



2014

Annual Drinking Water
Quality Report

TABLE OF CONTENTS

INTRODUCTION	3
REGULATORY CONTEXT	3
Provincial/Federal Regulatory Requirements	3
Regional Health Authority Requirements	3
Metro Vancouver Requirements	4
DRINKING WATER SYSTEM	5
Source Water Quality Monitoring	6
Source Water Quality Reporting	6
Water Conservation	7
Distribution System	9
Infrastructure	9
Cross Connection Control Program	9
WATER QUALITY MONITORING PROGRAM	10
Physical Parameters	12
Chemical Parameters	15
Bacteriological Quality	19
WATER UTILITY INCIDENT RESPONSE PLAN	22
CONCLUSION	22
A PUBLIC HEALTH MESSAGE FROM THE FRASER HEALTH AUTHORITY	22

LIST OF FIGURES

- Figure 1: Metro Vancouver Source Watershed
- Figure 2: How do you use your water? (image from Metro Vancouver)
- Figure 3: Number of Monthly Routine Samples Taken in 2014
- Figure 4: 2014 Average Monthly Water Temperatures in the Distribution System
- Figure 5: 2014 Monthly Average Turbidity Levels in the Distribution System
- Figure 6: Improvements in Water Quality in Distribution System (1997-2014)
- Figure 7: City of Burnaby – Results of Bacteriological Analyses of Potable Water Samples Compliance with BC Drinking Water Protection Regulation

LIST OF TABLES

- Table 1: Schedule B – Frequency of Monitoring Samples for Prescribed Water Supply Systems
- Table 2: Burnaby Drinking Water Disinfection By-Products Results
- Table 3: Burnaby Drinking Water Total Metal Sampling Results
- Table 4: Schedule A – Water Quality Standards for Potable Water

APPENDICIES

- Appendix A: Detailed Water Quality Reports of Samples Collected in 2014
- Appendix B: Metro Vancouver Water Quality Control Annual Report for 2014

INTRODUCTION

This report provides an overview of the regulatory context, outlines the drinking water quality program for 2014 and associated sample results to provide evidence of potability and compliance with the *British Columbia Drinking Water Protection Regulation*.

REGULATORY CONTEXT

Drinking water in the City of Burnaby (the City) falls under the regulatory jurisdiction of several government agencies:

PROVINCIAL/FEDERAL REGULATORY REQUIREMENTS

The *British Columbia Drinking Water Protection Regulation* promulgated under the *Drinking Water Protection Act* requires, amongst other aspects, suppliers of drinking water in British Columbia to hold an Operating Permit, demonstrate that the drinking water is appropriately treated and monitored from microbial perspective, have appropriate emergency and public notification plans in place, and prepare and make public an annual report on the results of previous year. In addition, the *Federal Guidelines for Canadian Drinking Water Quality* provide references for acceptable concentration values for various chemical and physical parameters for potable water.

REGIONAL HEALTH AUTHORITY REQUIREMENTS

In 2000, a "Water Quality Monitoring and Reporting Plan for the GVRD and Member Municipalities" (WQMRP) was established by the Regional Medical Health Officials, the Greater Vancouver Water District and member municipalities. This document, which was reviewed and amended in January 2006, is a cornerstone in providing regional consistency in the monitoring and reporting of bacteriological and chemical drinking water quality parameters. In order to avoid duplication, the WQMRP separates the responsibilities for water quality monitoring and reporting between the GVRD (now Metro Vancouver) and the member municipalities by generally assigning the responsibility of source water and reporting to the Metro Vancouver and the responsibility for distribution system monitoring and reporting to the municipalities.

METRO VANCOUVER REQUIREMENTS

In addition to the WQMRP, the Drinking Water Management Plan (DWMP) was adopted in 2005 to ensure that our region's water needs will be met affordably and sustainably for Metro Vancouver and its member municipalities. In 2007, the Plan was amended to fully incorporate management of the source watersheds. In June 2011, the Plan was updated again detailing the investments in water treatment, supply and conservation programs necessary to provide consistently higher quality drinking water, improved supply reliability, and greater environmental protection. Details of the Plan and the municipal actions identified and adopted by the City are posted on the Metro Vancouver website at: www.metrovancouver.org

DRINKING WATER SYSTEM

Metro Vancouver draws its water from Capilano, Seymour and Coquitlam sources and distributes it through its waterworks systems to member municipalities after treatment. As a part of the provision for treating water, Metro Vancouver uses chlorine and ultraviolet light (UV) as primary disinfectants for Seymour and Capilano source waters. Coquitlam source water uses ozone and UV as primary disinfectants. These source waters are subsequently re-chlorinated at various regional secondary disinfection facilities (8 stations located throughout Metro Vancouver) installed in 1998. The disinfectant dosages are monitored at the regional chlorination facilities using on-line potentiometric chlorine analyzers. **Figure 1** shows an aerial shot of Metro Vancouver's source water.



Figure 1 - Metro Vancouver Source Watershed (photo credit: metrovancouver.org)

SOURCE WATER QUALITY MONITORING

Metro Vancouver undertakes comprehensive biological and chemical monitoring of the water while it is in their system. Source water monitoring recommended in the WQMRP includes monitoring for: Total Coliform, *E. Coli*, Heterotrophic Plate Count (HPC), turbidity, pesticides, herbicides, all chemical parameters listed in the *Guidelines for Canadian Drinking Water Quality*, and *Giardia* and *Cryptosporidium* in water at the water supply intakes. In addition, Metro Vancouver also monitors its transmission mains and reservoirs for indicator organisms (Total Coliforms, *E. Coli*, and HPC), and a limited number of chemicals (free chlorine residual, polycyclic aromatic hydrocarbons (PAH's) and Benzene, Toluene, Ethylbenzene, Xylene (BTEX). The 2014 water quality results for Capilano, Seymour and Coquitlam watersheds can be found in [Appendix B](#).

