

January 27, 2025

School District 70
4645 Helen Street,
Port Alberni, BC
V9Y 6P6

Attention: Alex Taylor

Reference: Potable Water Lead Testing – Alberni Elementary School

Introduction

Island EHS Ltd has collected twenty-eight (28) water samples from tap / bottle filling stations at **Alberni Elementary School**, located at 4645 Helen Street, Port Alberni, B.C. The purpose of the sampling is to evaluate potential lead exposure risk from water consumed from the tap / bottle-filling stations. The samples were collected on January 16, 2025, and we report the following.

Sampling Methodology

Sampling locations were selected by the client. All samples were taken from cold water lines.

The lead samples were collected using the methodology taken from “Guidelines on Evaluating and Mitigating lead in Drinking Water Supplies, Schools, Daycares & Other Buildings” (published April 2019 by the British Columbia Health Protection Branch), using the Random Daytime Sampling method. A 125mL First Draw sample was followed by a 125mL sample taken after a 30-second flush. This methodology was conducted to determine if a 30-second flush is sufficient to reduce the lead concentrations to below the Maximum Acceptable Concentration (MAC).

The samples were collected in an appropriate bottle supplied by an accredited laboratory. The samples were chilled and immediately submitted to the testing laboratory and tested for lead.

Samples were analyzed by the Island EHS in-house laboratory, using procedures based on methods recommended by the American Public Health Association (APHA) and the US Environmental Protection Agency (US-EPA) (EPA 200.9). Our laboratory is accredited by CALA to ISO/IEC 17025:2017 standards. Results were compared to the latest edition of the Canadian Drinking Water Quality Guidelines (CDWQG) published by Health Canada’s Water Quality and Health Bureau.

Results

Table 1: Lead concentration from tested locations for First Draw and Flushed Sampling, compared to the Maximum Allowable Concentration (MAC) for Lead (0.005 mg/L).

Sample Location	MAC ¹ (mg/L)	Random Daytime Sample (mg/L)	Comments
01-S 01-F	0.005	<0.0006 <0.0006	Main floor – Classroom 2
02-S 02-F	0.005	<0.0006 <0.0006	Main floor – Staff Washroom
03-S 03-F	0.005	<0.0006 <0.0006	Main floor – Water Fountain
04-S 04-F	0.005	0.0024 <0.0006	Main floor – Classroom 3
05-S 05-F	0.005	<0.0006 <0.0006	Main floor – Classroom 4
06-S 06-F	0.005	<0.0006 <0.0006	Main floor – Classroom 5
07-S 07-F	0.005	0.001 <0.0006	Main floor – Classroom 12
08-S 08-F	0.005	0.0021 <0.0006	Main floor – Classroom 20
09-S 09-F	0.005	0.0035 <0.0006	Main floor – Classroom 22
10-S 10-F	0.005	0.0010 <0.0006	Main floor – Classroom 23
11-S 11-F	0.005	<0.0006 <0.0006	Upper Floor – Corridor, Water Fountain (Filtered)
12-S 12-F	0.005	<0.0006 <0.0006	Upper Floor – Classroom 24
13-S 13-F	0.005	0.0031 0.0020	Main Floor – Gym – Kitchen
14-S 14-F	0.005	0.0007 0.0047	Portable - Kindergarten

¹ MAC = Maximum acceptable concentrations
Results in **RED** indicate values that exceed the CDWQG

Full analytical results can be found in Appendix A.

Locations of the samples can be found in Appendix B.

Discussion

The school is supplied by the municipal potable water distribution system. According to the BC Health Protection Branch, “Lead is usually not found in drinking water when it leaves the treatment plant. Instead lead tends to leach out of pipes and fixtures in buildings...” Until 1989, the BC Building Code did not have provisions for restricting the use of lead-containing materials in potable water lines. Under the Canadian Standards Association (CSA) B125.1 standard, plumbing, fitting and fixtures produced as recently as 2012 that were considered “lead-free” could contain as much as 8% lead by weight. Since 2012, the maximum percent of lead in fixtures that are considered “lead-free” is 0.25%.

