

**Regional District of
Central Okanagan**

Large Water Systems Drinking Water Annual Report 2024

Killiney Beach, Westshore Estates and Sunset Ranch



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Introduction

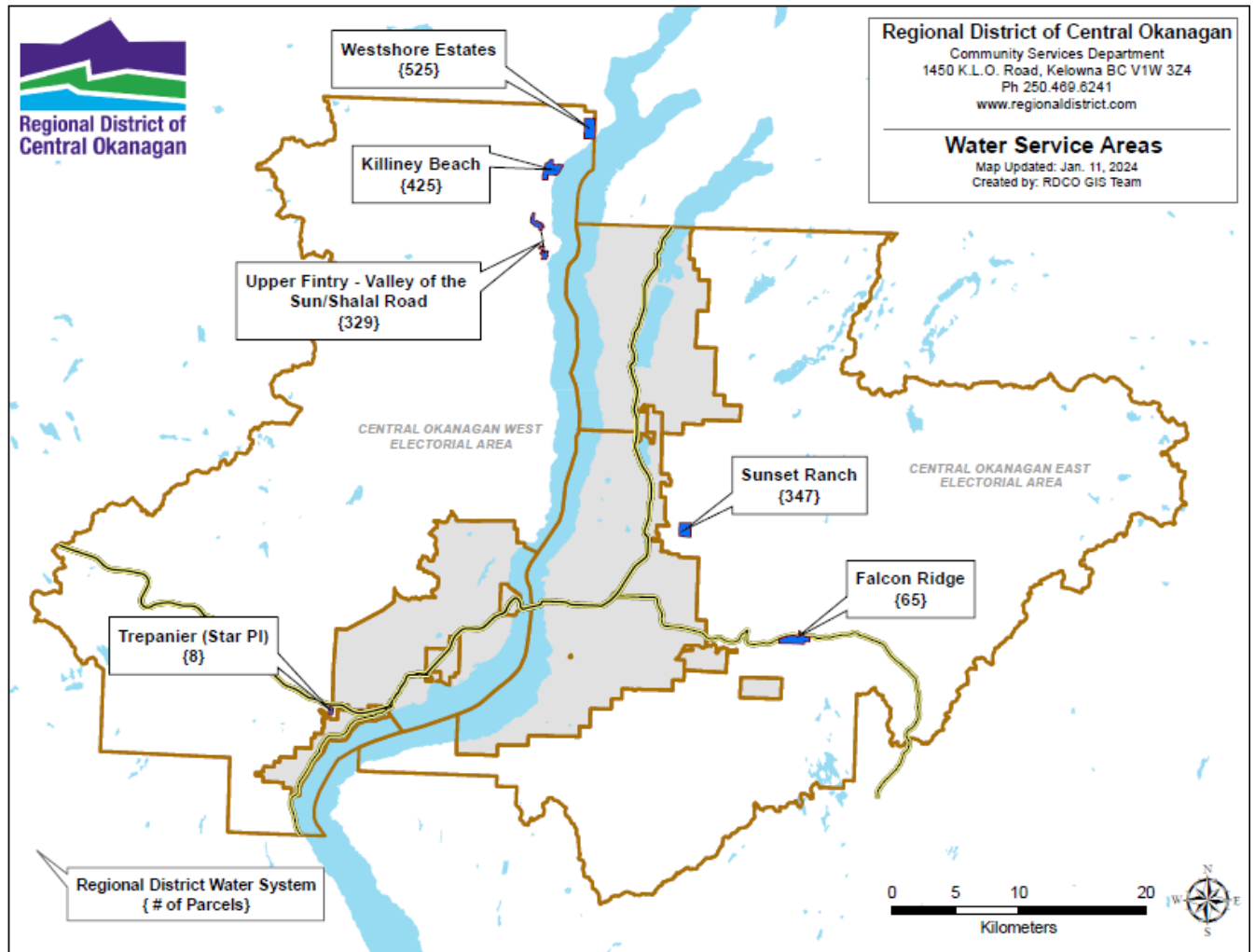
The purpose of this report is to provide information on the monitoring and maintenance of the Regional District of Central Okanagan's (RDCO) water distribution systems directed by the Interior Health Authority (IHA) as set forth by the Drinking Water Protection Act.

During 2024 the RDCO continued to monitor and improve the domestic water supply. This document will provide an overview of the distribution system, maintenance performed and water system data results and trending.

Water Distribution System

The RDCO administers eight water systems (two are Fire/Community Halls located in the Joe Rich area). These systems vary in size with five of the systems classified as Small and three as Large. This Report will contain information for the large systems only – Killiney Beach, Westshore Estates and Sunset Ranch.

Figure 1 - RDCO Water Service areas and number of parcels



The Large Water Systems administered by the RDCO, the number of users/customers for each system and the assigned EOCP number (Environmental Operators Certification Program) are outlined below.

Table 1 – RDCO Water Systems and EOCP information

Water System	EOCP Number	EOCP Classification	Number of Connections (approximate)	Water Source	Meets Drinking Water Objectives
Killiney Beach	1850	WD-3, WT-2	288	Okanagan Lake-sodium-hypochlorite injection disinfection	*no
Westshore	1852	WD-2, WT-2	329	Okanagan Lake-sodium-hypochlorite injection disinfection	*no
Sunset Ranch	678	WD-3	346	Groundwater Well-sodium hypochlorite injection disinfection	yes

* Killiney and Westshore water systems meet many of Interior Health’s water quality objectives including zero Coliforms, zero E.coli and inactivation of viruses and bacteria. However, both systems are not compliant regarding having two water treatment processes and inactivation of Cryptosporidium - water users can choose to boil their water rapidly for at least one minute prior to consumption or food preparation. Currently chlorination is the only method used to treat drinking water delivered to Killiney and Westshore customers.

Interior Health Website

<https://www.interiorhealth.ca/YourEnvironment/DrinkingWater/Pages/default.aspx>

Regulations and Management

The regulations for the management of the water distribution systems and the terms and conditions under which water services may be provided are set out in RDCO **Bylaw 1513**. User fees and asset renewal fees vary according to the number of users and the maintenance required for each system. Fees are set under the RDCO Water System Fees & Charges Amended **Bylaws No. 1371, 1375, 1373 (Appendix 1)**.

Testing and Monitoring Program

The monitoring program integrates source monitoring (where possible) as well as the quality in the distribution system. Routine weekly samples were collected at each site throughout the distribution system including raw water sources and results are reported to Interior Health monthly.

RDCO staff also conducts in-house testing including free and total chlorine residual, pH, conductivity, turbidity, iron, manganese, and temperature. This data was used as background information to supplement on-line monitoring and as a checking procedure within the Drinking Water Monitoring

program. The RDCO tests each system every 2 years for physical and chemical parameters. Any additional chemical testing done in 2024 is included in (**Appendix 2**).

Maintenance and Repairs

The RDCO continues to utilize an operations and maintenance program (MPulse) that includes annual cleaning/disinfection for the reservoirs, annual hydrant inspection and flushing, annual generator service and distribution flushing including valve exercising and dead-end flushing.

Conditions on Permit/System Improvements 2024

Killiney Beach

- » General water system improvements – *long-term planning to meet DWO*
- » Leak detection (ongoing) – *long-term planning to meet DWO*
- » Hydrant Maintenance and flushing
- » Source Protection Plan
- » Electrical Asset Management – Udell and Killarney
- » Re-keyed locks
- » Kildare PRV replacement
- » Water system source study (ongoing)
- » New chlorine and turbidity analyzer purchased

Westshore

- » General water system improvements – *long-term planning to meet DWO*
- » Leak detection (ongoing) – *long-term planning to meet DWO*
- » Hydrant Maintenance and flushing
- » Source Protection Plan
- » Mountain pumphouse repairs (new roofing, siding, gutter)
- » Mountain surge relief valve (power fail surge from upper reservoir) - ongoing
- » Upper reservoir cell #2 level sensor installed
- » New chlorine and turbidity analyzer installed at Lake Pumphouse
- » Mountain isolation valve
- » Re-keyed locks
- » Water system source study (ongoing)

Sunset Ranch

- » Hydrant Maintenance and flushing
- » New lines installed for Hypo injection
- » General improvements
- » Re-keyed locks
- » Surge anticipation valve design in well building - ongoing
- » Manganese quarterly monitoring
- » New chlorine analyzer purchased

Grants/Water Conservation

Grants

No grants were received in 2024.

Water Conservation

Outdoor Irrigation restrictions are in place for the customers RDCO water systems, as outlined below (Stage 2 water restrictions were implemented for all water systems on June 16, 2024, and Stage 3 water restrictions were issued July 30, 2024).

Further tips on water conservation including the **Water Talk Newsletter - Your Water-wise Information Source** can be found on the RDCO website at regionaldistrict.com. The newsletter was sent out to all RDCO water customers in the spring and fall of 2024, discussing system updates, new construction and conservation tips and ideas. Each water system has its own webpage on the RDCO website using the link **My Water System**.

Table 2 - RDCO Outdoor water irrigation schedule

Stage 1 Alternate Days Sprinkling:	
Effective	September 16th to June 15th, unless Notice of Stage 3 or 4 in Effect
Even numbered addresses:	<i>Sprinkling is only permitted on Even Calendar Days</i>
Odd numbered addresses:	<i>Sprinkling is only permitted on Odd Calendar Days</i>
Stage 2 Twice a Week Sprinkling:	
Effective	June 16th to September 15th, unless Notice of Stage 3 or 4 in Effect
Even numbered addresses:	<i>Sprinkling is only permitted on Saturdays & Tuesdays</i>
Odd numbered addresses:	<i>Sprinkling is only permitted on Sundays & Wednesdays</i>
Stage 3 Restriction Period - Once a Week Sprinkling:	
Effective	Upon Notice Issued by <i>Regional District Officer</i>
Even numbered addresses:	<i>Sprinkling is only permitted on Saturdays</i>
Odd numbered addresses:	<i>Sprinkling is only permitted on Sundays</i>
Stage 4 Restriction Period – No Sprinkling	
Effective	Upon Notice Issued by <i>Regional District Officer</i>

Source Water Protection

Killiney Beach and Westshore Estates

A source water assessment was completed in 2015 and a source protection planning spreadsheet was created in 2016. Treatment options are still being investigated for both Killiney and Westshore including source location so raw water sampling is not possible currently. The spreadsheet is reviewed annually and updated as required. An Okanagan Basin Water Board Gant was obtained in 2020 to conduct a study on the impact of septic fields on the foreshore of Okanagan Lake in the Killiney Beach and Westshore Estates area. The study and sampling (periphyton and water chemistry) were contracted out to Larratt Aquatic Consulting and results indicated there was no evidence of septic influence in the study areas.

Sunset Ranch

A source water assessment was completed in 2013.

Operator Education

The RDCO has established a training program that follows Environmental Operators Certification Program (EOCP) guidelines and required training, including First Aid, Transportation of Dangerous Goods and Backflow Prevention. Operators have been qualifying to write exams as per EOCP guidelines and will continue to increase their certification levels for successorship as well as redundancy for all water systems annually. The Regional District of Central Okanagan currently employs seven (6) staff working in the utilities department as seen below.

Table 3 – EOCP Certifications

Employee	EOCP Certification #	Level
Shane Dorey	9216	WT-2, WD-1
Kevin Trottier	4607	WT-3, WD-3, CH
Doug Murray	8948	WD-1
Peter Meersma	8244	CCCT, WD-2, WT-2, PLUMBER
Angela Lambrecht	6468	WT-1, WD-1, CH
Greg Beloin	7787	WT-1, WD-1, CH

Cross Connection Control/Backflow Events

On-going assessments of all RDCO managed water facilities continued in 2024 to minimize the risk of cross connections. Certified staff conducted annual servicing and maintenance on all back flow preventers in the water systems and documentation will be added to a Maintenance Management Program for future scheduling and tracking.

The Water Meter Reader Software was updated to Neptune 360 in 2024 - all installed water meters are read on a quarterly basis and continue to help operations in the cross-connection program as the Neptune meters have the capacity to record backflow conditions.

Unaccounted water reports are compiled quarterly using the water meter software and include any reverse flow events which are then are investigated.

SCADA System

The RDCO uses a *Supervisory Control and Data Acquisition* (SCADA) system that allows integrated real-time automated control that can respond quickly enough to compensate for process changes. Within the SCADA system there are several controls in place and RDCO staff can make changes on an as needed basis.

All reporting is done daily, and trending is in real time unless noted above. Trending and reporting are also compiled into monthly and yearly reports.

The following list is a description of some of the information that the RDCO currently trends and reports on our SCADA system.

Killiney Beach

- » Reservoir level and trending – Udell, Killarney and Winchester
- » On-line turbidity, chlorine, temperature, and pH
- » Pump control (amp, hours, pressure)
- » Total flow m³
- » Remote access and control of pumps and chlorinator (stat/stop times)

Westshore

- » Reservoir level and trending – Upper and Mountain
- » On-line turbidity, chlorine, temperature, and pH
- » Pump control (amp, hours, pressure)
- » Total flow m³
- » Remote access and control of pumps and chlorinator (stat/stop times)

Sunset Ranch

- » Reservoir level and trending
- » Pump control (amp, hours, pressure)
- » Well levels
- » Total flow m³
- » Check valve control
- » On-line chlorine, temperature, and pH

Emergency Response/Events

All notifications were put on and lifted after consultation with IHA and in accordance with guidelines set forth in the RDCO Emergency Response Manual, which is updated annually.

