



Annual Water Systems Report

2024



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1. RDEK Water Systems Overview

The Regional District of East Kootenay (RDEK) strives to provide a safe and reliable water supply to all its customers. As required by the Drinking Water Protection Act, this Annual Water Report is intended to inform the public of the water systems owned and operated by the RDEK and provide details on water quality, system maintenance and improvements, water conservation tactics, and more. The RDEK employs certified water operators to ensure system operations comply with regulations set out by the BC Interior Health Authority (IHA).

WATER SYSTEMS	EOCP #	2024 CONNECTIONS
EAST SIDE LAKE WINDERMERE	1926 & 1927 & 1099	1668
HOLLAND CREEK	1866	405
EDGEWATER	649	475
RUSHMERE	1854	39
SPUR VALLEY	2421	73
MOYIE	2742	72
ELKO	2407	62

2. Systems at a Glance

Water System	Source Water	Supply Method	Disinfection/Treatment Process	Pressure Reducing Stations	Reservoir & Capacity	Hydrants For Fire Protection
East Side Lk Windermere	Lake Windermere	Pumped/ Gravity	Flocculation & Filtration, Chlorine & UV disinfection	8	Concrete 962m ³ , 1250m ³ & 1600m ³	Yes
Edgewater	Lake Baptiste	Gravity	Chlorine & UV disinfection	3	Steel 800m ³ & 400m ³	Yes
Holland Creek	Groundwater Well	Pumped/ Gravity	Chlorine disinfection	2	Supplied by Kinbasket Water and Sewer	Yes
Rushmere	Lake Windermere	Pumped	Ultra-filtration and Chlorine disinfection	0	Polyurethane 17m ³	No ¹
Spur Valley	Groundwater Well	Pumped/ Gravity	Chlorine disinfection	0	Concrete 125m ³ & 222m ³	No ²
Moyie	Groundwater Well	Pumped/ Gravity	No treatment or disinfection	0	Concrete 71m ³	No
Elko	Groundwater Well	Pumped	No treatment or disinfection	0	No storage	No

¹Fire protection by tender only

²Insufficient fire flows through hydrants. Fire Protection by tender only

3. Water Quality Performance

Parameters	Quality Standards	Frequency	Water Systems	Performance
Total Coliform, E.Coli	Less than one E.Coli and total coliform bacteria detectable per 100mL samples	Weekly	East Side Lake Windermere	100%
			Edgewater	100%
			Holland Creek	100%
			Rushmere	100%
			Spur Valley	100%
		Monthly	Moyie	100%
			Elko	96% ¹
Free Chlorine Residual	Free chlorine residual minimum of 0.5mg/L entering the system after no less than 20 minutes contact time. Minimum of 0.2mg/L at any/all end points of the distribution system.	Daily	East Side Lake Windermere	100% \geq 0.5mg/L
		Five days/week	Edgewater	100% \geq 0.5mg/L
			Holland Creek Distribution	100% \geq 0.5 mg/L
		Three days/week	Rushmere	100% \geq 0.5 mg/L
			Spur Valley	100% \geq 0.5mg/L
Turbidity	Disinfected water shall not be higher than 1 NTU. Between 1 NTU and under 5 NTU a water quality advisory must be issued. Above 5 NTU a boil water notice is issued.	Daily	East Side Lake Windermere	100% \leq 1.0 NTU 100% $<$ 0.3 NTU
		Five days/week	Edgewater	100% $<$ 1.0 NTU 30.14% \leq 0.3 NTU
			Holland Creek	100% \leq 0.3 NTU
		Three days/week	Rushmere	100% \leq 0.3 NTU
			Spur Valley	100% \leq 0.3 NTU
Total Trihalomethanes	Maximum Allowable Annual Average of 0.1mg/L	Quarterly	East Side Lake Windermere	100%
			Edgewater	100%
			Holland Creek	N/A (Groundwater)
			Rushmere	N/A (Small System)
			Spur Valley	N/A (Groundwater)

Parameters	Quality Standards	Frequency	Water Systems	Performance
Haloacetic Acids	Maximum Allowable Annual Average of 0.08mg/L	Quarterly	East Side Lake Windermere	100%
			Edgewater	100%
			Holland Creek	N/A (Groundwater)
			Rushmere	N/A (small system)
			Spur Valley	N/A (Groundwater)
Edgewater Raw Water Monitoring for Filtration Deferral	<u>E. Coli</u> : <10% of samples may exceed 20/100 in any 6-month period	Weekly	Edgewater	100%<20/100mL ²
	<u>Total Coliform</u> : <10% of samples may exceed 100/100mL in any 6-month period		Edgewater-Raw Water	34.62%<100/100mL ³

¹Two samples positive for coliform, both resamples negative

²0/52 = 0% untreated raw water samples >20/100ml E.Coli coliforms

³34/52 = 65.38% untreated raw water samples >100/100ml total coliforms

Please see Appendix A for monthly turbidity, chlorine residual, and consumption data graphed over time for each system.

Please see Appendix B for full spectrum analysis results.

4. Water Systems in Detail

4.1 East Side Lake Windermere Water System:

East Side Lake Windermere's raw water is drawn from Lake Windermere and pumped from the Low Lift Pumping Station to the East Side Lake Windermere Water Treatment Plant (WTP) located on Windermere Loop Road. It passes through coagulation, flocculation, settling and filtration treatment stages and the filtered water is then disinfected using UV and chlorine before being fed to the reservoir and distribution system. The entire process is monitored via Supervisory Control and Data Acquisition (SCADA) instrumentation and auto-dialer alarms as well as being verified and documented by operators daily. The Windermere water distribution system is part of the East Side Lake Windermere Water System.

2024 Events and System improvements:

- 940 Distribution Pump Rebuilt and Reinstalled
- Surge Protection Updated at High Lift Pumping Station
- New Transformer installed at plant to support charging of electric vehicle
- SCADA and PLC programming updates for plant optimization
- C-Can set up for dosing of coagulant chemical in a safer more efficient location
- Leak repair at head of 940 distribution
- Pressure Reducing Valves Serviced
- UV Treatment Banks Serviced
- Replaced Bulk Meter at Akiskinook Resort
- Fire and Chemical Spill Alarms installed at East Side Plant

2025 Plans:

- Complete Engineering design of 940 reservoir expansion project (construction planned 2026)
- Complete Engineering design of Windermere water main replacement project (construction planned 2026)
- Windermere intake/pumphouse decommissioning
- Draft asset management plan

4.2 Edgewater Water System:

The source water intake for Edgewater is located at Baptiste Lake, approximately two kilometers southeast of the community. Edgewater water is disinfected with both UV and chlorine and is stored at the Hewitt Road reservoirs, which provide 1200m³ of treated storage. The RDEK has the capability to fully monitor the entire process through Edgewater's SCADA system, which alerts the operators of any potential problems.

