Consumer Confidence Report 2016

City of Great Falls, Public Drinking Water Supply

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This report is prepared annually by the City of Great Falls Water Utility. Its purpose is to inform the public about the quality of our municipal drinking water. Please take a few minutes to review it and feel free to call us with any questions.

The source of our water

The drinking water used by the residents of Great Falls, Malmstrom Air Force Base and Black Eagle is water that was pumped from the Missouri River and treated to make it safe to drink. The water treatment facility is located just upstream from the Missouri's confluence with the Sun River in Great Falls.

Water treatment and purification

Great Falls utilizes a conventional water treatment process, producing on average 4.5 billion gallons of safe drinking water per year. The process is monitored continuously both electronically and with grab samples of treated water. Only after careful scrutiny is water allowed to flow through underground water mains to reservoirs for use in homes and businesses. City water personnel stay abreast of new Federal and State drinking water regulations so that treatment and/or monitoring changes can be implemented as needed in a timely and cost-effective manner. The City is committed to the goal of providing its citizens with a safe and dependable supply of drinking water. This goal was achieved during 2016 by operating without any violations or variances regarding water quality.

What contaminants are present in our source water?

Water that precipitates from the atmosphere flows across the surface of the land or percolates through the soil. Naturally occurring minerals dissolve and waste substances produced by plants, animals and humans are picked up. The water then either becomes groundwater or makes its way to a stream, river, pond, lake or reservoir. This accumulated water can then be used as a drinking water source.

Contaminants that may need to be removed from source water before it can be considered safe to drink include:

- Microbial contaminants, including viruses, bacteria and protozoa. These can originate from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals. These can be naturally occurring or the result of urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides. These may come from a variety of sources including agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals. These are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants. These can be naturally occurring or the result of oil and gas production or mining activities.

Montana's Department of Environmental Quality (DEQ) completed and made available the Great Falls source water delineation and assessment report. This report delineates a source water protection area for Great Falls (an area of surface water and land that contributes water to the Great Falls Public Water Supply). It also identifies locations or regions within this area where contaminants might be generated, stored or transported and addresses their relative potential for contaminating Great Falls drinking water. The report can be used to develop a source water protection plan for Great Falls.

Do I need to take special precautions?

The Environmental Protection Agency diligently establishes regulations setting allowable limits for contaminants in drinking water delivered by public water systems. The Food and Drug Administration regulates contaminants in bottled water, affording equivalent protection to public health. Any drinking water may be reasonably expected to contain allowable amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily mean the water will pose a health risk. Detailed 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) or our local City-County Health Department (454-6950).

Certain people may be more vulnerable to contaminants in drinking water than the general population. For example, immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons having HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections caused by certain microbiological contaminants. These people should seek advice about their 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).

How can I become involved?

You can learn more about your local water utility by attending any of the regularly scheduled City Commission meetings on the first and third Tuesdays of every month at 7:00 p.m. in the Commission Chambers at the Great Falls Civic Center. You may also arrange a tour of the local water treatment plant by calling 727-1325. Regulatory updates and other interesting information can be found by visiting the American Water Works Association web site at http://www.awwa.org.

Questions & Answers

Q: How often is our drinking water tested?

A: The type and frequency of testing required is based on the water's source and the number of people served. Great Falls is classified as a medium-sized (between 50,000 and 100,000 served) surface water (Missouri River) community public water supply. As such, Great Falls is required to monitor the levels of some drinking water constituents, such as disinfectant residual, continuously while other constituents, such as radionuclides, are required to be tested only once every several years. The data presented in the tables contained in this report are the results from the most recent testing done in accordance with the applicable regulations.

Q: Why does the water coming out of my tap look milky sometimes but then clear up in my glass after a few seconds?

A: The water coming into your home may contain air held in solution by the pressure of the water system. As the water leaves the tap, the pressure rapidly decreases causing millions of tiny air bubbles to be suspended in the water, producing the milky appearance. The water then clears from the bottom of the container as the air bubbles rise and return to the atmosphere.

Q: **How hard is Great Falls water?**

A: Great Falls water is classified as moderately hard, ranging from 127 to 167 milligrams per liter as calcium carbonate or 7.4 to 9.8 grains per gallon. Some households install water softeners as a matter of personal preference but softening is generally not necessary.