Killiney Beach – emergency response enacted four times for 2024

February 12, 2024, a localized BOIL notice was issued when pressure was lost during a repair and was removed February 15, 2024.

March 27, 2024, a localized BOIL notice was issued when pressure was lost during an emergency repair, it was removed April 8, 2024.

April 11, 2024, a localized BOIL notice was issued when pressure was lost during a repair and was removed April 18, 2024.

October 24, 2024, a localized BOIL notice was issued after repair work and removed October 30, 2024.

Westshore – emergency response enacted once in 2024

October 16, 2024, a localized BOIL notice was issued after repair work and removed October 22, 2024.

Future Plans for 2025

Killiney Beach

- » Water source study (ongoing)
- » Hydrant maintenance and leak detection
- » Reservoir and intake cleaning
- » Easement maintenance
- » Hope Creek Reservoir deconstruction
- » Killarney/Udell pump station siding replacement
- » Roof replacements
- » New chlorine and turbidity analyzer installed

Westshore

- » Water source study (ongoing)
- » Hydrant maintenance
- » Reservoir and intake leaning
- » Easement maintenance
- » Surge Anticipation Valve at Mountain Reservoir
- » Air release valve replacement at Mountain pump station and below Northernview PRV
- » Lake Pump station isolation valve replacement
- » Mountain Reservoir level sensor replacement

Sunset Ranch

- » Surge anticipation valve for lower pump house
- » Hydrant maintenance
- » Reservoir jockey pump check valve replacement
- » PRV isolation valve replacement at Sunset and Camelback Road
- » New chlorine analyzer installed
- » Roof replacements
- » Replace old water meters

Weekly sample analysis results

Results for Total Coliform and E. coli are included in **Appendix 3**, and include the date, time, location, and chlorine residual.

Turbidity Analysis (NTU)

Turbidity must be monitored on-line for surface water distribution systems with greater than 300 connections. All turbidity data can be found in **Appendix 3** and include the date and location of the analysis. **Table 4** and **Figures 2-4** show turbidity trends and average data throughout the year.

Figure 2 - Killiney Beach turbidity

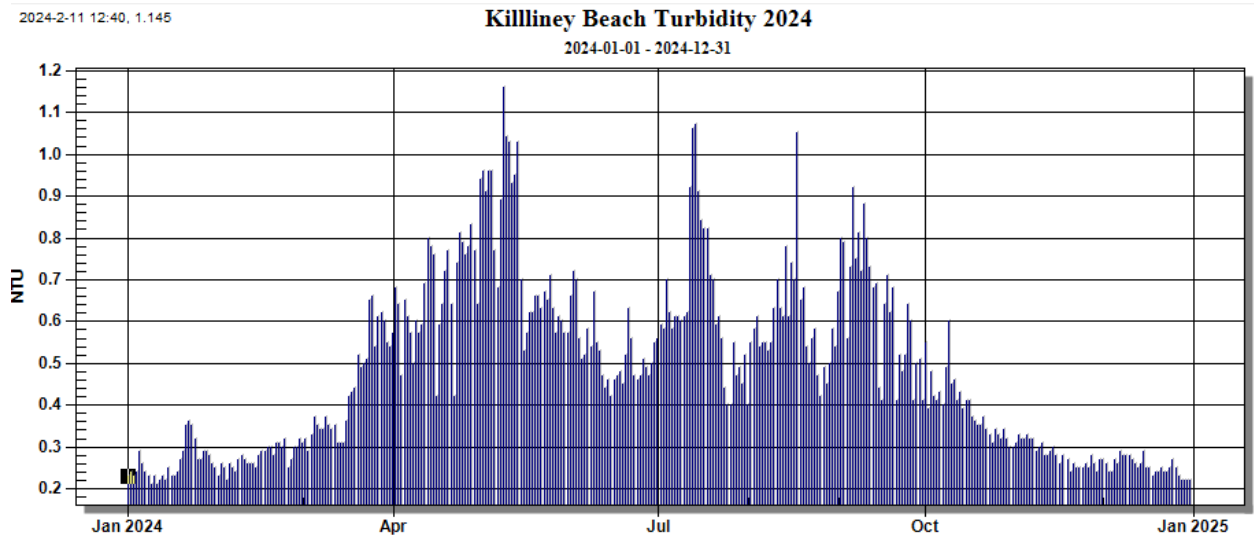


Figure 3 - Westshore Estates turbidity

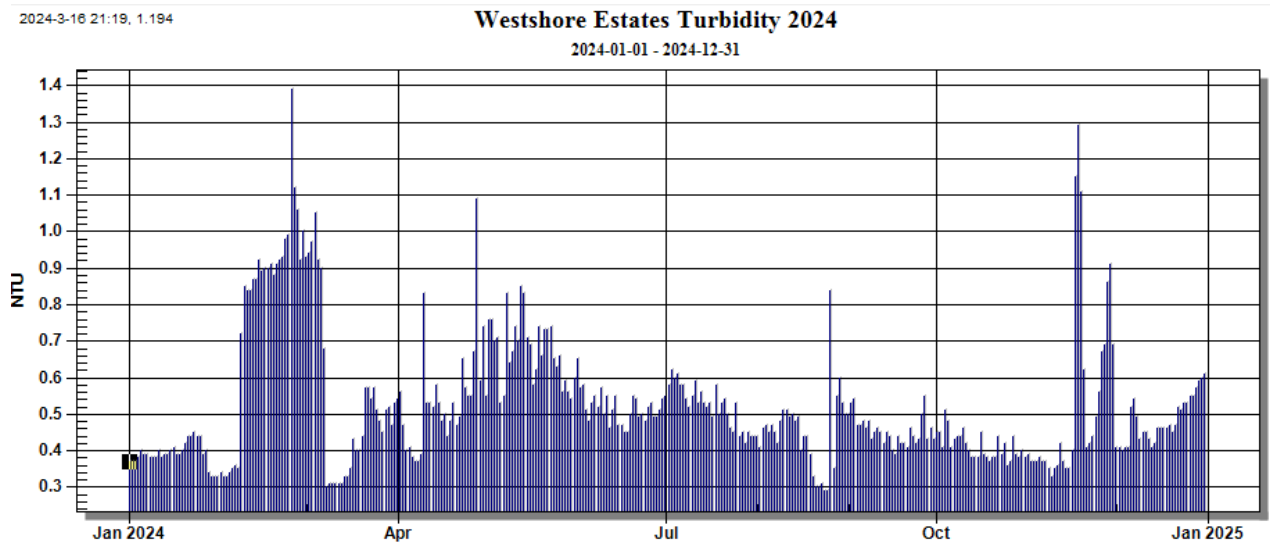


Figure 4 – Sunset Ranch turbidity

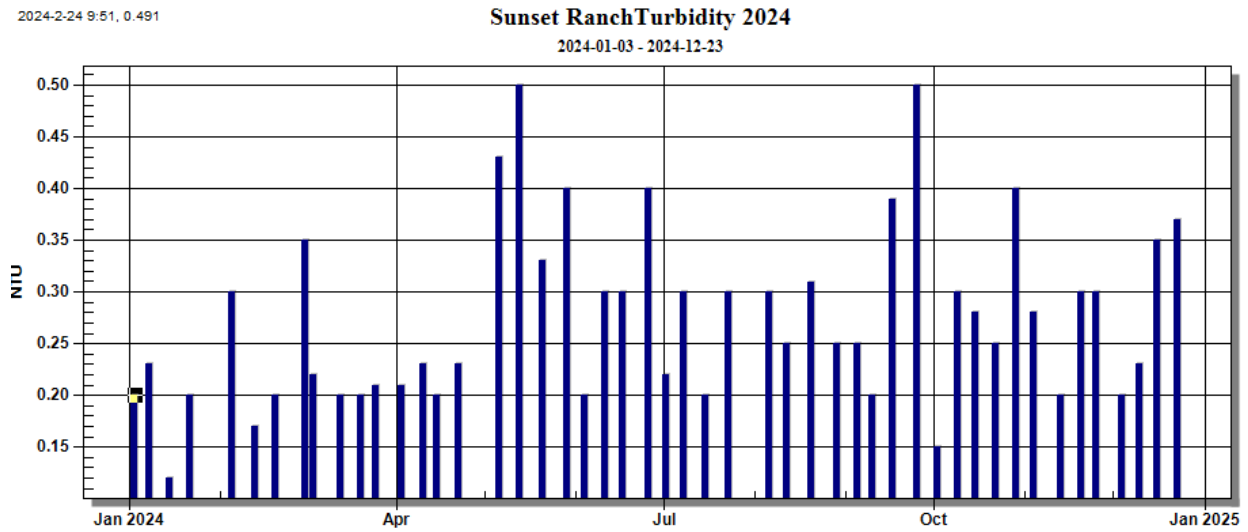


Table 4 – Average monthly turbidity data for Killiney Beach and Westshore Estates – 2024

Month	Killiney Beach (ntu range)	Westshore Estates (ntu range)
January 2024	0.21-0.36	0.33-0.45
February 2024	0.22-0.32	0.33-1.39
March 2024	0.29-0.66	0.30-1.05
April 2024	0.42-0.83	0.37-1.09
May 2024	0.53-1.16	0.53-0.85
June 2024	0.42-0.72	0.45-0.65
July 2024	0.40-1.07	0.42-0.62
August 2024	0.40-1.05	0.29-0.84
September 2024	0.41-0.92	0.39-0.55
October 2024	0.30-0.6	0.36-0.51
November 2024	0.24-0.33	0.33-1.29
December 2024	0.22-0.29	0.40-0.61
Total days >1.0	7	8
Total days >5.0	0	0

In 2024 Killiney Beach documented 7 days over 1.0 ntu (daily average) while Westshore Estates recorded 8, with neither logging any days over 5.0 ntu. Sunset Ranch is a groundwater well and does not have an on-line turbidity meter with all weekly grab sample turbidity results below 1.0 ntu.

Disinfection By-Product Results (THM and HAA)

Disinfection by-product samples are tested twice a year where “worst case” organic loading and chlorine residual is considered high. Samples are analyzed for Trihalomethanes (THM) and Haloacetic Acids (HAA). All Disinfection by-product data can be found in **Appendix 2** and includes the date and location of the analysis.

Table 5 indicates the sample results for total THM and HAA (HAA testing was not done at Sunset Ranch). All results were under the Maximum Acceptable Concentration (MAC) for THM and HAA under the **Canadian Drinking Water Guidelines (CDWG) of 0.100 mg/L and 0.080 mg/L, respectively.**

Table 5 – Total THM and HAA for Killiney Beach, Sunset Ranch and Westshore Estates

Month	Killiney Beach		Sunset Ranch	Westshore Estates	
	THM (mg/L)	HAA (mg/L)	THM (mg/L)	THM (mg/L)	HAA (mg/L)
January 2024					
February 2024			0.026		
March 2024					
April 2024					
May 2024					
June 2024	0.060	0.0442		0.046	0.0361
July 2024					
August 2024					
September 2024	0.064	0.0352	0.007	0.037	0.0361
October 2024					
November 2024					
December 2024					
Average	0.062	0.0397	0.017	0.042	0.0361
CDWG MAC	0.100	0.080	0.100	0.100	0.080

Per- and Polyfluorinated Substances (PFAS)

PFAS are a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. PFAS do not break down easily and persist in the environment for long periods of time. Due to the widespread use and persistence in the environment, some PFAS are found in people, fish and wildlife all over the world. People can be exposed to PFAS through food, drinking water, air, house dust and everyday consumer products. Certain foams used to fight wildfires can contain PFAS and these chemicals can pollute ground and surface water in the areas in which they are used. PFAS monitoring of the source water at Killiney Beach Lakeside Pumphouse was initiated in 2022 after the White Rock Lake Wildfire in 2021. All samples taken in 2022 and 2023 had non-detectable PFAS in the PPM (parts per million) range. Sampling was put on hold in 2024 (at the request of Interior Health) while scientists continue to develop effective affordable methodologies with lower detection limits - nanograms per liter (ng/L) or parts per trillion (PPT).

The Canadian Guideline for Drinking Water Quality has developed an objective of 30 nanograms per liter for a sum of 25 specific PFAS measured in drinking water. The intent of this objective is to reduce exposure to PFAS through drinking water. The lower the levels of PFAS present in the drinking water, the lower the risk of potential health effects.

Summary

The RDCO is committed to protecting Public and Environmental Health through a comprehensive monitoring program that meets the **Canadian Drinking Water Quality Guidelines and the BC Drinking Water Protection Act**.

The RDCO works closely with Interior Health and our Drinking Water Officer to deliver a program that encompasses water quality monitoring, treatment monitoring, and distribution maintenance which enables us to deliver a safe potable water supply to consumers.

Appendix 1

RDCO Bylaws 1513, 1371, 1375, 1373

This bylaw is a 'consolidated' version and includes amendments as noted below. It is placed on the Internet for convenience only. It is not the official or legal version and should not be used in place of certified copies which can be obtained through the Corporate Services Department. Plans, pictures, other graphics or text in the legal version may be missing or altered in this electronic version.

