

Drinking Water Annual Report -2014

City of Quesnel Water System

PURPOSE

The City of Quesnel annual water report describes the water system and provides a summary of quality testing and water management during 2014. It is a requirement under the British Columbia Drinking Water Regulations Drinking Water Protection Act.

WATER SYSTEM OVERVIEW

The City of Quesnel water system is comprised of 6 operating groundwater wells (main system), 8 reservoirs, 5 booster pump stations, 2 main PRV stations and approximately 100 km of water main. In addition the City also maintains one independent groundwater well on Sword Road (small system) in South Quesnel to provide water to the ball parks. At present there is no treatment or disinfection provided to the City's water system. Approximately 10,500 residents are serviced by the City water system. In 2014, there was 2,951,039 cubic meters of water used.

WATER MANAGEMENT

The SCADA monitoring system enables City staff to observe real-time data and information of changing water system conditions which includes well operation and reservoir levels. System operators have the ability to remotely respond to system conditions and demands. Should an alarm arise in the water system which requires response from an operator; the SCADA will contact the operator by pager and cell phone to report the condition. This reduces failure of equipment as well as increases pumping efficiency. Upgrades to the SCADA are ongoing as equipment becomes obsolete and communications between stations require updates to operate effectively. As Telus continues elimination of copper data lines, the City SCADA has been updating to radio communication between the Utilities office and water wells/pumping stations.

The water system emergency plan is updated annually. Operating procedures continue to be reviewed in order to improve reliability of the distribution network. It is critical to the system to maintain pumps and equipment to a high standard which avoids costly failures.

Water system operators are certified under the Environmental Operators Certification Program. In order to maintain certification, operators must receive 24 hours of approved training in every two year period and achieve a minimum of 70% on written examinations.

A new roof was constructed on Shadow Heights reservoir in 2014 in order to protect the integrity of the water system.

WATER MONITORING

To ensure the delivery of safe drinking water, the City has a program to monitor water quality at the source.

Historically, drinking water quality within the City has been monitored in consultation with the Provincial Health Inspector. The responsibility to ensure safe drinking water has been assisted by the adoption of the "British Columbia Drinking Water Regulations" by the province in May 2003. In accordance with these regulations, the City has developed a drinking water quality monitoring program to follow best practice.

The City sends water samples to an approved lab in Kelowna for all sampling points. Samples have also been received directly by Northern Health. There is direct contact between the City and lab on results and concerns. Our local Drinking Water Officer, as well as the Public Health Engineer at Northern Health Authority, also have access to these results. From the laboratory, the results are downloaded directly to Water Trax, the City's water quality database.

The sampling parameters used to monitor potability are listed in the Guidelines for Canadian Drinking Water Quality (GCDWQ) and the British Columbia Drinking Water Regulations (BCDWR). These sampling parameters are used as indicators for bacteriological, chemical and physical contaminants.

Sampling frequency is also important in obtaining an accurate overview of water quality within the distribution system. As a minimum, the number of samples to be taken of the source and distribution system as required by provincial regulations, are based on population. The minimum number of samples to be taken for the City of Quesnel's approximately 10,500 people is 13 per month. The City exceeds that number of monthly samples. The City samples 16 individual sites bi-weekly, for total coliforms, E. Coli, heterotrophic plate count and turbidity. As well, all reservoirs and wells are tested on a monthly basis for bacterial contaminants. In addition to the bacteriological parameters, additional testing is done for chemical & physical contaminants.

WATER QUALITY

Samples are taken at the start, middle and end of the entire City water distribution system. Lab results are transmitted to the City via email, as well as to the Drinking Water Officer. Results are then downloaded into the City's water quality database, Water Trax.

If it is observed during testing that certain parameters exceed the limits specified in the GCDWQ or BCDWR guidelines, a procedure is in place for retesting and notification of any results or conditions that render or could render the water unfit to drink.

The standard protocol when a water sample is found to contain the presence of coliforms, however minute, is to resample the water immediately at the same location and resubmit for testing. The provincial Environmental Health Officer will determine if any action by the City is necessary only after a second test also shows the presence of coliforms.

In accordance with the regulations of our operating permit, the City has a plan in effect to respond to emergencies to ensure the delivery of safe drinking water to all its residents.

In 2014, 340 samples were tested for E.Coli with zero exceedences. There were 346 samples tested for total coliform with eight exceedences. ("Attachment "B") The results of subsequent testing at these sites had no detect of coliform.

