL to control unacceptable levels of contaminants in water. The Agency also regulates how often public water systems (PWSs) monitor their water for contaminants and report the monitoring results to the States or EPA. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development. Finally, EPA requires PWSs to notify the public when they have violated these regulations. The 1996 Amendments to the SDWA require public notification to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation and the possibility of alternative water supplies during the violation.

The SDWA applies to the 50 States, the District of Columbia, Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.

The SDWA allows States and Territories to seek EPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primacy. To receive primacy, States must meet certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce the program requirements.

Of the 57 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within these two jurisdictions.

The 1986 SDWA Amendments gave Indian Tribes the right to apply for and receive primacy. To receive primacy, a Tribe must meet the same requirements as a State. To date, no Tribes have been granted primacy. Currently, EPA administers PWSS Programs on all Indian lands.

### **Annual State PWS Report**

An automated database called the Safe Drinking Water Information System (SDWIS) has been developed by the EPA to store drinking water information. Primacy States submit data to the federal version of SDWIS (SDWIS/FED) on a quarterly basis. Data include PWS inventory statistics, the incidence of MCLs, Major Monitoring, and Treatment Technique violations, and the enforcement actions taken against violators. The annual compliance report that States are required to submit to EPA will provide a total annual representation of the numbers of violations for each of the four categories listed in section 1414 (c)(3) of the SDWA reauthorization. These four categories are: MCLs, treatment techniques, variances and exemptions, and significant monitoring violations. The EPA Regional Offices report the information for Wyoming, the District of Columbia, and all Indian Lands. Regional offices also report Federal enforcement actions taken. EPA stores this data in SDWIS/FED. This report is based largely on data retrieved from SDWIS/FED.

### **Public Water System**

A Public Water System (PWS) is defined as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. There are three types of PWSs. PWSs can be community (such as towns), nontransient noncommunity (such as schools or factories), or transient noncommunity systems (such as rest stops or parks). For this report, when the acronym “PWS” is used, it means systems of all types unless specified otherwise.

In North Dakota in 2011, 333 systems were classified as Community Water Systems (CWSs), 34 as Nontransient Noncommunity Water Systems (NTNCWSs), and 186 as Transient Noncommunity Water Systems (TNCWSs) for a total of 553 PWSs.

### **2011 SDWA Violations**

The following tables depict SDWA violations incurred by North Dakota PWSs in calendar year 2011 and include violations that cross calendar year 2012 (i.e., violations determined in 2012 based on 2011 monitoring data). During 2011, a total of 221 major drinking water violations and 49 associated public notification violations were issued. A total of 106 out of 553 systems incurred these violations in North Dakota for 2011. EPA requires the reporting of these major drinking water violations in the Annual Compliance Report.

In addition to the major violations discussed above, the State of North Dakota issued 14 minor drinking water violations with no accompanying public notification violations. Overall, 111 out of 553 systems incurred major and/or minor drinking water violations during 2011. In addition, the State issued 14 non-classified (neither major nor minor) consumer notice certification violations during 2011. While EPA does not require the reporting of these minor and non-classified drinking water violations in the Annual Compliance Report, the State of North Dakota does include them throughout the report for public information.

**Availability of Annual Compliance Report (ACR)**

A legal notice stating the availability of North Dakota's 2011 ACR was published in six of the state's major newspapers. A press release was also sent to all fifty-three county newspapers. The ND Drinking Water Program will provide a copy of this report to all inquiries. North Dakota's State Report is available by contacting the North Dakota Department of Health, Division of Municipal Facilities, 918 E Divide Ave-3rd Floor, Bismarck, ND 58501-1947, Attention: LeeAnn Tillotson (701)328.5293 (phone), (701)328.5200 (fax), or [ltillots@nd.gov](mailto:ltillots@nd.gov) (e-mail).

**State:** North Dakota

**Reporting Interval:**

January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Organic Contaminants</b>							
1,1,1-Trichloroethane	0.2	0	0			0	0
1,1,2-Trichloroethane	0.005	0	0			0	0
1,1-Dichloroethylene	0.007	0	0			0	0
1,2,4-Trichlorobenzene	0.07	0	0			0	0
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0	0			0	0
1,2-Dichloroethane	0.005	0	0			0	0
1,2-Dichloropropane	0.005	0	0			0	0
2,3,7,8-TCDD (Dioxin)	3x10 <sup>-8</sup>	0	0			0	0
2,4,5-TP	0.05	0	0			0	0
2,4-D	0.07	0	0			0	0
Acrylamide				0	0		
Alachlor	0.002	0	0			0	0
Atrazine	0.003	0	0			0	0
Benzene	0.005	0	0			0	0
Benzo[a]pyrene	0.0002	0	0			0	0
Carbofuran	0.04	0	0			0	0
Carbon tetrachloride	0.005	0	0			0	0

