

DRINKING WATER SYSTEM ANNUAL REPORT

Reporting Period: January 1st to December 31st, (year)

Water System

Water System Owner

Primary Contact Name (Operator or Manager)

Phone Number (Operator or Manager)

E-mail (Operator or Manager)

DESCRIBE YOUR WATER SUPPLY SYSTEM

What is the Source(s) of Raw Water?

Deep Well Shallow Well Surface Water Other

If other, specify details:

Does the Drinking Water System have Primary Disinfection? Yes No

Chlorination Ultraviolet Light Ozone Other

If other, specify details:

Does the Drinking Water System have Secondary Disinfection? Yes No

Chlorination Other

If other, specify details:

Does the Drinking Water System have Filtration? Yes No

Check all boxes that apply

Cartridge Filter(s) Carbon Filter Sand Filtration Reverse Osmosis Other

If other, specify details:

PUBLIC REPORTING

Emergency Response & Contingency Plan (ERCP)

Is your ERCP up to Date? Yes No

How do you Inform the System Users of the ERCP?

Hand Delivered Bulletin Board Newspaper Utility Bill Insert Website

Other (specify details) CVRD Engineering Services, 175 Ingram Street, Duncan, BC

Drinking Water System Annual Report

How do you Inform the System Users of the Annual Report?

Hand Delivered Bulletin Board Newspaper Utility Bill Insert Website

Other (specify details)



COMPLIANCE WITH OPERATING PERMIT

List the conditions of your Operating Permit (Contact the DWO for a copy if needed):

Are you in compliance with your Operating Permit? Yes No

BACTERIOLOGICAL TESTING AND DRINKING WATER PROTECTION REGULATION WATER QUALITY STANDARDS

How many bacteriological samples were collected during this reporting period? _____

What is the minimum required sampling frequency for this system? (#samples/month) _____

Additional sampling details:

Was the minimum required sampling frequency achieved? Yes No

Comments:

Bacteriological summary attached to this report? Yes No

If no, how do the users of the system view the results?

WATER QUALITY STANDARDS FOR POTABLE WATER

<i>Parameter:</i>	<i>Standard:</i>	<i>Did this system meet standard?</i>	
Escherichia coli (for all samples)	No detectable <i>Escherichia coli</i> per 100ml	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Total Coliform Bacteria (if only 1 sample collected in a 30 day period)	No detectable total coliform bacteria per 100ml	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Total Coliform Bacteria (if more than 1 sample collected in a 30 day period)	No more than 10% of samples contain total coliform bacteria, and No sample has more than 10 total coliform bacteria per 100ml	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If the system did not meet any of above Drinking Water Protection Regulation standards, record the results in the table below; attach additional sheets if necessary.

Date	TC/100ml	E.coli/100ml	Reason	Corrective Action

CHEMICAL SAMPLING COMPLETED DURING THIS REPORTING PERIOD

Was any chemical sampling conducted during reporting period? Yes No

If no, when were the last chemical samples conducted for this system? (date) Don't know

If yes, attach a list of the chemical results

If any water samples did not meet the Guidelines for Canadian Drinking Water Quality, record the results in the table below; attach additional sheets if necessary.

Next scheduled full chemical test (date)

Parameter	Result	Corrective Action / Treatment / Comments

ADDITIONAL TESTING

Does the system have analyzers for continuous monitoring? Yes No

If yes, check all boxes that apply:

Chlorine Turbidity Other (details)

Are the results available on request?

If any additional testing or sampling was conducted, record results in the table below; attach additional sheets if necessary.

Additional Testing & Reason for Sampling	Corrective Action Taken

WATER QUALITY COMPLAINTS

Were there any water quality complaints in this reporting period? (e.g. taste, odour, colour etc.) Yes No

If yes, complete the table below; attach additional sheets if necessary.

Date	Water Quality Complaint	Corrective Action / Treatment

OPERATIONAL PROBLEMS

Were there any operational problems during this reporting period? (e.g. insufficient water supply, malfunction of disinfection equipment, line breaks, elevated turbidity etc.). Yes No

If yes, complete the table below; attach additional sheets if necessary.

Incident Date	Type of Operational Problem	Corrective Action Taken

MAJOR UPGRADES/REPAIRS & EXPENSES

Were there any major upgrades/repairs or any major costs incurred during this reporting period? Yes No

If yes, complete the table below; attach additional sheets if necessary.