Complaints regarding water quality are addressed and followed up on a case by case basis. The majority of customer complaints are of "dirty" or black water. This is due to manganese found in the City water which adheres to pipe walls in the distribution system until it is disturbed or breaks free. Homeowners are advised to run a cold tap until the water clears. In some cases the City will flush the mains through a hydrant or blowoff. All mains are flushed each fall to remove mineral scale and buildup in the lines in addition to ensuring proper operation and maintenance of all City fire hydrants.

There are occasional complaints of cold water smelling like rotten eggs or sulfur. This is caused from the City water having a reaction with the small diameter "feed line" tubing which connects the household plumbing to the faucet under the sink. It is most common in homes that have new or recently upgraded taps or plumbing fixtures. A corrective measure for this is suggest homeowners replace the feed lines with metal tubing such as copper or alternatively clean the lines with sodium hypochlorite (household bleach), then rinse and reinstall.

City of Quesnel Bylaw 1567 of 2004 was adopted in 2005 to ensure provisions for the elimination of cross connections between potable water and any non potable source. The City has two Certified Backflow Assembly Testers on staff who annually test assemblies in City parks and the City water supply system to protect against potential backflows and cross connections. They also install backflow prevention devices which are a secondary line of defence for backflow prevention.

It is the responsibility of the owner or operator of private buildings to install and test the approved backflow assembly upon installation and annually thereafter by a certified tester. Following the test a copy of the report is to be forwarded to the City of Quesnel. This program has not been completely implemented as there is a lack of resources and staff to track and account for these assemblies. What staff time is available is focused on communication with contractors/plumbers and high risk users. The main group addressed is industrial, commercial and institutions. Utilities staff communicate and keep a watchful eye out for any potential cross connection.

CONCLUSION

The 2014 City of Quesnel Water System Annual Report is presented to Council as required by the British Columbia Drinking Water Regulations Drinking Water Protection Act. It has been established as a requirement to ensure accountability to the community for the water service provided. In order to meet the terms and conditions of the City's Water System Operating Permit issued by the BC Drinking Water Officer, this report is made available to the public.

Additional information may be obtained from the City of Quesnel Utilities Department at 250-992-6330, attention: Chris Coben, Utilities Superintendent.

Attachment "A" contains:

- a list of the sampling point sites and the parameters tested for the City of Quesnel

Attachment "B" contains:

- Water sampling result summary reports for 2014 on both of the City's water systems; Main System, & Small System (on Sword Road).

LINKS:

The Health Canada website (www.hc-sc.gc.ca) contains "Summary of Guidelines for Canadian Drinking Water Quality", which Health Canada publishes on current guidelines and updates each spring on their website.

Attachment "A"

City of Quesnel Water Quality Monitoring Program		
Page 1 of 2		
SITE	LOCATION	PARAMETERS
BI-WEEKLY (Distribution System)		
FIRST WEEK		
Water Trax Locator #		
94 E4	Airport	Parameters: Total coliforms, Ecoli, HPC’s, turbidity, temp
94 E5	Mills Rd	
94 E7	Marsh Dr	
94 E8	Graham Avenue	
94 E9	West Fraser Rd	
94 FO	Pederson Rd	
94 EF	Carson Pit	
179 CA	Dennis Road	
THIRD WEEK		
94 E6	Carradice Rd	Parameters: Total coliforms, Ecoli, HPC’s, turbidity, temp
94 F1	Dixon St	
94 F2	Front St – Hospital	
94 F3	Nason St	
94 F4	N. Star Dragon Hill	
94 F6	N Star South Hill	
94 F7	Chew Rd	
21 D9B	Bulk Water on North Star	
MONTHLY (Reservoirs)		
94 EA	R-1 Shadow Heights	Parameters: Total coliforms, Ecoli, Temp
94 F9	R-2 Pinecrest	
94 FA	R-3 Sugar Loaf	
94 EB	R-4 Abbott Dr 1	
94 EC	R-4 Abbott Dr 2	
94 FC	R-5 Dragon Hill	
94 FF	R-6 New Tatchell Reservoir	
MONTHLY (Wells)		
94 ED	Well A Sword Rd	Parameters: Total coliforms, Ecoli, Temp
94 D1	Well 3 Rolph at Roddis	
94 DC	Well 6 Rolph at Robertson	
94 EO	Well 7 N. Fraser Dr	
94 E1	Well 8 Hilborn Rd	
94 DF	Well 9 Carson Sub	
28000	Well 10 Hilborn Rd	