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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Chlorobenzene	0.1	0	0			0	0
Chlordane	0.002	0	0			0	0
cis-1,2-Dichloroethylene	0.07	0	0			0	0
Dalapon	0.2	0	0			0	0
Di(2-ethylhexyl)adipate	0.4	0	0			0	0
Di(2-ethylhexyl)phthalate	0.006	0	0			0	0
Dichloromethane	0.005	0	0			0	0
Dinoseb	0.007	0	0			0	0
Diquat	0.02	0	0			0	0
Endothall	0.1	0	0			0	0
Endrin	0.002	0	0			0	0
Epichlorohydrin				0	0		
Ethylbenzene	0.7	0	0			0	0
Ethylene dibromide	0.00005	0	0			0	0
Glyphosate	0.7	0	0			0	0
Heptachlor	0.0004	0	0			0	0
Heptachlor epoxide	0.0002	0	0			0	0
Hexachlorobenzene	0.001	0	0			0	0
Hexachlorocyclopentadiene	0.05	0	0			0	0

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Lindane	0.0002	0	0			0	0
Methoxychlor	0.04	0	0			0	0
Monochlorobenzene	0.1	0	0			0	0
o-Dichlorobenzene	0.6	0	0			0	0
Oxamyl (Vydate)	0.2	0	0			0	0
para-Dichlorobenzene	0.075	0	0			0	0
Pentachlorophenol	0.001	0	0			0	0
Picloram	0.5	0	0			0	0
Simazine	0.004	0	0			0	0
Styrene	0.1	0	0			0	0
Tetrachloroethylene	0.005	0	0			0	0
Toluene	1	0	0			0	0
Total polychlorinated biphenyls	0.0005	0	0			0	0
Toxaphene	0.003	0	0			0	0
trans-1,2-Dichloroethylene	0.1	0	0			0	0
Trichloroethylene	0.005	0	0			0	0
Vinyl chloride	0.002	0	0			0	0
Xylenes (total)	10	0	0			0	0

**State:** North Dakota

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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Inorganic Contaminants</b>							
<b>Antimony</b>	<b>0.006</b>	0	0			0	0
<b>Arsenic</b>	<b>0.05</b>	10	4			0	0
<b>Asbestos</b>	<b>7 million fibers/L ≤ 10 μm long</b>	0	0			0	0
<b>Barium</b>	<b>2</b>	0	0			0	0
<b>Beryllium</b>	<b>0.004</b>	0	0			0	0
<b>Cadmium</b>	<b>0.005</b>	0	0			0	0
<b>Chromium</b>	<b>0.1</b>	0	0			0	0
<b>Cyanide (as free cyanide)</b>	<b>0.2</b>	0	0			0	0
<b>Fluoride</b>	<b>4.0</b>	4	1			0	0
<b>Mercury</b>	<b>0.002</b>	0	0			0	0
<b>Nitrate</b>	<b>10 (as Nitrogen)</b>	0	0			0	0
<b>Nitrite</b>	<b>1 (as Nitrogen)</b>	0	0			0	0
<b>Selenium</b>	<b>0.05</b>	3	1			0	0

**State:** North Dakota

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Thallium</b>	<b>0.002</b>	0	0			0	0
<b>Total nitrate and nitrite</b>	<b>10 (as Nitrogen)</b>	0	0			5	5
<b>Subtotal</b>		17	6			5	5

**Note:** Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of 'NUMBER OF PWS's IN VIOLATION', over the various violation types or contaminants, may not add up to the total number of violations.



**State:** North Dakota

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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations

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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Radionuclide MCLs</b>							
<b>Gross alpha</b>	<b>15 pCi/L</b>	0	0			0	0
<b>Radium-226 and radium-228</b>	<b>5 pCi/L</b>	0	0			0	0
<b>Gross beta</b>	<b>4 mrem/yr</b>	0	0			0	0
<b>Uranium</b>	<b>30ug/l</b>	0	0			0	0
<b>Subtotal</b>		0	0			0	0

**Note:** Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of 'NUMBER OF PWS'S IN VIOLATION', over the various violation types or contaminants, may not add up to the total number of violations. \* (Violations for radionuclides are reported as a radionuclide group.)

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Total Coliform Rule</b>							
<b>Acute MCL violation</b>	Presence	1	1				
<b>Non-acute MCL violation</b>	Presence	22	16				
<b>Major routine and follow up monitoring</b>						131	80
<b>Sanitary survey</b>						0	0
<b>Subtotal</b>		23	17			131	80

**Note:** Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of 'NUMBER OF PWS's IN VIOLATION', over the various violation types or contaminants, may not add up to the total number of violations.

