



FRENCH CREEK

Water Local Service Area

Annual Report

2008



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1. Introduction

The following annual report describes the French Creek Water Local Service Area and summarizes the water quality and production data from 2008. This report also includes a summary of inquiries and complaints, completed and proposed maintenance activities, the Emergency Response Plan, and the Cross Connection Control Program.

This report is to be submitted to the Vancouver Island Health Authority by the Spring of 2009.

2. French Creek Water System

The French Creek Water Service Area was established in 1980 and comprises an area west of Drew Road and south of the Island Highway between the City of Parksville and the Town of Qualicum Beach. The water source for the French Creek Water Service Area comes from a series of groundwater wells located within the Sandpiper subdivision. The water supply is chlorinated and stored in one reservoir. A map of the French Creek Water System is provided in Appendix A for reference.

2.1 Groundwater Wells

Six groundwater production wells are present in the area.

Well / Name	Well Depth	In Use	Wellhead Protection	Treated/Untreated with Chlorine
#1	39.6 m	No	Yes	n/a
#2	40.5 m	Yes	Yes	Treated
#4	40.2 m	Yes	Yes	Treated
#5	50.3 m	No	Yes	n/a
#6	52.4 m	No	Yes	n/a
#7	39.6 m	Yes	Yes	Treated

French Creek Well #1 has not been used for several years due to low production and high iron levels. Well #1 is expected to be converted to a monitoring well in 2009. Wells #5 and #6 are temporarily not in use due to elevated levels of iron and manganese.

2.2 Reservoirs

One service reservoir (steel construction) is present at 1225 Sunrise Drive, Parksville, B.C. and has a capacity of 364 m³ (80,000 imperial gallons).

2.3 Distribution System

The water distribution system in French Creek is comprised of 150mm and 200mm asbestos-concrete watermains, and 100mm, 150mm and 200mm PVC watermains. Fire hydrants are located throughout the system.

3. Water Sampling and Testing Program

Water sampling and testing is carried out weekly in the distribution system. The following table includes a summary of all testing.

Timing	Location	Tests
Weekly	RDN (in-house) Laboratory	Total coliforms, E.Coli Temperature, pH, Conductivity Chlorine residual, Salinity Total Dissolved Solids Iron, Manganese
Weekly (Health Dept. Requirement)	North Island Labs	Total, Fecal coliforms
Annual Source Water Testing	North Island Labs	Complete potability testing of each well
Annual System Water Testing	North Island Labs	Complete potability testing of distribution system

4. Water Quality - Source Water and Distribution System

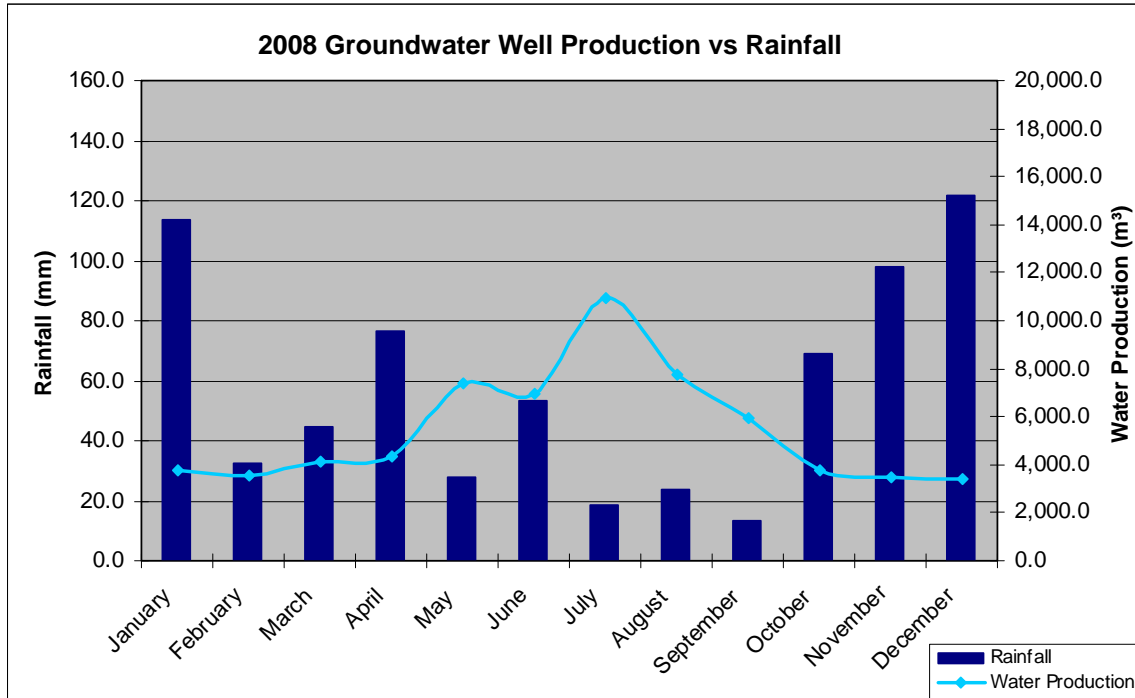
Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca in the WaterSmart section, under “Communities”. Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