CONSOLIDATED FOR CONVENIENCE TO INCLUDE
BYLAW NO. 1435, 2019, 1454, 2020, 1494, 2021 and 1517, 2023

REGIONAL DISTRICT OF CENTRAL OKANAGAN

BYLAW NO. 1371 – CONSOLIDATED

A bylaw to provide for the imposition of fees and charges against the owner or occupier of real property located within the service area boundary, or connected to the Regional District of Central Okanagan Killiney Beach Water System.

WHEREAS the Regional District of Central Okanagan is authorized by separate bylaws to provide for the regulation, operation, maintenance, and improvements of various water systems located within the Regional District of Central Okanagan;

NOW THEREFORE, THE REGIONAL BOARD OF THE REGIONAL DISTRICT OF CENTRAL OKANAGAN, IN OPEN MEETING ASSEMBLED, ENACTS AS FOLLOWS:

1. Every Owner of property and/or premises situated within the service boundary of the Regional District of Central Okanagan Killiney Beach Water System Service Area shall pay to the Regional District the fees and charges established in accordance with this Bylaw, as prescribed in Section 2 of this bylaw.
 - a. User fees shall apply to all parcels connected to the water system where the water service is turned on.
 - b. An Owner may apply to the Regional District Officer for a one-time full or partial exemption of the consumption based user fees in the event of an emergency or unexpected usage due to failure of a portion of private service works or similar occurrence.
 - c. Asset renewal fees shall apply to all parcels, vacant or otherwise, and shall commence immediately upon registration of a property in the Land Title Office.

2. Killiney Beach Water System Annual Fees and Charges Table:

Service Area	Fee Type	Quarterly Fees					
		Jan, 2023	Jan, 2024	Jan, 2025	Jan, 2026	Jan, 2027	
Killiney Beach	User Fee - Basic	\$162.00	\$173.00	\$180.00	\$185.00	\$189.00	
	User Fee - Consumption ¹ Per M ³	Rate for first 30 M ³	\$0.59	\$0.63	\$0.66	\$0.68	\$0.69
		Rate for next 60 M ³	\$0.83	\$0.88	\$0.92	\$0.95	\$0.97
		Rate for next 110 M ³	\$1.24	\$1.33	\$1.38	\$1.42	\$1.45
		Rate for remainder	\$2.36	\$2.53	\$2.63	\$2.70	\$2.76
Asset Renewal Fee	\$184.00	\$195.00	\$207.00	\$219.00	\$232.00		

¹ Rates and thresholds based on consumption per quarter

2.1 For the 3rd Quarter of 2021 only, the fees will be charged as outlined in the table below:

Service Area	Fee Type	Quarterly Fees	
		2021 Q3	
Killiney Beach	User Fee - Basic	\$44.67	
	User Fee - Consumption ¹	Rate for first 30 M ³	\$0.17 / M ³
		Rate for next 60 M ³	\$0.23 / M ³
		Rate for next 110 M ³	\$0.35 / M ³
		Rate for remainder	\$0.67 / M ³
Asset Renewal Fee	\$171.00		

¹ Rates and thresholds based on consumption per quarter

All fees and charges outlined in Section 2 will resume in the 4th Quarter of 2021.

3. In the case of a connection being made during any year the charge imposed shall be pro-rated based upon the number of days connected to the water system.
4. Fees will be billed quarterly or other established interval and all fees shall be due and payable 30 days after the billing date.
5. A late payment penalty of four percent (4%) will be assessed each quarter (compounded quarterly 16.99% per annum) on all outstanding balances accrued under this Bylaw or its predecessors and not paid by the due date.

5.1 In consideration of the COVID-19 Pandemic in 2020, outstanding balances not paid by the due date shall not be assessed the late payment penalty for the 2nd, 3rd and 4th Quarters. The penalty charges will resume in 2021.

5.2 In consideration of the evacuation order related to the White Rock Lake Wildfire in 2021, outstanding balances not paid by the due date shall not be assessed the late

payment penalty for the 2nd Quarter of 2021. The late payment penalty charges will resume in the 3rd Quarter of 2021.

6. The costs, rates, charges, fees and/or penalties required to be paid by this Bylaw shall form a charge against the parcel serviced, and if such costs, rates, charges, fees and/or penalties are unpaid on December 31st of the year in which they become payable, they shall be entered by the Regional District's Collector in the Collector's Roll next prepared, and transferred to the tax roll in the next succeeding year as arrears of taxes against the parcel from which they arose, and such amount may be recovered with interest at such rate as may be authorized from time to time by the Local Government Act, in like manner as municipal taxes. Payments must be received by December 15th to ensure adequate processing time at year end.
7. This Bylaw may be cited for all purposes as the "Regional District of Central Okanagan Killiney Beach Water System Fees & Charges Bylaw No. 1371, 2015".
8. This Bylaw comes into effect on January 1, 2016.

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CONSOLIDATED FOR CONVENIENCE TO INCLUDE
BYLAW NO. 1437, 2019, 1456, 2020 and 1519, 2023

REGIONAL DISTRICT OF CENTRAL OKANAGAN

BYLAW NO. 1373 – CONSOLIDATED

A bylaw to provide for the imposition of fees and charges against the owner or occupier of real property located within the service area boundary, or connected to the Regional District of Central Okanagan Sunset Ranch Water System.

WHEREAS the Regional District of Central Okanagan is authorized by separate bylaws to provide for the regulation, operation, maintenance, and improvements of various water systems located within the Regional District of Central Okanagan;

NOW THEREFORE, THE REGIONAL BOARD OF THE REGIONAL DISTRICT OF CENTRAL OKANAGAN, IN OPEN MEETING ASSEMBLED, ENACTS AS FOLLOWS:

1. Every Owner of property and/or premises situated within the service boundary of the Regional District of Central Okanagan Sunset Ranch Water System Service Area shall pay to the Regional District the fees and charges established in accordance with this Bylaw, as prescribed in Section 2 of this bylaw.
 - a. User fees shall apply to all parcels connected to the water system where the water service is turned on.
 - b. An Owner may apply to the Regional District Officer for a one-time full or partial exemption of the consumption based user fees in the event of an emergency or unexpected usage due to failure of a portion of private service works or similar occurrence.
 - c. Asset renewal fees shall apply to all parcels, vacant or otherwise, and shall commence immediately upon registration of a property in the Land Title Office.

Bylaw 1519

2. Sunset Ranch Water System Annual Fees and Charges Table:

Service Area	Fee Type	Quarterly Fees					
		Jan, 2023	Jan, 2024	Jan, 2025	Jan, 2026	Jan, 2027	
Sunset Ranch	User Fee - Basic	\$110.00	\$116.00	\$121.00	\$125.00	\$128.00	
	User Fee - Consumption ¹ Per M ³	Rate for first 30 M ³	\$0.27	\$0.29	\$0.30	\$0.31	\$0.31
		Rate for next 60 M ³	\$0.38	\$0.40	\$0.42	\$0.43	\$0.44
		Rate for next 110 M ³	\$0.60	\$0.63	\$0.65	\$0.67	\$0.69
		Rate for remainder	\$2.18	\$2.29	\$2.38	\$2.45	\$2.50
	User Fee - Consumption - Club House ¹ Per M ³	\$0.38	\$0.40	\$0.42	\$0.43	\$0.44	
	Asset Renewal Fee	\$61.00	\$65.00	\$69.00	\$73.00	\$77.00	
Investment Fee - (> 0.25 ha)	\$450.00	\$450.00	\$450.00	\$450.00	\$450.00		

¹ Rates and thresholds based on consumption per quarter

3. In the case of a connection being made during any year the charge imposed shall be pro-rated based upon the number of days connected to the water system.
4. Fees will be billed quarterly or other established interval and all fees shall be due and payable 30 days after the billing date.
5. A late payment penalty of four percent (4%) will be assessed each quarter (compounded quarterly 16.99% per annum) on all outstanding balances accrued under this Bylaw or its predecessors and not paid by the due date.

Bylaw 1456

5.1 In consideration of the COVID-19 Pandemic in 2020, outstanding balances not paid by the due date shall not be assessed the late payment penalty for the 2nd, 3rd and 4th Quarters. The penalty charges will resume in 2021.

6. The costs, rates, charges, fees and/or penalties required to be paid by this Bylaw shall form a charge against the parcel serviced, and if such costs, rates, charges, fees and/or penalties are unpaid on December 31st of the year in which they become payable, they shall be entered by the Regional District's Collector in the Collector's Roll next prepared, and transferred to the tax roll in the next succeeding year as arrears of taxes against the parcel from which they arose, and such amount may be recovered with interest at such rate as may be authorized from time to time by the Local Government Act, in like manner as municipal taxes. Payments must be received by December 15th to ensure adequate processing time at year end.
7. This Bylaw may be cited for all purposes as the "Regional District of Central Okanagan Sunset Ranch Water System Fees & Charges Bylaw No. 1373, 2015".
8. This Bylaw comes into effect on January 1, 2016.

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CONSOLIDATED FOR CONVENIENCE TO INCLUDE
BYLAW NO. 1439, 2019, 1458, 2020, 1496, 2021 and 1521, 2023

REGIONAL DISTRICT OF CENTRAL OKANAGAN

BYLAW NO. 1375 – CONSOLIDATED

A bylaw to provide for the imposition of fees and charges against the owner or occupier of real property located within the service area boundary, or connected to the Regional District of Central Okanagan Westshore Estates Water System.

WHEREAS the Regional District of Central Okanagan is authorized by separate bylaws to provide for the regulation, operation, maintenance, and improvements of various water systems located within the Regional District of Central Okanagan;

NOW THEREFORE, THE REGIONAL BOARD OF THE REGIONAL DISTRICT OF CENTRAL OKANAGAN, IN OPEN MEETING ASSEMBLED, ENACTS AS FOLLOWS:

1. Every Owner of property and/or premises situated within the service boundary of the Regional District of Central Okanagan Westshore Estates Water System Service Area shall pay to the Regional District the fees and charges established in accordance with this Bylaw, as prescribed in Section 2 of this bylaw.
 - a. User fees shall apply to all parcels connected to the water system where the water service is turned on.
 - b. An Owner may apply to the Regional District Officer for a one-time full or partial exemption of the consumption based user fees in the event of an emergency or unexpected usage due to failure of a portion of private service works or similar occurrence.
 - c. Asset renewal fees shall apply to all parcels, vacant or otherwise, and shall commence immediately upon registration of a property in the Land Title Office.

Bylaw 1521

2. Westshore Estates Water System Annual Fees and Charges Table:

3. Service Area		Fee Type	Quarterly Fees				
			Jan, 2023	Jan, 2024	Jan, 2025	Jan, 2026	Jan, 2027
Westshore	User Fee - Basic		\$162.00	\$173.00	\$180.00	\$185.00	\$189.00
	User Fee - Consumption ¹ Per M ³	Rate for first 30 M ³	\$0.53	\$0.57	\$0.59	\$0.61	\$0.62
		Rate for next 60 M ³	\$0.74	\$0.79	\$0.83	\$0.85	\$0.87
		Rate for next 110 M ³	\$1.11	\$1.19	\$1.24	\$1.28	\$1.30
		Rate for remainder	\$2.12	\$2.27	\$2.36	\$2.43	\$2.48
Asset Renewal Fee		\$195.00	\$207.00	\$219.00	\$232.00	\$246.00	

¹ Rates and thresholds based on consumption per quarter

Bylaw 1496

2.1 For the 3rd Quarter of 2021 only, the fees will be charged as outlined in the table below:

Service Area	Fee Type	Quarterly Fees	
		2021 Q3	
Westshore	User Fee - Basic		\$50.00
	User Fee - Consumption ¹	Rate for first 30 M ³	\$0.17 / M ³
		Rate for next 60 M ³	\$0.23 / M ³
		Rate for next 110 M ³	\$0.35 / M ³
		Rate for remainder	\$0.67 / M ³
Asset Renewal Fee		\$180.00	

¹ Rates and thresholds based on consumption per quarter

All fees and charges outlined in Section 2 will resume in the 4th Quarter of 2021.

4. In the case of a connection being made during any year the charge imposed shall be pro-rated based upon the number of days connected to the water system.
5. Fees will be billed quarterly or other established interval and all fees shall be due and payable 30 days after the billing date.
6. A late payment penalty of four percent (4%) will be assessed each quarter (compounded quarterly 16.99% per annum) on all outstanding balances accrued under this Bylaw or its predecessors and not paid by the due date.

Bylaw 1458

5.1 In consideration of the COVID-19 Pandemic in 2020, outstanding balances not paid by the due date shall not be assessed the late payment penalty for the 2nd, 3rd and 4th Quarters. The penalty charges will resume in 2021.

Bylaw 1496

5.2 In consideration of the evacuation order related to the White Rock Lake Wildfire in 2021, outstanding balances not paid by the due date shall not be assessed the late payment penalty for the 2nd Quarter of 2021. The late payment penalty charges will resume in the 3rd Quarter of 2021.

7. The costs, rates, charges, fees and/or penalties required to be paid by this Bylaw shall form a charge against the parcel serviced, and if such costs, rates, charges, fees and/or penalties are unpaid on December 31st of the year in which they become payable, they shall be entered by the Regional District's Collector in the Collector's Roll next prepared, and transferred to the tax roll in the next succeeding year as arrears of taxes against the parcel from which they arose, and such amount may be recovered with interest at such rate as may be authorized from time to time by the Local Government Act, in like manner as municipal taxes. Payments must be received by December 15th to ensure adequate processing time at year end.
 8. This Bylaw may be cited for all purposes as the "Regional District of Central Okanagan Westshore Estates Water System Fees & Charges Bylaw No. 1375, 2015".
 9. This Bylaw comes into effect on January 1, 2016.
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REGIONAL DISTRICT OF CENTRAL OKANAGAN

BYLAW NO. 1513

A bylaw providing for regulating and managing the Water systems of the Regional District of Central Okanagan located within Electoral Areas East and West.