<b>Minor routine and follow up monitoring</b>						4	4
<b>NOTE: EPA does not require minor monitoring violations to be counted for the ACR</b>							

**State:** North Dakota

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Ground Water Rule</b>							
Monitoring, Source, major	Presence	0	0	0	0	7	7
Compliance Monitoring		0	0	0	0	0	0
Corrective Actions		0	0	0	0	0	0
<b>Subtotal</b>		0	0	0	0	7	7
Ground Water Rule Compliance Monitoring, Chlorine Routine/Reporting MINOR NOTE: EPA does not require minor monitoring violations to be counted for the ACR						0	0
<b>Surface Water Treatment Rule (SDWA 1993)</b>							
Filtered systems							
Monitoring, routine/repeat						0	0
Treatment techniques				0	0		
Unfiltered systems							
Monitoring, routine/repeat							
Failure to filter							
<b>Subtotal</b>				0	0	0	0

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)</b>							
<b>Filtered systems</b>							
<b>Monitoring, routine/repeat</b>						0	0
<b>Treatment techniques</b>				0	0		
<b>Unfiltered systems</b>							
<b>Monitoring, routine/repeat</b>							
<b>Failure to filter</b>							
<b>Subtotal</b>				0	0	0	0
<b>Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)</b>							
<b>Filtered systems</b>							
<b>Monitoring, source water</b>						0	0
<b>Treatment techniques</b>				3	2		
<b>Unfiltered systems</b>							
<b>Monitoring, routine/repeat</b>							
<b>Failure to filter</b>							
<b>Subtotal</b>				3	2	0	0

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>LT1ESWTR</b> <b>Failure to Monitor Minor</b>  <b>NOTE: EPA does not require minor monitoring violations to be counted for the ACR</b>						0	0

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Surface Water Treatment Rule (SDWA 1993)							
Record keeping for Ind. Filter							
Failure to Produce Filter Assessment/ Failure to Produce CPE							
Failure to Profile/Consult							
Failure to Monitor/Routine, Major						0	0
Single Combined Filter Effluent				0	0		
Monthly Combined Filter Effluent				0	0		
Uncovered Storage Facility				0	0		
<b>Subtotal</b>				0	0	0	0

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Long Term 1 Enhanced Surface Water Treatment Rule</b>							
<b>Record keeping for Ind. Filter</b>						0	0
<b>Failure to Produce Filter Assessment/ Failure to Produce CPE</b>						0	0
<b>Failure to Profile/Consult</b>						0	0
<b>Failure to Monitor Routine, Major</b>						0	0
<b>Single combined Filter Effluent</b>				0	0		
<b>Monthly Combined Filter Effluent</b>				0	0		
<b>Uncovered Storage Facility</b>				0	0		
<b>Subtotal</b>				0	0	0	0



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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Long Term 2 Enhanced Surface Water Treatment Rule</b>							
Failure to meet sampling schedule requirements						0	0
Failure to meet sampling location requirements						0	0
Failure to meet analytical laboratory requirements						0	0
Failure to meet reporting requirements						0	0
<b>Subtotal</b>						0	0
<b>Filter Backwash Recycle Rule</b>							
Failure to Properly Recycle				0	0		
Recordkeeping						0	0
<b>Subtotal</b>				0	0	0	0

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Stage 1 Disinfectants and Disinfection By-products Rule</b>							
<b>Haloacetic Acids</b>	0.060	0	0			0	0
<b>Total Trihalomethane</b>	0.080	4	2			0	0
<b>Total Organic Carbon</b>				0	0	0	0
<b>Alkalinity</b>				0	0	0	0
<b>Chlorine/Chloramine</b>	MRDL=4.0	2	1			27	24
<b>Bromate/Bromide</b>	0.01	0	0			0	0
<b>Subtotal</b>		6	3	0	0	27	24

\* Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of 'NUMBER OF PWS'S IN VIOLATION', over the various violation types or contaminants, may not add up to the total.

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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Lead and Copper Rule</b>							
Initial lead and copper tap M/R						1	1
Follow-up or routine lead and copper tap M/R						1	1
Treatment installation				0	0		
Public education						0	0
<b>Subtotal</b>				0	0	2	2
<b>Lead Rule</b>							
Consumer Notice Violation						14	13
<p><b>Note:</b> Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of 'NUMBER OF PWS'S IN VIOLATION', over the various violation types or contaminants, may not add up to the total.</p> <p><b>**Lead Consumer Notice violations are not currently classified as Major or Minor.</b></p>							
<b>Consumer Confidence Report Rule</b>							
CCR Report Violation						0	0
<b>Subtotal</b>						0	0

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January 2011 - December 2011

	MCL/ MRDL (mg/L) <sup>1</sup>	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>CCR Adequacy/Availability/ Content Violation (MINOR Violation)</b>  <b>NOTE: EPA does not require reporting of minor violations of Adequacy/Availability/ Content to be included in the ACR.</b>						10	10
<b>Public Notification Rule</b>							
<b>Public Notice Violations</b>						49	28
<b>Subtotal</b>						49	28

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January 2011 - December 2011

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		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
<b>Public Notice Violations for MINOR and/or ON-GOING Violations</b>  <b>NOTE: EPA does not require Public Notice Violations pertaining to minor monitoring or on-going violations to be counted for the ACR</b>						0	0

1. Values are in milligrams per liter (mg/L), unless otherwise specified.

## **Definitions for Summary of Violations Table**

The following definitions apply to the Summary of Violations Table.