2024 Events and System Improvements:

- SCADA/PLC Maintenance
- Leaking Hydrants Replaced
- Inspected siphon line and ARVs from Baptiste
- Replaced Leaking ARV on siphon line
- Weir cleaned at Baptiste Reservoir
- PRV Inspections
- Boil Water Advisory May 17-July 7
- Began Water System Master Plan

2025 Plans:

- Capital planning for 2026 upgrades
- Complete water system master plan
- Complete asset management plan

4.3 Holland Creek Water System:

Kinbasket Water & Sewer Company (KWSC) supplies the community with bulk potable water. The well-sourced water is chlorinated to protect against contamination within the distribution system. The Holland Creek distribution system has no reservoirs – all storage is provided by KWSC.

2024 Events and System Improvements:

- PRVs Serviced
- Meter Head Replacement project well underway

2025 Plans:

- Draft and complete water system master plan

4.4 Rushmere Water System:

The Rushmere Water System draws raw water from Lake Windermere and is treated by way of a small membrane filtration treatment plant. Treated water is stored within the plant and pumped to the community using two variable frequency-drive distribution pumps. The plant is highly automated and operators maintain remote monitoring and control capability via SCADA. The plant is attended a minimum of 3 times per week and can alert staff when problems occur. The Rushmere Water System is used primarily for domestic purposes with some lawn and garden irrigation. There is no fire protection via fire hydrants.

2024 Events and System Improvements:

- SCADA Upgrades for Distribution Pump VFD (Variable Frequency Drive)
- Check valve replacement
- Distribution Pump Maintenance – Pump Rebuilt
- Installation of new chlorine analyzer
- Clean in Place of membrane filters completed

2025 Plans:

- Lake intake cleaning
- Check valve replacement
- Clean membrane filters (Clean in Place)
- Distribution Pump Maintenance
- Replace Distribution pipe manifold to make maintenance easier and to prevent accidental damage during maintenance.
- Pneumatic System Maintenance
- Continue to extend membrane lifespan by monitoring performance. No need to replace if they're still doing their job.

4.5 Spur Valley Water System:

The community of Spur Valley is supplied with water from a groundwater well situated just south of the community. The water is chlorinated as it leaves the well and then pumped to two reservoirs before being distributed to residents. The RDEK has the capability to monitor the entire process through Spur Valley's SCADA system, which alerts the operators of any potential problems. Operators are on site a minimum of 3 times per week.

2024 Events and System Improvements:

- Conducted leak detection and repaired leaking curb stop connection. Isolated another for future repair once lot is developed by owner

2025 Plans:

- Continue with leak detection
- New well pump (TBA)
- Hypo shock well (TBA)

4.6 Moyie Water System:

Moyie water is pumped from a groundwater well to a reservoir that maintains the pressure in the distribution system. The water is not chlorinated. RDEK operators are on site twice per week to ensure proper operation and perform monthly bacteriological sampling. The pumphouse is also outfitted with automatic alarm dialers to alert operators of any problems.

2024 Events and System Improvements:

- Well shock chlorinated and flushed
- Leak detection

2025 Plans:

- Curb stop assessment
- Leak repair
- Danger tree removal
- Well shock

4.7 Elko Water System:

The community of Elko receives raw water from a well located near the pumphouse. The well is located in a confined aquifer and water is pumped directly to the distribution system. Because there is no storage reservoir in Elko, the water system relies solely on the continuous operation of the pump to maintain pressure and keep up with demand. There is no chlorination in Elko.

RDEK operators are on site 2 times per week to ensure proper operation and perform bacteriological sampling monthly as required. The pumphouse is also outfitted with automatic alarm dialers to alert staff when regular operations are compromised.

2024 Events and System Improvements:

- Well shock
- Solar panels added to pumphouse site

2025 Plans:

- Curb stop assessment
- Valve exercising

5. Operator Certification

EOCP Certifications		
Employee	Certification #	Level
Krista Goodman	7969	WT-II, WD-II, MWWT-II, WWC-II, CH
Christina Bucci	8972	WT-III, WD-II, MWWT-I, CH
Chad Cochrane	1000063	WT-II, WD-I, MWWT-II
Aaron Bose	9550	WT-II, WD – II, MWWT - II
Alex Stephenson	1002481	SWS
Dave Berger	7040	SWS
Brian De Paoli	8973	SWS
Jeff Nicolajsen	141754	SWS
Bryan Grasdal	7757	WT-I, WD-II, WWC MU-II, CH
Tom Altmann	1000038	SWS, SSS, CH

- WT: Water Treatment
- WD: Water Distribution
- MWWT: Municipal Wastewater Treatment
- WWC: Wastewater Collection
- CH: Chlorine Handling
- SWS: Small Water Systems
- SSS: Small Sewer Systems
- MU: Multi Utility

6. Water Conservation

The RDEK has several components to its water conservation strategy. We have adopted scheduled watering hours for most of the RDEK owned and operated water systems (see examples below). We encourage the use of low-flow fixtures in new construction. Our operators diligently monitor our systems for problems and routinely check for unaccounted-for consumption like leaks or unmetered use.



7. Water Treatment Objectives

The Canadian Drinking Water Guidelines, developed by Health Canada, are designed to protect the health of community members and those most vulnerable: children, the elderly, and individuals with compromised immune systems. The parameters set out in those guidelines are the performance goals every water system should strive to achieve to provide the cleanest, safest and most reliable drinking water possible.

A Maximum Acceptable Concentration (MAC) level has been established by Health Canada for microbiological criteria. Each MAC has been designed to safeguard health, assuming a lifelong consumption of drinking water containing the substances at the maximum concentration level.

Aesthetic Objectives (AO) apply to characteristics of drinking water that can affect its acceptance by consumers. These would include such criteria as taste, odour, and appearance. Some AOs like turbidity could pose a health risk to some at-risk consumers if the MAC levels are exceeded.

In the East Kootenay, IHA acts as the water quality regulator by issuing Operating Permits and placing conditions on those permits. Those conditions are generally found in the BC Drinking Water Protection Act and the Canadian Drinking Water Guidelines.

IHA employs the 4-3-2-1-0 treatment objectives to ensure water-borne illnesses are not jeopardizing the public's health:

Based on Canadian Drinking Water Quality Guidelines:

- 4 log (99.99%) inactivation of viruses
- 3 log (99.9%) inactivation of or removal of Giardia and Cryptosporidium
- 2 treatment processes for surface water (typically this includes filtration and disinfection)
- 1 for <1 Nephelometric Turbidity Units (NTU) of turbidity (with a target of 0.1 NTU)
- 0 fecal coliform and E. coli

8. Water Quality Monitoring

Monitoring programs are established as required by IHA regulations, the water system's Operating Permit, and the Drinking Water Officer. Bacteriological testing is a major requirement and is performed routinely in every RDEK water system. Samples are submitted to an approved lab where they are tested for total coliform and E. coli bacteria.