SOURCE WATER QUALITY REPORTING

The Metro Vancouver staff presented its annual report on 2014 source water quality to the Metro Vancouver Utilities Committee on May 28th, 2015 to meet the requirement for water suppliers as per the *Drinking Water Protection Regulation* and as described in the Water Quality Monitoring and Reporting Plan. Summary and highlights of the region's water quality monitoring for 2014 can be found in their publication "The Greater Vancouver Water District Quality Control Annual Report 2014, Volume I" ([Appendix B](#)) and Volume II provides Chemical and Physical Monitoring results (full tabulation of data). In an effort to reduce paper usage, the printing of Volume II has been limited by Metro Vancouver to provide hard copy to specific individuals. Volume II will be made available to others if requested, either in hard copy or electronically. Requests for Volume II should be directed to the Water Quality Enquiry Line at 604-451-6010. This publication will be available at public libraries and posted in the Metro Vancouver's web site www.metrovancouver.org by the end of June 2015.

WATER CONSERVATION

Here in Burnaby, surrounded by waterways and with our mild, wet winters, it's easy to forget that water is a precious and limited resource. On average, Lower Mainland residents use more than 340 L per day for activities such as washing dishes and clothes, showering, flushing toilets, lawn sprinkling and other outside activities. With our climate and accessible resources, it's easy to take water for granted.

Water conservation is important for:

- Ensuring sufficient drinking water supplies through the year, for when low snow-pack levels and long, hot summers prevent our reservoirs from a full recharge. The Capilano, Seymour and Coquitlam reservoirs are filled by rain and snowmelt
- Meeting the demands of a growing population and delaying (or eliminating) the need for costly upgrades in the future
- Reducing waterfront pollution by minimizing how much waste water is generated

How do you use your water?

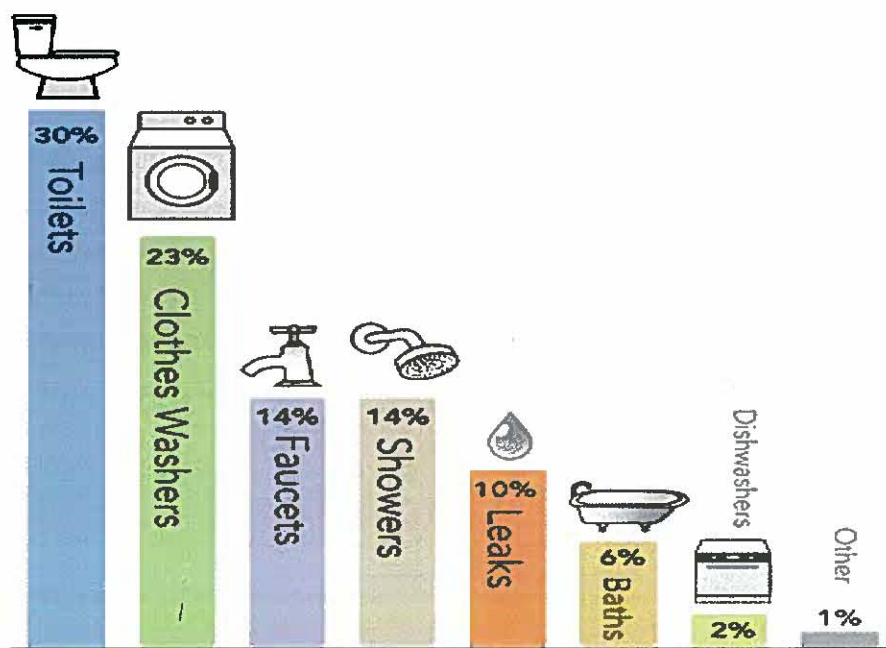


Figure 2 – How do you use your water? (image from Metro Vancouver)

The City of Burnaby encourages residents to use water sustainably to protect our water supply, conserve energy, and help reduce personal utility costs. Water use can typically be reduced with a few simple changes:

- Turn off the tap while brushing your teeth or washing dishes.
- Use a City Rain Barrel to collect rain water for use in gardens and planters.
- Water lawns sparingly or not at all. This saves up to 17,000 litres of water per household over the summer months.
- Use Spring-loaded garden hose nozzles. This saves 23 litres of water per minute.
- Wash Full loads and use shorter cycles when doing laundry. This will save 95 litres of water per load.
- Use low-flow toilets and save six to 14 litres of water per flush.
- Toilet inserts save up to 100 litres of water per day.
- Use aerator and flow restrictors on the kitchen tap to save up to 20 litres of water per day.
- Fix leaks in kitchen and bathroom taps and save 47 litres of water per day

Water Conservation in a Rainforest?

Metro Vancouver gets a lot of rain throughout the year (over 1 metre per year in some regions) except during the months of July, August and September. At the same time these are the months the water demand increases, in part, due to watering our lawns which can create a shortage of fresh water. A healthy lawn needs only one hour of rain or sprinkling per week. The City of Burnaby and other member municipalities of Metro Vancouver have Lawn Sprinkling Regulations in place to help conserve water in the summer months, when we use water faster than our reservoirs can refill. More details on the Lawn Sprinkling Restrictions are available at www.burnaby.ca.