**Consumer Confidence Report (CCR) Rule:** The CCR Rule requires all community water systems to issue annual drinking water quality reports to their customers. States are to report two categories of violations:

*CCR Report Violation:* A violation that exists when a PWS fails to produce and deliver the report to the public and provide a copy to the State by the annual due date or the State determines the report was grossly inadequate and must be regenerated and delivered providing a copy to the State.

*CCR Adequacy/Availability/Content Violation:* A violation where the State determines the report is deficient in language, content, and/or meeting availability requirements or if a community public water system fails to submit a completed certification form.

**Stage 1 Disinfectants/Disinfection By-products (D/DBP) Rule:** The D/DBP Rule currently requires community water systems supplied by surface water sources with a population serving greater than 10,000 to test for the regulated by-products potentially produced from the use of the disinfectants ozone, chlorine dioxide and chlorine.

**Filter Backwash Recycle Rule (FBRR):** The Filter Backwash Recycle Rule requires monitoring/reporting and treatment techniques for those public water systems that use surface water or ground water under the influence of surface water, practice conventional or direct filtration, and recycle spent filter backwash, thickener supernatant, or liquids from de-watering processes.

**Filtered Systems:** Water systems that have installed filtration treatment [40 CFR 141, Subpart H].

**Ground Water Rule (GWR):** The Groundwater Rule (GWR) is in place to provide increased protection against microbial pathogens, specifically bacterial and viral pathogens, in public water systems that use ground water. Instead of requiring disinfection for all ground water systems (GWS), the GWR establishes a risk-targeted approach to identifying GWSs that are susceptible to fecal contamination. The GWR requires systems at risk of microbial contamination to take corrective action to protect consumers from harmful bacteria and viruses. The basic requirements of the GWR for the GWSs are source water monitoring, compliance monitoring and corrective actions.

**Inorganic Contaminants:** Non-carbon-based compounds such as metals, nitrates, and asbestos. These contaminants are naturally-occurring in some water, but can get into water through farming, chemical manufacturing, and other human activities. EPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62].

**Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR):** The Long Term 1 Enhanced Surface Water Treatment Rule requires monitoring and treatment to improve control of microbial pathogens, specifically the protozoan cryptosporidium, in drinking water and to address risk trade-offs with disinfection by-products.

**Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR):** The Long Term 2 Enhanced Surface Water Treatment Rule requires monitoring data be collected so systems can categorize the source water cryptosporidium concentration into one of four bin classifications as associated with the rule.

**Lead and Copper Rule:** This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Lead and copper corrosion pose various health risks when ingested at any level, and can enter drinking water from household pipes and plumbing fixtures. States report violations of the Lead and Copper Rule in the following six categories:

*Initial lead and copper tap M/R:* A violation where a system did not meet initial lead and copper testing requirements, or failed to report the results of those tests to the State.

*Follow-up or routine lead and copper tap M/R:* A violation where a system did not meet follow-up or routine lead and copper tap testing requirements, or failed to report the results.

*Treatment installation:* Violations for a failure to install optimal corrosion control treatment or source water treatment which would reduce lead and copper levels in water at the tap. [One number is to be reported for the sum of violations in both categories].

*Lead service line replacement:* A violation for a system's failure to replace lead service lines on the schedule required by the regulation.

*Public education:* A violation issued when a system did not provide required public education about reducing or avoiding lead intake from water.

*Lead Consumer Notice:* A violation for a system's failure to certify that lead sampling results and lead health information were provided to the consumer whose home was used for lead and copper sampling. The requirement applies to each sample result regardless of whether or not lead was found in the home's drinking water.

**Maximum Contaminant Level (MCL):** The highest amount of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk. MCLs are defined in milligrams per liter (parts per million) unless otherwise specified.

**Maximum Residual Disinfectant Level (MRDL):** The EPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed, when public water systems add chemical disinfectant for either primary or residual treatment. These limits are known as Maximum Residual Disinfectant Levels.

**Monitoring:** EPA specifies which water testing methods the water systems must use, and sets schedules for the frequency of testing. A water system that does not follow EPA's schedule or methodology is in violation [40 CFR 141].

States must report monitoring violations that are significant as determined by the EPA Administrator and in consultation with the States. For purposes of this report, significant monitoring violations are major violations and they occur when no samples are taken or no results are reported during a compliance period. A major monitoring violation for the surface water treatment rule occurs when at least 90% of the required samples are not taken or results are not reported during the compliance period.

**Organic Contaminants:** Carbon-based compounds, such as industrial solvents and pesticides. These contaminants generally get into water through runoff from cropland or discharge from factories. EPA has set legal limits on 54 organic contaminants that are to be reported [40 CFR 141.61].