City of Quesnel
Water Quality Monitoring Program

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SEMI - ANNUALLY (Distribution System) (first week April & Oct)		
94 E5	Mills Rd (94E5)	Parameters: Copper, Zinc, Lead, Iron, Vinyl chloride, Manganese, Temperature
94 FO	Pederson Rd (94F0)	
ANNUALLY (Wells)		
94 ED	Well A Sword Rd	Parameters: Enhanced Potability , Metals, Langelier saturation index (LSI) Volatile Organic Compounds, Temp.
94 D1	Well 3 Rolph at Roddis	
94 DC	Well 6 Rolph at Robertson	
94 EO	Well 7 N. Fraser Drive	
94 E1	Well 8 Hilborn Rd	
94 DF	Well 9 Carson Sub	
28000	Well 10 Hilborn Rd	

Attachment "B"

Water sample result reports (in pdf format):

- **2014 Quesnel Main System Coliform/Ecoli Summary**
- **2014 Quesnel Small System Coliform/Ecoli Summary**
- **2014 Quesnel Main System Coliform/Ecoli Exceedences**
- **2014 Quesnel Small System Coliform/Ecoli Exceedences**
- **2014 April Semi-Annual Summary on Main**
- **2014 October Semi-Annual Summary on Main**
- ***2014 Week 3 –Coliform/HPC - Northern Health (subsequent test)***

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Facility: Distribution System
Sampling Point: Bulk Water Site #1 (7-15-QC, 21D9B)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility: Distribution System
Sampling Point: S- Airport (7-1-MR, 94E4)

Escherichia coli / E. coli (counts)

# samples: 10	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 10	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 10	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

non-detects: 10
of Exceedences: 0

Geometric Mean: n/a (based on 0 numerical results)

Facility: Distribution System
Sampling Point: S- Carradice Rd (7-3-MR, 94E6)

Escherichia coli / E. coli (counts)

samples: 13
detects: 0
non-detects: 13
of Exceedences: 0

min: < 1 CFU/100mL
max: < 1 CFU/100mL
Geometric Mean: n/a (based on 0 numerical results)

Total coliforms (counts)

samples: 13
detects: 2
non-detects: 11
of Exceedences: 2

min: < 1 counts/100mL
max: 2 counts/100mL
Geometric Mean: 1.414 counts/100mL (based on 2 numerical results)

Facility: Distribution System
Sampling Point: S- Chew Rd (7-13-MR, 94F7)

Escherichia coli / E. coli (counts)

samples: 9
detects: 0
non-detects: 9
of Exceedences: 0

min: < 1 CFU/100mL
max: < 1 CFU/100mL
Geometric Mean: n/a (based on 0 numerical results)

Total coliforms (counts)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

# samples: 9	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 9	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- Dennis Road (7-14-MD, 179CA)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 2	max: 2 counts/100mL
# non-detects: 9	Geometric Mean: 1.414 counts/100mL (based on 2 numerical results)
# of Exceedences: 2	

Facility:	Distribution System
Sampling Point:	S- Dixon (7-8-MR, 94F1)

Escherichia coli / E. coli (counts)

# samples: 9	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 9	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Total coliforms (counts)

# samples: 9	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 9	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- Marsh Drive (7-4-MD, 94E7)

Escherichia coli / E. coli (counts)

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- Mills Rd (7-2-MR, 94E5)

Escherichia coli / E. coli (counts)

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

of Exceedences: 0

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- N. Star Dragon Hill (7-11-MD, 94F4)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- N.Star South Hill (7-12-MD, 94F6)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
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2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- Nason (7-10-MD, 94F3)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- Pederson Rd (7-7-MD, 94F0)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Escherichia coli / E. coli (counts)

# samples: 14	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 14	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 14	min: < 1 counts/100mL
# detects: 2	max: 12 counts/100mL
# non-detects: 12	Geometric Mean: 3.464 counts/100mL (based on 2 numerical results)
# of Exceedences: 2	

Facility:	Distribution System
Sampling Point:	S- West Fraser Rd (7-6-MR, 94E9)

Escherichia coli / E. coli (counts)

# samples: 7	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 7	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 7	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 7	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Facility: Distribution System
Sampling Point: S-Graham Ave (7-5-MD, 94E8)

Escherichia coli / E. coli (counts)

# samples: 10	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 10	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 10	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 10	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility: Distribution System
Sampling Point: S-Hospital (7-9-MD, 94F2)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

of Exceedences: 0

Facility: Reservoirs
Sampling Point: R-1 Shadow Heights (8-1-MR, 94EA)

Escherichia coli / E. coli (counts)

samples: 11 min: < 1 CFU/100mL
detects: 0 max: < 1 CFU/100mL
non-detects: 11 Geometric Mean: n/a (based on 0 numerical results)
of Exceedences: 0

