VILLAGE OF LYTTON
2023 WATER SYSTEM REPORT

Kevin Vilac PO CWP CWWP

Village of Lytton

Community Water System

2023

Introduction

The Village of Lytton is the purveyor of drinking water to users connected to the Village of Lytton Community Water System. This report is provided to the Village of Lytton Council, Lytton First Nation, and Interior Health for their information, and in fulfillment of the Village's obligations under the Provincial Drinking Water Protection Act and associated regulations, the terms and conditions of the Village's Water Service Agreement with Lytton First Nation and the Village's Water System Operating Permit issued by Interior Health. Enforcement of the regulations and issuance of water system permits is the responsibility of Interior Health Authority's Drinking Water Officer.

Village of Lytton

Community Water System

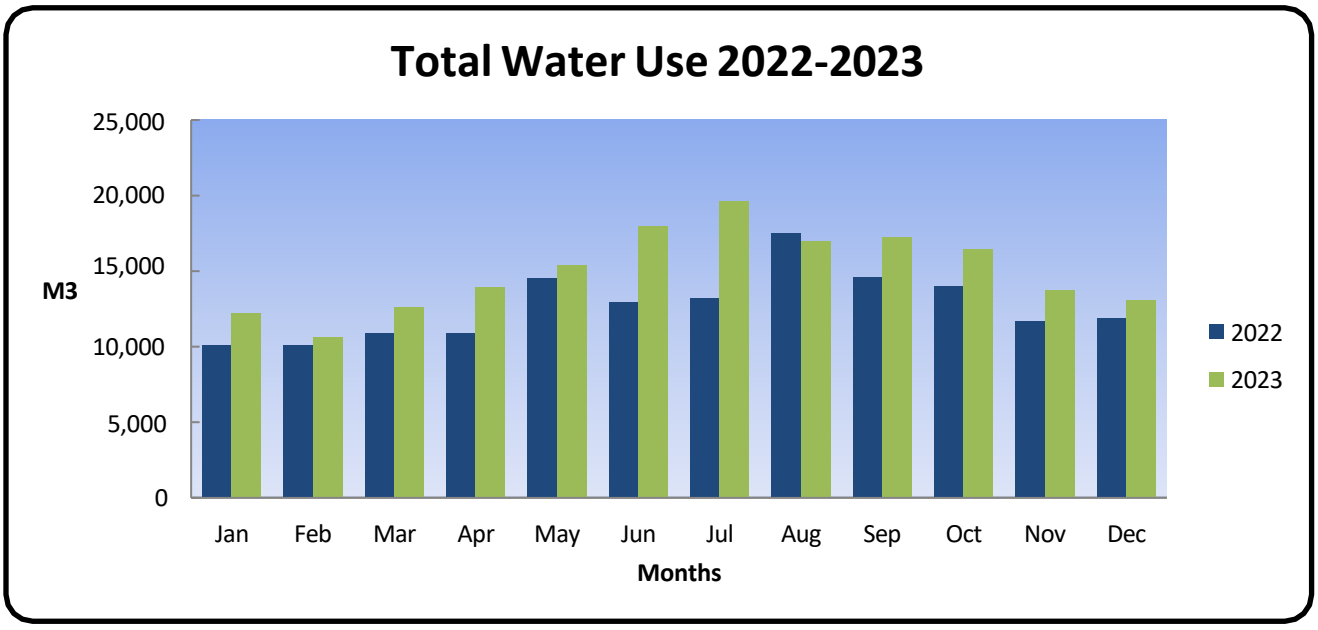
2023

Water Consumption

Raw water for the Village of Lytton water system is supplied from Lytton Creek. When the creek does not meet the required drinking water parameters the Village of Lytton water system is supplied water from two wells, Well #2 and Well #3. The Creek provided 125 466 000 litres of water and the Wells provided 60 481 000 litres of water for a total of 185 947 000 litres consumed within the Village of Lytton water system in 2023. The maximum daily water demand peaked at 837 000 litres on July 20, 2023, while the minimum daily demand occurred on June 1,2023 at 142 000 litres.