DISTRIBUTION SYSTEM

The City receives its treated water from Metro Vancouver and distributes it through a series of reservoirs and a network of pipes to the consumers. In order to ensure potability of the water at the point of supply, the City has a comprehensive program consisting of water quality monitoring, routine uni-directional flushing of water mains, cross-connection control and reservoir exercising.

INFRASTRUCTURE

The City's water system consists of four water pump (or booster) stations, four active water storage reservoirs (storage capacity 13.0 ML), twenty (20) pressure reducing stations, twenty-one (21) pressure zones and over 700 km of watermains valued at over \$490 M.

The City has a water main replacement program (average age of pipe is 29 years) to replace aging water mains at a rate of about 2% a year (approximately 15km per year), and a program to install dedicated sampling kiosks at sampling locations.

CROSS CONNECTION CONTROL PROGRAM

The City's cross connection control program works to ensure the potable water supply is protected from contamination in the event of back siphonage or back pressure. The City requires that appropriate backflow preventers are installed and tested annually as prescribed in the City of Burnaby Plumbing Bylaw #11148. Regulations for the cross connection control can be found in the British Columbia Plumbing Code.

WATER QUALITY MONITORING PROGRAM

In 2014, there were 63 water quality sample locations in Burnaby (detailed in [Appendix A](#)). These sample locations were selected on the basis of determining water quality in various pressure zones, dead ends, reservoirs, feed lines from the Metro Vancouver water mains, residences and institutions. These locations were grouped into four routes for sample collection purpose. Water samples were collected on average twice a week on a 2 week sample location cycle. At the time of sample collection, free chlorine residual, turbidity and temperature of water were measured using field test kits. In addition, Metro Vancouver also collected water samples from 15 sites from its transmission mains in the City (detailed in [Appendix A](#)).

The collected samples were submitted to the Metro Vancouver Laboratory for analysis. The Metro Vancouver Laboratory is a member of the Canadian Association of Environmental Analytical Laboratories (CAEAL), is accredited by the Standards Council of Canada (SCC) and is also approved by the Provincial Medical Health Officer for potable water testing.

A total of **3,032** routine drinking water samples were obtained in 2014 for bacteriological analysis. These included **1,624** samples collected from City sample sites and **1,408** samples collected from Metro Vancouver transmission line sites located within the City boundary (see [Appendix A](#) for details). The average number of samples collected for bacterial monitoring by the City every month was over 135 and is well above the 103 monthly sample requirement stipulated in the B.C. Drinking Water Protection Regulation for Burnaby's population size.

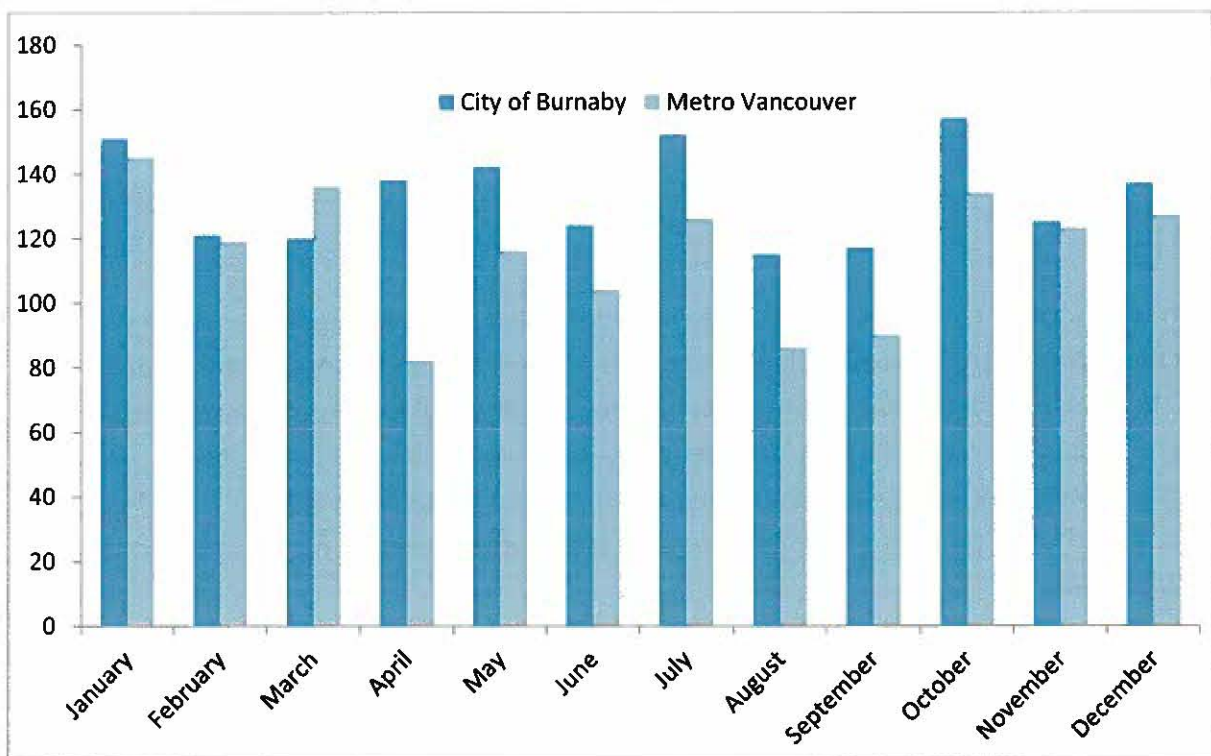


Figure 3 - Number of Monthly Routine Samples Taken in 2014

The water sampling frequency for microbiological characterization of the potable water is stipulated in Schedule B of *Guidelines for Canadian Drinking Water Quality* to be as follows:

Table 1- Schedule B – Frequency of Monitoring Samples for Prescribed Water Supply Systems	
Population Served	Number of Samples Per Month
Less than 5,000	4
5,000 to 90,000	1 per 1,000 of population
More than 90,000	90 plus 1 per 10,000 of population in excess of 90,000

From a reporting perspective, FHA was provided with the drinking water quality results directly by the Metro Vancouver laboratory at the same time as the results were sent to the City. It is to be noted that information regarding sampling locations, sample frequency, sample collection methodology, sample parameters and the laboratory to be used for sample analysis were submitted and accepted by the regulatory agency. Furthermore, Fraser Health Authority also collects water samples from City kiosks for audit purposes on a regular basis.

PHYSICAL PARAMETERS

The physical parameters tested for in the City's water distribution system include temperature and turbidity.

TEMPERATURE

Water temperature in the distribution system is dependent on the seasonal temperature variation experienced by the source water. The *Guidelines for Canadian Drinking Water Quality* set the aesthetic objective at less than 15°C for drinking water temperature. Temperatures above 15°C can impact aesthetic properties of taste, colour and odour. Temperature is also related to the microbiological characteristics of drinking water through

its effect on water treatment processes, especially disinfection, and its effect on the growth and survival of micro-organisms.

The average water temperature in the distribution system remained well below the aesthetic maximum objective of 15°C throughout most of the year. The average temperature peaked in August at 17.2°C. However, water quality samples did not show an increase in bacteriological growth, indicating that effective chlorine disinfection was achieved.

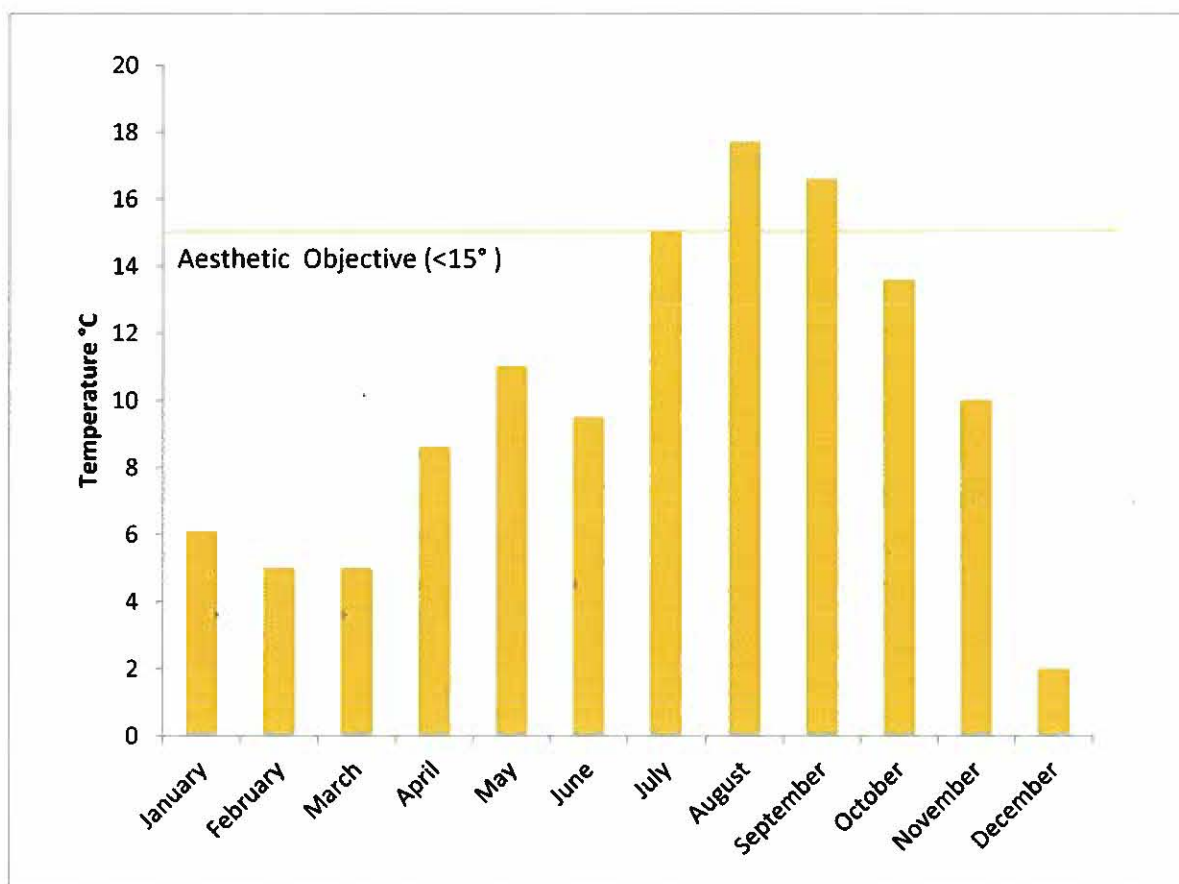


Figure 4 – 2014 Average Monthly Water Temperatures in the Distribution System

TURBIDITY

Turbidity is a measure of the relative clarity or cloudiness of water caused by fine suspended matter such as clay, silt and organics. Turbidity is not a direct measure of these particles, but

rather a general measure of the effect these particles have on light. Elevated turbidity may be attributed to source water conditions or other transient activities which causes a change in the water pressure or flow in the system. These activities include construction, watermain flushing, watermain breaks, or a sudden increase in water usage (i.e. firefighting). In an event that a sample indicated a high turbidity reading, follow up with the FHA and immediate flushing of applicable watermain(s) and re-sampling would be undertaken as appropriate.

