

Annual Report – Small Water System

SILVERDALE ELEMENTARY

As required under Section 15 of the Drinking Water Protection Act, water suppliers are to report the water quality monitoring results to the water system users on an annual basis.

Report Date: April 3, 2017

Reporting Period: January 1, 2016 to December 31, 2016

Owner: Board of School Trustees, School District No. 75 (Mission)

Any questions concerning this report please contact:

Ray Seifert, Director of Facilities
School District No. 75 (Mission)
33940 Dlugosh Avenue
Mission, BC V2V 6B2
Phone: 604.826.7375
Email: ray.seifert@mpsd.ca

Water System Classification:

Classified as a Small Water System by Environmental Operators
Certification Program

Certified Operators for the Small Water System:

School District No. 75 (Mission) has two (2) employees certified as
Small Water System Operators

**Results of Coliform/E. coli monitoring as per Section 11 of the Act and Section 8 of the
Regulations:**

Attached

Results of chemical analysis conducted during the period covered by this report:

Attached

**SCHOOL DISTRICT #75 (MISSION)
EMERGENCY RESPONSE PLAN**

SMALL WATER SYSTEMS

Part A: Well Water Quality

1. The Facilities Department will conduct routine sampling of all well water in the district to be tested by a certified test lab.
2. In the event of adverse well water test results, the following procedures, in accordance with the Guidelines for Canadian Drinking Water Quality, will apply:
 - a. Contact Brian Standing or alternate at Fraser Health Authority
 - b. An alternative source of water will be supplied and corrective action taken in consultation with the applicable governing agency if:
 - i. A sample contains more than ten (10) total coliforms per 100 ml.
 - ii. A sample contains any fecal coliform.
 - iii. Any consecutive samples from the same site show the presence of coliform.
 - iv. A sample shows an unsuitable compound of chemical.
 - c. If total coliform organisms are detected from a single sample, the site shall be re-sampled until three (3) consecutive samples comply with the regulations.
 - d. Alternative water supply will continue until three (3) consecutive samples comply with the Drinking Water Protection Act and Regulations.
 - e. All sources of drinking water on site will be tagged "Do Not Drink" and sealed from use where possible.

Part B: Loss of Water Supply

In the event of disruption in the water supply, immediately notify Brian Standing or alternate at Fraser Health Authority. District staff will be dispatched immediately to assess and correct the situation.

- a. Should it be determined that the disruption will exceed two (2) hours, alternate sources of water (dispensers) will be provided to the site.
- b. Should the disruption exceed one (1) day, either a delivery system will be installed at the site or students will be relocated to an unaffected site.

Part C: Emergency Contacts

In the event of any abnormal operating condition or emergency effecting or potentially affecting the water system, please contact one of the following managers from the Facilities Department at 604.826.7375 or directly at the numbers provided. They will then contact Fraser Health Authority immediately.

	Cell Phone #
Ray Seifert, Director of Facilities	604.302.4607
Bob Rudd, Engineering Foreman	604.302.4161

Part D: Questions or Concerns

If you have any questions or concerns regarding this Emergency Response Plan for Small Water Systems, please contact one of the Fraser Health Authority water inspectors at 604.870.7900 or at the numbers provided:

	Work #	After Hour #s
Dr. Marcus Lem, Medical Health Officer	604.556.5069	604.527.4806
Barbara Haworth, Drinking Water Program	604.870.7920	604.615.1140

Part E: Emergency Contact Numbers

Dewdney Elementary School	604.826.7375
Ferndale Elementary School	604.826.7375
Silverdale Elementary School	604.826.7375
Stave Falls Elementary School	604.826.7375