The water consumption for the Village of Lytton in 2023 averaged 509 444 litres per day. The maximum day (July 20th) water consumption was 5 580 litres per person, while the minimum day (June 1st) consumption was 947 litres per person. The average was 3396 litres per person in the Village of Lytton every day of the year (based on a population of 150); average daily consumption in British Columbia is only 465 litres per capita (Stats Canada).

The Village of Lytton must continue to reduce water consumption through identifying and repairing water leaks and enforcing water restrictions. The Province of British Columbia faced it's second year of drought in 2023 and to maintain water supplies entering another drought in 2024 the Village of Lytton must find ways to conserve water to ensure supply for the future.

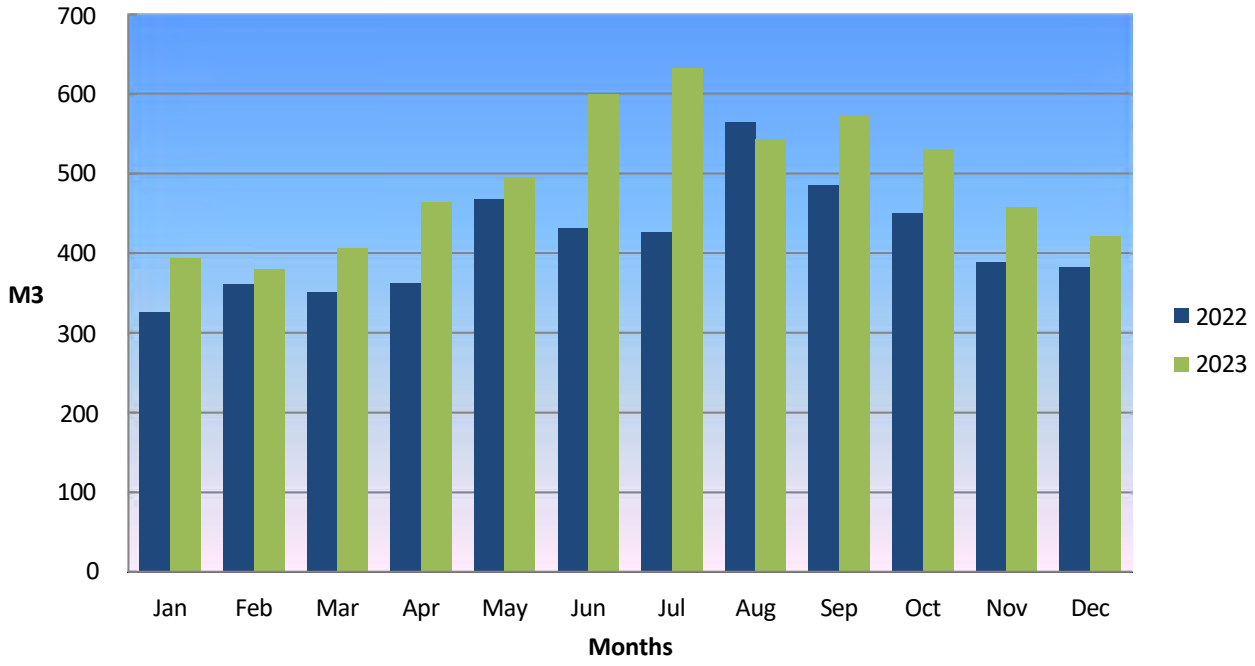


Village of Lytton

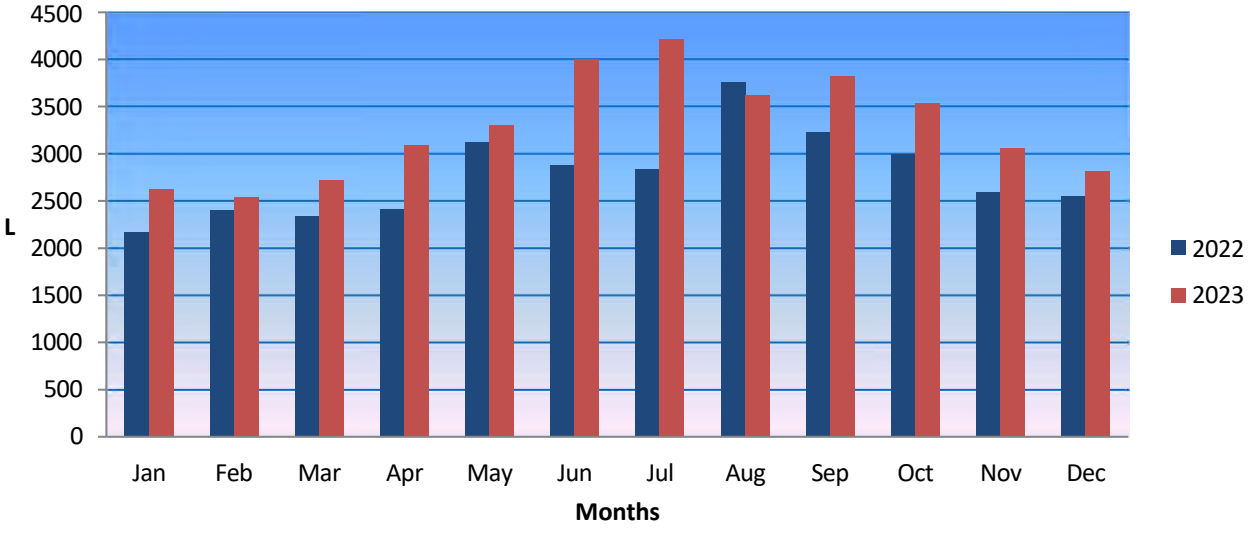
Community Water System

2023

Average Daily Water Use



Water Consumption Per Person Per Day



Village of Lytton

Community Water System

2023

Water Storage

The water storage capacity is just over 1.3 million litres between three reservoirs named, 345 Old Reservoir 445 m3, 345 New Reservoir 480 m3, and 265 Reservoir 360 m3. The Village's distribution system accounts for another approximately 115 thousand litres. Distribution piping sizes range from 50mm to 200 mm – approximately 6.5 Km in total length.