**Public Notification Rule:** This rule requires a public water system to notify the public anytime the system violates national primary drinking water regulations or has other situations posing a risk to public health.

**Radionuclides:** Radioactive particles which can occur naturally in water or result from human activity. EPA has set legal limits on four types of radionuclides: radium-226, radium-228, gross alpha, and beta particle/photon radioactivity [40 CFR 141]. Violations for these contaminants are to be reported using the following three categories:

*Gross alpha:* A violation for alpha radiation above the MCL of 15 picocuries/liter. Gross alpha includes radium-226 but excludes radon and uranium.

*Combined radium-226 and radium-228:* A violation for combined radiation from these two isotopes above the MCL of 5 pCi/L.

*Gross beta:* A violation for beta particle and photon radioactivity from man-made radionuclides above 4 millirem/year.

*Uranium:* A violation for uranium above the MCL of 30 ug/l.

**Reporting Interval:** The reporting interval for violations to be included in the Annual Compliance Report, which is to be submitted to EPA by July 1, 2012, is from January 1, 2011 through December 31, 2011.

**SDWIS Code:** Specific numeric codes from the Safe Drinking Water Information System (SDWIS) have been assigned to each violation type included in this report. The violations to be reported include exceeding contaminant MCLs, failure to comply with treatment requirements, and failure to meet monitoring and reporting requirements.

**Surface Water Treatment Rule (SDWA 1993):** The Surface Water Treatment Rule establishes criteria under which water systems supplied by surface water sources, or ground water sources under the direct influence of surface water, must filter and disinfect their water [40 CFR 141, Subpart H]. Violations of the Surface Water Treatment Rule are to be reported for the following four categories:

*Monitoring, routine/repeat (for filtered systems):* A violation for a system's failure to carry out required tests, or to report the results of those tests.

*Treatment techniques (for filtered systems):* A violation for a system's failure to properly treat its water.

*Monitoring, routine/repeat (for unfiltered systems):* A violation for a system's failure to carry out required water tests, or to report the results of those tests.

*Failure to filter (for unfiltered systems):* A violation for system's failure to properly treat its water. Data for this violation code will be supplied to the States by EPA.

**Total Coliform Rule (TCR):** The Total Coliform Rule establishes regulations for microbiological contaminants in drinking water. These contaminants can cause short-term health problems. If no samples are collected during one month compliance period, a significant monitoring violation occurs. States are to report four categories of violations:



*Acute MCL violation:* A violation where the system found fecal coliform or E. coli, potentially harmful bacteria, in its water, thereby violating the rule.

*Non-acute MCL violation:* A violation where the system found total coliform in samples of its water at a frequency or at a level that violates the rule. For systems collecting fewer than 40 samples per month, more than one positive sample for total coliform is a violation. For systems collecting 40 or more samples per month, more than 5% of the samples positive for total coliform is a violation.

*Major routine and follow-up monitoring:* A violation where a system did not perform any monitoring. One number is reported for the sum of violations in these two categories.

*Sanitary Survey:* A major monitoring violation where a system fails to collect 5 routine monthly microbiological samples if a sanitary survey has not been performed during the previous 5 years.

**Treatment Techniques:** Treatment or other measures that EPA requires instead of an MCL for contaminants that laboratories cannot adequately measure. Failure to meet operational and system requirements under the Surface Water Treatment Rule, the Lead and Copper Rule, and the Phase II Rule (Acrylamide and Epichlorohydrin) have been included in this category of violation for the purposes of this report.

**Unfiltered Systems:** Water systems (using surface water or groundwater under the direct influence of surface water) that are not required to filter their water prior to disinfection due to source and site-specific conditions [40 CFR, Subpart H].

**Violation:** A failure to meet any state or federal drinking water regulation.

## **CONCLUSION**

The vast majority of PWSs in North Dakota maintain an excellent SDWA compliance record. During 2011, 278 certificates of compliance were issued to operators and public water systems that maintained full compliance.

The following tables illustrate the high compliance rate (for calendar year 2011) maintained by North Dakota PWSs. It is the responsibility of each PWS under the SDWA to properly comply with all drinking water monitoring, reporting, MCL and treatment technique requirements.

Under the TCR, all PWSs are required to collect and submit a prescribed number of microbiological samples (based on population served) each month or quarter to a certified laboratory for analysis on an ongoing basis. Under the SWTR, PWSs that utilize surface water (currently 20 in North Dakota) are required to maintain finished water turbidity at or below certain target levels. Such systems are also required to maintain residual disinfectant concentrations at or above certain target levels (applies both to water entering and within the distribution system).

As it is nationwide, North Dakota's predominant compliance problem is ensuring that all required microbiological samples are collected. The department will continue to work with the PWSs in the state to improve compliance.

