2013 WATER QUALITY TESTING RESULTS FOR REGULATED CONTAMINANTS

CONTAMINANT	DATE TESTED*	UNIT	MCL	MCLG	HIGHEST COMPLIANCE LEVEL	RANGE OF DETECTIONS	MAJOR SOURCES	VIOLATION?
Inorganic Contaminants								
Barium	6/15/2010	ppm	2	2	0.016	N/A	Natural deposit erosion, drilling wastes	No
Fluoride#	3/13/2013	ppm	4	4	0.76	0.41-0.76	Natural deposit erosion, additive to promote strong teeth	No
Nitrate + Nitrite	4/9/2013	ppm	10	10	0.12	N/A	Fertilizer runoff, leaching from septic tanks, sewage	No
Microbiologial Contaminants					MAX			
Turbidity**#	10/6/2013	NTU	TT	N/A	0.19	0.05-0.19	Soil runoff	No
Total Coliform#	12/31/2013	% of samples	<5%	0	0%	0-0%	Naturally present in the environment	No
Radioactive Contaminants					MAX			
Combined Radium 226, 228	11/13/2008	pCi/L	5		0.814	NA	Erosion of natural deposits	No
Combined Uranium	11/13/2008	ppb	30		0.439	NA	Erosion of natural deposits	No
Gross Alpha, excluding RN & U	11/13/2008	pCi/L	15	15	ND	N/A	Erosion of natural deposits	No
Disinfectants			MRDL	MRDLG	MAX			
Chlorine	2/28/2013	ppm	4	4	1.2	1.1 to 1.2	Added as water disinfectant	No
Chloramine	6/30/2013	ppm	4	4	1.5	1.4 to 1.7	Added as water disinfectant	No
Total Organic Carbon (TOC) Removal								
Total Alkalinity (source)	5/31/2013	ppm			165	155 to 165	Natural erosion, certain plant activity, certain industrial wastewater discharges	No
Total Organic Carbon (source)	10/31/2013	ppm			5.4	4.10 to 5.40	Naturally present in the environment	No
Total Organic Carbon (treated)	10/31/2013	ppm			3.0	2.30 to 3.00	Naturally present in the environment	No
Disinfection Byproducts								
Total Trihalomethanes	9/30/2013	ppb	80	NA	80.0	21.85 to 142.5	By-product of drinking water chlorination	No
Total Haloacetic Acids	9/30/2013	ppb	60	NA	16	2.23 to 23.93	By-product of drinking water chlorination	No
Lead and Copper Sampling at Residential Taps					90TH PERCENTILE	EXCEEDENCE		
Lead	9/27/2013	ppb	AL=15		9.2	1	Corrosion of household plumbing systems	No
Copper	9/27/2013	ppm	AL=1.3		0.0399	0	Corrosion of household plumbing systems	No

*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 are not expected to vary significantly from year to year. Some of our data, though representative, are more than one year old.
Samples are taken daily

KEY TO TABLE

ppm = parts per million, or milligrams per liter (mg/L)
ppb = parts per billion, or micrograms per liter (ug/L)
ND = none detected
pci/L = Pico curies per liter : a measure of radioactivity

NTU = Nephelometric turbidity units
umho/cm = micromhos per centimeter (a measure of conductivity)
obsvns = observations/field at 100 power

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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 which, if exceeded, triggers treatment or other requirements which a water system must follow. For lead and copper the Action Level is exceeded if the 90th percentile value exceeds the Action Level. Thirty two sites were sampled and one site exceeded the Action Level for lead.

** **Turbidity** is a measure of the cloudiness of water. We monitor it because it is a good measure of the effectiveness of our filtration system. Turbidity has no health effects, however it can interfere with disinfection or provide a medium for microbial growth. Compliance is determined by the percentage of samples that meet the limit of 0.3 NTU.

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

The following information was inadvertently omitted from the 2013 Water Quality Report:

2013 Water Quality Testing Results for Unregulated Contaminants

The City of Bismarck was selected by EPA to sample for 21 unregulated contaminants during 2013. Samples were taken 3 times from both the Water Treatment Plant and from the Maximum Residence Time sampling point.

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. Should you have any questions, please contact our office at 355-1700.

The following unregulated contaminants were the only contaminants detected during this sampling. Results are from the sample point with the Maximum Residence (MR) Time in our system and the Water Treatment Plant.

Unregulated Contaminant	**Average Value at sampling points (µg/L)**	**Range of Detection at sampling points (µg/L)**
Chromium	0.84	0.76-0.94
Molybdenum	3.3	3.0-3.5
Strontium	330	290-360
Vanadium	1.4	1.2-1.9
Hexavalent chromium/chromium-6	0.63	0.57-0.70