Water Production

The primary drinking water source is Lytton Creek. The intake is located approximately 1km upslope and east of the Trans-Canada Highway. The Village also has two backup sources, Well 2 and Well 3.

- **Lytton Creek – rated 20 L/sec**
- **Well #2 – rated 7 L/sec**
- **Well #3 – rated 8 L/sec**

In the event of a power outage the Water Treatment Plant is powered by a backup diesel generator. The Creek intake is a gravity fed system with no power required for it to operate. The valve which controls the flow is located within the Water Treatment Plant.

Dam Intake

Village of Lytton

Community Water System

2023

Water Treatment Systems

The Village of Lytton has Trojan Swift low pressure UV reactors followed by Chlorination that is mixed within the 345 Reservoirs. The Reservoirs provide appropriate contact time before being distributed to ensure a minimum Free Chlorine residual of 1.20 mg/L as outlined within the Operating Permit.

Trojan Swift UV Reactors

The Village of Lytton follows Interior Health's 4-3-2-1-0 Drinking Water Objectives.

- 4 log inactivation of Viruses (99.99%)
- 3 log removal or inactivation of Giardia Lamblia and Cryptosporidium (99.9%)
- 2 refers to two treatment processes.
- 1 for less than 1 NTU of Turbidity
- 0 total and fecal coliforms and E. coli