Total coliforms (counts)

samples: 11 min: < 1 counts/100mL
detects: 0 max: < 1 counts/100mL
non-detects: 11 Geometric Mean: n/a (based on 0 numerical results)
of Exceedences: 0

Facility: Reservoirs
Sampling Point: R-2 Pinecrest (8-4-MR, 94F9)

Escherichia coli / E. coli (counts)

samples: 12 min: < 1 CFU/100mL
detects: 0 max: < 1 CFU/100mL
non-detects: 12 Geometric Mean: n/a (based on 0 numerical results)
of Exceedences: 0

Total coliforms (counts)

samples: 12 min: < 1 counts/100mL

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

# detects: 1	max: 1 counts/100mL
# non-detects: 11	Geometric Mean: 1.000 counts/100mL (based on 1 numerical results)
# of Exceedences: 1	

Facility:	Reservoirs
Sampling Point:	R-3 Sugarloaf (8-5-MR, 94FA)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Reservoirs
Sampling Point:	R-4 Abbott Dr 1 (8-2-MR, 94EB)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Reservoirs
Sampling Point:	R-4 Abbott Dr 2 (8-3-MR, 94EC)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Reservoirs
Sampling Point:	R-5 Dragon Hill (8-6-MR, 94FC)

Escherichia coli / E. coli (counts)

# samples: 11	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

of Exceedences: 0

Total coliforms (counts)

# samples: 11	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 11	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Reservoirs
Sampling Point:	R-6 New Tatchell Reservoir (8-8-MR, 94FF)

Escherichia coli / E. coli (counts)

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 1	max: 1 counts/100mL
# non-detects: 11	Geometric Mean: 1.000 counts/100mL (based on 1 numerical results)
# of Exceedences: 1	

Facility:	Well 10 Hilborn Rd.; Well No 10
Sampling Point:	Well No 10 Hilborn Rd. (9-1-EP, 28000)

Escherichia coli / E. coli (counts)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Well 3 Rolph at Roddis; Well No 3
Sampling Point:	Well 3 Rolph at Roddis (1-2-EP, 94D1)

Escherichia coli / E. coli (counts)

# samples: 10	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 10	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 10	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 10	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Well 6 Rolph at Robertson; Well No 6
Sampling Point:	Well 6 Rolph at Robertson (3-2-EP, 94DC)

2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Escherichia coli / E. coli (counts)

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Well 7 N. Fraser Dr; Well No 7
Sampling Point:	Well 7 N. Fraser Dr (4-2-EP, 94E0)

Escherichia coli / E. coli (counts)

# samples: 13	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 13	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 13	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 13	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Well 8 Hilborn Rd; Well No 8
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2014 Main System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Sampling Point: Well 8 Hilborn Rd (5-1-EP, 94E1)

Escherichia coli / E. coli (counts)

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility: Well 9 Carson Sub; Well No 9
Sampling Point: Well 9 Carson Sub (6-2-EP, 94DF)

Escherichia coli / E. coli (counts)

# samples: 15	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 15	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 15	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 15	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Result Legend:

P=present, A=absent, PR=presumptive, ND=non-detect, U=non-detect, OR=over-range, OG=overgrown,
TNTC=too numerous to count, NR=no result, NT=not tested, IG=ignore, ER=external report, SC=see comment

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» means detected & greater than number shown

*** Indicates Criteria is exceeded**

2014 Sm System Coliform/Ecoli Summary

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Small System

Facility: Distribution System
Sampling Point: S- Carson Plt (2-1-MR, 94EF)

Escherichia coli / E. coli (counts)

# samples: 12	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 12	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 12	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility: Well A Sword Rd; Well A Sword Rd
Sampling Point: Well A Sword Rd (1-1-EP, 94ED)

Escherichia coli / E. coli (counts)

# samples: 13	min: < 1 CFU/100mL
# detects: 0	max: < 1 CFU/100mL
# non-detects: 13	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Total coliforms (counts)

# samples: 13	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL

non-detects: 13
of Exceedences: 0

Geometric Mean: n/a (based on 0 numerical results)

Result Legend:

P=present, A=absent, PR=presumptive, ND=non-detect, U=non-detect, OR=over-range, OG=overgrown,
TNTC=too numerous to count, NR=no result, NT=not tested, IG=ignore, ER=external report, SC=see comment

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* Indicates Criteria is exceeded

2014 Main System Coliform Ecoli Exceedences

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Facility: Distribution System
Sampling Point: Bulk Water Site #1 (7-15-QC, 21D9B)

Facility: Distribution System
Sampling Point: S- Airport (7-1-MR, 94E4)

Facility: Distribution System
Sampling Point: S- Carradice Rd (7-3-MR, 94E6)