	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations
<b>Organic Contaminants</b>						
Community Water Systems (CWS)	333	100%	333	100%	333	100%
Nontransient Noncommunity Water Systems (NTNCWS)	34	100%	34	100%	34	100%
Transient Noncommunity Water Systems (TNCWS)	0				0	
<b>Inorganic Contaminants</b>						
CWS	333	98.5%			333	99.4%
NTNCWS	34	97.1%			34	100%
TNCWS	186	100 %			186	98.4%

	MCLs/MRDLs		Treatment Techniques		Significant Monitoring/Reporting	
	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations
<b>Radionuclides</b>						
CWS	333	100%			333	100%
NTNCWS	0				0	
TNCWS	0				0	
<b>Total Coliform Rule</b>						
CWS	333	97.9%			333	90.7%
NTNCWS	34	100%			34	82.4%
TNCWS	186	94.6%			186	76.88%
<b>Surface Water Treatment Rule<sup>1</sup> SDWA 1993</b>						
CWS			0	100%	0	100%
NTNCWS			0		0	
TNCWS			0		0	
<b>Long Term 1 Enhanced Surface Water Treatment Rule</b>						
CWS			15	100%	15	100%
NTNCWS			5	100 %	5	100%
TNCWS			0		0	
<b>Long Term 2 Enhanced Surface Water Treatment Rule</b>						
CWS			15	93.3%	15	100%
NTNCWS			3	66.7%	3	100%
TNCWS			0		0	

	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Provide Report	Percentage of Systems with <u>No</u> Violations
<b>Stage 1 Disinfectants/Disinfection By-products Rule<sup>2</sup></b>						
CWS	141	98.6%	14	100%	141	84.4%
NTNCWS	8	87.5%	5	100%	8	75%
TNCWS						
	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Provide Report	Percentage of Systems with <u>No</u> Violations
<b>Lead and Copper Rule</b>						
CWS			333	100 %	333	99.7%
NTNCWS			34	100%	34	97.1%
TNCWS			0		0	
	MCLs					
	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Provide Report	Percentage of Systems with <u>No</u> Violations
<b>Consumer Confidence Rule</b>						
CWS					333	100%
NTNCWS					0	
TNCWS					0	

	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Monitor	Percentage of Systems with <u>No</u> Violations	Total Number of Systems Required to Provide Report	Percentage of Systems with <u>No</u> Violations
<b>Ground Water Rule</b>						
CWS	245	100%	245	100%	245	98.4%
NTNCWS	23	100%	23	100%	23	100%
TNCWS	150	100%	150	100%	150	98.0%

1. Only those systems that use surface water are required to monitor under and comply with the SWTR.

# **LIST OF SYSTEMS WITH VIOLATIONS IN 2011<sup>1</sup>**

## **Organic Contaminants**

No violations for organic contaminants were issued in 2011.

## **Radionuclide Contaminants**

### **Failure to Monitor/Report Violations**

No violations for radionuclide contaminants were issued in 2011.

## **Inorganic Contaminant Violations**

### **Community and Noncommunity Water Systems**

#### **Arsenic**

##### **Maximum Contaminant Level Violation (MCL) Average**

Karlsruhe, City of - 1

Minnewaukan, City of - 1

R & R Trailer Court (Williams) - 4

Ryder, City of - 4

#### **Fluoride**

##### **Maximum Contaminant Level Violation (MCL), Average**

Lakeshore Estates - 4 (Mercer)

#### **Selenium**

##### **Maximum Contaminant Level Violation (MCL), Average**

Round Prairie School- 3 (Williams)

#### **Nitrate/Nitrite**

##### **Failure to Monitor/Report Violation**

MBI Energy Services, Inc. (McKenzie)

Noonan, City of

Noonan City Well 1-Coffee (Divide)

Oakes Golf Club (Dickey)

Willowbank Colony (LaMoure)

## **Lead and Copper Rule Violations**

### **Community and Nontransient Noncommunity Water Systems**

#### **Initial Tap Sampling**

Nabors Drilling Ross Camp (Mountrail)

#### **Follow-up or Routine Tap Monitor/Report**

Willowbank Colony (LaMoure)

#### **Lead Public Education**

None

#### **Lead Consumer Notice Certification**

Abercrombie, City of

Karlsruhe, City of

McKenzie County Rural Water - 2

Nabors Drilling Keene Camp (McKenzie)

Nabors Drilling Ross Camp (Mountrail)

Prairie View Estates (McKenzie)

R & T Water System (Williams)

Sanborn, City of

Sheyenne, City of

Velva, City of

Warwick, City of

Wilton, City of

Zeeland, City of

## **Microbiological Violations Community Water Systems<sup>1</sup>**

### **Maximum Contaminant Level Acute Violations (MCLA)**

Drayton, City of

### **Maximum Contaminant Level Violations (MCL)**

Abercrombie, City of - 3

All Seasons WD-System III (Bottineau)