In 2014, the majority (99.0%) of the samples obtained had turbidity <1 NTU. Twelve (12) samples (0.7%) had turbidity between 1-2 NTU, three (3) samples (0.18%) had turbidity between 2-3 NTU, one (1) sample (0.01%) had turbidity between 3-5 NTU and one (1) sample (0.01%) had a turbidity >5 NTU. The average turbidity in Burnaby's water system is seasonally constant as shown in **Figure 5** below.

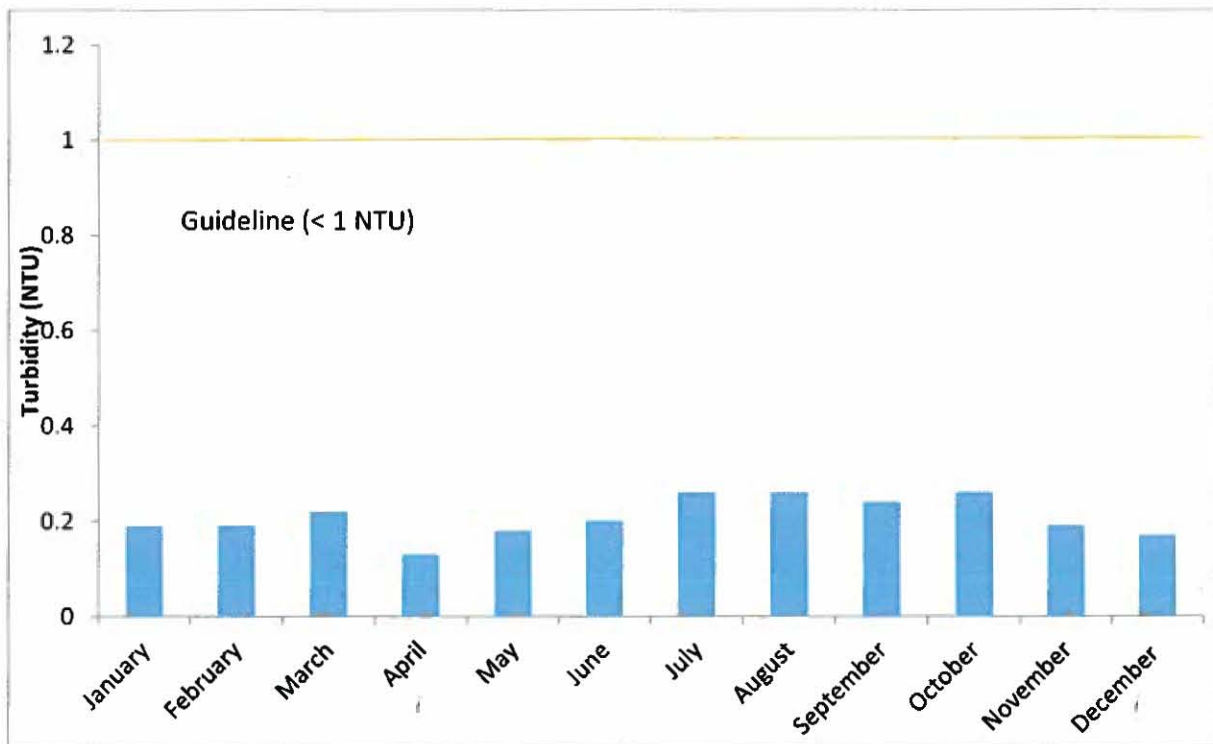


Figure 5 - 2014 Monthly Average Turbidity Levels in the Distribution System

CHEMICAL PARAMETERS

Water in the City's distribution system is also tested for chemical parameters of pH, chlorine, disinfection by-products (Haloacetic Acids and Total Trihalomethanes), metals and vinyl chloride.

PH

The pH levels of water at the select sample location were representative of the pH of source water. The water sample was 7.1, meeting the Aesthetic Objective of 6.5 to 8.5 noted in the *Guidelines for Canadian Drinking Water Quality*.

CHLORINE RESIDUAL

Chlorine is used to disinfect the water and safeguard against any microbial re-growth or contamination in the distribution system. The *Guidelines for Canadian Drinking Water Quality* recommends a minimum chlorine residual of 0.2 mg/L.

Sixty-one of the sixty-three sampling stations achieved the objective of 0.2 mg/L or above in 2014 on average. Sampling stations that experience temporary lower residual chlorine are largely due to low flow/use through the distribution system. The City maintains the residual chlorine levels in these areas by frequent flushing of the watermains to enhance flow.

DISINFECTION BY-PRODUCTS

Disinfection by-products are compounds formed by the interaction between chlorine and naturally occurring organic substances in the water such as decaying leaves and vegetation that enter the source water naturally.

The disinfection by-products, measured as Trihalomethanes and Haloacetic Acid were found to be below the Maximum Acceptable Concentration (MAC) value of 100 parts per billion and 80 parts per billion, respectively noted in the *Guidelines for Canadian Drinking Water Quality* (Table 2).