Total coliforms (counts)	Criteria
* 06/04/2014 09:05 2 counts/100mL	<=0, OG, P User-Defined
* 09/24/2014 09:45 1 counts/100mL	<=0, OG, P User-Defined

# samples: 13	min: < 1 counts/100mL
# detects: 2	max: 2 counts/100mL
# non-detects: 11	Geometric Mean: 1.414 counts/100mL (based on 2 numerical results)
# of Exceedences: 2	

Facility: Distribution System
Sampling Point: S- Chew Rd (7-13-MR, 94F7)

Facility: Distribution System
Sampling Point: S- Dennis Road (7-14-MD, 179CA)

Total coliforms (counts)	Criteria
* 08/13/2014 14:35 2 counts/100mL	<=0, OG, P User-Defined
* 08/18/2014 10:30 1 counts/100mL	<=0, OG, P User-Defined

# samples: 11	min: < 1 counts/100mL
# detects: 2	max: 2 counts/100mL
# non-detects: 9	Geometric Mean: 1.414 counts/100mL (based on 2 numerical results)

2014 Main System Coliform Ecoli Exceedences

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

# of Exceedences: 2		results)	
Facility:	Distribution System		
Sampling Point:	S- Dixon (7-8-MR, 94F1)		
Facility:	Distribution System		
Sampling Point:	S- Marsh Drive (7-4-MD, 94E7)		
Facility:	Distribution System		
Sampling Point:	S- Mills Rd (7-2-MR, 94E5)		
Facility:	Distribution System		
Sampling Point:	S- N. Star Dragon Hill (7-11-MD, 94F4)		
Facility:	Distribution System		
Sampling Point:	S- N.Star South Hill (7-12-MD, 94F6)		
Facility:	Distribution System		
Sampling Point:	S- Nason (7-10-MD, 94F3)		
Facility:	Distribution System		
Sampling Point:	S- Pederson Rd (7-7-MD, 94F0)		
Total coliforms (counts)		Criteria	
* 08/13/2014 11:50	12 counts/100mL	<=0, OG, P	User-Defined
* 08/18/2014 13:45	1 counts/100mL	<=0, OG, P	User-Defined
# samples: 14		min: < 1 counts/100mL	
# detects: 2		max: 12 counts/100mL	
# non-detects: 12		Geometric Mean: 3.464 counts/100mL (based on 2 numerical results)	
# of Exceedences: 2			

2014 Main System Coliform Ecoli Exceedences

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Facility:	Distribution System
Sampling Point:	S- West Fraser Rd (7-6-MR, 94E9)
Facility:	Distribution System
Sampling Point:	S-Graham Ave (7-5-MD, 94E8)
Facility:	Distribution System
Sampling Point:	S-Hospital (7-9-MD, 94F2)
Facility:	Reservoirs
Sampling Point:	R-1 Shadow Heights (8-1-MR, 94EA)
Facility:	Reservoirs
Sampling Point:	R-2 Pinecrest (8-4-MR, 94F9)

Total coliforms (counts)	Criteria
* 01/21/2014 09:20	1 counts/100mL <=0, OG, P User-Defined

# samples: 12	min: < 1 counts/100mL
# detects: 1	max: 1 counts/100mL
# non-detects: 11	Geometric Mean: 1.000 counts/100mL (based on 1 numerical results)
# of Exceedences: 1	

Facility:	Reservoirs
Sampling Point:	R-3 Sugarloaf (8-5-MR, 94FA)
Facility:	Reservoirs
Sampling Point:	R-4 Abbott Dr 1 (8-2-MR, 94EB)
Facility:	Reservoirs
Sampling Point:	R-4 Abbott Dr 2 (8-3-MR, 94EC)
Facility:	Reservoirs

2014 Main System Coliform Ecoli Exceedences

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Sampling Point: R-5 Dragon Hill (8-6-MR, 94FC)

Facility: Reservoirs

Sampling Point: R-6 New Tatchell Reservoir (8-8-MR, 94FF)

Total coliforms (counts)

Criteria

* 10/28/2014 13:50 1 counts/100mL <=0, OG, P User-Defined

samples: 12

min: < 1 counts/100mL

detects: 1

max: 1 counts/100mL

non-detects: 11

Geometric Mean: 1.000 counts/100mL (based on 1 numerical results)

of Exceedences: 1

Facility: Well 10 Hilborn Rd.; Well No 10

Sampling Point: Well No 10 Hilborn Rd. (9-1-EP, 28000)

Facility: Well 3 Rolph at Roddis; Well No 3

Sampling Point: Well 3 Rolph at Roddis (1-2-EP, 94D1)