Bi-Hutch Court MHP - 2 (Dunn)

Bowbells, City of

Oberon, City of - 3

Warwick, City of

### **Failure to Monitor Major and Follow-Up Monitoring Violations (FMma and MaR)Microbiological Violations**

Almont, City of

Apple Valley Co-op (Burleigh)

Arnegard Diamond Estates (McKenzie) - 2

Badlands Power Fuels TC (McKenzie) - 3

Bowdon, City of - 2

Fairview Colony (LaMoure)

Fradets Orchard Water System (Cass)

Grandin, City of

Imperial Valley Water Co. (Burleigh)

Leeds, City of

Litchville, City of

Maxbass, City of

McKenzie County Rural Water

Mercer, City of

Milton, City of

Missouri River Correctional Center (Burleigh) - 2

Misty Water LLC (Burleigh) (Inactive 11-1-11) - 2

New Hradec Waterworks

Oberon, City of

Oriska, City of

## **Microbiological Violations Community Water Systems<sup>1</sup>**

### **Failure to Monitor Major and Follow-Up Monitoring Violations (FMma and MaR)Microbiological Violations**-continued

Prairie View Estates (McKenzie)

Regent, City of

Rock Lake, City of

Ross, City of - 4

Solen, City of - 3

Stanley, City of

Warwick, City of - 3

Willowbank Colony - 11 (LaMoure)

Wollman Ranch (Grant) -2

Wyndmere, City of

### **Failure to Monitor Minor and Follow-Up Monitoring Violations (FMmi and MiR) NOTE: EPA does not require minor monitoring violations to be counted for the Annual Compliance Report.**

Cooperstown, City of

Wollman Ranch (Grant)

## **Microbiological Violations Noncommunity Water Systems**

### **Maximum Contaminant Level Violations (MCL)**

Carbury Recreation Area (Bottineau)

Crappie Creek Rec Area

Deepwater Bay MHP (Mountrail)

Doyle Memorial State Park (McIntosh)

Fort Rice B & G Inc. (Morton) (Inactive: 9-30-11)

Lake Tschida Downstream Campground -2 (Grant)

Little Yellowstone Park (Barnes)

Medina Rest Area (Stutsman)

Pelican Point Pressure System #3 (Stutsman)

Schatz's Point (Grant)



## **Microbiological Violations**

### **Noncommunity Water Systems**

#### **Failure to Monitor Major and Follow-Up Monitoring Violations (FMma and MaR)**

ATCO Lodge Williston (Williams) - 2  
Beulah Bay Rec Area (Mercer)  
Beulah Bay Rec Area #2 (Mercer)  
Big Tex's RV Park (Williams) - 4  
Boomtown RV Park (Mountrail)  
Calfrac Well Services (Williams)  
Cargill Malt (Stutsman)  
Club 85 Bar (Billings)  
Colony Park (Ward)  
Crappie Creek Rec Area (Grant)  
Dakota Lodge North (Williams)  
Dakota Lodge West (Williams)  
Dakota Water Hauler - 3 (Williams)  
Dakotaland Homes -2 (McKenzie)  
Deepwater Bay MHP - 3 (Mountrail)  
Fort Rice B & G (Morton) (Inactive: 9-30-11)  
Fort Union Trading Post (Williams)  
Hurley Enterprises (McKenzie)  
Indian Hills Resort - 2 (McLean)  
Kojaks Bar - 4 (Cass)  
L & D Bruhn MHP ((Mountrail) (Inactive: 3-29-11)  
Lake Sakakawea State Park (Mercer)  
Lidgerwood Park (Richland)  
Ma & Pa's Café (Ward) -3  
MBI Energy Services, Inc. (McKenzie) - 2  
Missouri Yellowstone Interpretive Center (Williams)  
Mon-Dak Water & Septic -2 (Mountrail)  
Nabors Drilling Keene Camp (McKenzie)  
Nabors Drilling Ross Camp (Mountrail)  
Nehring Lodges - 2 (Williams)  
New Town Employee MHP -2  
Oakes Golf Club (Dickey)

## **Microbiological Violations**

### **Noncommunity Water Systems**

#### **Failure to Monitor Major and Follow-Up Monitoring Violations (FMma and MaR)-continued**

Pat's Motel & Campground (McKenzie)  
PDQ Club (McKenzie)  
Prairieland RV Park (McKenzie)  
Rusty Nail RV (Dunn)  
Sarles Bar (Cavalier)  
Short Stop Convenience Store (McKenzie)  
Sidetrack Bar & Dam Café (Walsh)  
Solid Rock Development (McKenzie)  
Stanley House (Mountrail)  
Sweetwater Water Hauler (Billings)  
Target Tioga Lodge (Williams)  
The Food Barn (Burke)  
The Ram (Barnes) (Inactive: 2-29-12)  
Triangle Y Camp (McLean)  
Voyager Cove Camp (Mercer) (Inactive: 12-22-11) -3  
Wangness Truck (Burke) (Inactive:4-6-11)  
Williston Lodge/Bear Paw Lodge (Williams) - 5  
Zimny Water Hauler (Bottineau)