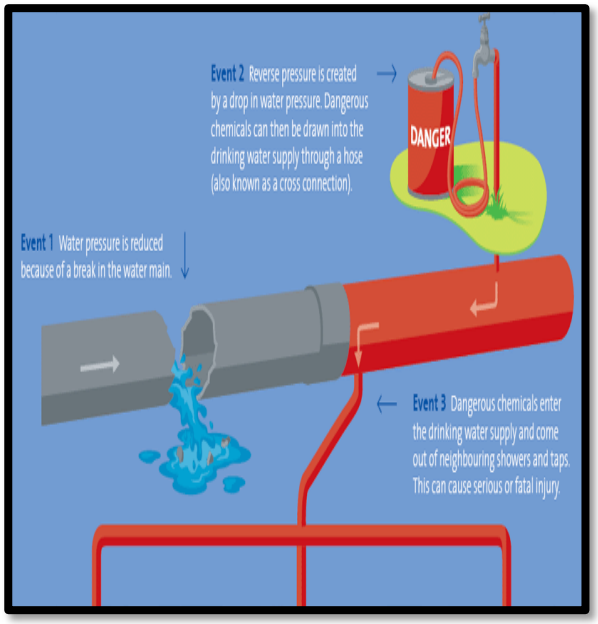
Quality Monitoring

Drinking water delivered to users of the village system is subject to a comprehensive and rigorous testing program that ensures quality drinking water. Water samples from up to seven (7) separate locations within the system were sent in 2023, on a weekly basis, to *Caro Analytical Services* laboratories to be tested for the presence/absence of E. coli and Total Coliform Bacteria. Village of Lytton staff also perform Chlorine residual testing, and Turbidity testing to ensure the water is potable.

The standard protocol when a water sample is found to contain the presence of Coliform (an early indicator that we could have a problem arising), however minute, is to flush and resample the water immediately at the same location and resubmit for testing. The Regional Drinking Water Officer will determine if any further action by the purveyor is necessary. The water is monitored 24/7 with our water quality monitoring devices. These devices will monitor in real time Flow, Temperature, Turbidity, UVT, PH and Chlorine residual when the system is operating. The quality control and accuracy of monitoring greatly increases with these devices

online. All information is sent back to the central computer system (SCADA) at ComCom. With this real time monitoring the Operators can instantly check the water quality and tell if a problem is arising.

Cross Connection Control Program



As the Village is rebuilt it will have to develop a Cross-connection Control Program for the Village of Lytton. This program is designed to inspect and eliminate any possible connections between the potable water system and any other connections that are not potable. For example, a connection to potable water and a sprinkler system that injects fertilizer could possibly contaminate the whole water system without the proper back flow device in place and maintained.

Records

The Village of Lytton is currently upgrading to an automated and continuous operating system to monitor Flow, Ph., Turbidity, Water temperature, Chlorine residual and Reservoir storage. This system is called SCADA, *Supervisory Control and Data Acquisition*, and it assists Village staff with maintaining a safe drinking water supply by advising us of any monitored change within our water system. This system will be owned and operated solely by Village staff. The SCADA system will alert staff to ensure that corrections can be made before water levels or quality can be adversely affected.

Test records are stored on Interior Health's website
https://services.interiorhealth.ca/publichealthprotection/watersamples.aspx

Appendix A has the test results for Well 2 & 3.

Village of Lytton

Community Water System

2023

Operation

The Village of Lytton Community Water System and Water Treatment facilities are operated and maintained by highly trained and certified operators. The SCADA system will continuously monitor the water quality which in turn assists the operators to make necessary adjustments to meet or exceed the provincial drinking water quality objectives established by Interior Health as well as federal Canadian Drinking Water Quality objectives. Water distribution work is also carried out by staff certified for their tasks: water main leak repair, water service installation, and fire hydrant maintenance. Special tasks such as reservoir cleaning, leak detection and water main replacement are undertaken by qualified contractors with the proper equipment and experience to complete the work.