5. Water Quality Inquiries and Complaints

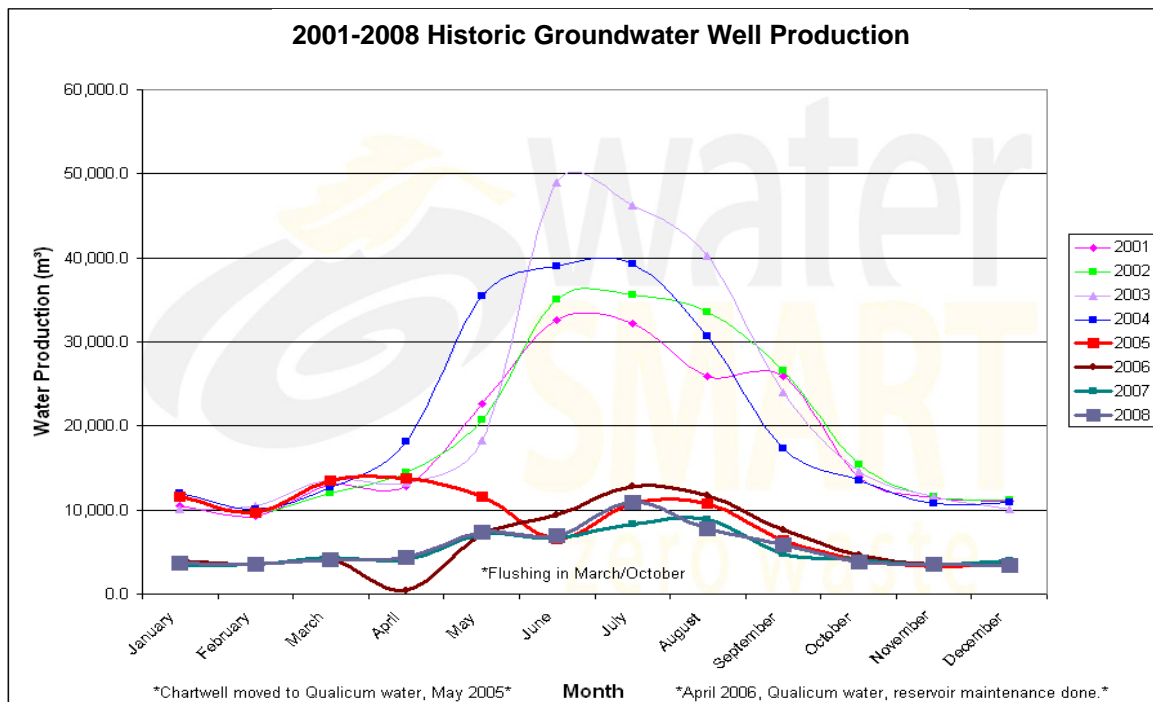
A few complaints and inquiries were received from the French Creek water service area, and were typically related to isolated incidents of iron discolouration in the water.

6. Groundwater Production and Consumption

The 2008 monthly groundwater production for French Creek is shown in the chart below. There are 233 water service connections in French Creek. Groundwater production has been charted against rainfall data from the City of Parksville website to show the correlation between rainfall and water consumption.



The monthly groundwater production for French Creek for the past 8 years is shown in the chart below. Groundwater production in 2008 was typically lower than previous years.



Consumption

In the Fall/Winter of 2008, the average usage per home in French Creek was 0.53 cubic metres per day (116 imperial gallons). In the summer, the average water usage was 1.07 cubic metres per day (235 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 303 L/day. This consumption is 1.5% more than the RDN system average of 298.4 L/day/capita for 2008.

7. Maintenance Program

Regular maintenance and inspections are completed around the wellhead areas to reduce or eliminate the risk of contamination and system failure. Watermains are flushed twice annually; in the Spring and Fall. Annual fire hydrant maintenance is completed in the Fall.

8. Water System Projects

8.1 2008 Completed Studies & Projects

- Completed a watermain replacement at 1225 Sunrise Drive.
- Replaced all facility signs.
- Began keyless door entry installation (card lock) at the Water Services field office, and all pumphouse sites.
- Re-keyed all gates and points of entry.
- Established electrical connections for the mobile generator at key sites.
- Completed 'B' fire hydrant maintenance.
- Completed semi-annual watermain flushing.
- Completed a comprehensive water conservation program (**Team WaterSmart**) from May to October.
- Initiated the WaterSmart school program in partnership with Nanaimo Recycling Exchange.
- Updated and improved the RDN **WaterSmart** website.
- Updated the Emergency Response Plan.
- Expanded the Operating Procedures binder.
- Completed the SCADA (Supervisory Control and Data Acquisition) Study.
- Completed the Innovative Water Supply and Re-Use study.
- Completed the *Action for Water* referendum process.
- Achieved Backflow Prevention Tester's Certification for 3 Operations staff.
- Created the Auto E-Message notification sign-up on the RDN website.

8.2 2009 Proposed Projects & Upgrades

- Establish the Drinking Water Protection Advisory Committee.
- Review the SCADA report and options for implementation.
- Complete the keyless door entry installations at all field sites.
- Commence the 2009 **Team WaterSmart** education program.
- Develop a rebate / incentive program.
- Develop the *Well Aware* well safety program.
- Convert two wells to observation wells.
- Install a stand-alone water sampling station.
- Install a new chlorine building.

8.3 2009 Proposed Studies

- Review water treatment costs for French Creek LSA.
- Complete the well re-development study.

9. **Emergency Response Plan**

The Emergency Response Plan (ERP) was reviewed and updated in 2008. A copy of the ERP is attached in Appendix C.

10. **Cross Connection Control**

A formalized Cross Connection Control Program was initiated in 2007. Cross connection controls in-place include dual check valves at each service connection, fire hydrant use permits, and water supply bylaws noting discontinued service if a threat to the water supply is perceived by staff.

In 2008, a review and comparison of successful cross-connection control programs in other small water systems nearby was undertaken. A database of commercial customers was set-up in order to keep track of the maintenance history of testable backflow prevention assemblies at each site. Three RDN Operations staff achieved Backflow Prevention Tester's certification.

The program in 2009 will include:

- A survey of existing and potential cross-connections,
- An audit of RDN-owned facilities in each water service area,
- The preparation of a draft bylaw to allow enforcement of the Cross Connection Control Program.