#### **Failure to Monitor Minor and Follow-Up Monitoring Violations (FMmi and MiR) NOTE: EPA does not require minor monitoring violations to be counted for the Annual Compliance Report.**

Nabors Drilling Keene Camp (McKenzie)  
Schatz's Point (Grant)

## **Long Term Interim Enhanced Surface Water**

### **Treatment Rule Violations**

#### **Failure to Maintain Microbial Treatment**

Coal Creek Station (McLean)  
Williston, City of

#### **Residual Disinfectant Concentration**

Coal Creek Station (McLean)

## **Stage 1 Disinfection By-Products Rule Violations**

### **Total Haloacetic Acids(HAA5)**

#### **Maximum Contaminant Level Violation (MCL), Average**

none

### **Total Trihalomethanes (TTHM)**

#### **Maximum Contaminant Level Violation (MCL), Average**

Coal Creek Station (McLean)- 2

Washburn, City of - 2

### **Chlorine/Chloramine**

#### **Maximum Residual Disinfectant Level Exceedance**

Cathay, City of - 2

### **Chloramine**

#### **Failure to Monitor/Report Major Violations**

Almont, City of

New Hradec Waterworks

Regent, City of

### **Chlorine**

#### **Failure to Monitor/Report Major Violations**

Apple Valley Co-op (Burleigh)

Badlands Power Fuels TC ( McKenzie) - 2

Cargill Malt (Stutsman)

Grandin, City of

Imperial Valley Water Co. (Burleigh)

Leeds, City of

Maxbass, City of

McKenzie County Rural Water

Mercer, City of

Milton, City of

Missouri River Correctional Center (Burleigh)

Misty Waters LLC (Burleigh) (Inactive: 11-1-11)

Oberon, City of

Omar Farms TC (Mountrail)

## **Chlorine Failure to Monitor/Report-continued**

Oriska, City of

Prairie View Estates (McKenzie)

Rock Lake, City of

Ross, City of - 2

Stanley, City of

Warwick, City of -2

Wyndmere, City of

## **Ground Water Rule**

### **Failure to Monitor, Triggered Source, Major**

#### **Community and Noncommunity**

Deepwater Bay MHP (Mountrail)

Fort Rice B & G Inc (Morton) (Inactive: 9-30-11)

Oakes Golf Club (Dickey)

Ross, City of

Warwick, City of

Watford City, City of

Wollman Ranch (Grant)

## **Consumer Confidence Rule Report Violations (Minor)**

### **Adequacy/Availability/Content - NOTE: EPA does not require minor monitoring violations to be counted for the Annual**

#### **Compliance Report.**

Country Acres MHP (Ward)

Deering, City of

Kensal, City of

Minot Mobile Estates (Ward)

Oberon, City of

Rock Lake, City of

Solen, City of

Warwick, City of

Willowbank Colony (LaMoure)

Wing, City of

## **Public Notification Rule Violations Community Water Systems**

Almont, City of  
Badlands Power Fuels TC (McKenzie) - 3  
Misty Waters (Burleigh) (Inactive: 11-1-11)  
Oberon, City of  
Oriska, City of  
Prairie View Estates ( McKenzie) - 2  
R & R Trailer Court (Williams)  
Regent, City of - 2  
Solen - 3  
Warwick, City - 2  
Willowbank Colony (LaMoure) - 6

## **Public Notification Rule Violations Noncommunity Water Systems**

ATCO Lodge Williston (Williams)  
Beulah Bay Rec Area (Mercer)  
Beulah Bay Rec Area #2 (Mercer)  
Big Tex's RV Park -2 (Williams)  
Dakotaland Homes (McKenzie)  
Deepwater Bay MHP (Mountrail)  
Fort Rice B & G Inc (Morton) (Inactive:9-30-11) - 3  
Indian Hills Resort (McLean)  
Kojaks Bar ( Cass) - 2  
Ma & Pa's Café (Ward)  
MBI Energy Services Inc (McKenzie)  
Mon-Dak Water & Septic (Mountrail)  
Nabors Drilling Ross Camp (Mountrail) -2  
Omar Farms (Mountrail)  
Target Tioga Lodge (Williams)  
Voyager Cove Camp (Mercer) ( Inactive: 12-22-11) - 2  
Williston Lodge/Bear Paw Lodge (Williams) - 4

## **NOTE: EPA does not require minor monitoring violations to be counted for the Annual Compliance Report.**

1. Multiple violations within a specified category are represented by a number following the system name (i.e., R & R Trailer Court -4" under Arsenic Maximum Contaminant Level Violation (MCL) Average means that R& R Trailer Court incurred 4 MCL violations during the reporting period). Counties are in parentheses.