Coliforms:

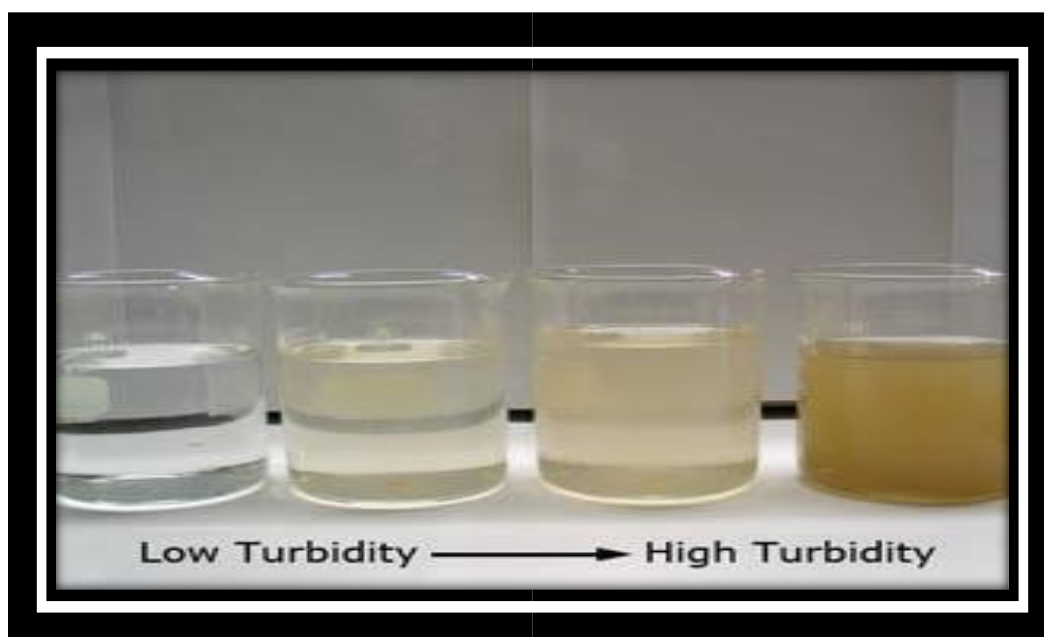
The presence of total coliforms in the water system is an indicator that the system is experiencing a regrowth of pathogens, that infiltration has occurred, or that it has not been properly treated at the source. It is an indication that the potential exists for bacteria to cause adverse health effects. The MAC for total coliform in all RDEK operated water systems is 0 per 100ml. If a sample comes back positive for coliform, operators review sampling practices, system operations anomalies, and a resample is conducted. If that result is positive, the main is flushed, monitored, and tested again. If the third result is positive, the main is taken out of service, chlorinated, flushed, and remains out of service until acceptable results are obtained.

E. coli:

Escherichia coli is one species in the fecal coliform group and is a definite indicator of the presence of feces in the distribution system. The MAC for E. coli is 0 per 100 ml. An unacceptable MAC test for E. coli triggers an immediate boil water order by the Medical Health Officer, which remains in effect until the problem is identified, isolated, resolved, and acceptable test results are obtained.

Turbidity:

Turbidity is a measure of water clarity. Turbid water can look cloudy or opaque and can also affect the colour of the water. Turbidity is measured in Nephelometric Turbidity Units, or NTU. The instrument used for measuring is called nephelometer or turbidimeter, which measures the intensity of light scattered at 90 degrees as a beam of light passes through a water sample.



For all its surface-sourced water systems, the RDEK monitors turbidity with continuous monitoring instrumentation and verifies values with daily grab samples, using this as a basis for determining general water quality. Water quality advisories are issued when turbidity levels are greater than 1 NTU. Boil water notices are issued at or above 5 NTU. Depending on the treatment system, Health Canada recommends different turbidity level objectives; however, if it is above 1 NTU, a water quality advisory is issued.

Chlorine Disinfection:

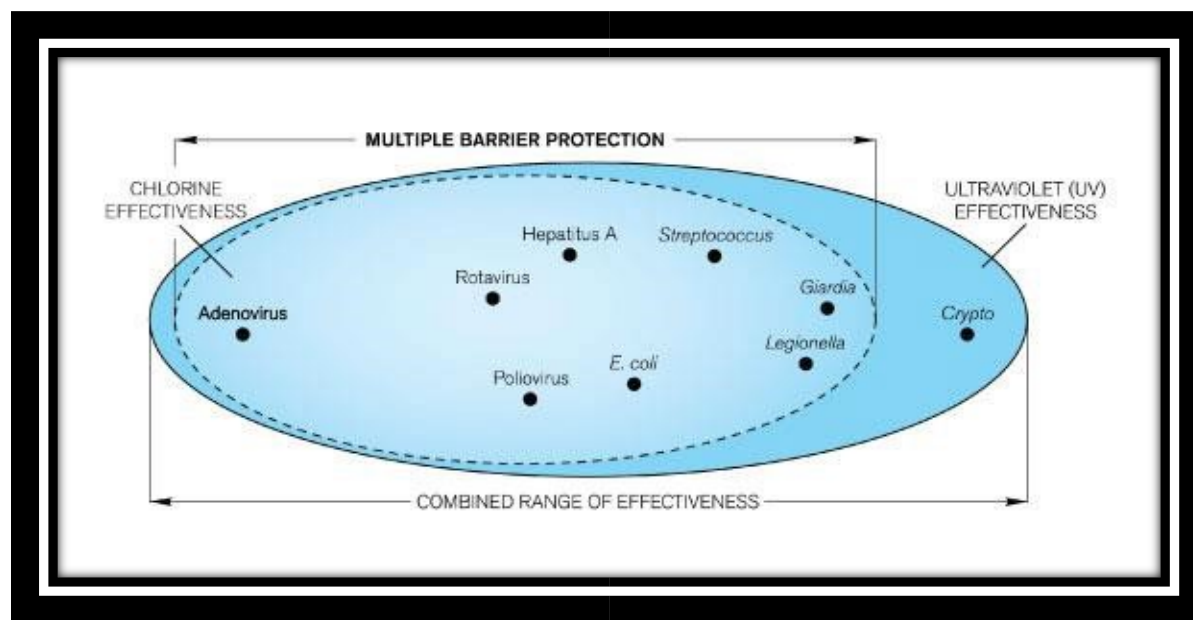
Most RDEK water systems use chlorine to disinfect the water prior to sending it through the distribution system. Maintaining free chlorine residual in all parts of the system is important in keeping the water safe from bacteriological growth and other disease-causing organisms.

To ensure adequate chlorine levels exist, the RDEK has several online chlorine analyzers that monitor residuals and will alert an operator should a residual fall below a desired point. Testing at remote points of distribution systems is also done routinely.

Ultraviolet Light Disinfection:

Ultraviolet light (UV) destroys harmful organisms by causing a molecular change in their DNA makeup that prevents them from multiplying. This process destroys the ability of the organism to spread disease. When pathogens cannot multiply, they are no longer considered to be harmful.

UV is often used in conjunction with chlorination for added protection and to combat organisms such as cryptosporidium. Cryptosporidium is a chlorine-resistant protozoan, but it can easily be inactivated by UV. Another advantage of UV disinfection is that it does not produce any disinfection byproducts. The East Side Lake Windermere and Edgewater water systems are equipped with UV disinfection systems.