Conclusions and Recommendations

Of the twenty-eight (28) locations from which water samples were collected by Island EHS on January 16, 2025, within Alberni Elementary School, located at 4645 Helen Street, Port Alberni, BC, no locations

were found to have an average lead concentration which exceeded the maximum acceptable concentration (MAC) in the first draw bottles. No locations were above the MAC after a 30 second flush.

Based on the above, it is recommended that annual testing for lead in water continues to be conducted at this location as part of the School District's drinking water testing program.

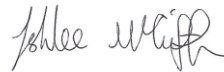
Limitations

This report has been prepared in accordance with established Industrial Hygiene practices. It is intended for the exclusive use of School District 70 to assist in the assessment of the drinking water quality in the sampled locations. The use of this document for any other purposes is at the sole risk of the users.

Island Environmental Health & Safety Ltd.



Adam Proust
Occupational Hygiene Technician
Field Investigation & Report



Ashlee McGiffin
Senior Occupational Hygienist
Report Review

**Appendix A:
Analytical Results**

Lead in Drinking Water Report



Island Environmental Health and Safety
 201 - 990 Hillside Avenue
 Victoria B.C, V8T 2A1
 (778)406-0933
admin@islandehs.ca

Certificate of Analysis

Client Name	School District 70	Report #	61711
Site Address	Alberni Elementary School	Report Date	1/24/2025
Collection Date	1/16/2025	Analysis Date	1/24/2025
Received by Lab	1/17/2025	PO	
Collected By	SM	Notes	

Analysis Summary: Stagnant/Flush

Sample #	AE01	Result (mg/L)	<0.0006	Stagnant
Location	Main Floor - Classroom 2	Result (mg/L)	<0.0006	Flush
Sampling Time	6:20 AM	Comments		
Sample #	AE02	Result (mg/L)	<0.0006	Stagnant
Location	Main Floor - Staff Washroom	Result (mg/L)	<0.0006	Flush
Sampling Time	6:21 AM	Comments		
Sample #	AE03	Result (mg/L)	<0.0006	Stagnant
Location	Main Floor - Water Fountain	Result (mg/L)	<0.0006	Flush
Sampling Time	6:22 AM	Comments		
Sample #	AE04	Result (mg/L)	0.0024	Stagnant
Location	Main Floor - Classroom 3	Result (mg/L)	<0.0006	Flush
Sampling Time	6:23 AM	Comments		
Sample #	AE05	Result (mg/L)	<0.0006	Stagnant
Location	Main Floor - Classroom 4	Result (mg/L)	<0.0006	Flush
Sampling Time	6:24 AM	Comments		
Sample #	AE06	Result (mg/L)	<0.0006	Stagnant
Location	Main Floor - Classroom 5	Result (mg/L)	<0.0006	Flush
Sampling Time	6:25 AM	Comments		

Notes

Results are compared to the latest Canadian Drinking Water Quality Guideline (CDWQG), published by Health Canada

Results in green are below the CDWQG limit of 0.005 mg/L

Results in red are at or above the CDWQG limit of 0.005 mg/L

Analysed using EPA 200.9

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Collected By	SM	Notes	

Analysis Summary: Stagnant/Flush

Sample #	AE07	Result (mg/L)	0.001	Stagnant
Location	Main Floor - Classroom 12	Result (mg/L)	<0.0006	Flush
Sampling Time	6:26 AM	Comments		
Sample #	AE08	Result (mg/L)	0.0021	Stagnant
Location	Upper Floor - Classroom 20	Result (mg/L)	<0.0006	Flush
Sampling Time	6:27 AM	Comments		
Sample #	AE09	Result (mg/L)	0.0035	Stagnant
Location	Upper Floor - Classroom 22	Result (mg/L)	<0.0006	Flush
Sampling Time	6:28 AM	Comments		
Sample #	AE10	Result (mg/L)	0.0010	Stagnant
Location	Upper Floor - Classroom 23	Result (mg/L)	<0.0006	Flush
Sampling Time	6:29 AM	Comments		
Sample #	AE11	Result (mg/L)	<0.0006	Stagnant
Location	Upper Floor - Corridor, Water Fountain (Filtered)	Result (mg/L)	<0.0006	Flush
Sampling Time	6:30 AM	Comments		
Sample #	AE12	Result (mg/L)	<0.0006	Stagnant
Location	Upper Floor - Classroom 24	Result (mg/L)	<0.0006	Flush
Sampling Time	6:31 AM	Comments		