Some Facts about Water

Of the 326 million cubic miles of water on earth, 97% is seawater. Of the remaining 3%, 77% is frozen and 22% is underground. This leaves each person on our planet enough liquid fresh surface water to fill a cube 130 feet on a side. But the water is not evenly distributed and is in constant demand. One gallon of water weighs about 8⅓ pounds. Average total water use (both indoor and outdoor) for a typical single-family home is about 100 gallons per person per day. You can fill an 8-ounce glass with drinking water 15,000 times for the same cost as a six-pack of soda. You can survive about a month without food, but only 5 to 7 days without water.

Water Analysis Data

The data tables on the next several pages contain terms and abbreviations with which you may be unfamiliar. In order to help you better understand this data we offer the following definitions and explanations:

parts per million (ppm) or milligrams per liter (mg/l) - one part per million is equivalent to one minute in two years or one penny in $10,000.

parts per billion (ppb) or micrograms per liter (μg/l) - one part per billion is equivalent to one minute in 2,000 years or one penny in $10,000,000.

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

millirems per year (mrem/yr) - a measure of radiation exposure. In the United States, the average person is exposed to an effective dose equivalent of approximately 360 mrem (whole body exposure) per year from all sources.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Water having turbidity in excess of 5 NTU would appear noticeably cloudy to the average person.

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 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 Residual Disinfection Level Goal or 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 Disinfection Level or MRDL - the highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

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

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

Variances and Exemptions – State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

The City of Great Falls routinely monitors for contaminants in drinking water according to Federal and State laws. The four data tables included in this report document the test results from monitoring during the period January 1st through December 31st, 2016. The State of Montana requires monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore some of the following data, though representative, are more than one year old. The tables are arranged as follows:

Table I. **Regulated Contaminants Detected**
Table II. **Unregulated Contaminants Detected**
Table III. **Regulated Contaminants Not Detected**

Additional report copies are available free of charge from the Great Falls Water Treatment Plant.
If you have any questions about this report or your water utility, please contact Eva Maydole, Water Quality Specialist for city of Great Falls or Wayne Lovelis, the Plant Manager at (406) 727-1325.

Table I. Regulated Contaminants Detected

Contaminant	Likely Source	MCL	MCLG	Date Sampled	Level Detected	Violation Yes or No
Arsenic	Erosion of natural deposits; runoff from orchards and glass and electronics production wastes.	0.01 ppm	0 ppm	1/21/2016	0.004 ppm	no
Fluoride	Erosion of natural deposits; discharge from fertilizer and aluminum factories.	4 ppm	4 ppm	1/21/16	0.9 ppm	no
Nitrate plus Nitrite as Nitrogen	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	10 ppm	10 ppm	1/21/2016	0.19 ppm	no
Lead *Note: In samples collected 1/21/2016 no lead was detected in the treated water as it left the water treatment plant.*	Corrosion of household plumbing systems; erosion of natural deposits**.**	AL = 15 ppb 90th percentile level must be less than 15 ppb	0 ppb	6/2016 to 9/2016	5 ppb@ 90th percentile (see below)	no
Copper *Note: In samples collected 1/21/2016 no copper was detected in the treated water as it left the water treatment plant.*	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	AL = 1.3 ppm 90th percentile level must be less than 1.3 ppm	1.3 ppm	6/2016 to 9/2016	0.625 ppm @ 90th percentile one site exceeded 1.3 ppm	no

DISINFECTANTS

Contaminant	Likely Source	MRDL	MRDLG	Sampled	Level Detected	Violation Yer or No
Chlorine	water additive used to control microbes	4 ppm	4 ppm	continuously	0.03 to 1.88 ppm	No
Chloramines†	water additive used to control microbes	4 ppm	4 ppm	continuously	0.03 to 1.88 ppm	No

† The primary disinfectant used in Great Falls is free chlorine. Through the addition of ammonia, monochloramine is formed just before the water exits the treatment plant. Monochloramine does not dissipate as readily as free chlorine and thus helps in maintaining disinfection at the far edges of the distribution system. Compared to free chlorine, monochloramine is a weak oxidizer and so minimizes disinfection by-product formation.