Facility: Well 6 Rolph at Robertson; Well No 6

Sampling Point: Well 6 Rolph at Robertson (3-2-EP, 94DC)

Facility: Well 7 N. Fraser Dr; Well No 7

Sampling Point: Well 7 N. Fraser Dr (4-2-EP, 94E0)

Facility: Well 8 Hilborn Rd; Well No 8

Sampling Point: Well 8 Hilborn Rd (5-1-EP, 94E1)

Facility: Well 9 Carson Sub; Well No 9

Sampling Point: Well 9 Carson Sub (6-2-EP, 94DF)

Result Legend:

P=present, A=absent, PR=presumptive, ND=non-detect, U=non-detect, OR=over-range, OG=overgrown,
TNTC=too numerous to count, NR=no result, NT=not tested, IG=ignore, ER=external report, SC=see comment

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*** Indicates Criteria is exceeded**

2014 Sm System Coliform Ecoli Exceedences

City of Quesnel

01/01/2014 to 12/31/2014 (mm/dd/yyyy)

City of Quesnel – Small System

Facility:	Distribution System
Sampling Point:	S- Carson Plt (2-1-MR, 94EF)

Facility:	Well A Sword Rd; Well A Sword Rd
Sampling Point:	Well A Sword Rd (1-1-EP, 94ED)

Result Legend:

P=present, A=absent, PR=presumptive, ND=non-detect, U=non-detect, OR=over-range, OG=overgrown,
TNTC=too numerous to count, NR=no result, NT=not tested, IG=ignore, ER=external report, SC=see comment

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> means greater than upper detection limit shown
« means detected & less than number shown
» means detected & greater than number shown

* Indicates Criteria is exceeded

2014 Semi Annual Summary April
04/23/2014 to 04/23/2014 (mm/dd/yyyy)

City of Quesnel
City of Quesnel – Main System

Facility: Distribution System
Sampling Point: S- Mills Rd (7-2-MR, 94E5)

Copper (total)
04/23/2014 15:10 0.006 mg/L **Criteria**
 <=1.0 AO

samples: 1 **min:** 0.006 mg/L
detects: 1 **max:** 0.006 mg/L
non-detects: 0 **avg:** 0.006 mg/L (based on 1 numerical results)
of Exceedences: 0

Escherichia coli / E. coli (counts)
04/23/2014 15:10 < 1 CFU/100mL **Criteria**
 <=0, P, PR User-Defined

samples: 1 **min:** < 1 CFU/100mL
detects: 0 **max:** < 1 CFU/100mL
non-detects: 1 **Geometric Mean:** n/a (based on 0 numerical results)
of Exceedences: 0

Heterotrophic Plate Count / HPC
04/23/2014 15:10 < 5 CFU/mL **Criteria**
 <=500 User-Defined

samples: 1 **min:** < 5 CFU/mL
detects: 0 **max:** < 5 CFU/mL
non-detects: 1 **Geometric Mean:** n/a (based on 0 numerical results)
of Exceedences: 0

Iron (total)
04/23/2014 15:10 < 0.10 mg/L **Criteria**
 <=0.3 AO

# samples: 1	min: < 0.10 mg/L
# detects: 0	max: < 0.10 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Lead (total)	Criteria
04/23/2014 15:10 < 0.001 mg/L	<=0.010 MAC

# samples: 1	min: < 0.001 mg/L
# detects: 0	max: < 0.001 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Manganese (total)	Criteria
04/23/2014 15:10 0.004 mg/L	<=0.05 AO

# samples: 1	min: 0.004 mg/L
# detects: 1	max: 0.004 mg/L
# non-detects: 0	avg: 0.004 mg/L (based on 1 numerical results)
# of Exceedences: 0	

Temperature	Criteria
04/23/2014 15:10 4.3 degrees C	
04/23/2014 15:10 4 degrees C	

# samples: 2	min: 4 degrees C
# detects: 2	max: 4.3 degrees C
# non-detects: 0	avg: 4.150 degrees C (based on 2 numerical results)
# of Exceedences: 0	