EMERGENCY RESPONSE & CONTINGENCY PLAN

Water System Name: Silverdale Elementary

Emergency Contacts	Name and Title	Phone	Fax	E-mail
Water System - Primary Contact (person responsible for receiving call from lab and/or FHA)	Bob Rudd Foreman	604-826-7375 604-302-4161	604-826-9273	bob.rudd@mpsd.ca
Water System - Secondary Contact (Should primary contact be ill or on vacation etc.)	Ray Seifert Director	604-826-7375 604-302-4607	604-826-9273	ray.seifert@mpsd.ca
Water System Owner	SD75 Mission	604-826-7375 Cell: n/a	604-826-9273	
Water System – Community Hall	Joan Crouch	604-826-2426		
Fraser Health Authority Contacts				
Environmental Health Officer	Barbara Haworth	604-870-7900	604-870-7901	barb.haworth@fraserhealth.ca
Medical Health Officer	Dr. Marcus Lem	604-556-5070	604-556-5077	marcus.lem@fraserhealth.ca
Fraser Health After Hours Contact (After 4:30 pm or on weekends)	Fraser Health On-Call Staff	604-527-4806		
Emergency Contacts				
Alternate Source of Water i.e. bottled water or bulk supply	Bottled water			
Plumbing Services	own			
Equipment Services i.e. Treatment/pumps	own			
Electrical Services	own			
B.C. Hydro				
Other				

Signature: 

Title: Foreman Engineering Dept.

Name: Bob Rudd

Date: April 3, 2017

Sample Range Report

Fraser Health Authority

Facility Name: Silverdale Elementary School - Water System
Date Range: Jan 1 2016 to Dec 31 2016

Operator School District #75 - Bob Rudd
 33919 Dewdney Trunk Rd
 Mission, BC V2V 4Y4

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>AUDIT Silverdale</u>				
<u>School - Staff Room,</u>				
<u>29715 Donatelli</u>				
	2/17/2016	L1	L1	
	6/8/2016	L1	L1	
	11/2/2016	A		
	Total Positive:	0	0	0
<u>Classroom 144 -</u>				
<u>Office Washroom,</u>				
<u>29715 Donatelli Ave</u>				
	1/27/2016	L1	L1	
	2/16/2016	L1	L1	
	3/1/2016	L1	L1	
	3/22/2016	L1	L1	
	4/26/2016	L1	L1	
	5/25/2016	L1	L1	
	6/28/2016	L1	L1	
	7/19/2016	L1	L1	
	8/16/2016	L1	L1	
	8/23/2016	L1	L1	
	9/20/2016	L1	L1	
	10/25/2016	L1	L1	
	11/29/2016	L1	L1	
	Total Positive:	0	0	0
<u>Classroom 111,</u>				
<u>29715 Donatelli Ave</u>				
	1/6/2016	L1	L1	
	2/2/2016	L1	L1	
	3/8/2016	L1	L1	
	3/30/2016	L1	L1	
	5/3/2016	L1	L1	
	5/31/2016	L1	L1	
	7/5/2016	L1	L1	
	7/26/2016	L1	L1	
	8/30/2016	T		
	10/4/2016	L1	L1	
	11/1/2016	L1	L1	

12/13/2016 L1 L1
 Total Positive: 0 0 0

Staff Room Kitchen
Tap, 29715 Donatelli
Ave

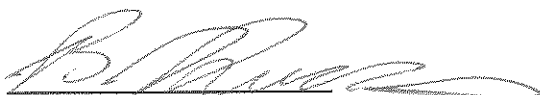
1/12/2016 L1 L1
 2/10/2016 T
 3/15/2016 L1 L1
 4/19/2016 L1 L1
 5/10/2016 L1 L1
 6/7/2016 L1 L1
 7/12/2016 L1 L1
 8/2/2016 L1 L1
 9/6/2016 L1 L1
 10/11/2016 L1 L1
 11/8/2016 L1 L1
 11/22/2016 L1 L1
 12/20/2016 L1 L1
 Total Positive: 0 0 0

Classroom 150,
29715 Donatelli Ave

1/19/2016 L1 L1
 2/23/2016 L1 L1
 4/5/2016 L1 L1
 4/12/2016 L1 L1
 5/17/2016 L1 L1
 6/14/2016 L1 L1
 6/21/2016 L1 L1
 8/9/2016 L1
 9/14/2016 L1 L1
 10/18/2016 L1 L1
 11/15/2016 L1 L1
 12/7/2016 L1 L1
 Total Positive: 0 0 0

Result Values:	E - estimated	L - less than	G - greater than
Samples that contain total coliform:	0		0.00% of total
Samples that contain e. coli:	0		0.00% of total
Samples that contain fecal coliform:	0		0.00% of total
Number of consecutive samples that contain total coliform:	0		
Number of samples that contain total coliform in last 30 days:	0/2		
Total number of samples:	53		