Disinfection Byproducts:

Disinfection byproducts are formed when disinfectants used in water treatment react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts, for which MAC's have been established, have been identified in drinking water, including trihalomethanes and haloacetic acids.

- Trihalomethanes (THM) are a group of four chemicals that are formed along with other disinfection byproducts when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The THMs are chloroform, bromodichloromethane, dibromochloromethane, and bromoform. The Canadian Drinking Water Guidelines have established a MAC to regulate total THMs (TTHM) at a maximum allowable annual average level of 0.1mg/L.
- Haloacetic Acids (HAA) are a group of chemicals that are formed along with other disinfection byproducts when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The Canadian Drinking Water Guidelines has established the MAC for haloacetic acids at 0.08 mg/L based on a location's running annual average of quarterly samples taken in the distribution system.

The RDEK samples for both THMs and HAAs on a quarterly basis¹. Of these samples, there was one result exceeding the Canadian Drinking Water thresholds for THMs in Edgewater in 2022. RDEK operators increased the frequency of distribution system flushing to further reduce THMs and continue to monitor the situation closely. All other tests met the required thresholds.

For more information on specific water quality parameters please contact the RDEK or visit *The Province of BC's Ministry of Health* website to find the *Drinking Water Protection Act and Regulation* <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/legislation> or the Health Canada website to find the *Guidelines for Canadian Drinking Water Quality*. <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/canadian-drinking-water-guidelines.html>

¹As per IHA standards, Spur Valley, Moyie, Elko, and Holland Creek are groundwater-sourced systems and do not require THM or HAA testing.

Filtration:

Filtration is part of the treatment process in the Rushmere and East Side Lake Windermere water systems. In Rushmere, filtration is performed by an ultra-filter cartridge system.

The filtration system for East Side Lake Windermere consists of the following steps:

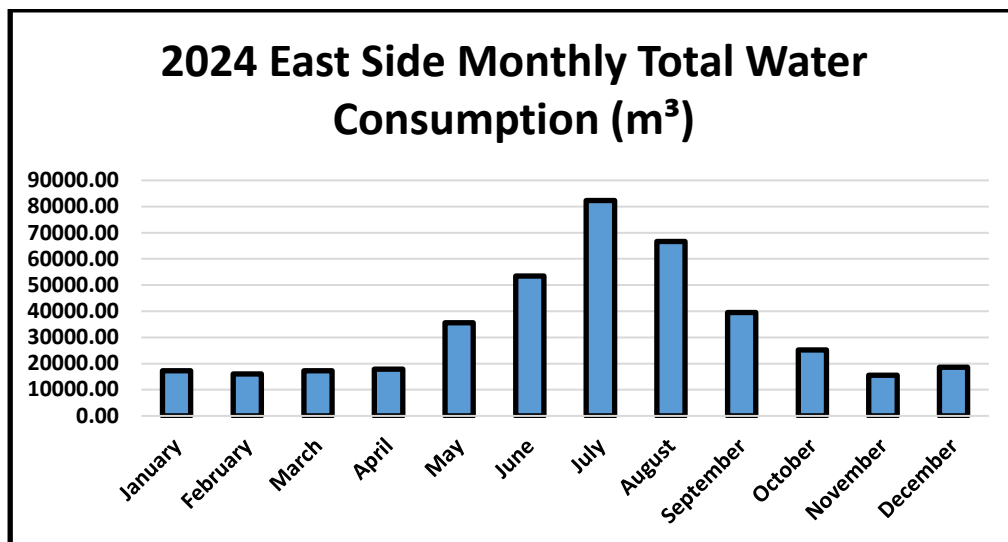
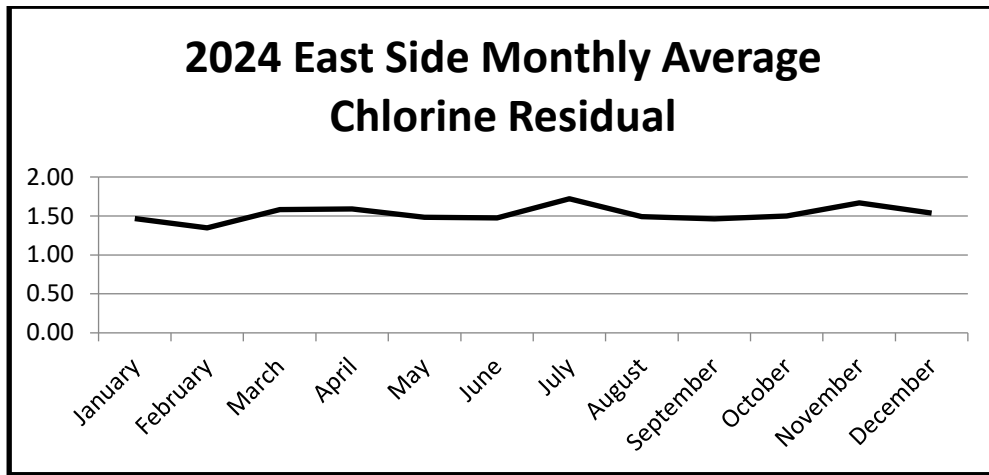
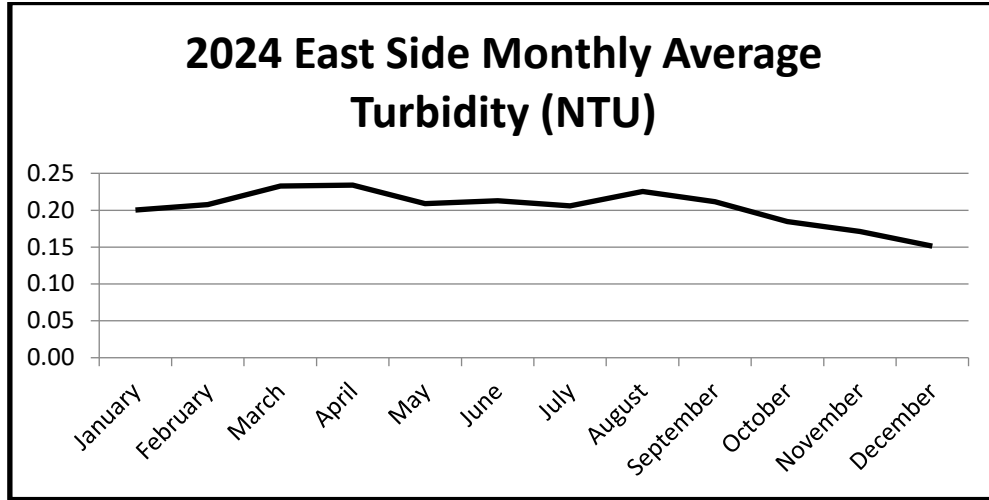
- Coagulation: Polyaluminum Chloride, a primary coagulant, is used to destabilize colloidal (particles that do not settle out) substances.
- Flocculation: A polymer is added to clump the destabilized particles together into aggregates that can be more easily separated from the water.
- Settling: The water is sent through up-flow tube settlers, slowing down the flow to allow the floc to settle. This first step removes the majority of the solids.
- Filtration: The water is passed through a mixed-media adsorption clarifier, which removes non-settleable solids using buoyant media. The final filtration process removes any remaining solids creating a very low turbidity product.