Notes

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Results in green are below the CDWQG limit of 0.005 mg/L

Results in red are at or above the CDWQG limit of 0.005 mg/L

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Collected By	SM	Notes	

Analysis Summary: Stagnant/Flush

Sample #	AE13	Result (mg/L)	0.0031	Stagnant
Location	Main Floor - Gym - Kitchen	Result (mg/L)	0.0020	Flush
Sampling Time	6:32 AM	Comments		
Sample #	AE14	Result (mg/L)	0.0007	Stagnant
Location	Portable - Kindergarten	Result (mg/L)	0.0047	Flush
Sampling Time	6:33 AM	Comments		

Island Environmental Health & Safety Ltd.

Notes

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Results in green are below the CDWQG limit of 0.005 mg/L
 Results in red are at or above the CDWQG limit of 0.005 mg/L
 Analysed using EPA 200.9



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Quality Control Report

	Result	Unit	Limits	Pass/Fail?
Duplicate	7	Rel. % Diff	0 - 15 %	PASS
LFM	96	% Recovery	85-115%	PASS
LRB	<0.0006	mg/L	<0.0132 mg/L	PASS
LFB	93	% Recovery	85-115%	PASS

Duplicate: Paired analysis of two portions of the same sample. Used to evaluate the variance in the measurement and homogeneity of the sample.

Laboratory Fortified Matrix (LFM): A client sample that has been fortified with a known amount of analyte. Used to evaluate matrix effects.

Laboratory Reagent Blank (LRB): A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Laboratory Fortified Blank (LFB): A blank matrix to which a known amount of analyte is added. Used to verify instrument calibration.

Results relate only to the items tested

This report is issued by Island EHS, accredited by CALA to ISO/IEC 17025:2017 standards for the scope of testing.