TABLE 2: Burnaby Drinking Water Disinfection By-Products Results (2014)

Sample Site	Sample Date	THM (ppb)					HAA (ppb)							
		Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroform	Total Trihalomethanes	Total THM Quarterly Average	Dibromoacetic Acid	Dichloroacetic Acid	Monobromoacetic Acid	Monochloroacetic Acid	Trichloroacetic Acid	Total Haloacetic Acid	Total HAA Quarterly Average
BUR-561K	07/03/2014	<1	<1	<1	20	20.5	31	<0.5	8	<1	6	7	22	34
	06/06/2014	<1	<1	<1	52	51.9	31	<0.5	25	<1	5	28.9	59.1	37
	04/09/2014	<1	<1	<1	47	47.2	36	<0.5	21	<1	7	45.3	73.9	43
	20/11/2014	<1	<1	<1	27	27.2	37	<0.5	11	<1	4	13.3	30	46
BUR-584K	07/03/2014	<1	<1	<1	31	31.2	25	<0.5	15	<1	9	16.4	41.6	31
	06/06/2014	<1	<1	<1	18	18.6	25	<0.5	7	<1	4	5.9	17.5	30
	04/09/2014	1	<1	<1	29	30.6	26	<0.5	15	<1	8	14.2	39.2	30
	20/11/2014	<1	<1	<1	24	24.5	26	<0.5	10	<1	4	11.2	26.3	31
BUR-586K	07/03/2014	<1	<1	<1	21	21.2	25	<0.5	8	<1	6	5.4	19.7	25
	06/06/2014	<1	<1	<1	20	20.4	25	<0.5	7	<1	4	8.5	20.3	26
	04/09/2014	1	<1	<1	35	35.8	25	<0.5	8	1	4	17.3	30.3	23
	20/11/2014	<1	<1	<1	26	26.6	26	<0.5	9	<1	4	10.6	23.8	24
BUR-598K	07/03/2014	1	<1	<1	32	33.7	37	<0.5	1	<1	<2	11.7	15.7	13
	06/06/2014	<1	<1	<1	34	35.2	36	<0.5	2	<1	<2	13.9	18.9	13
	04/09/2014	2	<1	<1	36	37.3	34	<0.5	3	<1	<2	13.7	18.9	14
	20/11/2014	<1	<1	<1	20	20.5	32	<0.5	12	<1	4	16.6	33.1	22

METALS

Drinking water samples from six stations were tested for metals on two different occasions. None of the sample results exceeded any guideline values stipulated in the *Federal Guidelines for Canadian Drinking Water Quality* (Table 3).

TABLE 3: Burnaby Drinking Water Total Metal Sampling Results (2014)

Site	BUR-561K		BUR-570K		BUR-576K		Guidelines ¹	
	13/05/14	14/11/14	13/05/14	14/11/14	13/05/14	14/11/14	Max.	Aesthetic
Aluminum	26	40	62	46	29	47	NA	NA
Antimony	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	NA
Arsenic	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	NA
Barium	3.2	3.2	2.6	3.3	3.2	3.3	1000	NA
Boron	<10	<10	<10	<10	<10	<10	5000	NA
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	5	NA
Calcium	3770	3330	2120	3230	3690	3340	NA	NA
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	50	NA
Cobalt	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Copper	18.7	27.5	8.0	9.4	2.8	5.5	NA	<1000
Iron	6	5	33	7	5	13	NA	<300
Lead	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	NA
Magnesium	158	139	127	138	160	135	NA	NA
Manganese	0.7	0.9	2.0	2.0	1.7	3.3	NA	<50
Mercury	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1	NA
Molybdenum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Nickel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Potassium	158	159	136	155	154	156	NA	NA
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	NA
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Sodium	1300	1780	3610	1510	1290	1460	NA	<200000
Zinc	3.8	4.7	<3.0	3.5	4.4	3.2	NA	<5000

NA – No Current Guideline Available ¹ Canadian Drinking Water Quality Guidelines

TABLE 3: Burnaby Drinking Water Total Metal Sampling Results (2014)

Site	BUR-582K		BUR-586		BUR-592K		Guidelines ¹	
	13/05/14	14/11/14	13/05/14	14/11/14	13/05/14	14/11/14	Max.	Aesthetic
Aluminum	55	56	28	39	31	44	NA	NA
Antimony	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	NA
Arsenic	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	NA
Barium	2.8	3.3	3.2	3.2	3.2	3.3	1000	NA
Boron	<10	<10	<10	<10	<10	<10	5000	NA
Cadmium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	5	NA
Calcium	2530	3070	3650	3530	3700	3370	NA	NA
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	50	NA
Cobalt	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Copper	9.4	14.5	17.5	26.8	8.4	4.2	NA	<1000
Iron	30	12	17	14	8	6	NA	<300
Lead	0.5	0.6	<0.5	<0.5	<0.5	<0.5	10	NA
Magnesium	132	134	148	129	161	135	NA	NA
Manganese	2.8	2.4	1.7	0.9	2.6	3.6	NA	<50
Mercury	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1	NA
Molybdenum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Nickel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Potassium	138	156	156	162	155	159	NA	NA
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	NA
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Sodium	3020	2190	1400	1550	1300	1480	NA	<200000
Zinc	<3.0	7.8	5.8	7.1	3.4	<3.0	NA	<5000
NA – No Current Guideline Available ¹ Canadian Drinking Water Quality Guidelines								

VINYL CHLORIDE

Vinyl chloride samples were not taken in 2014. However, historical data for water samples tested for vinyl chloride has been below guideline values of 2.0 µg/L stipulated in the *Guidelines for Canadian Drinking Water Quality*.