WHEREAS the Regional District of Central Okanagan is authorized by separate bylaws to provide for the operation, maintenance, and improvements of various water systems located within the Regional District of Central Okanagan;

AND WHEREAS it is deemed necessary and expedient to establish and standardize regulations for the management of the said water systems and the terms and conditions upon which water services may be provided;

NOW THEREFORE, THE REGIONAL BOARD OF THE REGIONAL DISTRICT OF CENTRAL OKANAGAN, IN OPEN MEETING ASSEMBLED, ENACTS AS FOLLOWS:

1 PURPOSE

- 1.1 The purpose of this Bylaw is to establish regulations under which water will be provided to any parcel located within a Regional District of Central Okanagan water system service area.

2 APPLICATION

- 2.1 This Bylaw shall apply to the Owner or occupier of all parcels located within a Regional District water system service area or the Owner or occupier of all parcels connected to a Regional District water system.

3 SEVERABILITY

- 3.1 If any section, subsection, sentence, clause, or phrase of this Bylaw is deemed to be invalid by the decision of any court of competent jurisdiction, the invalid portion shall be severed and the decision that it is invalid shall not affect the validity of the remainder of the bylaw.

4 DEFINITIONS

In this Bylaw, unless the context requires otherwise:

“**asset renewal fee**” means a fee imposed to assist with the partial replacement of water system works as part of infrastructure management and may be imposed regardless of whether or not a property or a premises is connected to a water system.

“**backflow**” means the flow of water or other substances back into any plumbing system connected to the works.

“**connection fee**” means a fee for applying to connect to a water system.

“**contaminant**” means any substance or matter in water which may render the water unfit for drinking according to guidelines and regulations of the Province of British Columbia.

“**cross connection**” means any connection whereby the water system is connected, directly or indirectly, to any device or source which may result in backflow or contaminants entering into any plumbing connected to the water system including bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or any other temporary, or permanent connecting arrangements.

“**disconnect**” or “**disconnection**” means the complete removal of a water service connection.

“**Owner**” shall be interpreted as defined in the Local Government Act as amended from time to time.

“**parcel**” means any lot, block, or other area in which land is held or into which land is subdivided but does not include a highway.

“**penalty**” or “**penalties**” means applicable fines or actions where a person contravenes the provisions of this bylaw. Every day during which there is an infraction of this Bylaw shall constitute a separate offence.

“**premises**” means any residence, building, or structure located on a property.

“**private service works**” means pipes, fittings, fixtures and other appurtenances on private property, not installed or owned by the Regional District, and is used to convey water from the water system on the property or premises.

“**property**” means any parcel contained within the boundaries of a Regional District water system service area.

“**Regional Board**” means the Board of the Regional District of Central Okanagan.

“**Regional District**” means the Regional District of Central Okanagan.

“**Regional District Officer**” means the Regional District employee, or designate, assigned the duties of managing the engineering services department.

“**sprinkle**” or “**sprinkling**” means the application or distribution of domestic water on a property, premises, lawn, driveway, or boulevard by sprinkling or spraying and does not include drip irrigation operating at 172 kilopascal (25 pounds per square inch) or less and emitted directly to the root zone of the plant material.

“**turn on**” means the opening of the shut-off valve located in a standpipe at or near where the water service connection crosses the property line.

“**turn off**” means the closing of the shut-off valve located in a standpipe at or near where the water service connection crosses the property line.

“**user fee**” means a fee imposed for the distribution of water.

“**utility corridor**” means a parcel of land registered by the Regional District for the purpose of accessing the utility for operation and maintenance.

“**wasteful**” means no useful purpose as determined by the Regional District Officer.

“**works**” means all pipes, valves, hydrants, fittings, water meters, pumps, intakes, reservoirs and all appurtenances.

“**water service connection**” means a pipe connected to a main water supply line and extending to a property line for the purpose of conveying water and includes pipes, shut-off valve and other appurtenances.

“**water meter**” means an apparatus or device used for measuring and reporting the volume of water passing through it.

“**water meter pit**” means a chamber constructed underground, which is used to install a water meter or approved backflow preventer.

“**water system**” means any water supply, distribution system and works that the Regional District is authorized by bylaw or by Ownership or by agreement, to operate, maintain and improve.

Unless otherwise defined herein, all words or expressions used in this Bylaw shall have the same meaning assigned to them as like words or expressions contained in the *Local Government Act*, the *Interpretation Act*, the BC Building Code and Regional District Bylaws.

5 COMPLIANCE WITH BYLAW

- 5.1 No person shall connect to or interfere in any way with the water system except in accordance with the provisions of this Bylaw.
- 5.2 Should any person contravene the provisions of this Bylaw, and such contravention causes or may cause damage to the water system, the Regional District may make any repairs and take whatever remedial action necessary to limit the extent of the damage, and the cost to the Regional District of so doing may be recovered by the Regional District as if the same were a debt due the Regional District. The amount of such cost, when certified by the Regional District Officer, if not before paid, shall be entered by the Regional District's Collector in the Collector's Roll next prepared after the receipt of the certificate and such amount may be recovered with interest at such rate as may be authorized from time to time by the Local Government Act, in like manner as municipal taxes.

6 OWNER'S LIABILITY

- 6.1 The Owner shall be liable for any contravention of this Bylaw arising on the parcel to which the water service connection is provided, whether the contravention is actually committed by the Owner or by a third party renting, leasing, or having access to the property.

7 OWNER'S RESPONSIBILITIES

7.1 Every Owner shall:

- a) Ensure that the terms and conditions of this Bylaw are not contravened on their property;
- b) Install, maintain, repair or replace as necessary all defective private service works which are leaking or are otherwise not in good repair such that they are a cause of waste of water, at their sole cost;
- c) Give immediate notice to the Regional District of any failure or problem with the water system of which the Owner becomes aware;
- d) Protect all private service works and the water meter from freezing, heat or other severe conditions;
- e) Close the private service works main water supply valve when the premises are vacant; and
- f) Pay all costs, rates, charges, fees, and penalties that may be imposed pursuant to this Bylaw.

7.2 Consumers using water for processes which require a guaranteed supply and pressure, or a critical standard of purity shall, at their expense, provide such equipment as necessary to provide the required standards and to protect such equipment from damage due to variations in or cessation of the Regional District water supply.

7.3 Where the water service connection on a premises is identified by the inspector as having a high risk of backflow, the Owner shall install, at his or her own expense, air gaps or backflow prevention devices which conform with CSA B64.10 "Selection and Installation of Backflow Preventers" and in the opinion of the Regional District Officer, are sufficient to prevent backflow from the premises and from any fixtures on the premises.

7.4 The Owner and occupant must ensure that:

- a) Air gaps and backflow prevention devices are installed in compliance with the BC Building Code and maintained in good operating condition at all times;
- b) The backflow prevention device is tested before the anniversary of the date it has been installed, cleaned, repaired, relocated or tested previously;
- c) The test required by clause b) is conducted by an individual currently certified in the Province of British Columbia to competently conduct tests of backflow prevention devices; and
- d) The results of the test required by clause b) are received by the Regional District within 30 days after the test has been conducted and if the results are not received by the Regional District, the Regional District may conduct or coordinate the test at the expense of the Owner.

7.5 Where the Regional District Officer determines that a cross connection or backflow prohibited by this Bylaw is an immediate risk to the water system or any person, or if an Owner fails to correct any cross connection or backflow as required by this Bylaw, the Regional District may order and undertake, at the expense of the Owner, the turning off or disconnection of the water system to the property without notice until such time as the cross connection or backflow is corrected.

8 INTERFERENCE WITH THE WATER SYSTEM

- 8.1 No person other than the Regional District Officer or a contractor authorized by the Regional District shall:
- a) enter into or work upon the water system;
 - b) connect or disconnect a water service connection, line, pipe, or other appurtenance to the water system;
 - c) uncover, cover, damage, injure, tamper with, alter, modify, maintain, operate or interfere with the water system;
 - d) obstruct or impede or impair free, clear and easy access to any hydrant, standpipe, valve or other fixture or appurtenance forming part of the water system; or
 - e) block the access of a utility corridor or by any means change or obstruct the utility corridor.

9 WATER SERVICE CONNECTIONS

- 9.1 Where an Owner applies to connect to a Regional District water system and the water service connection must be installed in order to service the property the Owner shall be responsible for all capital costs pertaining to the installation of the water service connection as set out in Schedule "A".
- 9.2 Additional water service connections and their locations must be approved by the Regional District Officer.
- 9.3 Each parcel shall be limited to one water service connection to the property line except:
- a) each residential unit on a property zoned for multiple dwellings or dwelling units shall each have a separate water service connection.
 - b) where limitations in site servicing, development restrictions, future subdivision, or proposed stratification exist, the Owner may make application for additional water service connections.
- 9.4 The Regional District reserves the right to refuse to install water service connections under frost conditions.
- 9.5 Connections to the water system must be made through a pressure reducing valve, which is to be located within the premises, and connected directly to the water system. The pressure reducing valve is to be installed prior to the residential water distribution works and after the water meter, and is to be installed and maintained by the Owner.
- 9.6 If the Regional District deems that a premises is connected to the water system and has unauthorised works the Owner may be liable to penalty for breaching this Bylaw as set out in Schedule "A", the water service may be shut off or disconnected, or a water meter pit and pit water meter may be installed at the expense of the Owner.

10 WATER SYSTEM EXTENSIONS

- 10.1 Where an Owner applies to connect to a Regional District water system and the water system must be extended to service the property, the Owner shall be responsible for all costs pertaining to the extension of the water system as set out in Schedule "A", including all required security deposits.
- 10.2 The Regional District reserves the right to refuse to install water system extensions under frost conditions.

11 APPROVAL TO CONNECT

- 11.1 Any Owner of real property or their authorized agent wishing to connect any building or structure to a Regional District water system shall make a building permit application for a water service connection to the Regional District and pay the applicable fees and charges set out in Schedule "A" of this Bylaw for that connection.
- 11.2 Applications for turning on the supply of water from the water system shall be made in writing to the Regional District and shall be accompanied by the fee set out in Schedule "A" of this Bylaw.
- 11.3 All applications for connection shall state the use of the premises for which the water system is to be connected, the number of dwelling units, the legal description and location of the property or premises to which the connection is to be made, and any other information that may be necessary to accurately assess the fees and charges applicable to the connection.
- 11.4 Fees and charges are payable when the building permit application is made.
- 11.5 Approval for connection to the water system shall not be granted until the Owner or his agent:
- a) Submits an application for a building permit;
 - b) Pays all applicable fees and charges;
 - c) Complies with the provisions of this bylaw, and any other applicable Regional District Bylaws; and
 - d) Complies with the BC Building Code.
- 11.6 The Regional District may inspect any works undertaken to determine compliance with a building permit, this and any other Regional District bylaw, and the BC Building Code, and may accept or reject the work for the purposes of Section 11.3 of this Bylaw.
- 11.7 Any person who applies to the Regional District to turn on the supply of water from the water system for any new building shall provide confirmation that the private service works were satisfactorily tested, inspected and approved by the Regional District, including satisfactorily inspected for connections and cross connections.
- 11.8 Where a security deposit is required by Schedule "A" prior to the completion of any works, the applicant will be reimbursed any remaining balance of the security deposit upon completion of the works. If the security deposit is insufficient to cover the costs of the works, then the remaining amount shall be added to the Owner's first invoice, and if unpaid shall be recoverable in accordance with Section 14.6 of this Bylaw.

12 TURN OFF OR DISCONNECTION

- 12.1 Applications for turning off or disconnecting the supply of water from the water service connection shall be made in writing to the Regional District and shall be accompanied by the fee set out in Schedule "A" of this Bylaw.
- 12.2 The Regional District may turn off the water service connection to any property or premises for any of the following reasons:
- a) maintaining, repairing, renovating, replacing, disinfecting or otherwise operating the water system;
 - b) excessive use of water, as determined by the Regional District Officer, that may put the water system at risk, including but not limited to exceeding water licence restrictions or consumption restrictions;
 - c) wasteful use of water;
 - d) violation of any water use regulations or provisions of this Bylaw;
 - e) non-payment of costs, rates, charges, fees, and/or penalties under this Bylaw;
 - f) failure to repair or replace defective pipes, fittings, valves, tanks or appliances which are leaking or are otherwise not in a good state of repair and which are or may become a cause of waste of water; or
 - g) where an emergency threatens the safety of the water system or the public.
- 12.3 The Regional District may disconnect the water service connection to any property or premises for any of the following reasons:
- a) approval of a request to discontinue water service to a property;
 - b) violation of a provision of this Bylaw; or
 - c) where the property or premises are deemed to be inaccessible and such inaccessibility is not remedied within 90 days of giving notice to the Owner that the property or premises is inaccessible.
- 12.4 An Owner whose water service has been turned off or disconnected for non-compliance with this Bylaw will be subject to a water service turn off fee or disconnection fee and a further service charge to restore the connection in accordance with Schedule "A".
- 12.5 The Regional District shall not be liable for any damages that may result from the turn off or disconnection of the water service connection or the restriction of water use pursuant to this section.
- 12.6 Where the water service connection is to be turned off:
- a) for non-payment of costs, rates, charges, fees, and/or penalties under this Bylaw, the District will give 30 days' advance notice to the Owner;
 - b) for maintenance, repair, renovation, replacement, disinfection or other operation of the water system, the Regional District will give 2 working days' advance notice for scheduled work;
 - c) for any other reason, the Regional District will give 7 days' advance notice to the Owner;
 - d) except that no advance notice will be given in the case of an emergency, and no notice will be given in any event or where safety of life or property is at risk.