Operations Staff

- Kevin Vilac - EOCP Wastewater Treatment IV
  - - EOCP Water Distribution IV
  - - EOCP Water Treatment MU II
  - - EOCP Wastewater Collections MU II
  - - BCWWA Chlorine Handling Certificate
  - - ABC Class II Wastewater Treatment Professional Operator
  - Cross Connection Control Inspector Certificate
- Tom Mcphail - EOCP Wastewater Treatment Level II
  - -EOCP Small Water Systems
- Morgan Heaster - Operator in Training

Maintenance / Capital Projects – 2023

- Replaced Butterfly Valve for UV reactor #2
- Installed Proper Air gaps for Air Release valves at the Water Treatment Plant
- May 17, 2023, Removed the Boil Water Notice for the upper part of the Village and IR 17
- Serviced UV reactors 1 & 2
- Cut and capped old leaking water line on Ponderosa
- Commissioned Well 3
- Replaced valve at Alonzo Way and 6th St.
- Installed concrete lock blocks in Lytton Creek to replace Gabian baskets.
- Installed Backup Generator at the Water Treatment Plant
- 244 Weekly water samples.

Village of Lytton

Community Water System

2023

Initiatives – 2024

In 2024 the Village will continue to identify and repair water leaks and replace old infrastructure. The Village will also work towards a complete Source Water Protection Plan and work towards a Cross Connection Control Program. With these plans and programs in place, it is a positive step forward in protecting the Village's drinking water system.

Chlorine Disinfection

Future Water Quality

The Village of Lytton will have to work towards finding and eliminating existing water leaks as the water consumption is far greater than it should be. Through ongoing training, monitoring and responsible planning the Village will be able to ensure potable water for its consumers. The Village will also have to implement water conservation strategies to ensure water for future generations.

Conclusion

The Village of Lytton Employees work hard in the effort to maintain, ensure proper water usage, identify and repair water leaks, monitor water quantity, monitor water quality, and educate the public whenever possible. With these goals the Village of Lytton should be able to maintain a quality water source and distribution system for many years to come.

This 2023 Village of Lytton Water System Report is presented to the public, by way of posting on the Village of Lytton website, as required by the British Columbia Drinking Water Protection Act and Regulations, as well as to meet the terms and conditions of the Village's Water System Operating Permit issued by Interior Health's Drinking Water Officer.

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	Lytton, Village of	**WORK ORDER**	22L0993
PROJECT	Analytical Testing	**REPORTED**	2023-01-13 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
0660236; Well #2 (22L0993-01) | Matrix: Water | Sampled: 2022-12-07 10:10					
Anions					
Chloride	**4.80**	0.10	mg/L	2022-12-09	
Fluoride	< 0.10	0.10	mg/L	2022-12-09	
Nitrate (as N)	**0.201**	0.010	mg/L	2022-12-09	
Nitrite (as N)	< 0.010	0.010	mg/L	2022-12-09	
Sulfate	**10.5**	1.0	mg/L	2022-12-09	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2022-12-15	
VPHw	< 100	100	µg/L	N/A	
EPHw10-19	< 250	250	µg/L	2022-12-13	
EPHw19-32	< 250	250	µg/L	2022-12-13	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*97*	*60-140*	%	*2022-12-13*	
Calculated Parameters					
Hardness, Total (as CaCO3)	**134**	0.500	mg/L	N/A	
Langelier Index	**0.006**	-5.0		2022-12-15	CT6
Solids, Total Dissolved	**148**	1.00	mg/L	N/A	
General Parameters					
Alkalinity, Total (as CaCO3)	**129**	1.0	mg/L	2022-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2022-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**129**	1.0	mg/L	2022-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2022-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2022-12-11	
Colour, True	< 5.0	5.0	CU	2022-12-09	
Conductivity (EC)	**263**	2.0	µS/cm	2022-12-11	
Cyanide, Total	< 0.0050	0.0020	mg/L	2022-12-10	RA1
pH	**7.87**	0.10	pH units	2022-12-11	HT2
Temperature, at pH	**21.8**		°C	2022-12-11	HT2
Turbidity	**1.21**	0.10	NTU	2022-12-13	HT1
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2022-12-14	
Acenaphthylene	< 0.200	0.200	µg/L	2022-12-14	
Acridine	< 0.050	0.050	µg/L	2022-12-14	
Anthracene	< 0.010	0.010	µg/L	2022-12-14	
Benz(a)anthracene	< 0.010	0.010	µg/L	2022-12-14	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2022-12-14	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2022-12-14	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2022-12-14	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2022-12-14	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2022-12-14	