Major Upgrades/Expenses	Details
Improvements required by DWO	
Additions/changes to system	
Purchase or install new equipment	
Equipment repair or replacement	
Annual maintenance of system	
Specialist report	
Other	

FUTURE IMPROVEMENTS

Are there any plans for future improvements? Yes No

If yes, complete the table below; attach additional sheets if necessary.

Future Upgrades or Improvements	Estimated Date of Completion

<p>Click here to enter a date. DATE COMPLETED:</p>	<p>COMPLETED BY:</p>
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Future upgrades or improvements	Estimated date of Completion
new genset at Decca WTP	2019
Install solar chlorinator at the reservoir	2020
Well development	2020/2021
4-3-2-1-0 Treatment if wells do not provide enough water	2020/2021
McKean Road Replacement	2020/2021
Inspect & clean reservoirs	2020/2021
Groundwater monitoring (data collection) all wells	2020



NORTH SHAWNIGAN LAKE COMMUNITY WATER SYSTEM

Facility Location:

175 Ingram Street
Shawnigan Lake

Facility Information:

Facility Type: 301-10000 DWT

Facility Sampling History:

Location	Date	Total Coliform	E.Coli
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	18-Dec-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	11-Dec-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	11-Dec-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	4-Dec-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	4-Dec-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	26-Nov-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	20-Nov-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	20-Nov-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	13-Nov-2018	L1	L1
S-8, Lot 10 Katy's Crescent, 10 Katy's Crescent, Shawnigan Lake, BC	13-Nov-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	5-Nov-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	5-Nov-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	29-Oct-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	22-Oct-2018	L1	L1
S-8, Lot 10 Katy's Crescent, 10 Katy's Crescent, Shawnigan Lake, BC	22-Oct-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	16-Oct-2018	L1	L1



S-7 3057 Miner Road, S-7 3057Miner Road	16-Oct-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	10-Oct-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	10-Oct-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	2-Oct-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	2-Oct-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	25-Sep-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	18-Sep-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	11-Sep-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	11-Sep-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	5-Sep-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	5-Sep-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	28-Aug-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	28-Aug-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	21-Aug-2018	L1	L1
S-8, Lot 10 Katy's Crescent, 10 Katy's Crescent, Shawnigan Lake, BC	21-Aug-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	14-Aug-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	14-Aug-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	8-Aug-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	8-Aug-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	31-Jul-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	31-Jul-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	23-Jul-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	23-Jul-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	16-Jul-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	16-Jul-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	9-Jul-2018	L1	L1
S-8, Lot 10 Katy's Crescent, 10 Katy's Crescent, Shawnigan Lake, BC	9-Jul-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	4-Jul-2018	D	



S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	3-Jul-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	27-Jun-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	27-Jun-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	18-Jun-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	18-Jun-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	12-Jun-2018	L1	L1
S-8, Lot 10 Katy's Crescent, 10 Katy's Crescent, Shawnigan Lake, BC	12-Jun-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	4-Jun-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	4-Jun-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	28-May-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	28-May-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	23-May-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	23-May-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	14-May-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	14-May-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	7-May-2018	L1	L1
S-8, Lot 10 Katy's Crescent, 10 Katy's Crescent, Shawnigan Lake, BC	7-May-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	30-Apr-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	30-Apr-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	24-Apr-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	24-Apr-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	16-Apr-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	16-Apr-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	10-Apr-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	10-Apr-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	3-Apr-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	3-Apr-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	27-Mar-2018	L1	L1



S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	27-Mar-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	19-Mar-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	19-Mar-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	13-Mar-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	13-Mar-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	5-Mar-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	5-Mar-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	26-Feb-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	26-Feb-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	19-Feb-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	19-Feb-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	13-Feb-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	13-Feb-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	5-Feb-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	5-Feb-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	30-Jan-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	22-Jan-2018	L1	L1
S-7 3057 Miner Road, S-7 3057Miner Road	22-Jan-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	16-Jan-2018	L1	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	16-Jan-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	8-Jan-2018	L1	L1
S-5 End of Gregory Rd. Reservoir , end of Gregory Road, Shawnigan Lake, BC	8-Jan-2018	L1	L1
S-1 2209 McKean, 2209 Mckean, Shawnigan Lake, BC	2-Jan-2018	6	L1
S-4 2032 Sunnybrook Lane , 2032 Sunnybrook Lane, Shawnigan Lake	2-Jan-2018	L1	L1