- 12.7 Where the water supply is to be turned off or disconnected for reason of non-compliance with any provision of this Bylaw, except the non-payment of costs, rates, charges, fees or penalties, the Regional District will give the person affected the opportunity to make representations to the Regional Board in respect of such non-compliance.
- 12.8 Notice under Section 12.6 of this Bylaw may be given by one or more of the following:
- a) posting notice on the property or premises;
 - b) providing notice on an invoice for water;
 - c) mailing notice to the address of the property or premises.
- 12.9 The Regional District is not responsible for any notice failing to reach an Owner or other consumer of water prior to the turn off or disconnection of water.

13 WATER METERS

- 13.1 All water service connections shall include a water meter.
- 13.2 Only one water meter shall be installed for all of the land shown on a strata plan that receives the supply of water from the water system from the same water service connection, except land shown on a bare land strata plan.
- 13.3 An Owner will be charged for the water meter when a building permit application is received for a connection to a water system. All water meters will be supplied by the Regional District and shall remain the property of the Regional District.
- a) Pit water meters are mandatory for all water service connections, unless otherwise approved by the Regional District Officer.
 - b) No drain valve, water bypass, branch line or any other type of fixture through which water may be taken shall be located upstream of a water meter, unless otherwise necessary for the operation of the water system, and approved by the Regional District Officer.
 - c) Pit water meters will be installed in a water meter pit at the water service connection by the Regional District or its contractor. The water meter pit will also be installed by the Regional District or its contractor and remain the property of the Regional District
 - d) No person shall tamper with any water meter so as to alter the amount of water registered thereby.
 - e) If the Regional District deems that a premises is unmetered or is inaccessible to install a water meter, repair a water meter, or to obtain a meter read due to gates, unrestrained dogs or any other reason, the Owner may be liable to penalty for breaching this Bylaw as set out in Schedule "A", the water service may be shut off or disconnected, or a water meter pit and pit water meter may be installed at the expense of the Owner.
 - f) The Regional District shall maintain and repair all water meters when rendered unserviceable through reasonable wear and tear; however if any water meter is damaged, broken, lost or removed from the property, the Owner shall be liable for the cost of a replacement water meter, in an amount set out in Schedule "A" of this Bylaw.
- 13.4 If any water meter stops, sticks or fails to indicate correctly the quantity of water which is passing or which has passed through it, the Regional District shall be entitled to charge for such water according to the average consumption of the 12 months immediately preceding the date upon which such meter was last found to be in good order.

- 13.5 Water service connections may have an in-home water meter installed, if approved by the Regional District Officer. In-home water meters will be installed in accordance with standard drawing M-1 as found in Schedule "C".
- a) An existing water service connection with an in-home water meter may require installation of a water meter pit and pit water meter at the expense of the Owner at time of building permit or at the discretion of the Regional District Officer.

14 FEES & CHARGES

- 14.1 Every Owner of property and/or premises situated within the service boundary of a Regional District Water Service Area shall pay to the Regional District the fees and charges established in accordance with this Bylaw, as prescribed in Schedule "A".
- 14.2 Every Owner of property and/or premises situated within the service boundary of a Regional District Water Service Area shall pay to the Regional District User fees and Charges established by separate bylaw for the applicable service area.
- a) User fees shall apply to all parcels connected to the water system where the water service is turned on and will continue to apply until the parcel is disconnected from the water system or the Regional District Officer approves termination of applicable User fees.
- b) An Owner may apply to the Regional District Officer for a one-time full or partial exemption of the consumption based user fees in the event of an emergency or unexpected usage due to failure of a portion of private service works or similar occurrence.
- 14.3 Every Owner of property and/or premises situated within the service boundary of a Regional District Water Service Area shall pay to the Regional District the Asset renewal fees and Charges established by separate bylaw for the applicable service area.
- a) Asset renewal fees shall apply to all parcels, vacant or otherwise, and shall commence immediately upon registration of a property in the Land Title Office.
- 14.4 Fees will be billed quarterly or other established interval and all fees shall be due and payable 30 days after the billing date.
- 14.5 A late payment penalty of four percent (4%) will be assessed each quarter (compounded quarterly 16.99% per annum) on all outstanding balances accrued under this Bylaw or its predecessors and not paid by the due date.
- 14.6 The costs, rates, charges, fees and/or penalties required to be paid by this Bylaw shall form a charge against the parcel serviced, and if such costs, rates, charges, fees and/or penalties are unpaid on December 31st of the year in which they become payable, they shall be entered by the Regional District's Collector in the Collector's Roll next prepared, and transferred to the tax roll in the next succeeding year as arrears of taxes against the parcel from which they arose, and such amount may be recovered with interest at such rate as may be authorized from time to time by the Local Government Act, in like manner as municipal taxes. Payments must be received by December 15th to ensure adequate processing time at year end.

- 14.7 Any connection fees, fees for additional connections or extensions, and water meter fees must be paid 10 days prior to installation or connection to the water system.
- 14.8 The water meter fees set out in Schedule "A" include the water meter and water meter setting fittings, all of which will be supplied and owned by the Regional District.
- 14.9 The pit water meter charge in Schedule "A" also includes installation of the meter in an Owner supplied and installed water meter pit.

15 PROHIBITIONS

- 15.1 Pumps, boosters, or other devices that have the effect of increasing water pressure in the water service connection to a pressure that is higher than the normal water pressure in the water service connection are prohibited without a backflow prevention device.
- 15.2 No person shall sell any water obtained from the water system, allow any water to be used on a parcel other than the parcel for which the water service connection has been provided, or permit any water to be taken from the parcel for which the water service connection has been provided.
- 15.3 No person will introduce, or allow to be introduced, any contaminants or pollutants into a Regional District water system.
- 15.4 No person shall connect, cause to be connected, or allow to remain connected any piping fixture, fitting, container, appliance, or cross connection that could cause or allow drinking water quality, the water system, or a private service to become contaminated, degraded or polluted in any way.
- 15.5 No person shall connect, or cause to be connected, and the Owner or occupant of the premises must not permit to be connected, a pipe, fixture, fitting, container or appliance in a manner which, under any circumstances, permits or facilitates backflow into the Regional District's water system.
- 15.6 No person shall demolish, move, remove or substantially alter any building connected to the water system, without first applying to the Regional District to turn off or disconnect the water service connection to that property and paying the applicable fee set out in Schedule "A".

16 OUTDOOR WATER USE RESTRICTIONS

- 16.1 The Regional District may, at its discretion, and whenever the public interest so requires, suspend or limit the consumption of water from the water systems, or regulate the hours or days of use, or may further prescribe the manner in which such water may be used.
- 16.2 The following sprinkling hours apply at all times, subject to sprinkling restrictions:
- a) Properties equipped with an automated time clock sprinkler system may only sprinkle between the hours of 12:00 midnight to 6:00 a.m. on the days permitted by the sprinkling restrictions as identified below.
 - b) Properties equipped with only manually controlled sprinkling systems, including those

attached to outside taps, may only operate from 6:00 a.m. to 11:00 a.m. and from 6:00 p.m. to 12:00 midnight on the days permitted by the sprinkling regulations as identified below.

- c) A person using a watering can or hose with a spring-loaded nozzle may hand water any time of the day.

16.3 Sprinkling Restrictions – Sprinkling Days

Stage 1 Alternate Days Sprinkling:		
Effective		September 16th to June 15th, unless Notice of Stage 3 or 4 in Effect
Even numbered addresses:		Sprinkling is only permitted on Even Calendar Days
Odd numbered addresses:		Sprinkling is only permitted on Odd Calendar Days
Stage 2 Twice a Week Sprinkling:		
Effective		June 16th to September 15th, unless Notice of Stage 3 or 4 in Effect
Even numbered addresses:		Sprinkling is only permitted on Saturdays & Tuesdays
Odd numbered addresses:		Sprinkling is only permitted on Sundays & Wednesdays
Stage 3 Restriction Period - Once a Week Sprinkling:		
Effective		Upon Notice Issued by Regional District Officer
Even numbered addresses:		Sprinkling is only permitted on Saturdays
Odd numbered addresses:		Sprinkling is only permitted on Sundays
Stage 4 Restriction Period – No Sprinkling		
Effective		Upon Notice Issued by Regional District Officer

- a) During a Stage 3 sprinkling restriction period there shall be no outdoor water use for the following purposes:
 - i. to fill a swimming pool, hot tub, garden pond, or decorative fountain;
 - ii. wash a vehicle or boat with water; or
 - iii. wash driveways or sidewalks or patios.
- b) During a Stage 4 sprinkling restriction period there shall be no outdoor water use for any purpose.

16.4 The following operations or activities that rely on a steady supply and use of water are automatically exempt from any sprinkling restrictions:

- a) nurseries;
- b) farms;
- c) orchards;
- d) vineyards;
- e) washing exterior building surfaces, including windows, parking lots, driveways or sidewalks, prior to the application of a product such as paint, preservative, or stucco, or preparation of a surface prior to paving or repainting or bricklaying, or if required by law to comply with health and safety regulations.

- 16.5 The following sprinkling restriction exemptions apply; however, there are no exemptions during a Stage 4 Restriction Period:
- a) A person may water new trees and shrubs during installation and for the following 24 hours, but after that exemption period watering must comply with the sprinkling restrictions.
 - b) A person may sprinkle new sod during the sprinkling hours set out in Section 16.2 for a period of 21 days after installation, but after the exemption period must comply with the sprinkling restrictions.
 - c) A person may sprinkle newly seeded lawn during the sprinkling hours set out in Section 16.2 for a period of 49 days or until growth is established, whichever is less, but after the exemption period must comply with the sprinkling restrictions.
- 16.6 No person shall allow water to flow wastefully to parking lots, driveways, sidewalks, roadways or structures while sprinkling.

17 HYDRANT USE PERMIT

- 17.1 The Regional District may issue Hydrant Use Permits on terms and conditions outlined in this section and Schedule "B".
- 17.2 The Regional District may issue a Hydrant Use Permit for the purposes of:
- a) construction road compaction;
 - b) construction dust control;
 - c) construction water main testing;
 - d) utility line flushing;
 - e) wellpoint dewatering installation;
 - f) road sweeping; or
 - g) tanker truck filling.
- 17.3 The Regional District may refuse to issue a Hydrant Use Permit where such issuance may result in a risk to the water system, in the sole discretion of the Regional District Officer.
- 17.4 The Regional District, in issuing a Hydrant Use Permit, may impose terms and conditions regarding the use of the hydrant as follows:
- a) the location of the hydrant that may be used;
 - b) the type of hydrant that may be used;
 - c) the dates and time when the hydrant may be used;
 - d) the type of backflow prevention device required; and
 - e) precautions to be taken in connecting to and using the hydrant.
- 17.5 A backflow prevention device or an approved air gap must be installed prior to any connection to a hydrant pursuant to a Hydrant Use Permit. A current test report for backflow prevention devices (if applicable) must be available on request.
- 17.6 No person shall operate any hydrant or use water drawn from any hydrant pursuant to a Hydrant Use Permit, otherwise than in accordance with the terms and conditions of the Hydrant Use Permit.

- 17.7 At any time the Regional District may cancel or suspend a Hydrant Use Permit issued pursuant to this Bylaw:
- a) if the Regional District considers that the use of the hydrant may result in a risk to the water system; or
 - b) if the Hydrant Use Permit holder fails to comply with the provisions of this Bylaw or the terms and conditions of the Hydrant Use Permit.
- 17.8 Any damage to the hydrant or the water system as a result of hydrant use will be repaired at the applicant's expense.

18 OWNERSHIP OF WATER SYSTEM

- 18.1 All water pipes, connections, appurtenances, or facilities required to provide water to an Owner's property line shall be owned by the Regional District. This includes, but is not limited to, all works that are located within a highway or a statutory right of way, or lands owned by the utility regardless of whether they were constructed at the expense of the Owner or the Regional District.
- 18.2 All water meters, either pit or in-home water meters, located within an Owner's property or premises, shall be owned by the Regional District.

19 PRESSURE, SUPPLY, AND QUALITY

- 19.1 The Regional District does not guarantee a constant pressure, continuous supply of water or direction of water flow, and it reserves the right at any and all times, without notice, to change operating conditions for the purposes of making repairs, extensions, alterations or improvements or for any other reason.
- 19.2 The Regional District, its Board, officers, agents, or employees shall not incur any liability for damage or other loss caused by changes in water pressure, shutting off water or change in direction of flow or by reason of the water containing sediments, deposits or other foreign matter.