Contaminant	Likely Source of Contamination	MCL	MCLG	Date Sampled	Level Detected	Violation Yes or No
Turbidity Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the water filtration system.	Soil runoff	TT = 1 NTU maximum TT < 0.15 NTU 95% of the time	0	Throughout the year every 4 hours manually; _____ every 15 minutes electronically	0.120 NTU on 2/6/2016 <0.05 NTU 99% of time	No No
RADIONUCLIDES						
Beta/Photon Emitters	decay of natural and man-made deposits	4 mrem/yr	0 mrem/yr	2/23/99	2.7 (± 2.7) pCi/l gross beta	No
Gross Alpha	erosion of natural deposits	15 pCi/l	0 pCi/l	7/1/14	4.1	No
Radium 226 + Radium 228	erosion of natural deposits	5 pCi/l	0 pCi/l	7/1/14	<0.5	No
Uranium	erosion of natural deposits	0.03 ppm	0 ppm	7/1/14	0.001	No

Synthetic Organic Contaminants Including Pesticides and Herbicides

Contaminant	Likely Source of Contamination	MCL	MCLG	Date Sampled	Level Detected	Violation Yes or No
Hexachlorocyclopentadiene	discharge from chemical factories	50 ppb	50 ppb	6/13/16	<0.10	No

LEAD AND COPPER RULE SAMPLING SUMMARY (triennial samples)

Note:
Each sample collected for lead analysis was also analyzed for copper. In this report the sites are separately numbered 1-32 based on ascending levels of lead or copper, that is, the site having the highest level of lead did not necessarily also have the highest level of copper.

Site Ranking	Copper results in ascending order in ppm	Lead results in ascending order in ppb
1	0.013	0
2	0.026	0
3	0.027	0
4	0.035	0
5	0.041	0
6	0.052	0
7	0.053	0
8	0.057	0
9	0.062	0
10	0.072	0
11	0.087	0
12	0.089	0
13	0.097	0
14	0.101	0
15	0.106	1
16	0.147	1
17	0.157	1
18	0.158	1
19	0.195	1
20	0.198	1
21	0.209	1
22	0.232	1
23	0.262	2
24	0.284	2
25	0.295	3
26	0.314	3
27	0.523	3
28	0.613	5
29	0.636	5
30	0.740	6
31	1.020	8
32	1.740	8
90th Percentile	**0.625 ppm**	**5 ppb**

Table I. Regulated Contaminants Detected (continued)

The 1994 Federal Lead & Copper Rule mandates a household testing program for these substances. Under the provisions of the Lead & Copper Rule high-risk sites include, but are not limited to single-family residences served by a lead service line, having interior lead piping or having lead-soldered copper pipe installed after 1982 but prior to Montana's ban on lead solder, which began December 31, 1987. According to the Rule, 90% of the samples from high-risk homes must have lead levels less than 15 ppb and copper levels less than 1.3 ppm. Samples were collected from water that had remained within the building's interior plumbing for a period of at least six hours. Lead and copper levels below the MCL indicated water that was not corrosive to lead or copper 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. The City of Great Falls 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

Table I. Regulated Contaminants Detected (continued)

Disinfection By-Products (DBPs)

Contaminant	Likely Source of Contamination	MCL	Date Sampled	Level Detected	Violation
TTHMs (total trihalomethanes)	by-product of drinking water disinfection	80 loc. avg.‡	quarterly	see table below	No
HAA5s (five haloacetic acids)	by-product of drinking water disinfection	60 loc. avg.‡	quarterly	see table below	No