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0660236; Well #2 (22L0993-01) | Matrix: Water | Sampled: 2022-12-07 10:10, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Chrysene	< 0.050	0.050	µg/L	2022-12-14	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2022-12-14	
Fluoranthene	< 0.030	0.030	µg/L	2022-12-14	
Fluorene	< 0.050	0.050	µg/L	2022-12-14	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2022-12-14	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2022-12-14	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2022-12-14	
Naphthalene	< 0.200	0.200	µg/L	2022-12-14	
Phenanthrene	< 0.100	0.100	µg/L	2022-12-14	
Pyrene	< 0.020	0.020	µg/L	2022-12-14	
Quinoline	< 0.050	0.050	µg/L	2022-12-14	
Surrogate: Acridine-d9	*57*	*50-140*	%	*2022-12-14*	
Surrogate: Naphthalene-d8	*80*	*50-140*	%	*2022-12-14*	
Surrogate: Perylene-d12	*93*	*50-140*	%	*2022-12-14*	
Total Metals					
Aluminum, total	**0.0470**	0.0050	mg/L	2022-12-12	
Antimony, total	< 0.00020	0.00020	mg/L	2022-12-12	
Arsenic, total	**0.00193**	0.00050	mg/L	2022-12-12	
Barium, total	**0.0249**	0.0050	mg/L	2022-12-12	
Boron, total	< 0.0500	0.0500	mg/L	2022-12-12	
Cadmium, total	< 0.000010	0.000010	mg/L	2022-12-12	
Calcium, total	**38.7**	0.20	mg/L	2022-12-12	
Chromium, total	**0.00151**	0.00050	mg/L	2022-12-12	
Cobalt, total	< 0.00010	0.00010	mg/L	2022-12-12	
Copper, total	**0.00054**	0.00040	mg/L	2022-12-12	
Iron, total	**0.099**	0.010	mg/L	2022-12-12	
Lead, total	< 0.00020	0.00020	mg/L	2022-12-12	
Magnesium, total	**9.18**	0.010	mg/L	2022-12-12	
Manganese, total	**0.00247**	0.00020	mg/L	2022-12-12	
Mercury, total	< 0.000010	0.000010	mg/L	2022-12-19	
Molybdenum, total	**0.00138**	0.00010	mg/L	2022-12-12	
Nickel, total	< 0.00040	0.00040	mg/L	2022-12-12	
Potassium, total	**1.25**	0.10	mg/L	2022-12-12	
Selenium, total	< 0.00050	0.00050	mg/L	2022-12-12	
Sodium, total	**4.12**	0.10	mg/L	2022-12-12	
Strontium, total	**0.193**	0.0010	mg/L	2022-12-12	
Uranium, total	**0.00121**	0.000020	mg/L	2022-12-12	
Zinc, total	< 0.0040	0.0040	mg/L	2022-12-12	
Volatile Organic Compounds (VOC)					
Benzene	< 0.5	0.5	µg/L	2022-12-15	
Bromodichloromethane	< 1.0	1.0	µg/L	2022-12-15	
Bromoform	< 1.0	1.0	µg/L	2022-12-15	