Parameter	Concentration	Sample ID	Sampling Point Name
Alkalinity (total, as CaCO₃)			
06/14/2018 15:02	19.8 mg/L	L2113184-1	Shawnigan Lake-intake
Aluminum (total)			
06/14/2018 15:02	0.047 mg/L	L2113184-1	Shawnigan Lake-intake
Ammonia (total, as N)			
06/14/2018 15:02	< 0.0050 mg/L	L2113184-1	Shawnigan Lake-intake
Antimony (total)			
06/14/2018 15:02	< 0.00050 mg/L	L2113184-1	Shawnigan Lake-intake
Arsenic (total)			
06/14/2018 15:02	0.00024 mg/L	L2113184-1	Shawnigan Lake-intake
Background Bacteria			
06/14/2018 15:02	< 1 CFU/100ml	L2113184-1	Shawnigan Lake-intake
Barium (total)			
06/14/2018 15:02	< 0.010 mg/L	L2113184-1	Shawnigan Lake-intake
Beryllium (total)			
06/14/2018 15:02	< 0.0050 mg/L	L2113184-1	Shawnigan Lake-intake
Bismuth (total)			
06/14/2018 15:02	< 0.20 mg/L	L2113184-1	Shawnigan Lake-intake
Boron (total)			
06/14/2018 15:02	< 0.10 mg/L	L2113184-1	Shawnigan Lake-intake
Bromochloroacetic acid			
08/01/2018 10:05	0.0015 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Bromodichloromethane (dichlorobromomethane)			
08/01/2018 10:05	0.0033 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Bromoform			
08/01/2018 10:05	< 0.0010 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Cadmium (total)			
06/14/2018 15:02	< 0.00020 mg/L	L2113184-1	Shawnigan Lake-intake

Calcium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	6.94 mg/L	L2113184-1	Shawnigan Lake-intake
Chloride		Sample ID	Sampling Point Name
06/14/2018 15:02	4.80 mg/L	L2113184-1	Shawnigan Lake-intake
Chloroform		Sample ID	Sampling Point Name
08/01/2018 10:05	0.0615 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	0.0019 mg/L	L2113184-1	Shawnigan Lake-intake
Chromium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.0020 mg/L	L2113184-1	Shawnigan Lake-intake
Cobalt (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.010 mg/L	L2113184-1	Shawnigan Lake-intake
Colour		Sample ID	Sampling Point Name
06/14/2018 15:02	10.9 TCU	L2113184-1	Shawnigan Lake-intake
Conductivity		Sample ID	Sampling Point Name
06/14/2018 15:02	62.9 uS/cm	L2113184-1	Shawnigan Lake-intake
Copper (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	0.0021 mg/L	L2113184-1	Shawnigan Lake-intake
Dibromoacetic acid		Sample ID	Sampling Point Name
08/01/2018 10:05	< 0.0010 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Dibromochloromethane (Chlorodibromomethane)		Sample ID	Sampling Point Name
08/01/2018 10:05	< 0.0010 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Dichloroacetic acid		Sample ID	Sampling Point Name
08/01/2018 10:05	0.0288 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Escherichia coli / E. coli (counts)		Sample ID	Sampling Point Name
* 06/14/2018 15:02	1 counts/100ml	L2113184-1	Shawnigan Lake-intake
Fecal (thermal tolerant) Coliforms (counts)		Sample ID	Sampling Point Name
* 06/14/2018 15:02	1 counts/100ml	L2113184-1	Shawnigan Lake-intake
05/07/2018 12:40	< 1 counts/100ml	L2090604-1	Well K1 Ingot Rd.
12/06/2018 09:45	< 2 counts/100ml	L2207474-1	Well K1 Ingot Rd.