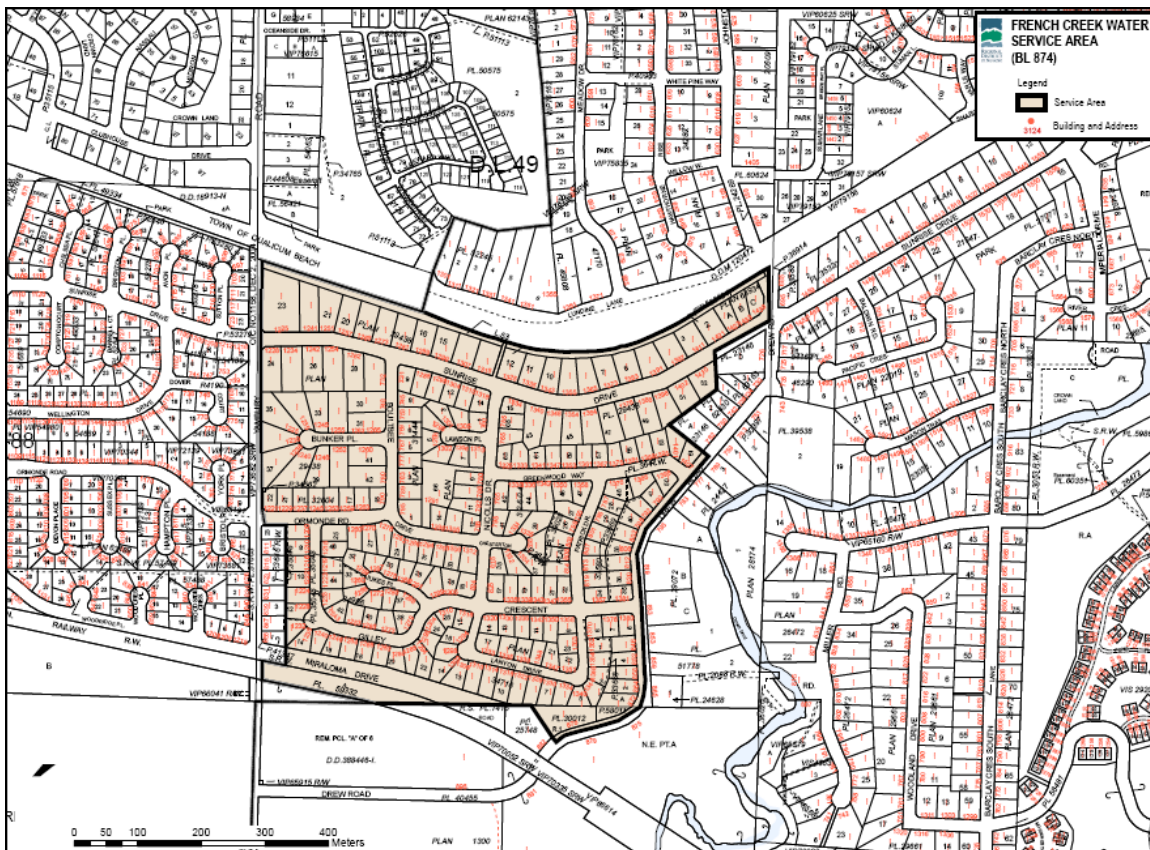
11. **Closing**

An annual report for the year 2009 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2010. Annual reports are also available on our website at www.rdn.bc.ca in the WaterSmart section, under "Communities".

APPENIDX A

**MAP OF FRENCH CREEK
WATER LOCAL SERVICE AREA**

FRENCH CREEK WATER LOCAL SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS

Distribution Potability Test Results - French Creek

(Treated Drinking Water)

Test	Water Quality Guidelines				Date									
	Units	CDWG	BCAWQG		1999	2000	2001	2002	2003	2004	2005	May 17 2006	May 22 2007	May 27 2008
Color	CU	15	<=15	AO	25	5	37	7	22	39	60	20	7	17
Conductivity	uS		700	MAC	279	309	324	281	326	327	311	309	309	312
TDS	mg/L	500	<=500	AO	172	190	167	153	173	200	150	193	182	208
Hardness (CaCO3)	mg/L	80-100	<=500	AO	103	115.2	124.9	136	116.3	120	120	140	140	130
pH	pH units	6.5-8.5	6.5-8.5	AO	8.03	7.83	7.72	7.95	7.9	7.8	7.8	8.1	8	8.15
Turbidity	NTU's	5	1	MAC	0.96	0.63	0.85	0.22	0.69	1.3	2.3	0.9	0.6	0.7
Alkalinity	mg/L				137	135	134	131	138	130	140	150	130	140
Chloride	mg/L	250	<=250	AO	5.7	6.07	9.2	5.21	10.91	14.4	13	7.2	7.1	7.6
Fluoride	mg/L	1.5	1.5	MAC	0.1	0.14	0.12	0.13	0.09	<1.0	<1.0	0.1	<1.0	<1.0
Sulfate	mg/L	500	<=500	AO	5.1	5	7.61	12.07	6.74	48.6	5.4	11.3	9.9	10.4
Nitrate	mg/L	10	10	MAC	0.06	5.89	<.004	0.03	0.06	0.2	<0.1	<0.01	<0.1	<0.1
Nitrite	mg/L	1			0.05	0.08	<.002	0.03	<0.01	<0.1	<0.1	<0.01	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	0.007	0.04	0.017	<.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05
T-Antimony	mg/L		0.006	MAC			<.006	<.006	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.001
T-Arsenic	mg/L	0.025	0.025	IMAC		<.01	<.01	<.01	0.0006	0.0007	0.0009	0.0002	<0.0002	<0.001
T-Barium	mg/L	1.0	1	MAC	0.008	0.01	0.0139	0.0159	0.01	0.015	0.014	0.015	0.016	0.01
T-Boron	mg/L	5.0	5	MAC		0.041	0.036	0.022	0.037	0.039	0.034	0.018	0.023	<0.02
T-Cadmium	mg/L	0.005				<.0006	<.0006	<.0006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0003
T-Calcium	mg/L					28	29.9	33.3	27.1	28.9	28.2	33.5	34.3	30.6
T-Chromium	mg/L	0.05	0.05	MAC		<.0009	<.0009	<.0009	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.003
T-Copper	mg/L	1.0	<=1	MAC		<.001	0.002	<.001	0.004	0.002	0.001	0.002	0.002	<0.005
T-Iron	mg/L	0.3	<=0.3	AO	0.2	0.41	0.461	0.203	0.4	0.5	1	0.1	0.1	0.12
T-Lead	mg/L	0.01	0.01	MAC		<.002	0.002	<.002	0.0002	0.0002	0.0002	<0.0001	0.0002	<0.0005
T-Magnesium	mg/L		<=700	AO	10.4	11	12.2	12.8	11.8	11.9	11.7	12.6	13.6	12.3
T-Manganese	mg/L	0.05	<=0.05	AO	0.13	0.17	0.213	0.152	0.174	0.385	0.34	0.124	0.136	0.13
T-Mercury	mg/L	0.001	0.001	MAC		<.0001	<.0001	<.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.01
T-Potassium	mg/L					<4	2.2	204	2.4	2.5	2	2.4	2.3	2.2
T-Selenium	mg/L	0.01	0.01	MAC		<.004	0.005	<.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.003
T-Sodium	mg/L	200	<=200	AO		15	20.2	11.9	19.6	21	20	12.5	12.9	13.4
T-Uranium	mg/L	0.1	0.1	MAC		<.06	<.06	<.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
T-Zinc	mg/L	5	<5	AO		0.0069	0.0027	0.0034	0.005	0.012	0.009	0.004	0.011	<0.005
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	<1	<1	<1	n/a	n/a	<1	<1	<1	<1	<1.0
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1	<1	<1	n/a	n/a	<1	<1	<1	<1	<1.0
E.coli	cfu/100ml	<1	<1	cfu/100ml								<1	<1	<1.0
Tannins & Lignins					n/a	n/a	0.28	<.1	n/a	n/a	n/a	n/a	n/a	n/a
Trihalomethanes	mg/l	0.1		MAC	n/a	n/a	3.1	n/a	n/a	n/a	n/a	0.009	n/a	n/a

BCAWQG - BC approved water quality guidelines
 MAC - maximum acceptable concentrations
 IMAC - interim maximum acceptable concentrations
 AO - aesthetic objective
 Red font indicates non-compliance.