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PROJECT	Analytical Testing	**REPORTED**	2023-01-13 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
0660236; Well #2 (22L0993-01) | Matrix: Water | Sampled: 2022-12-07 10:10, Continued					
Volatile Organic Compounds (VOC), Continued					
Carbon tetrachloride	< 0.5	0.5	µg/L	2022-12-15	
Chlorobenzene	< 1.0	1.0	µg/L	2022-12-15	
Chloroethane	< 2.0	2.0	µg/L	2022-12-15	
Chloroform	< 1.0	1.0	µg/L	2022-12-15	
Dibromochloromethane	< 1.0	1.0	µg/L	2022-12-15	
1,2-Dibromoethane	< 0.3	0.3	µg/L	2022-12-15	
Dibromomethane	< 1.0	1.0	µg/L	2022-12-15	
1,2-Dichlorobenzene	< 0.5	0.5	µg/L	2022-12-15	
1,3-Dichlorobenzene	< 1.0	1.0	µg/L	2022-12-15	
1,4-Dichlorobenzene	< 1.0	1.0	µg/L	2022-12-15	
1,1-Dichloroethane	< 1.0	1.0	µg/L	2022-12-15	
1,2-Dichloroethane	< 1.0	1.0	µg/L	2022-12-15	
1,1-Dichloroethylene	< 1.0	1.0	µg/L	2022-12-15	
cis-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2022-12-15	
trans-1,2-Dichloroethylene	< 1.0	1.0	µg/L	2022-12-15	
Dichloromethane	< 3.0	3.0	µg/L	2022-12-15	
1,2-Dichloropropane	< 1.0	1.0	µg/L	2022-12-15	
1,3-Dichloropropene (cis + trans)	< 1.0	1.0	µg/L	2022-12-15	
Ethylbenzene	< 1.0	1.0	µg/L	2022-12-15	
Methyl tert-butyl ether	< 1.0	1.0	µg/L	2022-12-15	
Styrene	< 1.0	1.0	µg/L	2022-12-15	
1,1,2,2-Tetrachloroethane	< 0.5	0.5	µg/L	2022-12-15	
Tetrachloroethylene	< 1.0	1.0	µg/L	2022-12-15	
Toluene	< 1.0	1.0	µg/L	2022-12-15	
1,1,1-Trichloroethane	< 1.0	1.0	µg/L	2022-12-15	
1,1,2-Trichloroethane	< 1.0	1.0	µg/L	2022-12-15	
Trichloroethylene	< 1.0	1.0	µg/L	2022-12-15	
Trichlorofluoromethane	< 1.0	1.0	µg/L	2022-12-15	
Vinyl chloride	< 1.0	1.0	µg/L	2022-12-15	
Xylenes (total)	< 2.0	2.0	µg/L	2022-12-15	
Surrogate: Toluene-d8	*99*	*70-130*	%	*2022-12-15*	
Surrogate: 4-Bromofluorobenzene	*82*	*70-130*	%	*2022-12-15*	
Surrogate: 1,4-Dichlorobenzene-d4	*74*	*70-130*	%	*2022-12-15*	

Sample Qualifiers:

CT6	Results were based on lab temperature & lab pH.
HT1	The sample was prepared and/or analyzed past the recommended holding time.
HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
RA1	The Reporting Limit has been raised due to matrix interference.

Page	:	3 of 7
Work Order	:	KS2303597
Client	:	Village of Lytton
Project	:	—

Analytical Results

Sub-Matrix: Water (Matrix: Water)