Total coliforms (counts)**Criteria**

04/23/2014 15:10 < 1 counts/100mL <=0, OG, P User-Defined

samples: 1

min: < 1 counts/100mL

detects: 0

max: < 1 counts/100mL

non-detects: 1

Geometric Mean: n/a (based on 0 numerical results)

of Exceedences: 0

Turbidity**Criteria**

04/23/2014 15:10 < 0.1 NTU <=1 User-Defined

samples: 1

min: < 0.1 NTU

detects: 0

max: < 0.1 NTU

non-detects: 1

avg: n/a (based on 0 numerical results)

of Exceedences: 0

Vinyl chloride**Criteria**

04/23/2014 15:10 < 0.0020 mg/L <=0.002 MAC

samples: 1

min: < 0.0020 mg/L

detects: 0

max: < 0.0020 mg/L

non-detects: 1

avg: n/a (based on 0 numerical results)

of Exceedences: 0

Zinc (total)**Criteria**

04/23/2014 15:10 < 0.04 mg/L <=5 AO

samples: 1

min: < 0.04 mg/L

detects: 0

max: < 0.04 mg/L

2014 Semi Annual Summary April

City of Quesnel

04/23/2014 to 04/23/2014 (mm/dd/yyyy)

City of Quesnel – Main System

non-detects: 1
of Exceedences: 0
avg: n/a (based on 0 numerical results)

Facility: Distribution System
Sampling Point: S- Pederson Rd (7-7-MD, 94F0)

Copper (total)
04/23/2014 13:45 0.004 mg/L
Criteria
<=1.0 AO

samples: 1
detects: 1
non-detects: 0
of Exceedences: 0
min: 0.004 mg/L
max: 0.004 mg/L
avg: 0.004 mg/L (based on 1 numerical results)

Escherichia coli / E. coli (counts)
04/23/2014 13:45 < 1 CFU/100mL
Criteria
<=0, P, PR User-Defined

samples: 1
detects: 0
non-detects: 1
of Exceedences: 0
min: < 1 CFU/100mL
max: < 1 CFU/100mL
Geometric Mean: n/a (based on 0 numerical results)

Heterotrophic Plate Count / HPC
04/23/2014 13:45 < 5 CFU/mL
Criteria
<=500 User-Defined

samples: 1
detects: 0
non-detects: 1
of Exceedences: 0
min: < 5 CFU/mL
max: < 5 CFU/mL
Geometric Mean: n/a (based on 0 numerical results)

2014 Semi Annual Summary April

City of Quesnel

04/23/2014 to 04/23/2014 (mm/dd/yyyy)

City of Quesnel – Main System

Iron (total)

Criteria

04/23/2014 13:45 < 0.10 mg/L <=0.3 AO

samples: 1

min: < 0.10 mg/L

detects: 0

max: < 0.10 mg/L

non-detects: 1

avg: n/a (based on 0 numerical results)

of Exceedences: 0

Lead (total)

Criteria

04/23/2014 13:45 < 0.001 mg/L <=0.010 MAC

samples: 1

min: < 0.001 mg/L

detects: 0

max: < 0.001 mg/L

non-detects: 1

avg: n/a (based on 0 numerical results)

of Exceedences: 0

Manganese (total)

Criteria

* 04/23/2014 13:45 0.054 mg/L <=0.05 AO

samples: 1

min: 0.054 mg/L

detects: 1

max: 0.054 mg/L

non-detects: 0

avg: 0.054 mg/L (based on 1 numerical results)

of Exceedences: 1

Temperature

Criteria

04/23/2014 13:45 5.5 degrees C

04/23/2014 13:45 6 degrees C

samples: 2

min: 5.5 degrees C

detects: 2

max: 6 degrees C

Report created on 01/12/2015 4:01:51 PM

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# non-detects: 0	avg: 5.750 degrees C (based on 2 numerical results)
# of Exceedences: 0	

Total coliforms (counts)		Criteria	
04/23/2014 13:45	< 1 counts/100mL	<=0, OG, P	User-Defined

# samples: 1	min: < 1 counts/100mL
# detects: 0	max: < 1 counts/100mL
# non-detects: 1	Geometric Mean: n/a (based on 0 numerical results)
# of Exceedences: 0	

Turbidity		Criteria	
04/23/2014 13:45	< 0.1 NTU	<=1	User-Defined

# samples: 1	min: < 0.1 NTU
# detects: 0	max: < 0.1 NTU
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Vinyl chloride		Criteria	
04/23/2014 13:45	< 0.0020 mg/L	<=0.002	MAC

# samples: 1	min: < 0.0020 mg/L
# detects: 0	max: < 0.0020 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Zinc (total)		Criteria	
04/23/2014 13:45	< 0.04 mg/L	<=5	AO

# samples: 1	min: < 0.04 mg/L
# detects: 0	max: < 0.04 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Result Legend:

P=present, A=absent, PR=presumptive, ND=non-detect, U=non-detect, OR=over-range, OG=overgrown,
TNTC=too numerous to count, NR=no result, NT=not tested, IG=ignore, ER=external report, SC=see comment