French Creek Well #1 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2000	2001	2002	2003	2004	2005	2006	2007	2008
Color	CU	15	<15	AO	7		12	off	off	off	off	off	off
Conductivity	µS		700	MAC	248		292	off	off	off	off	off	off
Total Dissolved Solids	mg/L	500	<1=500	AO	166		173	off	off	off	off	off	off
Hardness (CaCO3)	mg/L	80-100	<1=500	AO	138.7		120.1	off	off	off	off	off	off
pH	pH units	6.5-8.5	6.5-8.5	AO	7.89		7.89	off	off	off	off	off	off
Turbidity	NTU's	5	1	MAC	0.58		0.6	off	off	off	off	off	off
Alkalinity	mg/L				135		147	off	off	off	off	off	off
Chloride	mg/L	250	<1=250	AO	2.39		2.48	off	off	off	off	off	off
Fluoride	mg/L	1.5	1.5	MAC	0.13		0.14	off	off	off	off	off	off
Sulfate	mg/L	500	<1=500	AO	3.67		3.28	off	off	off	off	off	off
Nitrate (N)	mg/L	10	10	MAC	<0.002		<0.01	off	off	off	off	off	off
Nitrite (N)	mg/L	1			<0.006		<0.01	off	off	off	off	off	off
T-Aluminum	mg/L		0.2	MAC	0.011		<0.005	off	off	off	off	off	off
T-Antimony	mg/L		0.006	MAC			<0.0002	off	off	off	off	off	off
T-Arsenic	mg/L	0.025	0.025	IMAC	<0.01		0.0012	off	off	off	off	off	off
T-Barium	mg/L	1.0	1	MAC	0.0211		0.022	off	off	off	off	off	off
T-Boron	mg/L	5.0	5	MAC	<0.002		0.019	off	off	off	off	off	off
T-Cadmium	mg/L	0.005			<0.0006		<0.00001	off	off	off	off	off	off
T-Calcium	mg/L				32.8		27.8	off	off	off	off	off	off
T-Chromium	mg/L	0.05	0.05	MAC	<0.0009		<0.0005	off	off	off	off	off	off
T-Copper	mg/L	1.0	<1=1	MAC	0.001		<0.001	off	off	off	off	off	off
T-Iron	mg/L	0.3	<1=0.3	AO	0.621		0.5	off	off	off	off	off	off
T-Lead	mg/L	0.01	0.01	MAC	<0.002		<0.0003	off	off	off	off	off	off
T-Magnesium	mg/L		<1=700	AO	13.8		12.3	off	off	off	off	off	off
T-Manganese	mg/L	0.05	<1=0.05	AO	0.302		0.282	off	off	off	off	off	off
T-Mercury	mg/L	0.001	0.001	MAC	<0.0001		<0.0002	off	off	off	off	off	off
T-Potassium	mg/L				2.3		2	off	off	off	off	off	off
T-Selenium	mg/L	0.01	0.01	MAC	<0.004		<0.0002	off	off	off	off	off	off
T-Sodium	mg/L	200	<1=200	AO	11.6		10.5	off	off	off	off	off	off
T-Uranium	mg/L	0.1	0.1	MAC	<0.06		<0.0005	off	off	off	off	off	off
T-Zinc	mg/L	5	<5	AO	0.017		0.002	off	off	off	off	off	off
								off	off	off	off	off	off
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	*489			off	off	off	off	off	off
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1			off	off	off	off	off	off
E.coli	cfu/100ml	<1	<1	cfu/100ml				off	off	off	off	off	off

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms

French Creek Well #2 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2000	2001	2002	2003	2004	2005	Oct 24 2006	Oct 24 2007	Oct 8 2008
Color	CU	15	</=15	AO	<5		4	<5	<5	6	<5	<5	<5
Conductivity	µS		700	MAC	267		289	285	294	283	285	280	315
Total Dissolved Solids	mg/L	500	</=500	AO	179		160	180	180	164	6	247	186
Hardness (CaCO3)	mg/L	80-100	</=500	AO	132.7		124.2	134	140	130	63	130	150
pH	pH units	6.5-8.5	6.5-8.5	AO	8.11		8.14	7.9	8.1	8.1	8.2	8.08	7.9
Turbidity	NTU's	5	1	MAC	0.29		0.11	0.54	<0.5	<0.5	<0.5	<0.5	<0.5
Alkalinity	mg/L				126		132	130	140	140	130	130	120
Chloride	mg/L	250	</=250	AO	2.7		2.58	3.3	3.3	3.1	3.3	3.7	5
Fluoride	mg/L	1.5	1.5	MAC	0.17		0.13	<0.6	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	500	</=500	AO	14.89		12.88	1.7	16.5	11.8	9.6	9.7	21.3
Nitrate (N)	mg/L	10	10	MAC	<0.002		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (N)	mg/L	1			<0.006		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	0.015		0.009	<0.005	0.01	0.046	<0.01	0.009	0.013
T-Antimony	mg/L		0.006	MAC			<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0002
T-Arsenic	mg/L	0.025	0.025	IMAC	<0.01		<0.0002	<0.0002	<0.0002	0.0002	<0.0004	0.0002	<0.0002
T-Barium	mg/L	1.0	1	MAC	0.0147		0.015	0.015	0.016	0.015	0.02	0.016	0.018
T-Boron	mg/L	5.0	5	MAC	<0.002		1.015	0.018	0.022	0.02	0.022	0.021	0.021
T-Cadmium	mg/L	0.005			<0.0006		<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.00001	<0.00001
T-Calcium	mg/L				32.7		29.8	32.1	34.2	32.2	15.4	30.8	36.2
T-Chromium	mg/L	0.05	0.05	MAC	<0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0004
T-Copper	mg/L	1.0	</=1	MAC	0.002		0.01	0.002	0.002	0.015	<0.002	0.005	0.005
T-Iron	mg/L	0.3	</=0.3	AO	0.142		<0.1	0.2	0.1	0.1	<0.1	0.1	0.1
T-Lead	mg/L	0.01	0.01	MAC	<0.002		0.0005	0.0001	0.0001	0.0018	<0.0002	0.0012	0.0003
T-Magnesium	mg/L		</=700	AO	12.4		12.1	13	13.7	11.8	6	11.7	14
T-Manganese	mg/L	0.05	</=0.05	AO	0.132		0.126	0.125	0.132	0.13	0.06	0.119	0.137
T-Mercury	mg/L	0.001	0.001	MAC	<0.0001		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.01
T-Potassium	mg/L				2.1		2	2.2	2.3	2.3	1.1	2.2	2.3
T-Selenium	mg/L	0.01	0.01	MAC	<0.004		<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0006
T-Sodium	mg/L	200	</=200	AO	8.3		7.9	7.9	8.6	9	4.5	8.8	8.69
T-Uranium	mg/L	0.1	0.1	MAC	<0.06		<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0004
T-Zinc	mg/L	5	<5	AO	0.0367		0.031	0.021	0.029	0.026	0.007	0.074	0.016
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	*163				*50	<1	<1	<1	<1
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1				<1	<1	<1	<1	<1
E.coli	cfu/100ml	<1	<1	cfu/100ml							<1	<1	<1