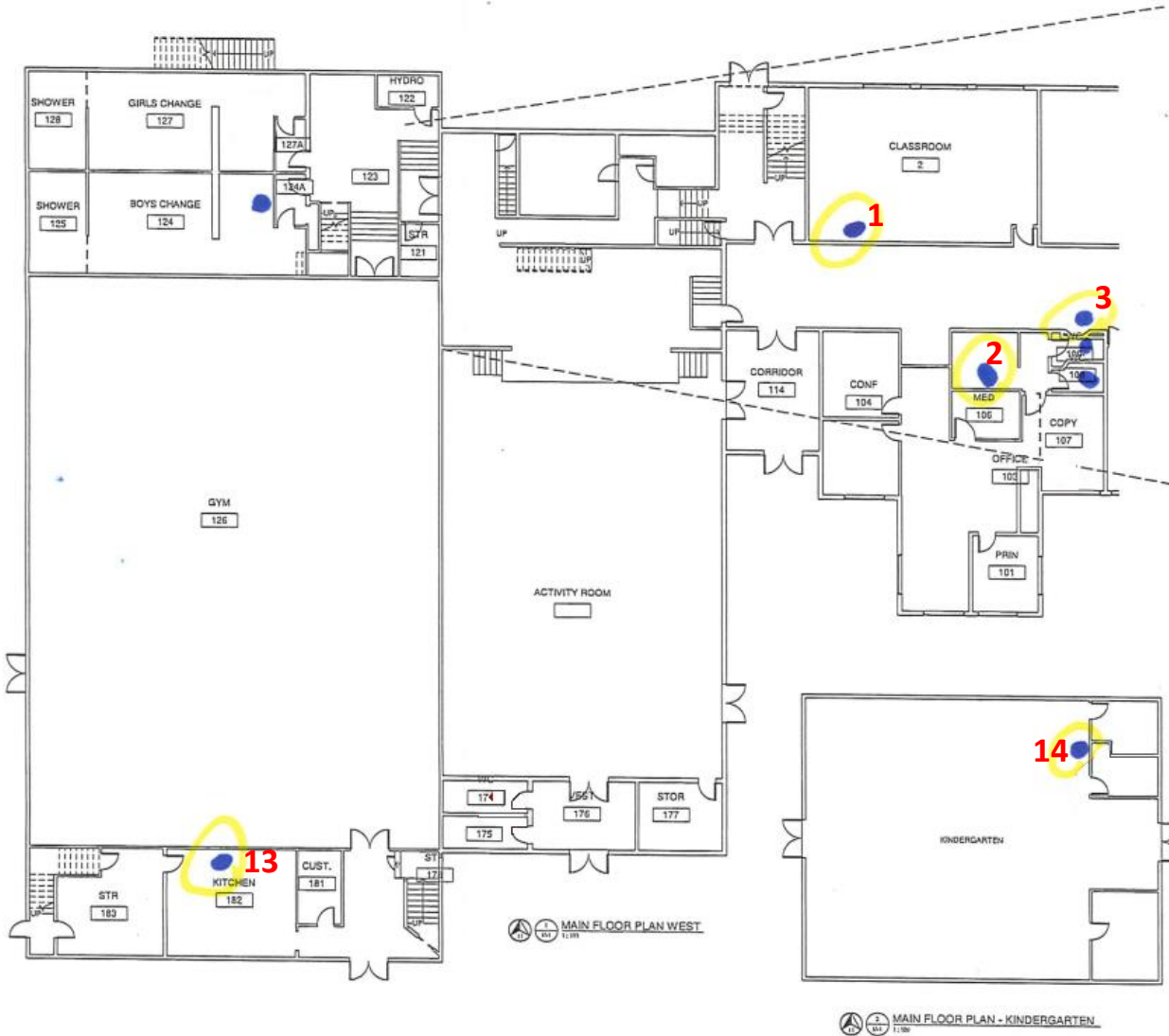


Laura Martin
 Laboratory Analyst

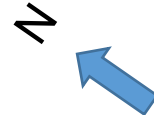
End of Report

**Appendix B:
Sample locations**

Alberni Elementary School – Main Floor Plan West



LEGEND:
 XX Water Sample Location



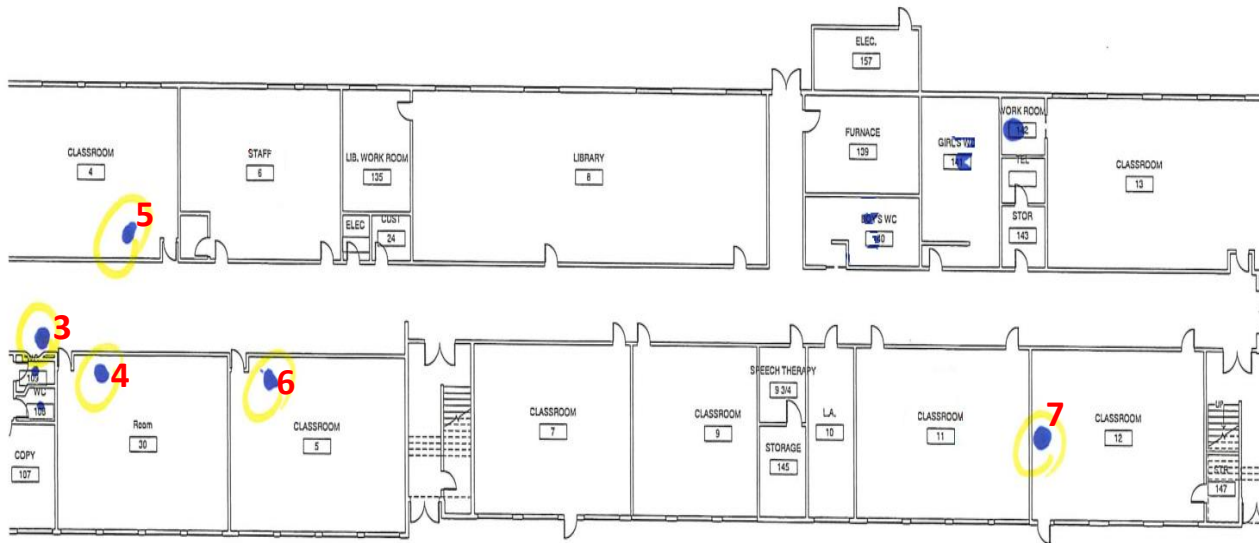
Project 61711	Date of Issue January 2025
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Lead in water testing
Sample Locations