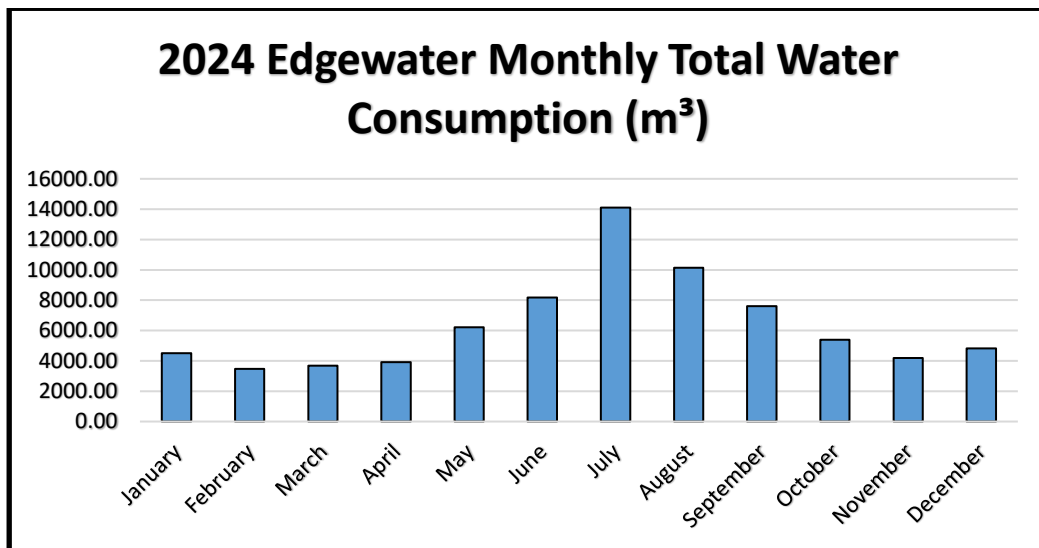
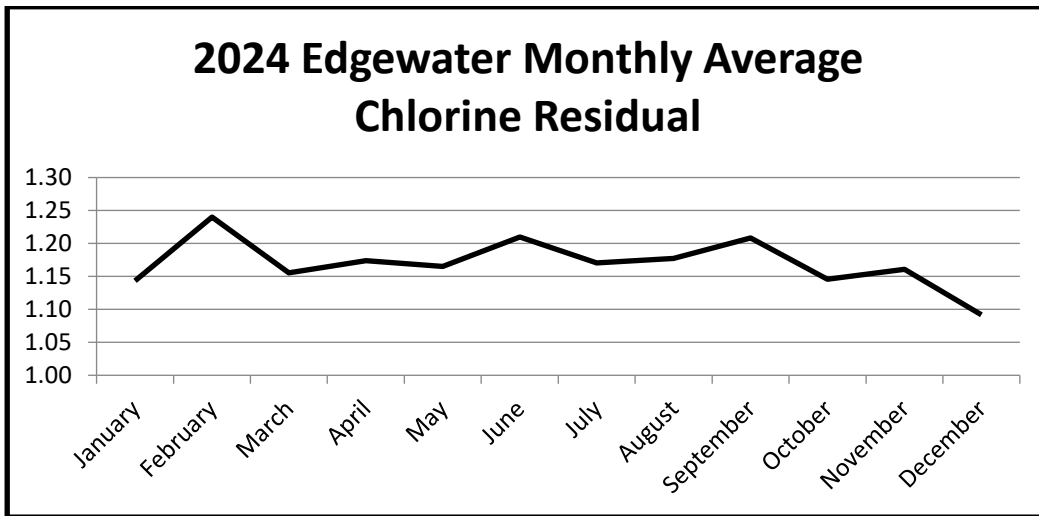
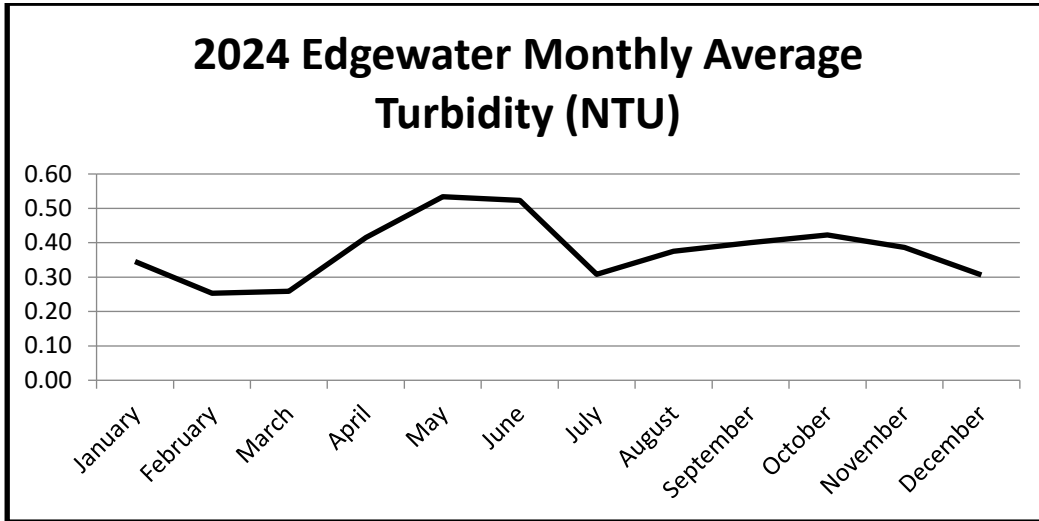
Summary