Comments:



Environmental Health Officer
Jan 11 2017

FOR FURTHER INFORMATION PLEASE CALL: Barb Haworth (604) 870-7900

DRINKING WATER SYSTEM ANNUAL REPORT

Reporting Period: January 1st to December 31st, (year) 2016

Water System SILVERDALE ELEMENTARY

Water System Owner SD #75 MISSION

Primary Contact Name (Operator or Manager) ROB CLARK

Phone Number (Operator or Manager) 604-856-2526

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)

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 that have been placed on your Operating Permit (if you have conditions, these will be stated on your permit):

Are you in compliance with the conditions listed on your Operating Permit? Yes No N/A

BACTERIOLOGICAL TESTING AND DRINKING WATER PROTECTION REGULATION WATER QUALITY STANDARDS

How many bacteriological samples were collected during this reporting period? 54

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

Parameter:	Standard:	Did this system meet standard?	
Escherichia coli (for all samples)	No detectable Escherichia coli per 100ml	<input checked="" 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 checked="" 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 checked="" 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 Never

If yes, did all water samples meet the Guidelines for Canadian Drinking Water Quality? Yes No

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.

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

DATE COMPLETED:	COMPLETED BY: <i>Bob Ruess</i>
-----------------	--------------------------------

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Report Transmission Cover Page

Bill To:	School District #75 - Mission 33940 Dlugosh Avenue Mission, BC, Canada V2V 6B2	Project:	ID: 59772 Name: Silverdale Location: 29715 Donatelli Ave. R.R. #2 LSD: Mission BC V4S 1H6 P.O.:	Lot ID:	1196098
Attn:	Ray Seifert			Control Number:	
Sampled By:				Date Received:	Apr 11, 2017
Company:				Date Reported:	Apr 18, 2017
				Report Number:	2181572

Contact & Affiliation	Address	Delivery Commitments
Ray Seifert School District #75 - Mission	33940 Dlugosh Avenue Mission, British Columbia V2V 6B2 Phone: (604) 826-7375 Fax: (604) 820-0927 Email: ray.seifert@mpsd.ca	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (Test Report, COC) by Email - Multiple Reports By On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report
Lynn McCaw School District #75 - Mission	33940 Dlugosh Avenue Mission, British Columbia V2V 6B2 Phone: (604) 826-7375 Fax: (604) 820-0927 Email: lynn.mccaw@mpsd.ca	On [Report Approval] send (Test Report, COC) by Email - Merge Reports

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Analytical Report

Bill To: School District #75 - Mission	Project:	Lot ID: 1196098
33940 Dlugosh Avenue	ID: 59772	Control Number:
Mission, BC, Canada	Name: Silverdale	Date Received: Apr 11, 2017
V2V 6B2	Location: 29715 Donatelli Ave.	Date Reported: Apr 18, 2017
Attn: Ray Seifert	R.R. #2	Report Number: 2181572
Sampled By:	LSD: Mission BC V4S 1H6	
Company:	P.O.:	
	Acct code:	