TTHM Summary	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
1st Quarter 2016	33 ppb	38 ppb	35 ppb	37 ppb	35 ppb	30 ppb	34 ppb	37 ppb
2nd Quarter 2016	35 ppb	38 ppb	38 ppb	38 ppb	39 ppb	35 ppb	35 ppb	31 ppb
3rd Quarter 2016	53 ppb	56 ppb	50 ppb	56 ppb	56 ppb	53 ppb	54 ppb	53 ppb
4th Quarter 2016	34 ppb	43 ppb	39 ppb	42 ppb	44 ppb	38 ppb	39 ppb	42 ppb
‡locational average	38.8 ppb	43.8 ppb	40.5 ppb	43.3 ppb	43.5 ppb	39 ppb	40.5 ppb	40.8 ppb

highest compliance level for 2016 = 43.8 range = 38.8 to 43.8

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

HAA5 Summary	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
1st Quarter 2016	32 ppb	35 ppb	31 ppb	26 ppb	33 ppb	31 ppb	34 ppb	31 ppb
2nd Quarter 2016	32 ppb	30 ppb	32 ppb	30 ppb	30 ppb	33 ppb	34 ppb	34 ppb
3rd Quarter 2016	48 ppb	49 ppb	46 ppb	41 ppb	1.9 ppb	48 ppb	46 ppb	46 ppb
4th Quarter 2016	35 ppb	34 ppb	32 ppb	14 ppb	1.7 ppb	29 ppb	30 ppb	33 ppb
‡locational average	36.8 ppb	37.0 ppb	35.3 ppb	27.8 ppb	16.7 ppb	35.3 ppb	36.0 ppb	36.0 ppb

highest compliance level for 2016 = 36.8 ppb range = 16.7 to 36.8 ppb

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TOC (Total Organic Carbon)

Total Organic Carbon (TOC) provides a medium for the formation of disinfection by-products, which include TTHMs and HAA5s. Removing TOC at the water treatment plant is important in reducing the potential for the formation of all disinfection by-products, both regulated and unregulated.

Date Sampled	River Water TOC	Treated Water TOC	% Removal Required (A)	% Removal Achieved (B)	Compliance Ratio (B/A)*
1/4/16	2.7 mg/L	2.0 mg/L	15.0	25.9	1.73
2/4/16	2.4 mg/L	2.0 mg/L	15.0	16.7	1.11
3/2/16	2.1 mg/L	1.7 mg/L	15.0	19.0	1.27
4/4/16	2.3 mg/L	1.8 mg/L	15.0	21.7	1.45
5/2/16	2.4 mg/L	1.9 mg/L	15.0	20.8	1.39
6/2/16	2.3 mg/L	1.8 mg/L	15.0	21.7	1.45
7/12/16	2.3 mg/L	1.7 mg/L	15.0	26.1	1.74
8/4/16	2.5 mg/L	2.0 mg/L	15.0	20.0	1.33
9/13/16	2.8 mg/L	2.0 mg/L	15.0	28.6	1.90
10/3/16	2.6 mg/L	2.0 mg/L	15.0	23.1	1.54
11/7/16	2.5 mg/L	1.9 mg/L	15.0	24.0	1.60
12/5/16	2.4 mg/L	1.8 mg/L	15.0	25.0	1.67

*Compliance is based, in part, upon the yearly average compliance ratio being equal to or > 1.0. In 2016, the average compliance ratio was 1.51.

Table I. Regulated Contaminants Detected (continued)

Secondary Parameter	Date Sampled	Level Detected	SMCL**
Calcium	1/21/16	37 mg/L	N/A
Magnesium	1/21/16	12 mg/L	N/A
Sodium	1/21/16	19 mg/L	< 20 recommended
Total Hardness as CaCO3	1/21/16	142 mg/L	N/A
Total Alkalinity as CaCO3	1/21/16	129 mg/L	N/A
Conductivity	1/21/16	362 umhos/cm	N/A
pH	1/21/16	7.6 s.u.	6.5 - 8.5
Langelier Index	1/21/16	- 0.1	N/A

**** Secondary Maximum Contaminant Level (SMCL) - a chemical contaminant in excess of this amount may affect aesthetic qualities and public acceptance. SMCLs are non-enforceable standards.**

Table II. Unregulated Contaminants Detected

Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Inorganic Contaminant	Date Sampled	Level Detected	SMCL
Aluminum	1/21/16	0.03 mg/L	N/A
Bicarbonate as HCO3	1/21/16	157 mg/L	N/A
Chloride	1/21/16	11 mg/L	250
Potassium	1/21/16	3 mg/L	N/A
Silica	1/21/16	18.8 mg/L	N/A
Strontium	1/21/16	0.22 mg/L	N/A
Sulfate	1/21/16	34 mg/L	250

Radionuclides	Date Sampled	Level Detected	Unit of Measurement	Significance
Radon-222 *	1/09/95	47 (± 37)	pCi/l	see comments below

*About radon: There is currently no federal regulation for radon in drinking water. Radon is a radioactive gas that you can't see, taste or smell. It is found all over the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water that contains radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (4pCi/l) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (1-800-SOS-RADON).

