



**Settle down.**

# **THE CITY OF GRAND FORKS**

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**2015 DOMESTIC WATER SYSTEM ANNUAL REPORT**

**FACILITY #0210688**

**CLASS III SYSTEM**

# OPERATING PERMIT CONDITIONS

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1. Implementation of a source protection plan;
2. Provision of operators that are EOCP certified to the classification level of the water supply system;
3. Operate according to our Water Quality Monitoring Program;
4. Operate according to our Cross Connection Control Program;
5. Provide continuous on-line monitoring of the Water Disinfection Process;
6. Provide long term plans for source, treatment and distribution system improvements taking into account the goal of 43210 treatment;
7. Review and Update the Emergency Response Plan Annually;
8. Monthly & annual water system reports;

## SOURCE PROTECTION

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The City of Grand Forks engaged Remi Allard of Piteau Associates to undertake an assessment of our wells to determine well yields, impact of mutual well draw down interference on total water delivery capacity, asset valuation, evaluation of physical attributes for each well, water quality vulnerability and identification of priorities, as well as, development of a management plan based on the identified priority action items. From this analysis the City feels that Modules 1 and 2 of the Source to Tap Assessment Guidelines (S2TAG) have been completed. This includes the engagement of an assessment team, including Mr. Allard, Sasha Bird and Doug Allin from the City of Grand Forks and representation from IHA, which for the moment includes Ms. Juliana Gola and Mr. Wayne Radomske. The City has completed Modules 7 and 8 of the S2T AG and has completed a Well and Aquifer Protection Plan. The report has been submitted to Interior Health for information.

The City of Grand Forks was represented by Sasha Bird, Manager of Engineering and Planning, on the Technical Committee for the Kettle River Watershed Management Plan completed by the Regional District of the Kootenay Boundary.

The Coordinator for the Kettle River Watershed Management Plan is now in the employ of the City of Grand Forks and will be reviewing and providing recommendations regarding source protection moving forward.

# EOCP CERTIFICATION

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J. Dean Chapman  
EOCP Operator #1720,  
Water Distribution Level III

Len V. Federico  
EOCP Operator #6276,  
Water Distribution Level II

Benjack T. Sorensen-Lawrence  
EOCP Operator #8223,  
Water Distribution, Level II

John Feenstra  
EOCP Operator #8220,  
Water Distribution, Operator-in-Training

## WATER QUALITY MONITORING PROGRAM

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In accordance with our Operating Permit, the City of Grand Forks is required to submit monthly reports to the Interior Health Authority (IHA). These reports contain information on the weekly testing results for coliforms, and chlorine residuals. Any adverse conditions or events can be described at this time as well. Results must comply with: Canadian Drinking Water Quality Guidelines; the BC Drinking Water Protection Act regulations; and Ministry of Environment Standards.

Testing consists of the following:

- Daily flow rates; total flow; free chlorine and chlorine pump setting;
- Daily testing of chlorine residuals on line @ all wells; total flow; free chlorine; well levels;
- Daily online monitoring through SCADA of chlorine residuals;
- Weekly sample testing at various locations throughout the water system including at the source: chlorine residual and coliforms

### **Drinking Water Officer for the City of Grand Forks**

Monthly water sample reports are sent to Pouria Mojtahedi, who acts as the Drinking Water Officer.

## CROSS CONNECTION CONTROL PROGRAM

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The City of Grand Forks has developed a Cross Connection Control Program in compliance with the Interior Health Authority's Permit to Operate a Water System (Drinking Water Protection Act, Part 2, Section 8). The purpose of this Program is to protect the public health, by ensuring that the safe clean water, provided by the City of Grand Forks, is not contaminated due to backflow after it is introduced into the water distribution system.

Dean Chapman, Utilities Coordinator is currently our certified Cross Connection Control Administrator. Len Federico and Ken Espenhain are certified as a Backflow Assembly Testers. Annual testing of City owned backflow prevention devices are performed by City personnel and the Cross Connection Control Program for

private businesses/individuals within City boundaries are administered by MTS of Vernon, B.C. Len Federico has completed the Cross Connection Control Inspector Certification course in 2015 which will allow the City of Grand Forks to perform facility assessments and assume administration control of the Backflow Prevention Program.

## ONLINE MONITORING PROGRAM

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The City of Grand Forks currently utilizes a Supervisory Control and Data Acquisition System (SCADA) to monitor the domestic water system online. Operators can access the system from home, which provides the potential to check the system 24/7. Adjustments can be made through the SCADA software, which can alter system settings, without having to physically attend the pump stations or reservoirs.

Readings are collected by the system, in order to monitor: chlorine, flow, reservoir levels, valve position, source control, telemetry status, pump run times, alarms, pump information/run times, aquifer levels and overall system functions. Data collected is analyzed, recorded and reported, as necessary, to the IHA on a monthly basis. Trend reports can be generated or date specific information can be extrapolated. The SCADA system can even call out system alarms and faults.

Minimum Daily Demand:	December 28	1,228 cubic metres
Maximum Daily Demand:	July 6	12,904 cubic metres

## GOALS FOR THE WATER SYSTEM

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The City of Grand Forks has invested into asset management planning and as part of the City's Asset Management Plan, the City plans for annual water infrastructure improvements in conjunction with available funding opportunities through this tool. An asset management program, WorkTech, has been purchased with training and implementation of the program which commenced in 2015. It is anticipated that data collection will take place over the coming years that will be instrumental in identifying all infrastructure assets, the life expectancy and proposed replacement costs complete with timelines for the water system.

The City of Grand Forks initiated its Residential Universal Water Metering Project in 2014. Neptune Technologies Ltd. was the successful contractor to install the wireless meter technology and successfully installed 80% to the residents of Grand Forks. The program will continue to completion in 2016 after which, it is anticipated to do a 1 year mock billing period to the residents that is based on consumption. It is during this mock billing period, that The City of Grand Forks will deliver public education and water consumption awareness literature to the residents.

Over the next five years, the City will:

- Implement recommendations from the Management of Community Water Wells report;
- Implement recommendations from the Well and Aquifer Protection Plan report;
- Implement recommendations from the Water Supply Plan report.
- Implement the Asset Management Program
- Initiate Feasibility Study for the Reservoir Roof Structure
- Complete the Universal Water Metering Project and begin billing on water consumption.
- Well #3 motor replacement including variable frequency drive.
- 5<sup>th</sup> street water main replacement.
- Well #2 replacement.
- Update water conservation and drought management plan.

## **ANNUAL UPDATE OF EMERGENCY RESPONSE PLAN**

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The annual update of the Emergency Response Plan is attached.