20 LIMITATION OF LIABILITY

- 20.1 Water is provided on the condition that the Owner makes no claim against the Regional District, its Board or Council, or its officers, agents, and employees acting within the scope of their employment. It is further a condition that the Owner shall make no claim for any indirect, incidental, or consequential damage. Nothing contained in the Bylaw shall be construed to impose any liability on the Regional District to provide water to any person or premises or to provide a continuous supply of water or water of any particular quantity or quality to any person or premises.
- 20.2 Any supply of water by the Regional District is subject to the following conditions, in addition to other conditions in this Bylaw:
- a) the Regional District is not responsible for the failure of the water supply as a result of any accident or damage to the water system;

- b) the Regional District is not responsible for any excessive water pressure or lack of water pressure;
- c) the Regional District is not responsible for any temporary stoppage of the water supply on account of alterations or repairs to the water system; whether such arises from the negligence of any person employed by the Regional District or another person, or through natural deterioration or obsolescence of the water system or otherwise.

21 INDEMNIFICATION

21.1 Water is provided on the condition that the Owner indemnify and save harmless the Regional District, its Board or Council, or its officers, agents, and employees in respect of all claims arising from the provision of the water.

22 RIGHT OF ENTRY

22.1 The Regional District Officer is authorized to enter upon any property or premises at any reasonable time for the purpose of inspecting the lands and improvements and all parts of the water system and private service works thereon, and for the purpose of testing, repairing, replacing, maintaining and of doing such work as necessary to ensure the proper functioning of the water system including without limitation all pipes, valves, meters and appurtenances situated on the parcel, and to ensure compliance with, or prevent violation of, the provisions of this Bylaw.

22.2 The Owner or occupant shall provide adequate, convenient, and unobstructed access, failing which the property or premises may be considered inaccessible.

23 ORDER TO COMPLY

23.1 The Regional District Officer may order an Owner or occupant who contravenes this Bylaw to comply with the Bylaw within a specified time.

23.2 Where an Owner does not comply with such an order within the specified time, the Regional District Officer may order the action contained in the order to be performed by Regional District employees, or others, and the cost to the Regional District of so doing may be recovered from the Owner by the Regional District as if the same were a debt due the Regional District. The amount of such cost, when certified by the Regional District Officer, if not before paid, shall be entered by the Regional District's Collector in the Collector's Roll next prepared after the receipt of the certificate and such amount may be recovered with interest at such rate as may be authorized from time to time by the Local Government Act, in like manner as municipal taxes.

24 VIOLATION

24.1 Any person who:

- a) violates the provisions of this Bylaw;
- b) causes or permits any act in contravention or violation of the provisions of this Bylaw;
- c) neglects or omits Bylaw requirements;
- d) fails to comply with bylaw orders, directions, or notices; or
- e) prevents, obstructs or attempts to prevent or obstruct the authorized entry of any

Regional District Officer authorized under this bylaw;

commits an offence against this Bylaw. Each day that a violation is permitted to continue shall constitute a new and distinct offence.

25 PENALTIES

25.1 Any person who violates any provision of this Bylaw may, on summary conviction, be liable to the maximum penalty under the Offence Act, plus the cost of prosecution, for each offence.

25.2 The penalties imposed under this section are a supplement and not a substitute for any other remedy to an infraction of this Bylaw.

26 CITATION

26.1 This Bylaw may be cited for all purposes as the "Regional District of Central Okanagan Water Systems Regulations Bylaw No. 1513, 2023".

27 ENACTMENT AND TRANSITIONAL


27.1 The "Regional District of Central Okanagan Water systems Fees and Regulations Bylaw No. 1370, 2015", as amended, is hereby repealed.

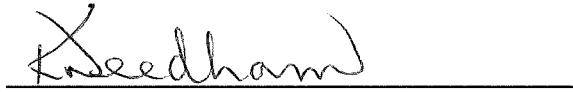
27.2 This Bylaw comes into effect on the date of adoption.

27.3 Any fees which became due and payable under the Regional District of Central Okanagan Water systems Fees and Regulations Bylaw No.1370, 2015, prior to its repeal, are recoverable under this Bylaw.

READ A FIRST, SECOND AND THIRD TIME THIS 12 DAY OF JANUARY 2023

ADOPTED THIS 12 DAY OF JANUARY 2023


CHAIRPERSON


CORPORATE OFFICER

SCHEDULE “A” FEES & CHARGES

1. Application Fees

- a) Connection fee (/residential unit).....\$200.00
- b) Water meter Fees (/meter):

Meter Type	Jan, 2023	Jan, 2024	Jan, 2025	Jan, 2026	Jan, 2027
5/8"x3/4" diameter	\$ 1,170.00	\$ 1,240.00	\$ 1,310.00	\$ 1,380.00	\$ 1,470.00
Other	Supplier cost plus 20% administration fee				

2. Water system Fees for Extensions, Additional Service Connections, & Water Meter Pits:

The Fees for an Extension, an Additional Service Connection, or a water meter pit are each calculated as follows:

$$\$ = (\text{All off-site capital costs}) + (6\% \text{ administration fee}) + (25\% \text{ security deposit})$$

Where:

- The capital costs and administration fee have the following minimums:
 - Off-site capital costs \$3,000; and
 - Administration fee \$ 500.
- Any additional costs incurred will be at the expense of the Owner.
- The Regional District Officer may reduce or remove these fees if alternate funding is available for the applicable capital costs.

3. Water system Disconnection fee:

The Fees for disconnection of an existing water service connection are calculated as follows:

$$\$ = (\text{All off-site capital costs}) + (6\% \text{ administration fee})$$

Where:

- The capital costs and administration fee have the following minimums:
 - Off-site capital costs \$1,000; and
 - Administration fee \$ 250.
- Any additional costs incurred will be at the expense of the Owner.

4. Call-Out Service Fees:

- a) Water Service turn on or turn off
(1 of each per year, by appointment only).....\$0.00
- b) Water Service turn on or turn off
(Beyond 1 of each per year, by appointment only)\$150.00
- c) After Hours Water Service turn-on or turn-off.....\$300.00
- d) Water Service locates, elevation adjustments, miscellaneous
(by appointment only).....\$150.00

5. Inaccessible or Unmetered Property or Premises Penalty..... \$250.00/billing period

SCHEDULE "B" HYDRANT USE PERMIT

HYDRANT NO. _____

Name Of Hydrant User _____ Phone No _____
 Name Of Contact Person _____ Phone No _____
 Purpose For Use _____
 Name Of Water System _____
 Location Of Hydrant _____
 Estimated Volume Required _____
 Estimated Duration Required _____
 Date Start: _____ Date Finish: _____

OFFICE USE ONLY

Authorized By _____
 Date Serviced _____
 Additional Terms and Conditions of Permit:

SPECIAL NOTES:

Resale as potable water is prohibited.

A non-refundable application fee of \$100, plus \$50 per day of proposed use, is required upon application.

The permit must be in the **possession of the user** when operating the hydrant.

A gate valve shall be installed on the hydrant to control flow. The operating wheel shall be removed when leaving the hydrant unattended. **Ball valves are not to be used for control.**

The connection shall be removed by the end of each working day, except by written permission.

Approved backflow prevention assemblies or an approved air gap must be used.

A current test report for backflow prevention assemblies (if applicable) must be available on request.

A water meter must be used and water consumption must be recorded daily and reported to the Regional District of Central Okanagan.

The hydrant must be fully open for use.

Only hydrant wrenches are to be used (no pipe wrenches).

Regional District of Central Okanagan reserves the right to restrict or terminate hydrant use.

The applicant acknowledges that any damage to the hydrant or the water main as a result of hydrant use will be repaired at the applicant's expense.

Any connection to any fire hydrant without permitted approval will be subject to penalties authorized by the Regional District of Central Okanagan Water systems Bylaw and the Regional District of Central Okanagan Fire Prevention and Regulations Bylaw.

The following Hold Harmless and Indemnification Clause applies to this permit:

The Hydrant User shall be liable for all loss, costs, damages, and expenses whatsoever incurred or suffered by the Regional District of Central Okanagan, its elected officials, officers, employees and agents (the Indemnitees) including but not limited to damage to or loss of property and loss of use thereof, and injury to or death of a person or persons resulting from or in connection with the performance, purported performance, or non-performance of this Permit, excepting only where such loss, costs, damages and expenses are as a result of the sole negligence of the Indemnitees.

The Hydrant User shall defend, indemnify and hold harmless the Indemnitees from and against all claims, demands, actions, proceedings, and liabilities whatsoever and all costs and expenses incurred in connection therewith and resulting from the performance, purported performance, or non-performance of this Permit, excepting only where such claim, demand, action, proceeding or liability is based on the sole negligence of the Indemnitees.

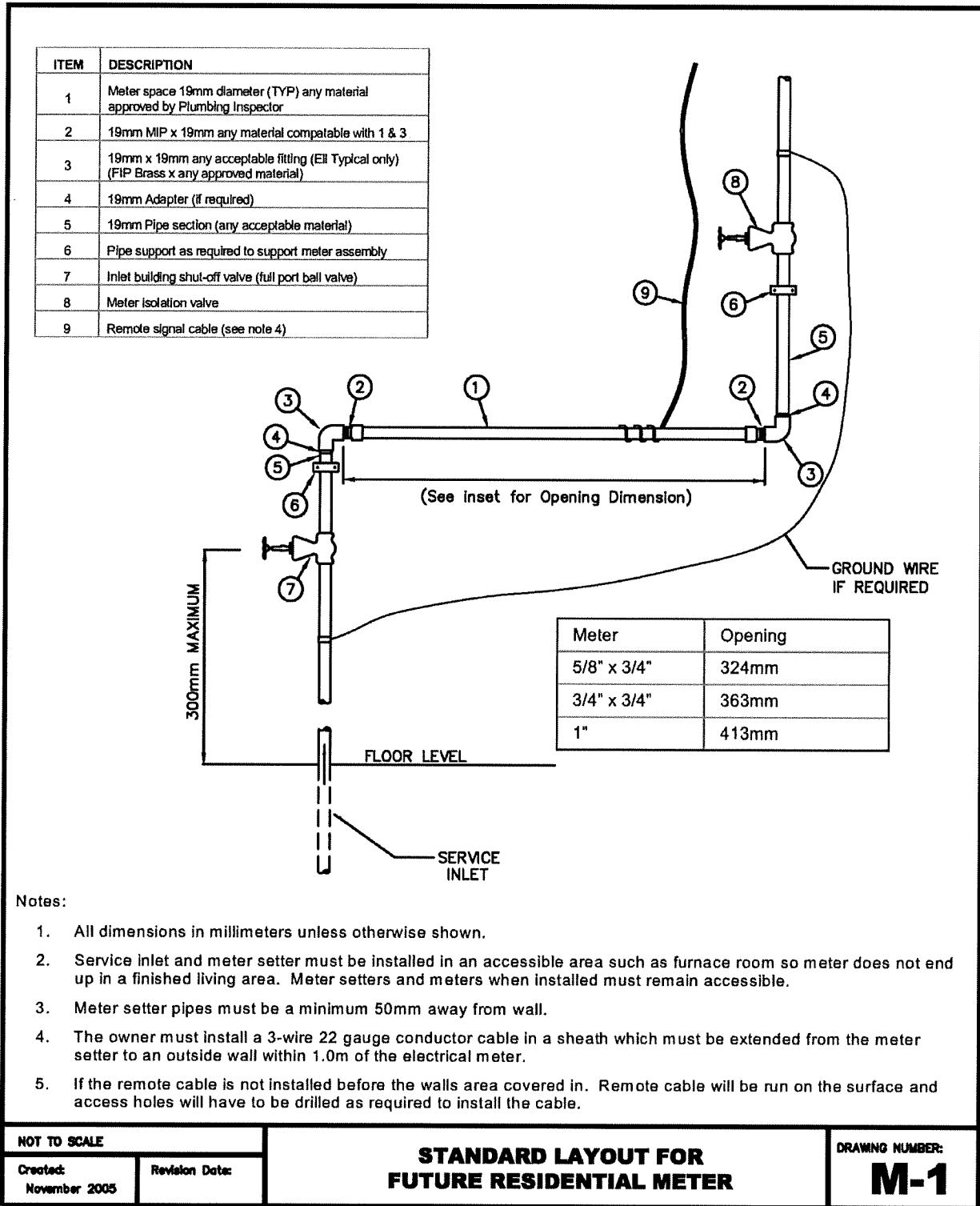
I HAVE READ AND UNDERSTAND THE ABOVE CONDITIONS.