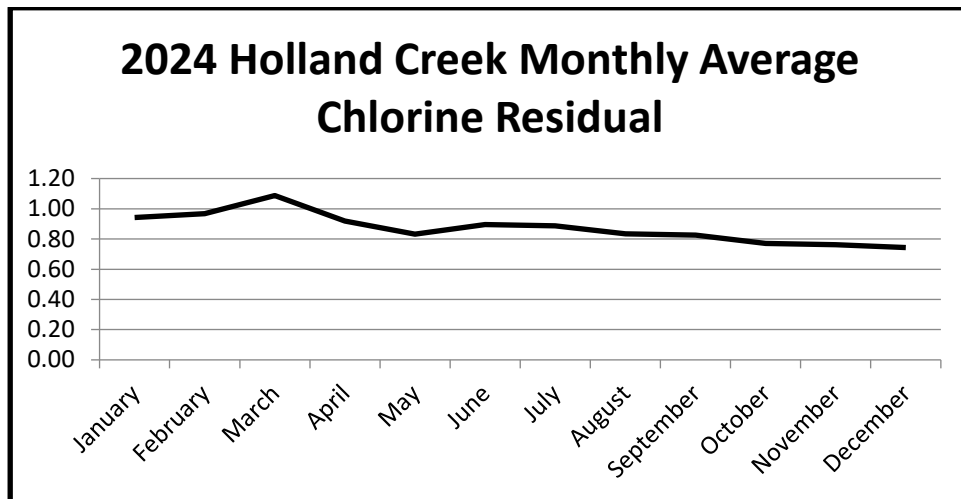
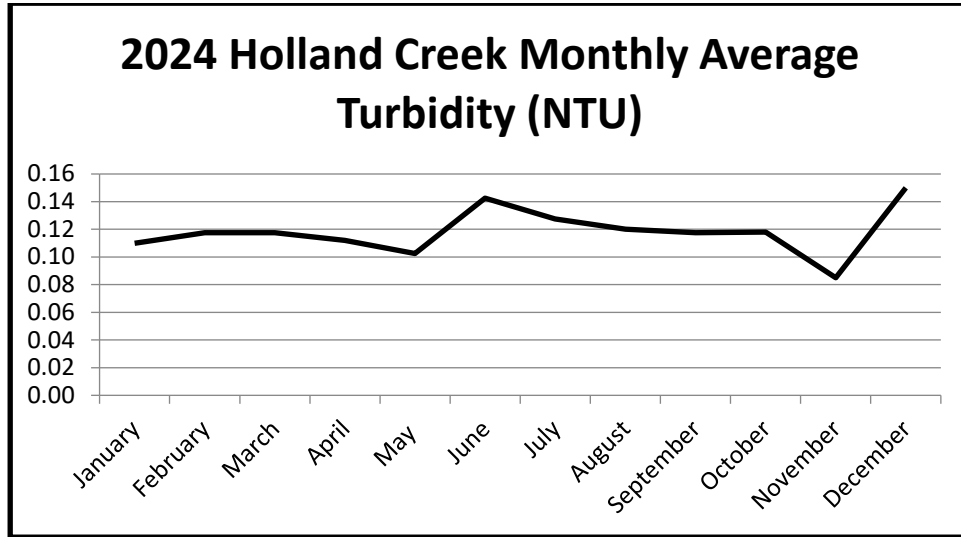
The RDEK is committed to providing safe, potable water to the public by working with IHA and maintaining standards set by Canadian Drinking Water Guidelines. This report represents a way of communicating facts and keeping the public apprised of the operational processes of the RDEK's water systems in the East Kootenay.

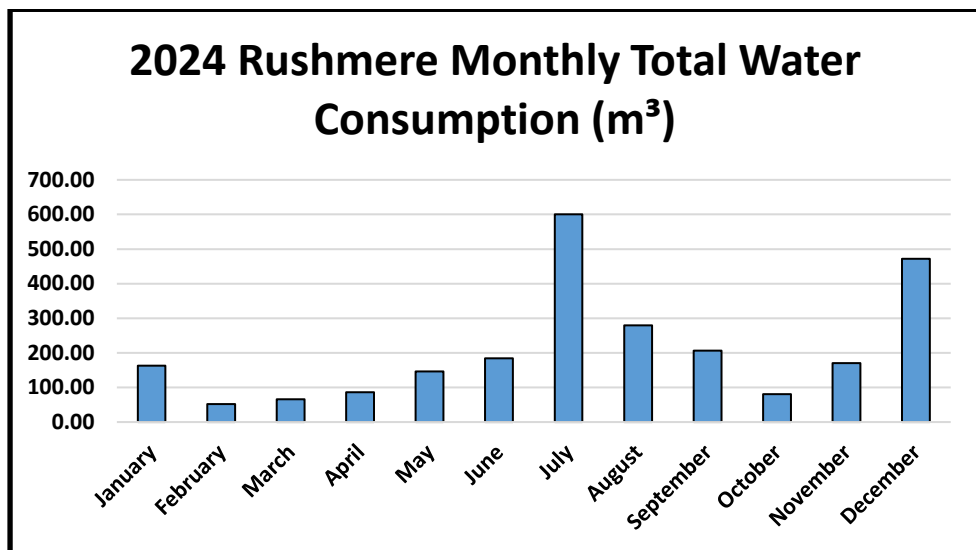
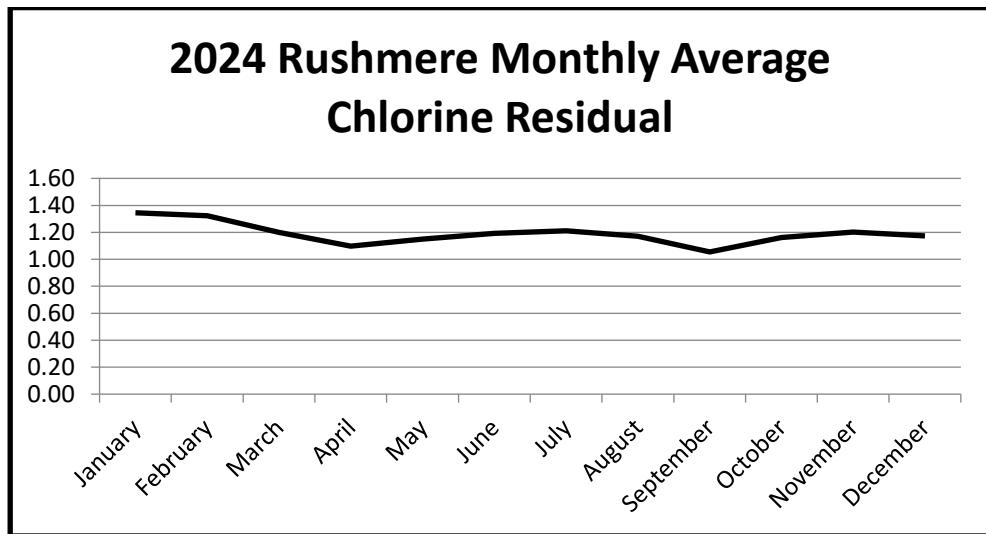
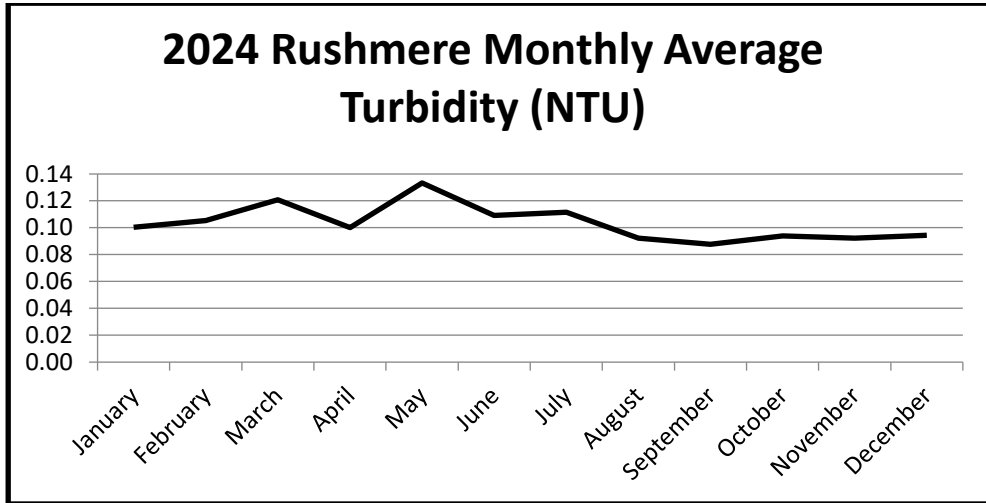