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms

French Creek Well #4 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2000	2001	2002	2003	2004	2005	Oct 24 2006	Oct 24 2007	Oct 8 2008
Color	CU	15	</=15	AO	<5		4	<5	<5	8	<5	5	<5
Conductivity	µS		700	MAC	271		300	310	310	304	295	297	317
Total Dissolved Solids	mg/L	500	</=500	AO	182		173	173	190	146	200	193	152
Hardness (CaCO3)	mg/L	80-100	</=500	AO	135.9		130	140	150	136	130	130	150
pH	pH units	6.5-8.5	6.5-8.5	AO	8.06		8.18	7.94	7.8	8.1	8.2	8.15	7.9
Turbidity	NTU's	5	1	MAC	<0.05		0.1	0.56	<0.5	<0.5	<0.5	<0.5	<0.5
Alkalinity	mg/L				134		143	150	150	150	140	130	150
Chloride	mg/L	250	</=250	AO	2.52		2.49	3.2	3.1	3.5	3.9	3.4	5.2
Fluoride	mg/L	1.5	1.5	MAC	0.12		0.13	<0.6	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	500	</=500	AO	7.26		13.62	12	13.6	13.2	11.1	9.9	21.3
Nitrate (N)	mg/L	10	10	MAC	<0.002		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (N)	mg/L	1			<0.006		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	0.015		0.005	<0.005	0.006	<0.005	0.006	<0.005	0.01
T-Antimony	mg/L		0.006	MAC			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
T-Arsenic	mg/L	0.025	0.025	IMAC	<0.01		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
T-Barium	mg/L	1.0	1	MAC	0.0129		0.013	0.014	0.014	0.014	0.013	0.014	0.017
T-Boron	mg/L	5.0	5	MAC	<0.002		0.016	0.021	0.024	0.023	0.024	0.024	0.019
T-Cadmium	mg/L	0.005			<0.0006		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
T-Calcium	mg/L				33		30.8	32.9	34.8	33.2	30.8	31.6	36.1
T-Chromium	mg/L	0.05	0.05	MAC	<0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.003	<0.0004
T-Copper	mg/L	1.0	</=1	MAC	<0.001		0.001	<0.001	0.004	<0.001	0.002	0.002	0.002
T-Iron	mg/L	0.3	</=0.3	AO	0.134		0.1	0.1	0.1	0.1	0.1	0.2	0.08
T-Lead	mg/L	0.01	0.01	MAC	<0.002		<0.0001	0.0001	0.0004	0.0002	0.0008	0.0008	0.0002
T-Magnesium	mg/L		</=700	AO	13		12.9	14	14.6	12.8	12.6	12.5	13.9
T-Manganese	mg/L	0.05	</=0.05	AO	0.15		0.147	0.142	0.159	0.15	0.14	0.143	0.129
T-Mercury	mg/L	0.001	0.001	MAC	<0.0001		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.01
T-Potassium	mg/L				2.3		2.3	2.4	2.6	2.5	2.5	2.4	2.2
T-Selenium	mg/L	0.01	0.01	MAC	<0.004		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
T-Sodium	mg/L	200	</=200	AO	10.2		9.4	9.6	10.2	10.6	10.2	10	8.57
T-Uranium	mg/L	0.1	0.1	MAC	<0.06		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Zinc	mg/L	5	<5	AO	0.0107		0.005	0.014	0.015	0.015	0.009	0.043	0.008
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	*39				<1	<1	<1	<1	<1
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1				<1	<1	<1	<1	<1
E.coli	cfu/100ml	<1	<1	cfu/100ml							<1	<1	<1