BACTERIOLOGICAL QUALITY

The bacteriological monitoring conducted regularly by the City includes testing for heterotrophic plate count (HPC), total coliform and E.coli.

HETEROTROPHIC PLATE COUNT

Heterotrophic Plate Count (HPC) is measured to monitor the system for early bacterial re-growth in the water distribution system. The annual average levels of HPC have been decreasing over the last ten years (Figure 4). While bacteriological re-growth in late summer and fall period is still occurring (due to warmer water temperatures), it is to a much lesser extent than in previous years. Continued effort in unidirectional flushing of water mains and maintaining free chlorine residual objective of 0.2 mg/L helps keeping the low HPC levels.

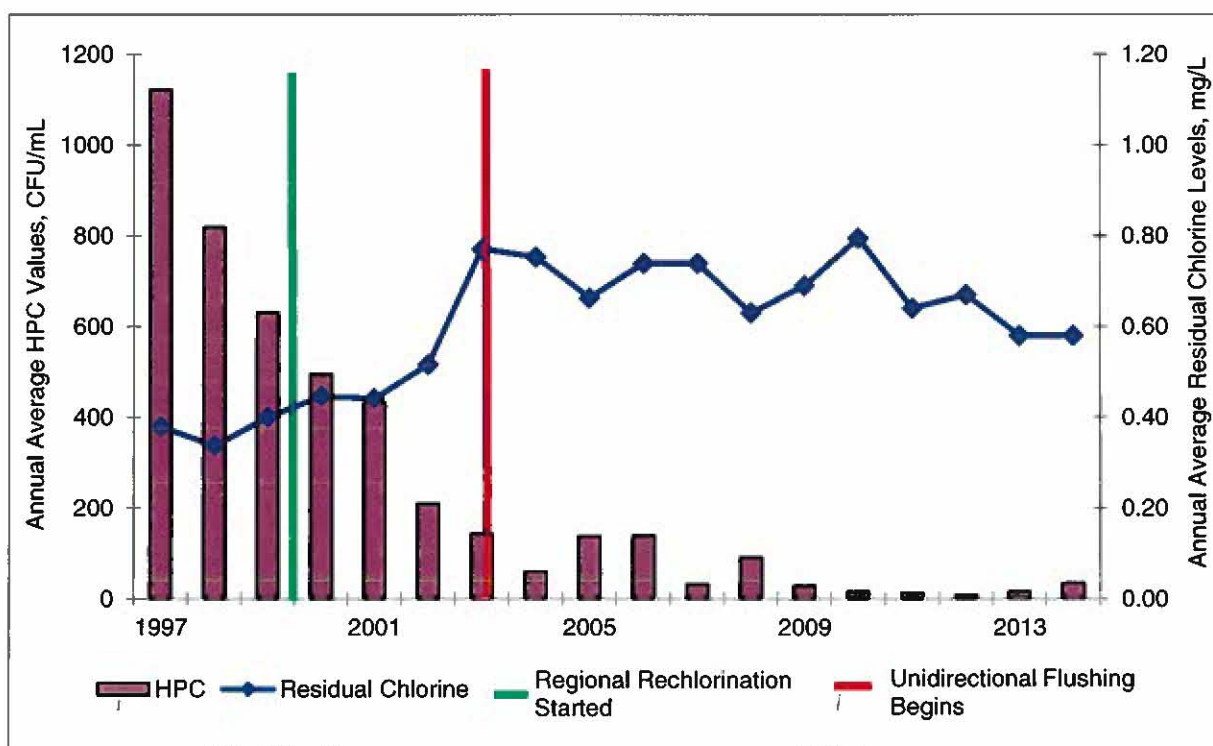


Figure 6- Improvements in Water Quality in Distribution System (1997-2014)

TOTAL COLIFORM AND E.COLI

For a waterworks system to be in compliance, the potable water sample must meet the following standards set out in Schedule A of the BCDWPA for the parameter tested:

Table 4: Schedule A – Water Quality Standards for Potable Water	
Parameter	Standard
Fecal coliform bacteria	No detectable fecal coliform bacteria per 100 ml
<i>Escherichia coli</i>	No detectable <i>Escherichia coli</i> per 100 ml
Total coliform bacteria	a) No more than 10% of the samples in a 30 day period should be positive for total coliform bacteria when more than one sample is collected b) No sample should contain more than 10 total coliform bacteria per 100 mL

Overall, the bacteriological water quality complied with the *BC Drinking Water Protection Regulations* with the exception of the following one event which was subsequently followed up on and brought into compliance with the regulations:

One drinking water sample obtained on August 12, 2014 from a sampling kiosk located at 8300 block Willard Street show the presence of an E. Coli bacteria. In response, staff immediately implemented pre-established protocols for an E. Coli Event. Fraser health Authority (FHA) was notified regarding the sample result. The results off all the drinking water samples taken from the area were reviewed and noted to be in compliance. The watermains in the immediate area of 8300 block Willard Street were flushed and re-sampled. The supplement samples were found to be in compliance with the *BC Drinking water Protection Regulations*. Based on the follow-up procedures undertaken and the

resultant water quality findings, FHA were satisfied with the actions taken and did not require any additional action.

With respect to Total Coliform, three (3) samples were found to contain Total Coliform but at no time did the percentage of samples tested positive for Total Coliform exceed the 10% stipulated in the *B.C. Drinking Water Protection Regulations* (see [Figure 7](#)). Furthermore, none of the three samples that tested positive for Total Coliforms was greater than 10. As a standard protocol, any sample with greater than 1 Total Coliform would result in resampling. Any sample with greater than 10 Total Coliforms would result in a follow-up with FHA and immediate flushing of applicable water mains and re-sampling.