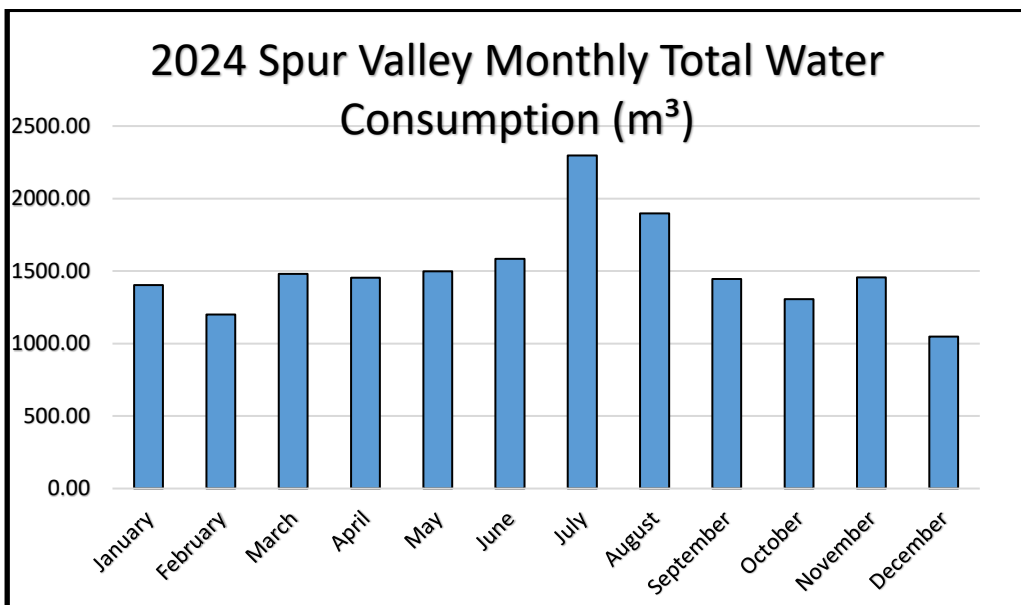
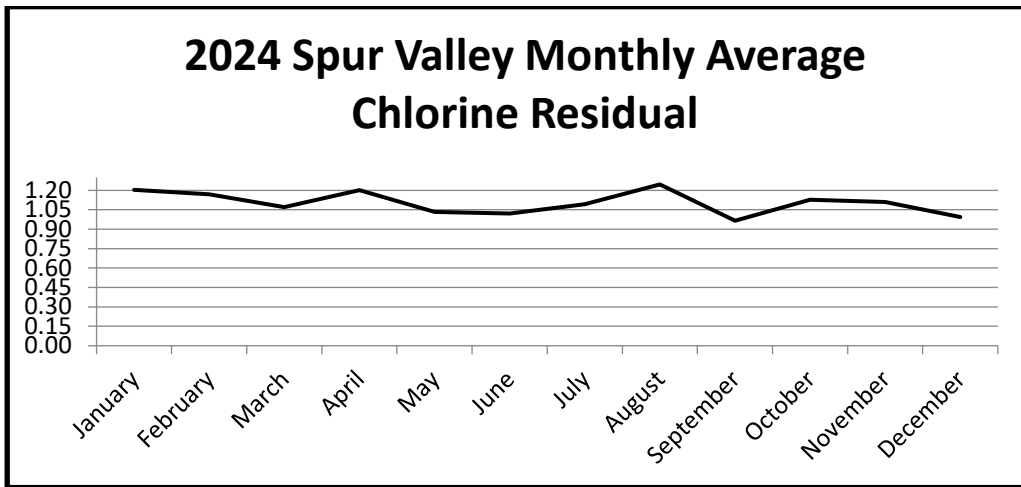
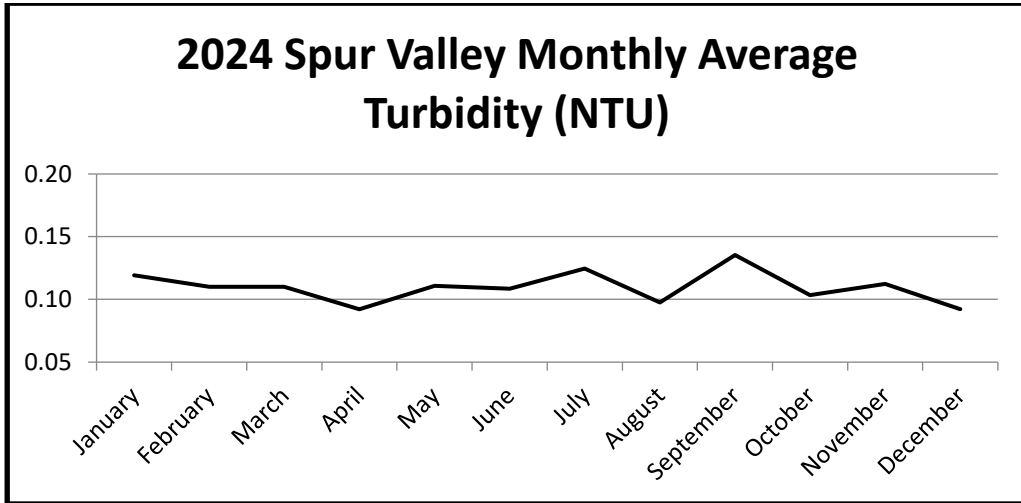
Appendix A: Monitoring Data