Signature

Date

CC: Applicable Fire Department
RDCO Water Operator

SCHEDULE "C" M-1 STANDARD LAYOUT FOR FUTURE RESIDENTIAL METER



Appendix 2

Additional Chemical Data



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Killiney Beach

WORK ORDER REPORTED 24C2687
2024-03-27 15:24

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
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Okanagan Lake-raw water (24C2687-01) | Matrix: Fresh Water | Sampled: 2024-03-20 09:50

Anions

Chloride	6.79	AO ≤ 250	0.10 mg/L	2024-03-24	
Fluoride	0.16	MAC = 1.5	0.10 mg/L	2024-03-24	
Nitrate (as N)	0.036	MAC = 10	0.010 mg/L	2024-03-24	HT1
Nitrite (as N)	< 0.010	MAC = 1	0.010 mg/L	2024-03-24	HT1
Sulfate	34.6	AO ≤ 500	1.0 mg/L	2024-03-24	

Calculated Parameters

Hardness, Total (as CaCO3)	107	None Required	0.500 mg/L	N/A	
Langelier Index	0.1	N/A	-5.0	2024-03-27	CT6
Solids, Total Dissolved	169	AO ≤ 500	1.00 mg/L	N/A	

General Parameters

Alkalinity, Total (as CaCO3)	124	N/A	1.0 mg/L	2024-03-23	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0 mg/L	2024-03-23	
Alkalinity, Bicarbonate (as CaCO3)	124	N/A	1.0 mg/L	2024-03-23	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0 mg/L	2024-03-23	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0 mg/L	2024-03-23	
Colour, True	< 5.0	AO ≤ 15	5.0 CU	2024-03-23	
Conductivity (EC)	299	N/A	2.0 µS/cm	2024-03-23	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020 mg/L	2024-03-27	
pH	8.14	7.0-10.5	0.10 pH units	2024-03-23	HT2
Temperature, at pH	22.2	N/A	°C	2024-03-23	HT2
Turbidity	0.39	OG < 1	0.10 NTU	2024-03-23	

Total Metals

Aluminum, total	< 0.0050	OG < 0.1	0.0050 mg/L	2024-03-27	
Antimony, total	< 0.00020	MAC = 0.006	0.00020 mg/L	2024-03-27	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050 mg/L	2024-03-27	
Barium, total	0.0219	MAC = 2	0.0050 mg/L	2024-03-27	
Boron, total	< 0.0500	MAC = 5	0.0500 mg/L	2024-03-27	
Cadmium, total	0.000019	MAC = 0.007	0.000010 mg/L	2024-03-27	
Calcium, total	27.2	None Required	0.20 mg/L	2024-03-27	
Chromium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2024-03-27	
Cobalt, total	< 0.00010	N/A	0.00010 mg/L	2024-03-27	
Copper, total	0.00112	MAC = 2	0.00040 mg/L	2024-03-27	
Iron, total	< 0.010	AO ≤ 0.3	0.010 mg/L	2024-03-27	
Lead, total	< 0.00020	MAC = 0.005	0.00020 mg/L	2024-03-27	
Magnesium, total	9.42	None Required	0.010 mg/L	2024-03-27	
Manganese, total	0.00098	MAC = 0.12	0.00020 mg/L	2024-03-27	
Mercury, total	< 0.000010	MAC = 0.001	0.000010 mg/L	2024-03-26	
Molybdenum, total	0.00339	N/A	0.00010 mg/L	2024-03-27	
Nickel, total	0.00042	N/A	0.00040 mg/L	2024-03-27	
Potassium, total	2.52	N/A	0.10 mg/L	2024-03-27	
Selenium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2024-03-27	



TEST RESULTS

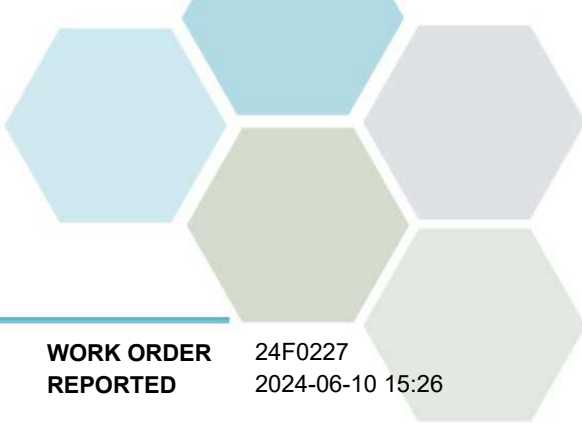
REPORTED TO PROJECT Regional District of Central Okanagan
Killiney Beach

WORK ORDER REPORTED 24C2687
2024-03-27 15:24

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Okanagan Lake-raw water (24C2687-01) Matrix: Fresh Water Sampled: 2024-03-20 09:50, Continued					
<i>Total Metals, Continued</i>					
Sodium, total	12.2	AO ≤ 200	0.10 mg/L	2024-03-27	
Uranium, total	0.00227	MAC = 0.02	0.000020 mg/L	2024-03-27	
Zinc, total	< 0.0040	AO ≤ 5	0.0040 mg/L	2024-03-27	

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.



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Killiney Beach

WORK ORDER REPORTED 24F0227
2024-06-10 15:26

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Lakeside reservoir (24F0227-01) | Matrix: Drinking Water | Sampled: 2024-06-03 09:30

Calculated Parameters

Total Trihalomethanes	0.0602	MAC = 0.1	0.00400	mg/L	N/A	
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Field Parameters

Chlorine, Free	1.80	N/A	0.02	mg/L	2024-06-03	
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Haloacetic Acids

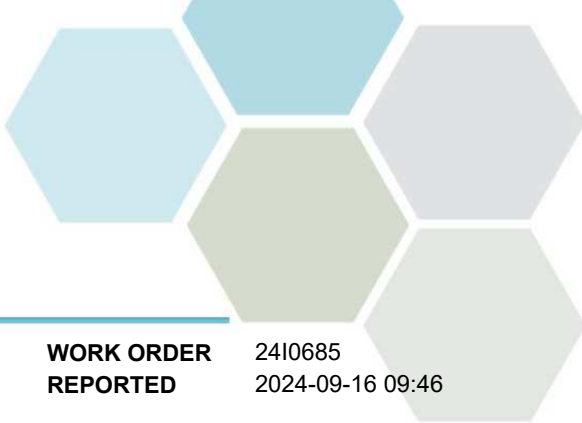
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-07	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-07	
Dichloroacetic Acid	0.0184	N/A	0.0020	mg/L	2024-06-07	
Trichloroacetic Acid	0.0258	N/A	0.0020	mg/L	2024-06-07	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-07	
Total Haloacetic Acids (HAA5)	0.0442	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	108		70-130	%	2024-06-07	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-06-04	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-06-04	

Volatile Organic Compounds (VOC)

Bromodichloromethane	0.0057	N/A	0.0010	mg/L	2024-06-07	
Bromoform	< 0.0010	N/A	0.0010	mg/L	2024-06-07	
Chloroform	0.0545	N/A	0.0010	mg/L	2024-06-07	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	2024-06-07	
Surrogate: Toluene-d8	92		70-130	%	2024-06-07	
Surrogate: 4-Bromofluorobenzene	84		70-130	%	2024-06-07	



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Killiney Beach

WORK ORDER REPORTED 2410685
2024-09-16 09:46

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Lakeside (2410685-01) | Matrix: Drinking Water | Sampled: 2024-09-05 09:30

Calculated Parameters

Total Trihalomethanes	0.0637	MAC = 0.1	0.00400	mg/L	N/A	
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Field Parameters

Chlorine, Free	1.50	N/A	0.02	mg/L	2024-09-05	
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Haloacetic Acids

Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-12	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-12	
Dichloroacetic Acid	0.0224	N/A	0.0020	mg/L	2024-09-12	
Trichloroacetic Acid	0.0128	N/A	0.0020	mg/L	2024-09-12	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-12	
Total Haloacetic Acids (HAA5)	0.0352	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	106		70-130	%	2024-09-12	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-09-06	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-09-06	

Volatile Organic Compounds (VOC)

Bromodichloromethane	0.0061	N/A	0.0010	mg/L	2024-09-10	
Bromoform	< 0.0010	N/A	0.0010	mg/L	2024-09-10	
Chloroform	0.0576	N/A	0.0010	mg/L	2024-09-10	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	2024-09-10	
Surrogate: Toluene-d8	103		70-130	%	2024-09-10	
Surrogate: 4-Bromofluorobenzene	74		70-130	%	2024-09-10	

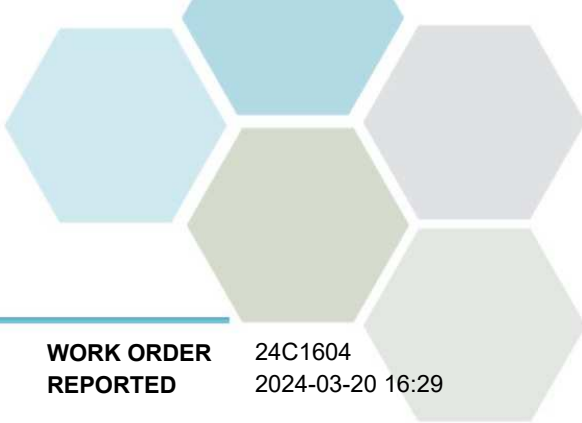


TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Killiney Beach

WORK ORDER REPORTED 24C1313
2024-03-21 10:49

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Lakeside (24C1313-01) Matrix: Drinking Water Sampled: 2024-03-11 10:40					
<i>Field Parameters</i>					
Chlorine, Free	1.50	N/A	0.02 mg/L	2024-03-11	
<i>Microbiological Parameters</i>					
Coliforms, Total	< 1	MAC = 0	1 CFU/100 mL	2024-03-12	
E. coli	< 1	MAC = 0	1 CFU/100 mL	2024-03-12	
<i>Perfluorinated Compounds</i>					
6:2 Fluorotelomer sulfonate (6:2FTS)	< 0.02	N/A	0.01 µg/L	2024-03-19	
8:2 Fluorotelomer sulfonate (8:2FTS)	< 0.02	N/A	0.01 µg/L	2024-03-19	
Perfluorobutanesulfonate (PFBS)	< 0.02	N/A	0.01 µg/L	2024-03-19	
Perfluorobutanoic acid (PFBA)	< 0.1	N/A	0.1 µg/L	2024-03-19	
Perfluoroheptanoic acid (PFHpA)	< 0.02	N/A	0.01 µg/L	2024-03-19	
Perfluorohexanesulfonate (PFHxS)	< 0.02	N/A	0.01 µg/L	2024-03-19	
Perfluorohexanoic acid (PFHxA)	< 0.02	N/A	0.01 µg/L	2024-03-19	
Perfluorononanoic acid (PFNA)	< 0.02	N/A	0.01 µg/L	2024-03-19	
Perfluorooctanesulfonate (PFOS)	< 0.02	0.6	0.01 µg/L	2024-03-19	
Perfluorooctanoic acid (PFOA)	< 0.02	0.2	0.01 µg/L	2024-03-19	
Perfluoropentanoic acid (PFPeA)	< 0.02	N/A	0.01 µg/L	2024-03-19	



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Sunset Ranch

WORK ORDER REPORTED 24C1604
2024-03-20 16:29

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
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Reservoir (24C1604-01) | Matrix: Drinking Water | Sampled: 2024-03-13 12:15

Anions

Chloride	26.8	AO ≤ 250	0.10 mg/L	2024-03-15	
Fluoride	0.27	MAC = 1.5	0.10 mg/L	2024-03-15	
Nitrate (as N)	1.97	MAC = 10	0.010 mg/L	2024-03-15	
Nitrite (as N)	0.011	MAC = 1	0.010 mg/L	2024-03-15	
Sulfate	124	AO ≤ 500	1.0 mg/L	2024-03-15	

Calculated Parameters

Total Trihalomethanes	0.0263	MAC = 0.1	0.00400 mg/L	N/A	
Hardness, Total (as CaCO3)	377	None Required	0.500 mg/L	N/A	
Langelier Index	0.9	N/A	-5.0	2024-03-20	CT6
Solids, Total Dissolved	477	AO ≤ 500	10.0 mg/L	N/A	

Field Parameters

Chlorine, Free	0.70	N/A	0.02 mg/L	2024-03-13	
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General Parameters

Alkalinity, Total (as CaCO3)	260	N/A	1.0 mg/L	2024-03-15	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0 mg/L	2024-03-15	
Alkalinity, Bicarbonate (as CaCO3)	260	N/A	1.0 mg/L	2024-03-15	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0 mg/L	2024-03-15	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0 mg/L	2024-03-15	
Carbon, Total Organic	1.11	N/A	0.50 mg/L	2024-03-14	
Colour, True	< 5.0	AO ≤ 15	5.0 CU	2024-03-19	
Conductivity (EC)	735	N/A	2.0 µS/cm	2024-03-15	
Cyanide, Total	0.0052	MAC = 0.2	0.0020 mg/L	2024-03-16	
pH	8.04	7.0-10.5	0.10 pH units	2024-03-15	HT2
Temperature, at pH	22.0	N/A	°C	2024-03-15	HT2
Turbidity	0.10	OG < 1	0.10 NTU	2024-03-15	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1 CFU/100 mL	2024-03-14	
E. coli	< 1	MAC = 0	1 CFU/100 mL	2024-03-14	

Total Metals

Aluminum, total	< 0.0050	OG < 0.1	0.0050 mg/L	2024-03-19	
Antimony, total	< 0.00020	MAC = 0.006	0.00020 mg/L	2024-03-19	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050 mg/L	2024-03-19	
Barium, total	0.0188	MAC = 2	0.0050 mg/L	2024-03-19	
Boron, total	< 0.0500	MAC = 5	0.0500 mg/L	2024-03-19	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010 mg/L	2024-03-19	
Calcium, total	102	None Required	0.20 mg/L	2024-03-19	
Chromium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2024-03-19	
Cobalt, total	< 0.00010	N/A	0.00010 mg/L	2024-03-19	
Copper, total	0.00622	MAC = 2	0.00040 mg/L	2024-03-19	
Iron, total	< 0.010	AO ≤ 0.3	0.010 mg/L	2024-03-19	