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms

French Creek Well #5 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2000	2001	2002	2003	2004	2005	Oct 24 2006	Oct 24 2007	Oct 8 2008
Color	CU	15	</=15	AO	25		28	20	25	30	14	18	35
Conductivity	µS		700	MAC	270		293	321	312	272	258	262	263
Total Dissolved Solids	mg/L	500	</=500	AO	181		173	167	210	164	190	253	176
Hardness (CaCO3)	mg/L	80-100	</=500	AO	103.8		100	106	110	89	86	86	87
pH	pH units	6.5-8.5	6.5-8.5	AO	7.66		7.61	7.62	7.7	8.1	7.8	8.01	7.7
Turbidity	NTU's	5	1	MAC	0.43		0.87	1.64	1.8	1.6	1	1.5	0.9
Alkalinity	mg/L				135		129	150	160	140	130	130	130
Chloride	mg/L	250	</=250	AO	7.06		9.5	11.3	10.3	3.1	5.7	5.4	7.2
Fluoride	mg/L	1.5	1.5	MAC	0.14		0.15	<0.6	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	500	</=500	AO	0.12		0.17	1.8	<2	11.2	<2.0	<2.0	<2.0
Nitrate (N)	mg/L	10	10	MAC	<0.002		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (N)	mg/L	1			<0.006		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	0.013		<0.005	<0.005	0.024	0.065	0.011	0.024	0.009
T-Antimony	mg/L		0.006	MAC			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
T-Arsenic	mg/L	0.025	0.025	IMAC	<0.01		0.0008	0.0009	0.0011	0.001	0.0007	0.0008	0.0005
T-Barium	mg/L	1.0	1	MAC	0.0066		0.007	0.008	0.008	0.006	0.007	0.007	0.006
T-Boron	mg/L	5.0	5	MAC	0.02		0.039	0.062	0.07	0.052	0.058	0.056	0.051
T-Cadmium	mg/L	0.005			<0.0006		<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
T-Calcium	mg/L				24.9		23.4	25	27	21.5	20.4	20.8	20.5
T-Chromium	mg/L	0.05	0.05	MAC	<0.0009		<0.0005	<0.0005	<0.0005	0.0005	<0.0005	0.0007	0.0006
T-Copper	mg/L	1.0	</=1	MAC	<0.001		0.003	0.013	<0.001	0.004	<0.001	0.002	0.001
T-Iron	mg/L	0.3	</=0.3	AO	0.882		0.9	1	1.1	0.9	0.9	1.1	0.73
T-Lead	mg/L	0.01	0.01	MAC	<0.002		0.0001	0.0017	0.0002	0.0014	0.0004	0.0006	0.0004
T-Magnesium	mg/L		</=700	AO	10.1		10.1	10.6	11.2	8.5	8.4	8.2	8.69
T-Manganese	mg/L	0.05	</=0.05	AO	0.256		0.246	0.235	0.271	0.211	0.198	0.205	0.182
T-Mercury	mg/L	0.001	0.001	MAC	<0.0001		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.01
T-Potassium	mg/L				2.7		2.6	2.7	2.9	2.6	2.6	2.5	2.4
T-Selenium	mg/L	0.01	0.01	MAC	<0.004		<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0006
T-Sodium	mg/L	200	</=200	AO	23.5		21.8	23	26	21.5	20.6	20.4	20.3
T-Uranium	mg/L	0.1	0.1	MAC	<0.06		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Zinc	mg/L	5	<5	AO	0.0049		0.003	0.032	0.027	0.062	0.033	0.047	0.03
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	*36		<1		<1	<1	<1	*1	<1
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1		<1		<1	<1	<1	<1	<1
E.coli	cfu/100ml	<1	<1	cfu/100ml							<1	<1	<1

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms

French Creek Well #6 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2000	2001	2002	2003	2004	2005	Oct 24 2006	Oct 24 2007	Oct 8 2008
Color	CU	15	</=15	AO	25		23	19	16	27	11	19	31
Conductivity	µS		700	MAC	252		247	264	237	226	219	225	224
Total Dissolved Solids	mg/L	500	</=500	AO	169		147	133	150	220	170	140	162
Hardness (CaCO3)	mg/L	80-100	</=500	AO	97.3		90.2	91	97	83	80	81	84
pH	pH units	6.5-8.5	6.5-8.5	AO	7.64		7.61	7.56	7.7	7.9	7.8	8	7.6
Turbidity	NTU's	5	1	MAC	0.62		0.87	1.3	1.1	1.6	1.8	3	0.9
Alkalinity	mg/L				121		121	130	130	120	110	110	110
Chloride	mg/L	250	</=250	AO	4.05		3.8	5	4.3	4.2	4.5	3.9	5.5
Fluoride	mg/L	1.5	1.5	MAC	0.14		0.17	<0.6	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	500	</=500	AO	0.09		<0.2	1.7	<2	<2	<2.0	<2.0	<2.0
Nitrate (N)	mg/L	10	10	MAC	<0.002		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (N)	mg/L	1			<0.006		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	0.026		<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.006
T-Antimony	mg/L		0.006	MAC			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
T-Arsenic	mg/L	0.025	0.025	IMAC	<0.01		0.0015	0.0018	0.0018	0.0022	0.0017	0.0016	0.0014
T-Barium	mg/L	1.0	1	MAC	0.0049		0.005	0.006	0.005	0.005	0.005	0.005	0.005
T-Boron	mg/L	5.0	5	MAC	<0.002		0.021	0.034	0.036	0.028	0.032	0.033	0.032
T-Cadmium	mg/L	0.005			<0.0006		0.00005	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001
T-Calcium	mg/L				23.1		20.8	21.1	22.8	20	18.8	19.5	19.7
T-Chromium	mg/L	0.05	0.05	MAC	<0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	0.0006
T-Copper	mg/L	1.0	</=1	MAC	<0.001		<0.001	0.001	0.001	0.001	0.002	0.004	0.002
T-Iron	mg/L	0.3	</=0.3	AO	0.773		0.8	0.9	0.9	1.2	1	1.5	0.8
T-Lead	mg/L	0.01	0.01	MAC	<0.002		0.0002	0.0009	0.006	0.0018	0.0013	0.0039	0.0023
T-Magnesium	mg/L		</=700	AO	9.63		9.3	9.4	9.8	8	7.9	7.9	8.51
T-Manganese	mg/L	0.05	</=0.05	AO	0.198		0.183	0.17	0.186	0.19	0.168	0.182	0.171
T-Mercury	mg/L	0.001	0.001	MAC	<0.0001		<0.001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.01
T-Potassium	mg/L				2.1		2	2	2.2	1.9	2	2	1.9
T-Selenium	mg/L	0.01	0.01	MAC	<0.004		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0006
T-Sodium	mg/L	200	</=200	AO	16.5		18	15.8	16.1	14.4	14.2	14.6	15.3
T-Uranium	mg/L	0.1	0.1	MAC	<0.06		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Zinc	mg/L	5	<5	AO	0.0137		0.009	0.017	0.015	0.088	0.074	0.398	0.062
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	*942		<1		<1	<1	<1	<1	<1
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1		<1		<1	<1	<1	<1	<1
E.coli	cfu/100ml	<1	<1	cfu/100ml							<1	<1	<1