Prepared for:
School District 70 – Pacific Rim
 Sampling Site:
4645 Helen Street, Port Alberni, BC

Not to Scale	
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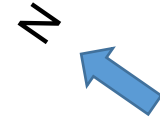
Alberni Elementary School – Main Floor Plan East



MAIN FLOOR PLAN EAST
1118

LEGEND:

XX Water Sample Location



Project
61711

Date of Issue
January 2025

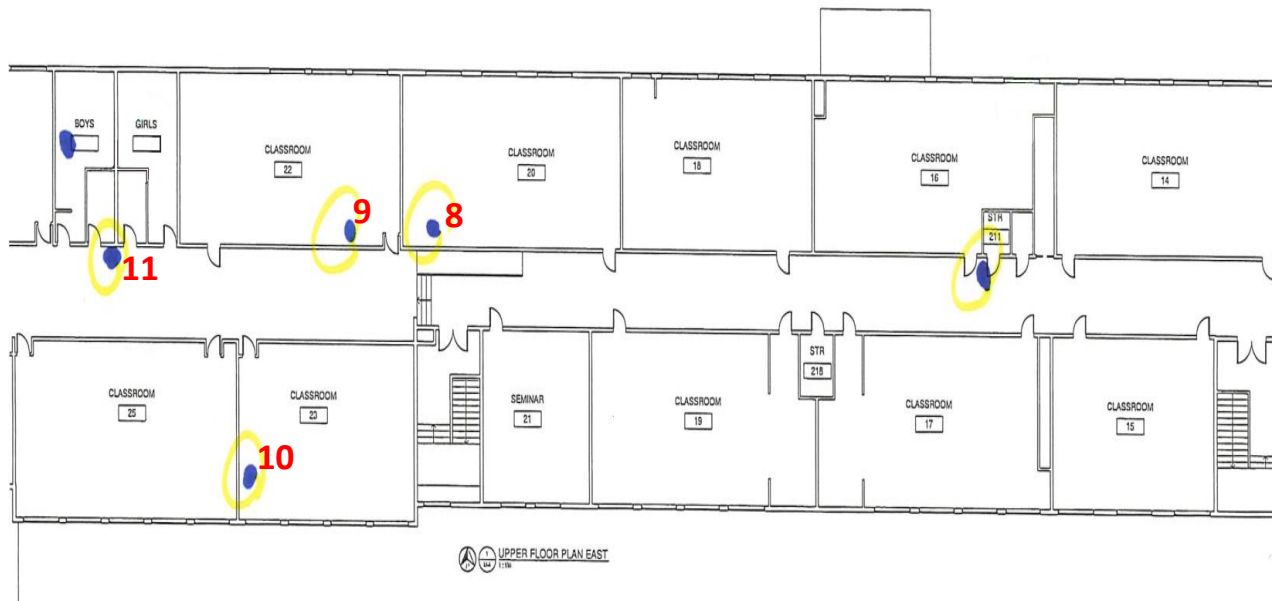
Lead in water testing
Sample Locations

Prepared for:
School District 70 – Pacific Rim
Sampling Site:
4645 Helen Street, Port Alberni, BC

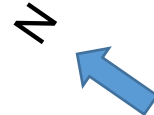
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Alberni Elementary School – Upper Floor Plan East