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2014 Semi Annual Summary October
10/07/2014 to 10/07/2014 (mm/dd/yyyy)

City of Quesnel
City of Quesnel – Main System

Facility: Distribution System
Sampling Point: S- Mills Rd (7-2-MR, 94E5)

Copper (total)
10/07/2014 10:40 0.014 mg/L **Criteria**
 <=1.0 AO

samples: 1 min: 0.014 mg/L
detects: 1 max: 0.014 mg/L
non-detects: 0 avg: 0.014 mg/L (based on 1 numerical results)
of Exceedences: 0

Iron (total)
10/07/2014 10:40 < 0.10 mg/L **Criteria**
 <=0.3 AO

samples: 1 min: < 0.10 mg/L
detects: 0 max: < 0.10 mg/L
non-detects: 1 avg: n/a (based on 0 numerical results)
of Exceedences: 0

Lead (total)
10/07/2014 10:40 < 0.001 mg/L **Criteria**
 <=0.010 MAC

samples: 1 min: < 0.001 mg/L
detects: 0 max: < 0.001 mg/L
non-detects: 1 avg: n/a (based on 0 numerical results)
of Exceedences: 0

Magnesium (total)
10/07/2014 10:40 17.6 mg/L **Criteria**

# samples: 1	min: 17.6 mg/L
# detects: 1	max: 17.6 mg/L
# non-detects: 0	avg: 17.600 mg/L (based on 1 numerical results)
# of Exceedences: 0	

Vinyl chloride		Criteria	
10/07/2014 10:40	< 0.0020 mg/L	<=0.002	MAC

# samples: 1	min: < 0.0020 mg/L
# detects: 0	max: < 0.0020 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Zinc (total)		Criteria	
10/07/2014 10:40	< 0.04 mg/L	<=5	AO

# samples: 1	min: < 0.04 mg/L
# detects: 0	max: < 0.04 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Facility:	Distribution System
Sampling Point:	S- Pederson Rd (7-7-MD, 94F0)

Copper (total)		Criteria	
10/07/2014 11:45	0.007 mg/L	<=1.0	AO

# samples: 1	min: 0.007 mg/L
# detects: 1	max: 0.007 mg/L
# non-detects: 0	avg: 0.007 mg/L (based on 1 numerical results)

2014 Semi Annual Summary October
10/07/2014 to 10/07/2014 (mm/dd/yyyy)

City of Quesnel
City of Quesnel – Main System

of Exceedences: 0

Iron (total)

Criteria

10/07/2014 11:45 < 0.10 mg/L <=0.3 AO

samples: 1

min: < 0.10 mg/L

detects: 0

max: < 0.10 mg/L

non-detects: 1

avg: n/a (based on 0 numerical results)

of Exceedences: 0

Lead (total)

Criteria

10/07/2014 11:45 < 0.001 mg/L <=0.010 MAC

samples: 1

min: < 0.001 mg/L

detects: 0

max: < 0.001 mg/L

non-detects: 1

avg: n/a (based on 0 numerical results)

of Exceedences: 0

Magnesium (total)

Criteria

10/07/2014 11:45 7.5 mg/L

samples: 1

min: 7.5 mg/L

detects: 1

max: 7.5 mg/L

non-detects: 0

avg: 7.500 mg/L (based on 1 numerical results)

of Exceedences: 0

Vinyl chloride

Criteria

10/07/2014 11:45 < 0.0020 mg/L <=0.002 MAC

2014 Semi Annual Summary October

City of Quesnel

10/07/2014 to 10/07/2014 (mm/dd/yyyy)

City of Quesnel – Main System

# samples: 1	min: < 0.0020 mg/L
# detects: 0	max: < 0.0020 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Zinc (total)	Criteria
10/07/2014 11:45 < 0.04 mg/L	<=5 AO

# samples: 1	min: < 0.04 mg/L
# detects: 0	max: < 0.04 mg/L
# non-detects: 1	avg: n/a (based on 0 numerical results)
# of Exceedences: 0	

Result Legend:

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City of Quesnel Water Quality Sampling Results



1/14/2014																			
Hpc	Coliforms	Ecoli	Temp	Hpc	Coliforms	Ecoli	Temp	Hpc	Coliforms	Ecoli	Temp	Hpc	Coliforms	Ecoli	Temp	Hpc	Coliforms	Ecoli	Temp
NORTHERN HEALTH				NORTHERN HEALTH				NORTHERN HEALTH				NORTHERN HEALTH				NORTHERN HEALTH			

First Week

[illegible]

Third Week

[illegible]

Monthly Reservoirs

[illegible]

Monthly Wells

[illegible]