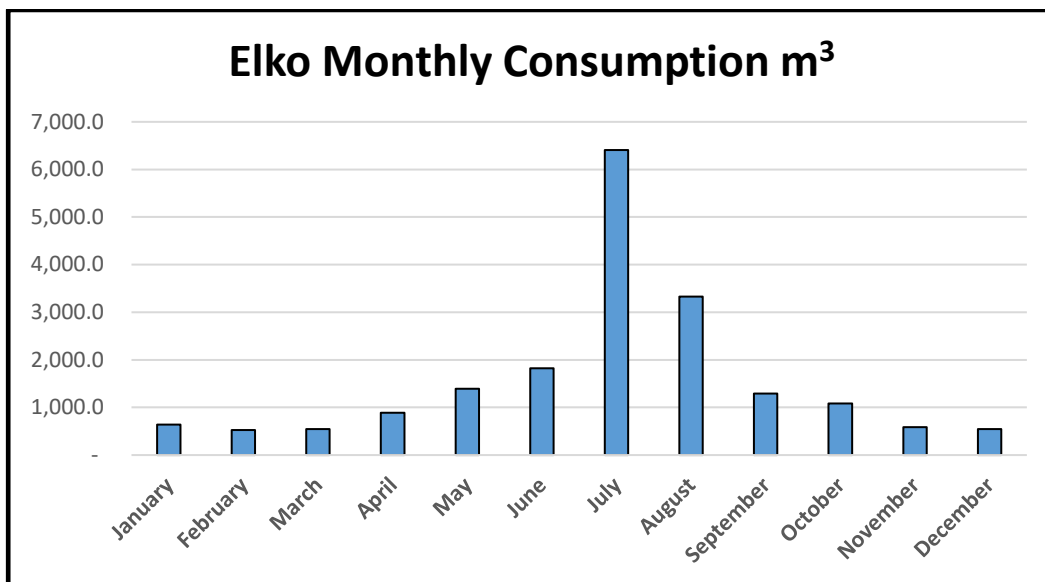
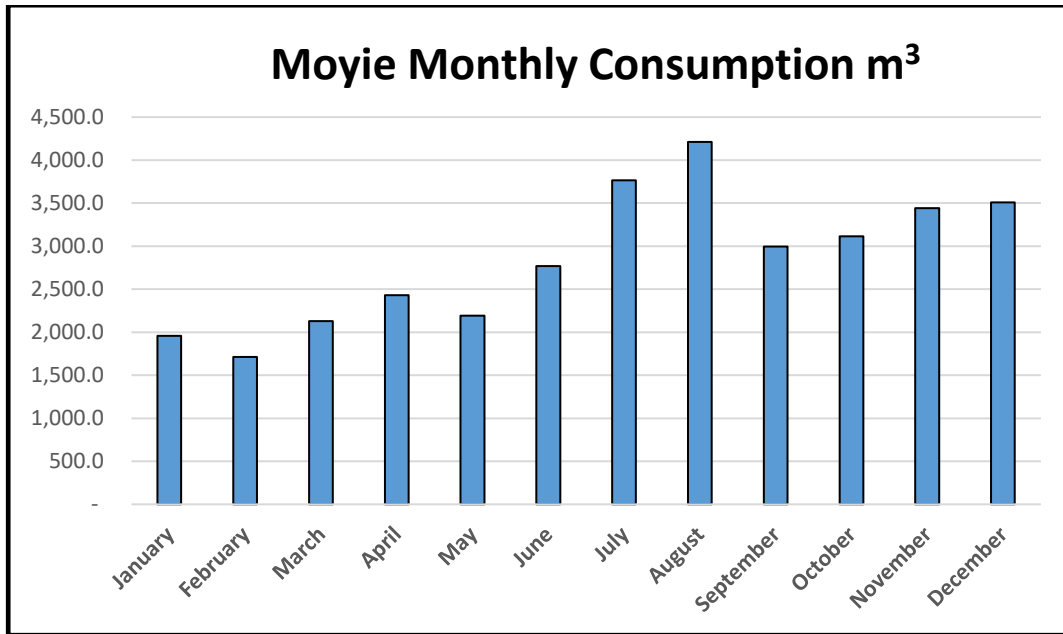












Appendix B: Full Spectrum Analysis Data

ALS Certificate of Analysis – sampled August 6, 2024

East Side Distribution

East Side RAW*

Holland Creek Distribution

Edgewater Distribution

Edgewater RAW**

Elko ALS Environmental Certificate of Analysis – sampled July 31, 2024

Elk Valley Resources Regional Effects Program

*Raw water direct from Lake Windermere prior to treatment.

**Raw water direct from Lake Baptiste prior to treatment.

Dichloropropylene, trans-1,3-	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,1-	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl chloride	0.40	µg/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40

Volatle Organic Compounds [Fuels] (Matrix: Water)

Benzene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	0.40	µg/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, m+p-	0.40	µg/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	0.30	µg/L	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Volatle Organic Compounds [THMs] (Matrix: Water)

Bromodichloromethane	0.50	µg/L	2.62	<0.50	3.10	<0.50	2.97	2.49	<0.50
Bromoform	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	0.50	µg/L	63.0	<0.50	65.4	<0.50	53.7	12.7	1.35
Dibromochloromethane	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.58	<0.50

Hydrocarbons (Matrix: Water)

EPH (C10-C19)	250	µg/L			<250	<250	<250		
EPH (C19-C32)	250	µg/L			<250	<250	<250		
LEPHw	250	µg/L			<250	<250	<250		
HEPHw	250	µg/L			<250	<250	<250		

Hydrocarbons Surrogates (Matrix: Water)

Bromobenzotrifluoride, 2- (EPH surrogate)	1.0	%			88.4	89.6	86.8		
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Volatle Organic Compounds Surrogates (Matrix: Water)

Bromofluorobenzene, 4-	1.0	%	91.0	91.9	88.4	89.6	91.6	92.3	89.7
Difluorobenzene, 1,4-	1.0	%	100	99.2	98.8	97.9	99.9	98.4	97.9

Polycyclic Aromatic Hydrocarbons (Matrix: Water)

Acenaphthene	0.010	µg/L			<0.010	<0.010	<0.010		
Acenaphthylene	0.010	µg/L			<0.010	<0.010	<0.010		
Acridine	0.010	µg/L			<0.010	<0.010	<0.010		
Anthracene	0.010	µg/L			<0.010	<0.010	<0.010		
Benz(a)anthracene	0.010	µg/L			<0.010	<0.010	<0.010		
Benzo(a)pyrene	0.0050	µg/L			<0.0050	<0.0050	<0.0050		
Benzo(b+j)fluoranthene	0.010	µg/L			<0.010	<0.010	<0.010		
Benzo(b+j+k)fluoranthene	0.015	µg/L			<0.015	<0.015	<0.015		
Benzo(g,h,i)perylene	0.010	µg/L			<0.010	<0.010	<0.010		
Benzo(k)fluoranthene	0.010	µg/L			<0.010	<0.010	<0.010		
Chrysene	0.010	µg/L			<0.010	<0.010	<0.010		
Dibenz(a,h)anthracene	0.0050	µg/L			<0.0050	<0.0050	<0.0050		
Fluoranthene	0.010	µg/L			<0.010	<0.010	<0.010		
Fluorene	0.010	µg/L			<0.010	<0.010	<0.010		
Indeno(1,2,3-c,d)pyrene	0.010	µg/L			<0.010	<0.010	<0.010		

Methylnaphthalene, 1-	0.010	µg/L	<0.010	<0.010	<0.010
Methylnaphthalene, 2-	0.010	µg/L	<0.010	<0.010	<0.010
Naphthalene	0.050	µg/L	<0.050	<0.050	<0.050
Phenanthrene	0.020	µg/L	<0.020	<0.020	<0.020
Pyrene	0.010	µg/L	<0.010	<0.010	<0.010
Quinoline	0.050	µg/L	<0.050	<0.050	<0.050

Polycyclic Aromatic Hydrocarbons Surrogates (Matrix: Water)

Chrysene-d12	0.1	%	79.6	79.2	77.5
Naphthalene-d8	0.1	%	75.8	80.8	83.8
Phenanthrene-d10	0.1	%	81.4	79.9	79.3

(L) = Lower Limit

(U) = Upper Limit

Results highlighted in red exceed the guideline limit

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.