Fluoride	Sample ID	Sampling Point Name
06/14/2018 15:02 < 0.020 mg/L	L2113184-1	Shawnigan Lake-intake
Haloacetic acids 5 / HAA5	Sample ID	Sampling Point Name
08/01/2018 10:05 0.0616 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02 < 0.0054 mg/L	L2113184-1	Shawnigan Lake-intake
Hardness (total, as CaCO3)	Sample ID	Sampling Point Name
06/14/2018 15:02 22.9 mg/L	L2113184-1	Shawnigan Lake-intake
Heterotrophic Plate Count / HPC	Sample ID	Sampling Point Name
* 06/14/2018 15:02 7,000 CFU/100ml	L2113184-1	Shawnigan Lake-intake
Iron (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 0.086 mg/L	L2113184-1	Shawnigan Lake-intake
Langelier Index (@ 20 C)	Sample ID	Sampling Point Name
06/14/2018 15:02 15.6	L2113184-1	Shawnigan Lake-intake
Lead (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 < 0.00050 mg/L	L2113184-1	Shawnigan Lake-intake
Lithium (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 < 0.010 mg/L	L2113184-1	Shawnigan Lake-intake
Magnesium (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 1.36 mg/L	L2113184-1	Shawnigan Lake-intake
Manganese (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 0.0144 mg/L	L2113184-1	Shawnigan Lake-intake
Mercury (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 < 0.00020 mg/L	L2113184-1	Shawnigan Lake-intake
Molybdenum (total)	Sample ID	Sampling Point Name
06/14/2018 15:02 < 0.030 mg/L	L2113184-1	Shawnigan Lake-intake
Monobromoacetic acid	Sample ID	Sampling Point Name
08/01/2018 10:05 < 0.0010 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02 < 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Monochloroacetic acid	Sample ID	Sampling Point Name
08/01/2018 10:05 < 0.0050 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02 < 0.0050 mg/L	L2113184-1	Shawnigan Lake-intake

Nickel (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.050 mg/L	L2113184-1	Shawnigan Lake-intake
Nitrate (as N)		Sample ID	Sampling Point Name
06/14/2018 15:02	0.117 mg/L	L2113184-1	Shawnigan Lake-intake
05/07/2018 12:40	0.543 mg/L	L2090604-1	Well K1 Ingot Rd.
12/06/2018 09:45	1.09 mg/L	L2207474-1	Well K1 Ingot Rd.
Nitrate + Nitrite (as N)		Sample ID	Sampling Point Name
06/14/2018 15:02	0.117 mg/L	L2113184-1	Shawnigan Lake-intake
Nitrite (as N)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Nitrogen (total)		Sample ID	Sampling Point Name
05/07/2018 12:40	0.577 mg/L	L2090604-1	Well K1 Ingot Rd.
12/06/2018 09:45	1.13 mg/L	L2207474-1	Well K1 Ingot Rd.
pH		Sample ID	Sampling Point Name
06/14/2018 15:02	7.49	L2113184-1	Shawnigan Lake-intake
06/14/2018 15:02	6.12	L2113184-1	Shawnigan Lake-intake
Phosphorus (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.30 mg/L	L2113184-1	Shawnigan Lake-intake
05/07/2018 12:40	< 0.0020 mg/L	L2090604-1	Well K1 Ingot Rd.
12/06/2018 09:45	0.0024 mg/L	L2207474-1	Well K1 Ingot Rd.
Potassium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	0.26 mg/L	L2113184-1	Shawnigan Lake-intake
Selenium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Silicon (total, as Si)		Sample ID	Sampling Point Name
06/14/2018 15:02	2.27 mg/L	L2113184-1	Shawnigan Lake-intake
Silver (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.010 mg/L	L2113184-1	Shawnigan Lake-intake
Sodium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	3.8 mg/L	L2113184-1	Shawnigan Lake-intake
Strontium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	0.0269 mg/L	L2113184-1	Shawnigan Lake-intake