				Client sample ID	Well 3
				Client sampling date / time	20-Sep-2023 10:10
Analyte	CAS Number	Method/Lab	LOR	Unit	KS2303597-001 Result
Physical Tests					
Absorbance, UV (@ 254nm), unfiltered	—	E405/VA	0.0050	AU/cm	0.0180
Alkalinity, total (as CaCO3)	—	E290/VA	1.0	mg/L	152
Colour, true	—	E329/VA	5.0	CU	<5.0
Conductivity	—	E100/VA	2.0	µS/cm	311
Hardness (as CaCO3), from total Ca/Mg	—	EC100A/VA	0.60	mg/L	158
Langelier index (@ 15°C)	—	EC105A/VA	0.010	-	0.750
Langelier index (@ 20°C)	—	EC105A/VA	0.010	-	0.825
Langelier index (@ 25°C)	—	EC105A/VA	0.010	-	0.894
Langelier index (@ 4°C)	—	EC105A/VA	0.010	-	0.577
Langelier index (@ 60°C)	—	EC105A/VA	0.010	-	1.34
Langelier index (@ 77°C)	—	EC105A/VA	0.010	-	1.53
pH	—	E108/VA	0.10	pH units	8.41
Solids, total dissolved [TDS]	—	E162/VA	10	mg/L	196
Turbidity	—	E121/VA	0.10	NTU	7.39
pH, saturation (@ 4°C)	—	EC105A/VA	0.010	pH units	7.83
Transmittance, UV (@ 254nm), unfiltered	—	E405/VA	1.0	% T/cm	95.9
pH, saturation (@ 15°C)	—	EC105A/VA	0.010	pH units	7.66
pH, saturation (@ 20°C)	—	EC105A/VA	0.010	pH units	7.58
pH, saturation (@ 25°C)	—	EC105A/VA	0.010	pH units	7.52
pH, saturation (@ 60°C)	—	EC105A/VA	0.010	pH units	7.07
pH, saturation (@ 77°C)	—	EC105A/VA	0.010	pH units	6.88
Anions and Nutrients					
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	<0.0050
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	2.27
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.074
Kjeldahl nitrogen, total [TKN]	—	E318/VA	0.050	mg/L	<0.050
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.104

Page	:	4 of 7
Work Order	:	KS2303597
Client	:	Village of Lytton
Project	:	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: Well 3
					Client sampling date / time: 20-Sep-2023 10:10
					KS2303597-001 Result
Anions and Nutrients					
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010
Nitrogen, total organic	---	EC363/VA	0.050	mg/L	<0.050
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	15.3
Cyanides					
Cyanide, strong acid dissociable (Total)	---	E333/VA	0.0050	mg/L	<0.0050
Organic / Inorganic Carbon					
Carbon, total organic [TOC]	---	E355-L/VA	0.50	mg/L	<0.50
Microbiological Tests					
Coliforms, total	---	E010/KS	1	MPN/100mL	6
Coliforms, Escherichia coli [E. coli]	---	E010/KS	1	MPN/100mL	<1
Total Metals					
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0074
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00011
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00161
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.0220
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.057
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000050
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	42.7
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	<0.000010
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	0.00212
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00140
Iron, total	7439-89-6	E420/VA	0.010	mg/L	1.11
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	<0.000050
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0022
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	12.4
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00491

Page	:	5 of 7
Work Order	:	KS2303597
Client	:	Village of Lytton
Project	:	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: Well 3 Client sampling date / time: 20-Sep-2023 10:10 KS2303597-001 Result
Total Metals					
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.00267
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	0.00055
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	1.38
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	<0.00020
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000559
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	7.18
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	6.62
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.262
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	5.92
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	<0.000010
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	<0.00010
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	0.00054
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	<0.00010
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00209
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	0.00230
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0074
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010

Page	:	6 of 7
Work Order	:	KS2303597
Client	:	Village of Lytton
Project	:	---

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

					Client sample ID	Well 3
					Client sampling date / time	20-Sep-2023 10:10
Analyte	*CAS Number*	*Method/Lab*	*LOR*	*Unit*	**KS2303597-001**	
					Result	
Polycyclic Aromatic Hydrocarbons						
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	<0.010	
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	<0.010	
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	
Polycyclic Aromatic Hydrocarbons Surrogates						
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	95.0	
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	86.0	
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	97.5	
Haloacetic Acids						
Bromochloroacetic acid	5589-96-8	E750/WT	1.00	µg/L	<1.00	
Dibromoacetic acid	631-64-1	E750/WT	1.00	µg/L	<1.00	
Dichloroacetic acid	79-43-6	E750/WT	1.00	µg/L	<1.00	
Monobromoacetic acid	79-08-3	E750/WT	1.00	µg/L	<1.00	
Monochloroacetic acid	79-11-8	E750/WT	1.00	µg/L	<1.00	
Trichloroacetic acid	76-03-9	E750/WT	1.00	µg/L	<1.00	
Haloacetic acids, total [HAA5]	---	E750/WT	5.00	µg/L	<5.00	

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.