LEGEND:
XX Water Sample Location



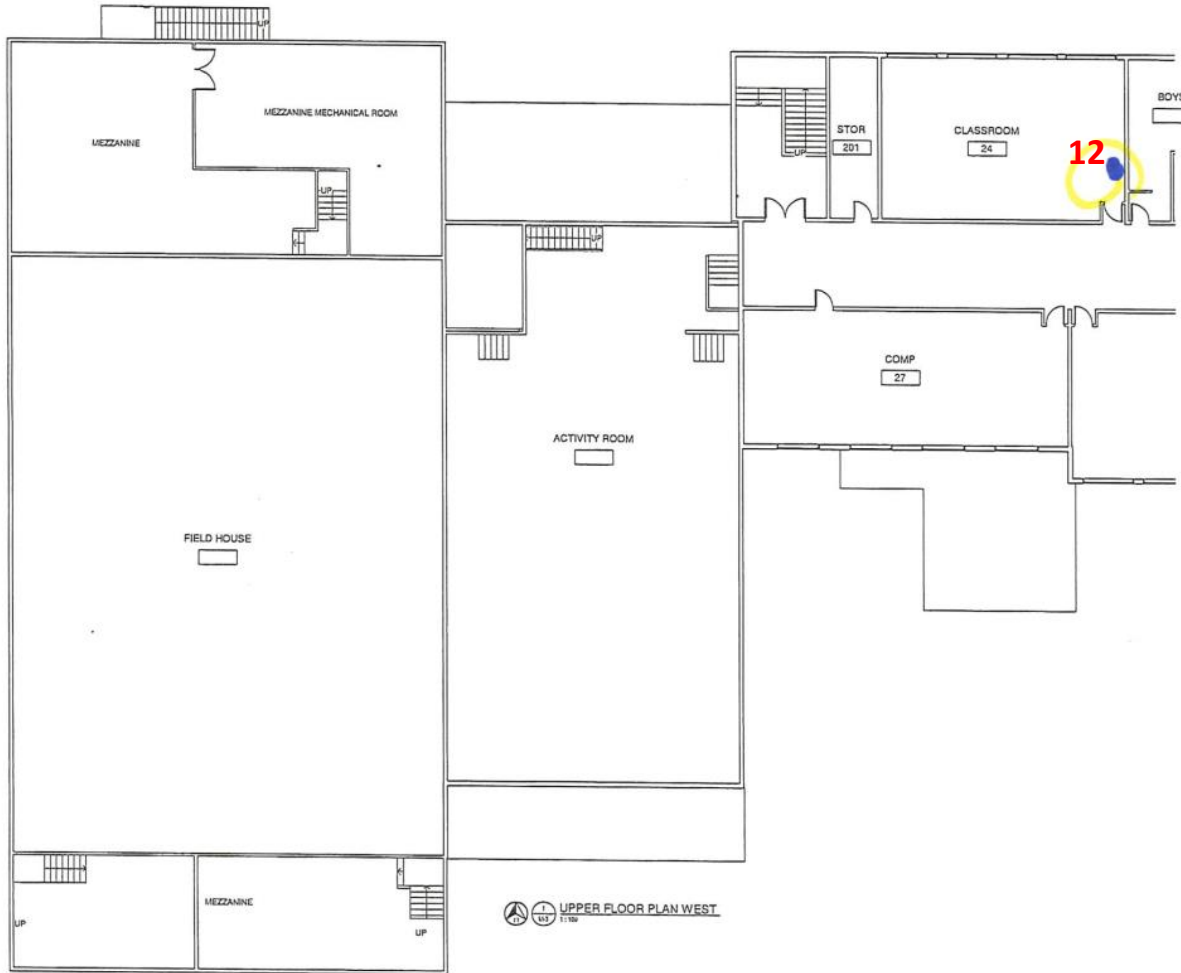
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Lead in water testing
Sample Locations

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School District 70 – Pacific Rim
 Sampling Site:
4645 Helen Street, Port Alberni, BC

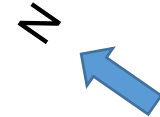
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Alberni Elementary School – Upper Floor Plan West



LEGEND:

XX Water Sample Location



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Not to Scale