Sulfate Reducing Bacteria		Sample ID	Sampling Point Name
06/14/2018 15:02	SC	L2113184-1	Shawnigan Lake-intake
Sulphate		Sample ID	Sampling Point Name
06/14/2018 15:02	2.81 mg/L	L2113184-1	Shawnigan Lake-intake
Sulphide (total, as S)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.018 mg/L	L2113184-1	Shawnigan Lake-intake
Tannins and Lignins		Sample ID	Sampling Point Name
06/14/2018 15:02	0.35 mg/L	L2113184-1	Shawnigan Lake-intake
Thallium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.20 mg/L	L2113184-1	Shawnigan Lake-intake
Tin (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.030 mg/L	L2113184-1	Shawnigan Lake-intake
Titanium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.010 mg/L	L2113184-1	Shawnigan Lake-intake
Total Coliforms (counts)		Sample ID	Sampling Point Name
* 06/14/2018 15:02	> 1 counts/100ml	L2113184-1	Shawnigan Lake-intake
Total Dissolved Solids / TDS		Sample ID	Sampling Point Name
06/14/2018 15:02	53 mg/L	L2113184-1	Shawnigan Lake-intake
Total Kjeldahl Nitrogen / TKN		Sample ID	Sampling Point Name
06/14/2018 15:02	0.182 mg/L	L2113184-1	Shawnigan Lake-intake
Total Organic Carbon / TOC		Sample ID	Sampling Point Name
06/14/2018 15:02	3.65 mg/L	L2113184-1	Shawnigan Lake-intake
Total Trihalomethanes / TTHM		Sample ID	Sampling Point Name
08/01/2018 10:05	0.0648 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0020 mg/L	L2113184-1	Shawnigan Lake-intake
Trichloroacetic acid		Sample ID	Sampling Point Name
08/01/2018 10:05	0.0328 mg/L	L2140357-1	S1-2209 McKean Rd
06/14/2018 15:02	< 0.0010 mg/L	L2113184-1	Shawnigan Lake-intake
Turbidity		Sample ID	Sampling Point Name
06/14/2018 15:02	1.18 NTU	L2113184-1	Shawnigan Lake-intake

Uranium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.00010 mg/L	L2113184-1	Shawnigan Lake-intake
Vanadium (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	< 0.030 mg/L	L2113184-1	Shawnigan Lake-intake
Zinc (total)		Sample ID	Sampling Point Name
06/14/2018 15:02	0.0094 mg/L	L2113184-1	Shawnigan Lake-intake

Result Legend:

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

< means less than lower detection limit shown

> means greater than upper detection limit shown

« means detected & less than number shown

» means detected & greater than number shown

* Indicates Criteria is exceeded

Client/Code

Cowichan Valley Regional District
175 Ingram St
Duncan, BC
V9L 1N8

Date 07Aug18 11:56a
Source FWS
Type of Sample 1um wound filter
No. of Samples 2

No. W141873

TEL: (250) 746-2530
Email: group

CommentsArrival temp.: 20.0C
Sampler: Rod Lama

PARASITE ANALYSIS

<u>Sample</u>	<u>Cysts/100L</u>	<u>Organisms Identified</u>	<u>Comments</u>
1 Shawnigan L N.Water System 02Aug18 10:22a P.I.#2 180 Ltrs	0.10 0.10	Giardia (cysts) Cryptosporidium (oocysts)	-protozoan; enteric parasite -protozoan; enteric parasite
2 Youbou Sys TB 02Aug18 12:14p 150 Ltrs	ND ND	Giardia (cysts) Cryptosporidium (oocysts)	-protozoan; enteric parasite -protozoan; enteric parasite

Detection Limit = 1 per 100L *

Lab Test Recovery = 94.6%

* test is strongly influenced by volume collected, amount & type of sediment present

ND = none detected

ref: Direct Antibody -Hydrofluor Meridian

Monitoring for Giardia & Cryptosporidium, JL Clancy, WD Gollnitz & Z Tabib, 1994
Prop. ICR Protozoan Methods for Detection of Giardia Cysts and Cryptosporidium Oocysts
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Vasconcelos, J., S. Harris., 1992

Manual of Clinical Microbiology, EH Lennette etal. Am. Soc for Microbiology

Clinical Diagnosis by Laboratory Methods, Davidson & Henry

Veterinary Clinical Parastiology, MW Sloss, RL Kemp. Iowa State Univ. Press 5th ed.

Parasitology for Vetinarians, JR Georgi & ME Georgi. WB Saunders & Co, 1990

Personal Communications re methodologies & taxonomy: US EPA -S. Harris,
US EPA (Cinc) F. Schaefer
US EPA (retired) J.Vasconcelos
BC CDC Magda Moricz (1995)

K. Paneque Martinez
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W. Riggs
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