Reference Number	1196098-1
Sample Date	April 11, 2017
Sample Time	09:00
Sample Location	
Sample Description	Staff Kitchen / 9.9 °C
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Aluminum	Extractable mg/L	0.00358	0.001	0.1	Below OG
Antimony	Extractable mg/L	0.000063	0.00002	0.006	Below MAC
Arsenic	Extractable mg/L	0.0049	0.0001	0.010	Below MAC
Barium	Extractable mg/L	0.0017	0.0001	1	Below MAC
Boron	Extractable mg/L	0.008	0.002	5	Below MAC
Cadmium	Extractable mg/L	<0.000010	0.00001	0.005	Below MAC
Chromium	Extractable mg/L	<0.000050	0.00005	0.05	Below MAC
Copper	Extractable mg/L	<0.0005	0.0005	1.0	Below AO
Lead	Extractable mg/L	0.000016	0.00001	0.01	Below MAC
Selenium	Extractable mg/L	<0.0002	0.0002	0.05	Below MAC
Uranium	Extractable mg/L	<0.000010	0.00001	0.02	Below MAC
Vanadium	Extractable mg/L	<0.000050	0.00005		
Zinc	Extractable mg/L	0.0014	0.0005	5.0	Below AO
Physical and Aggregate Properties					
Colour	True	Colour units	<5	5	
Turbidity		NTU	0.11	0.02	
Routine Water					
pH - Holding Time			Exceeded		
pH	at 25 °C		7.92	7.0-10.5	Within Range
Electrical Conductivity		µS/cm at 25 °C	142	1	
Calcium	Extractable mg/L	18.7	0.01		
Iron	Extractable mg/L	0.021	0.004	0.3	Below AO
Magnesium	Extractable mg/L	2.2	0.02		
Manganese	Extractable mg/L	0.003	0.001	0.05	Below AO
Potassium	Extractable mg/L	0.99	0.04		
Silicon	Extractable mg/L	7.78	0.005		
Sodium	Extractable mg/L	8.4	0.1	200	Below AO
T-Alkalinity	as CaCO3 mg/L	65	5		
Chloride	Dissolved mg/L	2.94	0.05	250	Below AO
Fluoride	Dissolved mg/L	0.054	0.01	1.5	Below MAC
Nitrate - N	Dissolved mg/L	<0.010	0.01	10	Below MAC
Nitrite - N	Dissolved mg/L	<0.010	0.01	1	Below MAC
Sulfate (SO4)	Dissolved mg/L	6.7	0.1	500	Below AO
Hardness	as CaCO3 (extractable) mg/L	55.6	1		
Total Dissolved Solids	Extractable mg/L	100	1		



Analytical Report

Bill To:	School District #75 - Mission	Project:		Lot ID:	1196098
	33940 Dlugosh Avenue	ID:	59772	Control Number:	
	Mission, BC, Canada	Name:	Silverdale	Date Received:	Apr 11, 2017
	V2V 6B2	Location:	29715 Donatelli Ave.	Date Reported:	Apr 18, 2017
Attn:	Ray Seifert	R.R. #2		Report Number:	2181572
Sampled By:		LSD:	Mission BC V4S 1H6		
Company:		P.O.:			
		Acct code:			

Approved by:

Mathieu Simoneau
Operations Manager

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).

Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.



Methodology and Notes

Bill To: School District #75 - Mission	Project:	Lot ID: 1196098
33940 Dlugosh Avenue	ID: 59772	Control Number:
Mission, BC, Canada	Name: Silverdale	Date Received: Apr 11, 2017
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Sampled By:	LSD: Mission BC V4S 1H6	
Company:	P.O.:	
	Acct code:	

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Alk, pH, EC, Turb in water (Surrey)	APHA	* Alkalinity - Titration Method, 2320 B	12-Apr-17	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* Conductivity, 2510 B	12-Apr-17	Exova Surrey
Alk, pH, EC, Turb in water (Surrey)	APHA	* pH - Electrometric Method, 4500-H+ B	12-Apr-17	Exova Surrey
Anions by IEC in water (Surrey)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	13-Apr-17	Exova Surrey
Metals SemiTrace (Extractable) in water (Surrey)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	12-Apr-17	Exova Surrey
Trace Metals (extractable) in Water (Surrey)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	12-Apr-17	Exova Surrey
True Color in water (Surrey)	APHA	* Spectrophotometric - Single Wavelength Method, 2120 C	12-Apr-17	Exova Surrey
Turbidity - Water (Surrey)	APHA	* Turbidity - Nephelometric Method, 2130 B	12-Apr-17	Exova Surrey

* Reference Method Modified

References

APHA Standard Methods for the Examination of Water and Wastewater
 US EPA US Environmental Protection Agency Test Methods

Guidelines

Guideline Description Health Canada GCDWQ
 Guideline Source Guidelines for Canadian Drinking Water Quality, Health Canada, February 2017
 Guideline Comments MAC = Maximum Acceptable Concentration
 AO = Aesthetic Objective
 OG = Operational Guideline for Water Treatment Plants
 Refer to Health Canada GCDWQ for complete guidelines and additional drinking water information at www.hc-sc.gc.ca

Comments:

The comparison of test results to guideline limits is provided for information purposes only. This is not to be taken as a statement of conformance / nonconformance to any guideline, regulation or limit. The data user is responsible for all conclusions drawn with respect to the data and is advised to consult official regulatory references when evaluating compliance.

Please direct any inquiries regarding this report to our Client Services group.
 Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.