Table III. Regulated Contaminants NOT Detected

Microbiological Contaminants – tested throughout 2015, 70 routine distribution system samples per month	
Total Coliform Bacteria	Escherichia coli

Inorganic Contaminants – all tested 1/21/16 unless otherwise indicated					
Antimony	Beryllium	Copper	Lead	Molybdenum	Silver
Asbestos (5/24/11)	Cadmium	Cyanide	Manganese	Nickel	Thallium
Barium	Chromium	Iron	Mercury	Selenium	Zinc

Volatile Organic Contaminants (VOCs) – all tested 6/13/16 unless otherwise indicated			
Benzene	1,1-Dichloroethene	Styrene	Toluene
Carbon tetrachloride	cis-1,2-Dichloroethene	Tetrachloroethene	Vinyl chloride
Chlorobenzene	trans-1,2-Dichloroethene	1,2,4-Trichlorobenzene	Xylenes (ortho-, meta-, para-)
1,2-Dichlorobenzene	Methylene chloride	1,1,1-Trichloroethane	1,2-Dibromo-3-chloropropane
1,4-Dichlorobenzene	1,2-Dichloropropane	1,1,2-Trichloroethane	1,2-Dibromoethane
1,2-Dichloroethane	Ethylbenzene	Trichloroethene	

Table III. Regulated Contaminants NOT Detected			
Volatile Organic Contaminants (VOCs) – all tested 6/13/16 unless otherwise indicated			
Bromobenzene	2-Chlorotoluene	cis-1,3-Dichloropropene	1,1,2,2-Tetrachloroethane
Bromochloromethane	4-Chlorotoluene	trans-1,3-Dichloropropene	1,2,3-Trichlorobenzene
Bromoform	Dibromomethane	Hexachlorobutadiene	Trichlorofluoromethane
Bromomethane	1,3-Dichlorobenzene	Isopropylbenzene	1,2,3-Trichloropropane
n-Butylbenzene	Dichlorodifluoromethane	p-Isopropyltoluene	1,2,4-Trimethylbenzene
sec-Butylbenzene	1,1-Dichloroethane	Methyl tert-butyl ether (MTBE)	1,3,5-Trimethylbenzene
tert-Butylbenzene	1,3-Dichloropropane	Naphthalene	m+p Xylenes
Chloroethane	2,2-Dichloropropane	n-Propylbenzene	o-Xylene
Chloromethane	1,1-Dichloropropene	1,1,1,2-Tetrachloroethane	

In Summary, analysis of Great Falls drinking water revealed no violations during 2016. Although some constituents were detected, the Environmental Protection Agency considers water to be safe at these levels. Furthermore, MCLs are set very stringently. To put this into perspective, for a given regulated contaminant a person would have to drink 2 liters of water every day at the MCL for a lifetime for there to be a one-in-a-million chance of having a corresponding adverse health effect.

Important additional information regarding source water monitoring: During 2007 Great Falls collected monthly water samples directly from the Missouri River intake and had them analyzed for *Cryptosporidium*, a microbial pathogen found in surface water throughout the United States. Although the filtration aspect of our water treatment process removes *Cryptosporidium* it cannot guarantee 100% removal. Our monitoring indicated the presence of these organisms in our source water during the months of February, April, July, September, October and December.

In October 2015 we started a second round of monitoring for Cryptosporidium and Giardia. Cryptosporidium was present in our source water in October 2015 and in September and October of 2016.

Current test methods do not allow us to determine whether the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

The Long Term 2 (LT2) Enhanced Surface Water Treatment Rule requires an additional 1 log removal of *Cryptosporidium* from the source water. The City of Great Falls is in the process of making capital improvements by installing an Ultra Violet treatment system in order to consistently achieve this removal. In the meantime we have been achieving the additional 1 log removal requirement and the City of Great Falls will strive to continue to meet the requirements of LT2.