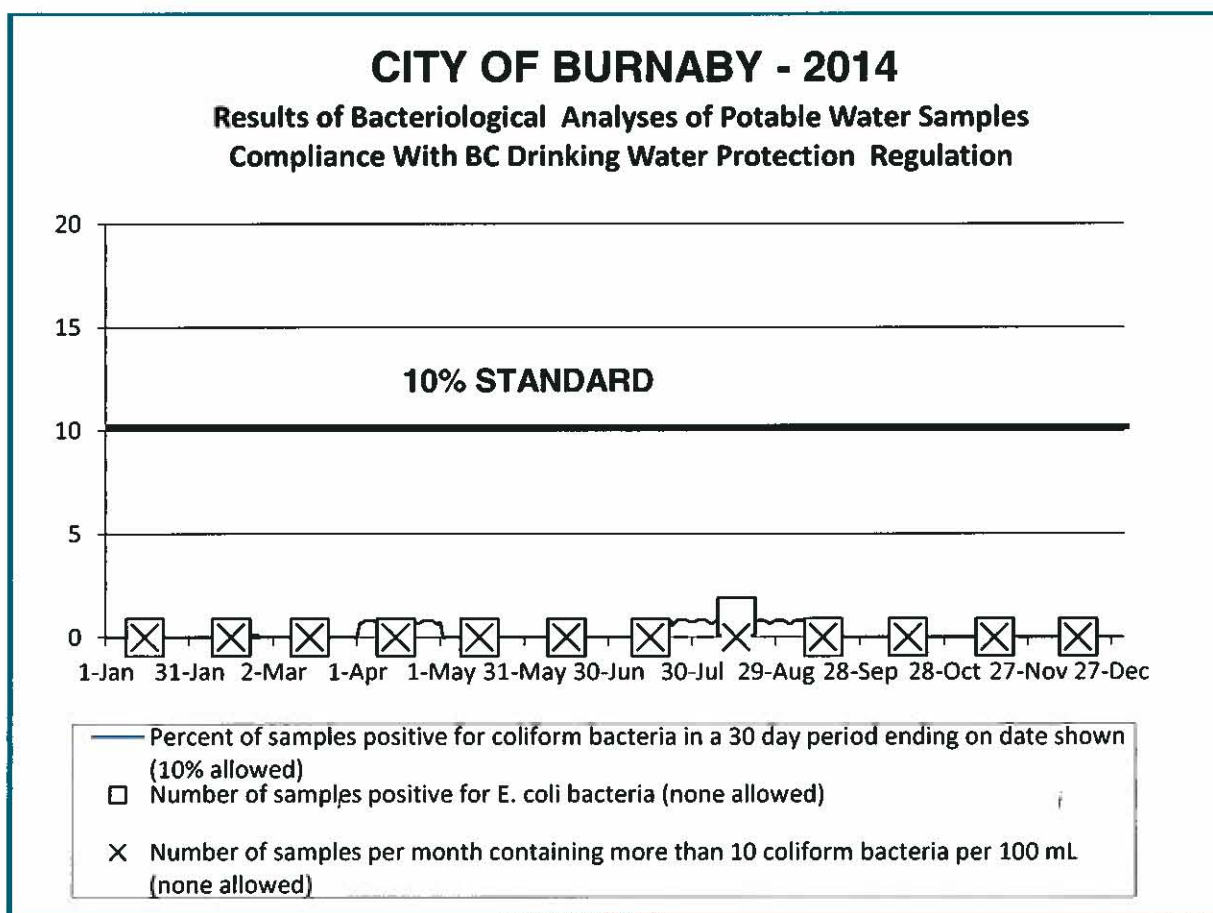


Figure 7 – City of Burnaby – Results of Bacteriological Analyses of Potable Water Samples Compliance with BC Drinking Water Protection Regulation

See **Appendix A** for a complete list of results by sampling location.

WATER UTILITY INCIDENT RESPONSE PLAN

In the event of major emergencies or disasters, the Engineering Department is responsible for restoring/maintaining water utility operations in order to ensure that water quality, quantities and pressures are sufficient for the distribution of drinking water and effective fire fighting. The Water Utility Incident Response Plan is the Engineering Department's action plan to ensure compliance to the legislated requirements under the BC Drinking Water Protection Act and Regulation. Should water utility service be diminished by an emergency or disaster this plan will assist in reducing the impact and ensuring orderly response.

CONCLUSION

The City of Burnaby in partnership with Metro Vancouver consistently deliver clean, safe and aesthetically pleasing drinking water to the residents, businesses and visitors in Burnaby. In 2014, the physical, chemical and bacteriological characteristics of the water continues to be of high quality and in compliance with applicable regulations and guidelines.

A PUBLIC HEALTH MESSAGE FROM THE FRASER HEALTH AUTHORITY

As per standard recommended water practices, "Water from taps that are not used for several hours is good for washing or watering plants but not for drinking or cooking, as it may contain elevated levels of lead or copper. Run the water for at least one minute, or until the water is cold before using it for drinking or cooking. For the same reason never use water from hot taps for drinking or cooking."

As per the request from the Fraser Health Authority the HealthlinkBC File #56 "*HealthlinkBC File #56- Persons with Compromised or Weakened Immune Systems*", has been attached to the Annual Drinking Water Quality Report.