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms

French Creek Well #7 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2000	2001	2002	2003	2004	2005	Oct 24 2006	Oct 24 2007	Oct 8 2008
Color	CU	15	</=15	AO	<5		5	<5	<5	7	<5	<5	5
Conductivity	µS		700	MAC	277		314	338	333	342	316	355	343
Total Dissolved Solids	mg/L	500	</=500	AO	186		160	193	220	300	210	273	210
Hardness (CaCO3)	mg/L	80-100	</=500	AO	142.3		139	155	170	160	140	160	160
pH	pH units	6.5-8.5	6.5-8.5	AO	8.17		8.12	8.05	8.2	8.2	8.3	8.22	8
Turbidity	NTU's	5	1	MAC	0.13		0.24	0.66	<0.5	<0.5	<0.5	<0.5	<0.5
Alkalinity	mg/L				131		142	160	160	160	150	160	160
Chloride	mg/L	250	</=250	AO	2.13		2.37	2.8	3.4	3	3.4	3.2	4.9
Fluoride	mg/L	1.5	1.5	MAC	0.12		0.13	<0.6	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	500	</=500	AO	15.22		15.82	17.6	20	18.9	13.1	<2.0	17.4
Nitrate (N)	mg/L	10	10	MAC	<0.002		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (N)	mg/L	1			<0.006		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	0.021		0.006	<0.005	<0.0005	<0.005	0.015	0.021	0.007
T-Antimony	mg/L		0.006	MAC			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
T-Arsenic	mg/L	0.025	0.025	IMAC	<0.01		<0.0002	0.0002	0.0003	0.0003	<0.0002	0.0002	<0.0002
T-Barium	mg/L	1.0	1	MAC	0.0144		0.015	0.017	0.018	0.017	0.015	0.018	0.017
T-Boron	mg/L	5.0	5	MAC	<0.002		0.014	0.019	0.02	0.019	0.021	0.019	0.018
T-Cadmium	mg/L	0.005			<0.0006		<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
T-Calcium	mg/L				35.7		33.7	37.2	41.6	39.8	35	39.3	39.9
T-Chromium	mg/L	0.05	0.05	MAC	<0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Copper	mg/L	1.0	</=1	MAC	<0.001		0.002	<0.001	<0.001	0.001	0.001	0.002	<0.001
T-Iron	mg/L	0.3	</=0.3	AO	0.158		<0.1	0.1	0.1	0.1	<0.1	0.2	0.11
T-Lead	mg/L	0.01	0.01	MAC	<0.002		0.0004	<0.0001	0.0001	0.0002	0.0001	0.0001	0.0004
T-Magnesium	mg/L		</=700	AO	12.9		13.3	15.2	16.7	14.9	13.3	15.1	15.8
T-Manganese	mg/L	0.05	</=0.05	AO	0.127		0.126	0.132	0.156	0.147	0.124	0.148	0.138
T-Mercury	mg/L	0.001	0.001	MAC	<0.0001		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.01
T-Potassium	mg/L				2.1		2.1	2.2	2.5	2.4	2.4	2.4	2.4
T-Selenium	mg/L	0.01	0.01	MAC	<0.004		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
T-Sodium	mg/L	200	</=200	AO	9.2		9	8.4	9	9.5	9.9	9	8.49
T-Uranium	mg/L	0.1	0.1	MAC	<0.06		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Zinc	mg/L	5	<5	AO	0.0782		0.046	0.043	0.01	0.012	0.003	0.012	0.006
Total Coliform	cfu/100ml	<1	<1	cfu/100ml	*50				<1	<1	<1	<1	<1
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml	<1				<1	<1	<1	<1	<1
E.coli	cfu/100ml	<1	<1	cfu/100ml							<1	<1	<1

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms



Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
Jan-08													
08-Jan	1334 Lanyon	0	0	0	0	7	7.1	0.06	130	0.1	272	0.11	0.12
15-Jan	1228 Sunrise Dr	0	0	0	0	9	7	0.07	129	0.1	275		
22-Jan	1334 Lanyon					6	6.9	0.11	129	0.1	277		
	Average	0	0	0	0	7.3	7.0	0.08	129.3	0.1	274.7	0.11	0.12
	Maximum	0	0	0	0	9	7.1	0.11	130	0.1	277	0.11	0.12
	Minimum	0	0	0	0	6	6.9	0.06	129	0.1	272	0.11	0.12

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
Feb-08													
05-Feb	1228 Sunrise Dr	0	0	0	0	8	6.9	0.11	130	0.1	278	0.11	0.144
12-Feb	1334 Lanyon Dr	0	0	0	0	7	6.9	0.11	130	0.1	275		
20-Feb	1228 Sunrise Dr			0	0	10	6.8	0.12	125	0.1	263		
26-Feb	1334 Lanyon Dr			0	0	8	7	0.12	129	0.1	274		
	Average	0	0	0	0	8.3	6.9	0.12	128.5	0.1	272.5	0.11	0.144
	Maximum	0	0	0	0	10	7	0.12	130	0.1	278	0.11	0.144
	Minimum	0	0	0	0	7	6.8	0.11	125	0.1	263	0.11	0.144

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
04-Mar	1228 Sunrise Dr	0	0	0	0	10	6.9	0.09	127	0.1	270	0.16	0.148
12-Mar	1334 Lanyon Dr	0	0	0	0	8	6.9	0.12	133	0.1	284		
18-Mar	1228 Sunrise Dr			0	0	11	6.9	0.18	130	0.1	276		
26-Mar	1334 Lanyon Dr					8	6.9	0.13	129	0.1	276		
Average		0	0	0	0	9.3	6.9	0.13	129.8	0.1	276.5	0.16	0.148
Maximum		0	0	0	0	11	6.9	0.18	133	0.1	284	0.16	0.148
Minimum		0	0	0	0	8	6.9	0.09	127	0.1	270	0.16	0.148

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Apr-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
02-Apr	1228 Sunrise Dr	0	0	0	0	10	6.9	0.12	130	0.1	277	0.12	
08-Apr	1334 Lanyon Dr	0	0	0	0	9	7	0.11	132	0.1	282		
15-Apr	1228 Sunrise Dr			0	0	12	6.7	0.15	132	0.1	279		0.154
22-Apr	1334 Lanyon Dr			0	0	11	6.9	0.14	132	0.1	278		
	Average	0	0	0	0	10.5	6.9	0.13	131.5	0.1	279.0	0.12	0.154
	Maximum	0	0	0	0	12	7	0.15	132	0.1	282	0.12	0.154
	Minimum	0	0	0	0	9	6.7	0.11	130	0.1	277	0.12	0.154

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Green tests are completed by RDN

Comments:

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Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
06-May	1228 Sunrise Dr	0	0	0	0	11	7	0.6	140	0.1	292	0.13	0.151
21-May	1334 Lanyon Dr	0	0	0	0	13	6.8	0.11	139	0.1	293		
27-May	1228 Sunrise Dr			0	0	13	6.8	0.15	136	0.1	286		
Average		0	0	0	0	12.3	6.9	0.29	138.3	0.1	290.3	0.13	0.151
Maximum		0	0	0	0	13	7	0.6	140	0.1	293	0.13	0.151
Minimum		0	0	0	0	11	6.8	0.11	136	0.1	286	0.13	0.151

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Comments:

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Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Jun-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
04-Jun	1228 Sunrise Dr	0	0	0	0	12	7	0.27	131	0.1	276	0.14	0.146
11-Jun	1334 Lanyon Dr	0	0	0	0	15	7.1	0.08	140	0.1	294		
17-Jun	1228 Sunrise Dr			0	0	13	6.8	0.11	139	0.1	292		
24-Jun	1334 Lanyon Dr			0	0	16	7.1	0.12	142	0.1	297		
	Average	0	0	0	0	14.0	7.0	0.15	138.0	0.1	289.8	0.14	0.146
	Maximum	0	0	0	0	16	7.1	0.27	142	0.1	297	0.14	0.146
	Minimum	0	0	0	0	12	6.8	0.08	131	0.1	276	0.14	0.146

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Comments:

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Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Jul-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
02-Jul	1228 Sunrise Dr	0	0										
09-Jul	1334 Lanyon Dr	0	0	0	0	17	6.8	0.11	142	0.1	299	0.13	0.132
15-Jul	1228 Sunrise Dr			0	0	13	7	0.17	141	0.1	296		
22-Jul	1334 Lanyon Dr			0	0	19	6.8	0.12	142	0.1	299		
29-Jul	1228 Sunrise Dr			0	0	14	6.9	0.11	140	0.1	293		
	Average	0	0	0	0	15.8	6.9	0.13	141.3	0.1	296.8	0.13	0.132
	Maximum	0	0	0	0	19	7	0.17	142	0.1	299	0.13	0.132
	Minimum	0	0	0	0	13	6.8	0.11	140	0.1	293	0.13	0.132

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Comments:

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Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Aug-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
06-Aug	1228 Sunrise Dr	0	0	0	0	14	6.9	0.09	139	0.1	292	0.14	0.143
12-Aug	1334 Lanyon Dr	0	0	0	0	19	6.9	0.04	139	0.1	292		
19-Aug	1228 Sunrise Dr			0	0	13	6.9	0.06	147	0.1	308		
26-Aug	1334 Lanyon Dr			0	0	19	6.8	0.04	146	0.1	303		
	Average	0	0	0	0	16.3	6.9	0.06	142.8	0.1	298.8	0.14	0.143
	Maximum	0	0	0	0	19	6.9	0.09	147	0.1	308	0.14	0.143
	Minimum	0	0	0	0	13	6.8	0.04	139	0.1	292	0.14	0.143

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Sep-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
03-Sep	1228 Sunrise Dr	0	0										
09-Sep	1334 Lanyon	0	0										
16-Sep	1228 Sunrise Dr			0	0	14	6.9	0.07	139	0.1	292	0.15	0.144
	Average	0	0	0	0	14.0	6.9	0.07	139.0	0.1	292.0	0.15	0.144
	Maximum	0	0	0	0	14	6.9	0.07	139	0.1	292	0.15	0.144
	Minimum	0	0	0	0	14	6.9	0.07	139	0.1	292	0.15	0.144

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Comments:

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Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Oct-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
07-Oct	1228 Sunrise Dr	0	0	0	0	12	6.9	0.09	122	0.1	287	0.48	0.178
15-Oct	1334 Lanyon Dr	0	0	0	0	15	7	0.03	143	0.1	301		
21-Oct	1228 Sunrise Dr			0	0	11	7.3	0.02	140	0.1	296		
29-Oct	1334 Lanyon Dr			0	0	12	7	0.05	141	0.1	297		
	Average	0	0	0	0	12.5	7.1	0.05	136.5	0.1	295.3	0.48	0.178
	Maximum	0	0	0	0	15	7.3	0.09	143	0.1	301	0.48	0.178
	Minimum	0	0	0	0	11	6.9	0.02	122	0.1	287	0.48	0.178

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Comments:

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Regional District of Nanaimo - Utilities Department

French Creek Water Analysis - Monthly Report



Date Nov-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
04-Nov	1228 Sunrise Dr	0	0	0	0	12	7.2	0.02	141	0.1	297	0.12	0.147
12-Nov	1334 Lanyon Dr	0	0	0	0	10	7	0.11	143	0.1	302		
18-Nov	1228 Sunrise Dr			0	0	13	6.7	0.14	145	0.1	305		
25-Nov	1334 Lanyon Dr			0	0	11	6.7	0.08	143	0.1	301		
	Average	0	0	0	0	11.5	6.9	0.09	143.0	0.1	301.3	0.12	0.147
	Maximum	0	0	0	0	13	7.2	0.14	145	0.1	305	0.12	0.147
	Minimum	0	0	0	0	10	6.7	0.02	141	0.1	297	0.12	0.147

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French Creek Water Analysis - Monthly Report



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02-Dec	1228 Sunrise Dr	0	0	0	0	10	7	0.27	146	0.1	308	0.07	0.148
09-Dec	1334 Lanyon Dr	0	0	0	0	10	6.8	0.11	136	0.1	288		
	Average	0	0	0	0	10.0	6.9	0.19	141.0	0.1	298.0	0.07	0.148
	Maximum	0	0	0	0	10	7	0.27	146	0.1	308	0.07	0.148
	Minimum	0	0	0	0	10	6.8	0.11	136	0.1	288	0.07	0.148

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APPENDIX C

EMERGENCY RESPONSE PLAN

* Emergency Response Plan not included in Public Copy.