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Sunset Ranch

WORK ORDER REPORTED 24C1604
2024-03-20 16:29

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Reservoir (24C1604-01) | Matrix: Drinking Water | Sampled: 2024-03-13 12:15, Continued

Total Metals, Continued

Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-03-19	
Magnesium, total	29.9	None Required	0.010	mg/L	2024-03-19	
Manganese, total	< 0.00020	MAC = 0.12	0.00020	mg/L	2024-03-19	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-03-17	
Molybdenum, total	0.00653	N/A	0.00010	mg/L	2024-03-19	
Nickel, total	< 0.00040	N/A	0.00040	mg/L	2024-03-19	
Potassium, total	2.99	N/A	0.10	mg/L	2024-03-19	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-03-19	
Sodium, total	24.5	AO ≤ 200	0.10	mg/L	2024-03-19	
Uranium, total	0.00823	MAC = 0.02	0.000020	mg/L	2024-03-19	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2024-03-19	

Volatile Organic Compounds (VOC)

Bromodichloromethane	0.0067	N/A	0.0010	mg/L	2024-03-20	
Bromoform	0.0055	N/A	0.0010	mg/L	2024-03-20	
Chloroform	0.0040	N/A	0.0010	mg/L	2024-03-20	
Dibromochloromethane	0.0100	N/A	0.0010	mg/L	2024-03-20	
Surrogate: Toluene-d8	119		70-130	%	2024-03-20	
Surrogate: 4-Bromofluorobenzene	111		70-130	%	2024-03-20	

Sample Qualifiers:

- CT6 Results were based on lab temperature & lab pH.
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Sunset Ranch

WORK ORDER REPORTED 24F1131
2024-06-14 14:35

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Reservoir (24F1131-01) Matrix: Drinking Water Sampled: 2024-06-10 12:30					
<i>Field Parameters</i>					
Chlorine, Free	0.60	N/A	0.02 mg/L	2024-06-10	
<i>General Parameters</i>					
Carbon, Total Organic	1.46	N/A	0.50 mg/L	2024-06-14	
<i>Microbiological Parameters</i>					
Coliforms, Total	< 1	MAC = 0	1 CFU/100 mL	2024-06-11	
E. coli	< 1	MAC = 0	1 CFU/100 mL	2024-06-11	
<i>Total Metals</i>					
Iron, total	< 0.010	AO ≤ 0.3	0.010 mg/L	2024-06-13	
Manganese, total	< 0.00020	MAC = 0.12	0.00020 mg/L	2024-06-13	

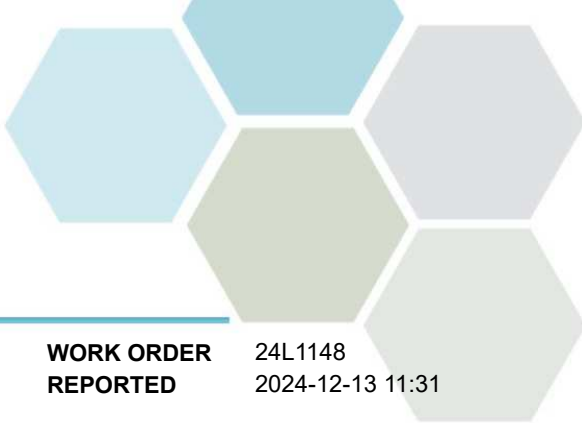


TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Sunset Ranch

WORK ORDER REPORTED 2410687
2024-09-17 12:34

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Reservoir (2410687-01) Matrix: Drinking Water Sampled: 2024-09-05 11:00						
Calculated Parameters						
Total Trihalomethanes	0.00698	MAC = 0.1	0.00400	mg/L		N/A
Field Parameters						
Chlorine, Free	0.10	N/A	0.02	mg/L		2024-09-05
General Parameters						
Carbon, Total Organic	1.29	N/A	0.50	mg/L		2024-09-17
Total Metals						
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L		2024-09-09
Manganese, total	0.00231	MAC = 0.12	0.00020	mg/L		2024-09-09
Volatile Organic Compounds (VOC)						
Bromodichloromethane	< 0.0010	N/A	0.0010	mg/L		2024-09-10
Bromoform	0.0049	N/A	0.0010	mg/L		2024-09-10
Chloroform	< 0.0010	N/A	0.0010	mg/L		2024-09-10
Dibromochloromethane	0.0020	N/A	0.0010	mg/L		2024-09-10
Surrogate: Toluene-d8	101		70-130	%		2024-09-10
Surrogate: 4-Bromofluorobenzene	72		70-130	%		2024-09-10



TEST RESULTS

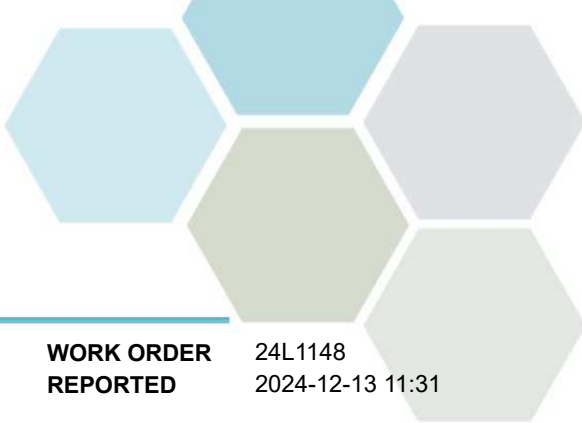
REPORTED TO PROJECT Regional District of Central Okanagan
Sunset Ranch

WORK ORDER REPORTED 24L1148
2024-12-13 11:31

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Reservoir (24L1148-01) Matrix: Drinking Water Sampled: 2024-12-10 14:00						PRES
<i>Field Parameters</i>						
Chlorine, Free	0.10	N/A	0.02	mg/L	2024-12-10	
<i>General Parameters</i>						
Carbon, Total Organic	1.62	N/A	0.50	mg/L	2024-12-11	
<i>Microbiological Parameters</i>						
Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-12-10	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-12-10	
<i>Total Metals</i>						
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-12-12	
Manganese, total	< 0.00020	MAC = 0.12	0.00020	mg/L	2024-12-12	

Sample Qualifiers:

PRES Sample has been preserved for TOC in the laboratory and the holding time has been extended.



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Sunset Ranch

WORK ORDER REPORTED 24L1148
2024-12-13 11:31

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Reservoir (24L1148-01) Matrix: Drinking Water Sampled: 2024-12-10 14:00						PRES
<i>Field Parameters</i>						
Chlorine, Free	0.10	N/A	0.02	mg/L	2024-12-10	
<i>General Parameters</i>						
Carbon, Total Organic	1.62	N/A	0.50	mg/L	2024-12-11	
<i>Microbiological Parameters</i>						
Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-12-10	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-12-10	
<i>Total Metals</i>						
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-12-12	
Manganese, total	< 0.00020	MAC = 0.12	0.00020	mg/L	2024-12-12	

Sample Qualifiers:

PRES Sample has been preserved for TOC in the laboratory and the holding time has been extended.



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Westshore Estates

WORK ORDER REPORTED 24C2415
2024-03-27 16:31

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Lakeshore reservoir (24C2415-01) | Matrix: Drinking Water | Sampled: 2024-03-20 10:00

Anions

Chloride	10.1	AO ≤ 250	0.10	mg/L	2024-03-22	
Fluoride	0.11	MAC = 1.5	0.10	mg/L	2024-03-22	
Nitrate (as N)	0.041	MAC = 10	0.010	mg/L	2024-03-22	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-03-22	
Sulfate	30.9	AO ≤ 500	1.0	mg/L	2024-03-22	

Calculated Parameters

Hardness, Total (as CaCO3)	130	None Required	0.500	mg/L	N/A	
Langelier Index	-0.4	N/A	-5.0		2024-03-27	CT6
Solids, Total Dissolved	180	AO ≤ 500	1.00	mg/L	N/A	

Field Parameters

Chlorine, Free	2.00	N/A	0.02	mg/L	2024-03-20	
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General Parameters

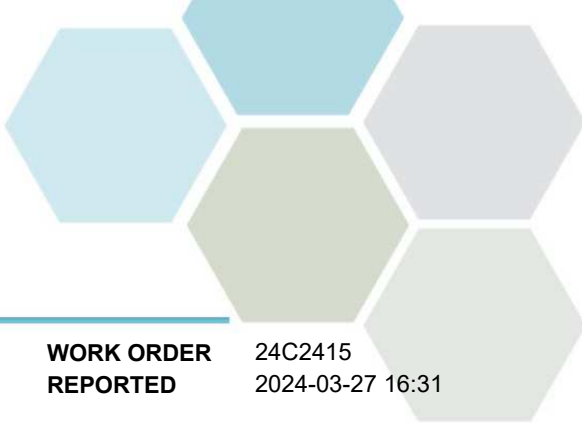
Alkalinity, Total (as CaCO3)	123	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Bicarbonate (as CaCO3)	123	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-03-23	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-03-21	
Conductivity (EC)	301	N/A	2.0	µS/cm	2024-03-23	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-03-22	
pH	7.53	7.0-10.5	0.10	pH units	2024-03-23	HT2
Temperature, at pH	22.0	N/A		°C	2024-03-23	HT2
Turbidity	0.60	OG < 1	0.10	NTU	2024-03-22	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-03-21	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-03-21	

Total Metals

Aluminum, total	0.0072	OG < 0.1	0.0050	mg/L	2024-03-23	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-03-23	
Arsenic, total	0.00050	MAC = 0.01	0.00050	mg/L	2024-03-23	
Barium, total	0.0232	MAC = 2	0.0050	mg/L	2024-03-23	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-03-23	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-03-23	
Calcium, total	36.0	None Required	0.20	mg/L	2024-03-23	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-03-23	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-03-23	
Copper, total	0.00285	MAC = 2	0.00040	mg/L	2024-03-23	
Iron, total	0.014	AO ≤ 0.3	0.010	mg/L	2024-03-23	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-03-23	
Magnesium, total	9.63	None Required	0.010	mg/L	2024-03-23	



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Westshore Estates

WORK ORDER REPORTED 24C2415
2024-03-27 16:31

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Lakeshore reservoir (24C2415-01) Matrix: Drinking Water Sampled: 2024-03-20 10:00, Continued					
<i>Total Metals, Continued</i>					
Manganese, total	0.00437	MAC = 0.12	0.00020 mg/L	2024-03-23	
Mercury, total	< 0.000010	MAC = 0.001	0.000010 mg/L	2024-03-22	
Molybdenum, total	0.00363	N/A	0.00010 mg/L	2024-03-23	
Nickel, total	0.00042	N/A	0.00040 mg/L	2024-03-23	
Potassium, total	2.49	N/A	0.10 mg/L	2024-03-23	
Selenium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2024-03-23	
Sodium, total	15.7	AO ≤ 200	0.10 mg/L	2024-03-23	
Uranium, total	0.00241	MAC = 0.02	0.000020 mg/L	2024-03-23	
Zinc, total	< 0.0040	AO ≤ 5	0.0040 mg/L	2024-03-23	

Sample Qualifiers:

- CT6 Results were based on lab temperature & lab pH.
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Westshore Estates

WORK ORDER REPORTED 24C2415
2024-03-27 16:31

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Lakeshore reservoir (24C2415-01) | Matrix: Drinking Water | Sampled: 2024-03-20 10:00

Anions

Chloride	10.1	AO ≤ 250	0.10	mg/L	2024-03-22	
Fluoride	0.11	MAC = 1.5	0.10	mg/L	2024-03-22	
Nitrate (as N)	0.041	MAC = 10	0.010	mg/L	2024-03-22	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-03-22	
Sulfate	30.9	AO ≤ 500	1.0	mg/L	2024-03-22	

Calculated Parameters

Hardness, Total (as CaCO3)	130	None Required	0.500	mg/L	N/A	
Langelier Index	-0.4	N/A	-5.0		2024-03-27	CT6
Solids, Total Dissolved	180	AO ≤ 500	1.00	mg/L	N/A	

Field Parameters

Chlorine, Free	2.00	N/A	0.02	mg/L	2024-03-20	
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General Parameters

Alkalinity, Total (as CaCO3)	123	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Bicarbonate (as CaCO3)	123	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-03-23	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-03-23	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-03-21	
Conductivity (EC)	301	N/A	2.0	µS/cm	2024-03-23	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-03-22	
pH	7.53	7.0-10.5	0.10	pH units	2024-03-23	HT2
Temperature, at pH	22.0	N/A		°C	2024-03-23	HT2
Turbidity	0.60	OG < 1	0.10	NTU	2024-03-22	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-03-21	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-03-21	

Total Metals

Aluminum, total	0.0072	OG < 0.1	0.0050	mg/L	2024-03-23	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-03-23	
Arsenic, total	0.00050	MAC = 0.01	0.00050	mg/L	2024-03-23	
Barium, total	0.0232	MAC = 2	0.0050	mg/L	2024-03-23	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-03-23	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-03-23	
Calcium, total	36.0	None Required	0.20	mg/L	2024-03-23	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-03-23	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-03-23	
Copper, total	0.00285	MAC = 2	0.00040	mg/L	2024-03-23	
Iron, total	0.014	AO ≤ 0.3	0.010	mg/L	2024-03-23	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-03-23	
Magnesium, total	9.63	None Required	0.010	mg/L	2024-03-23	



TEST RESULTS

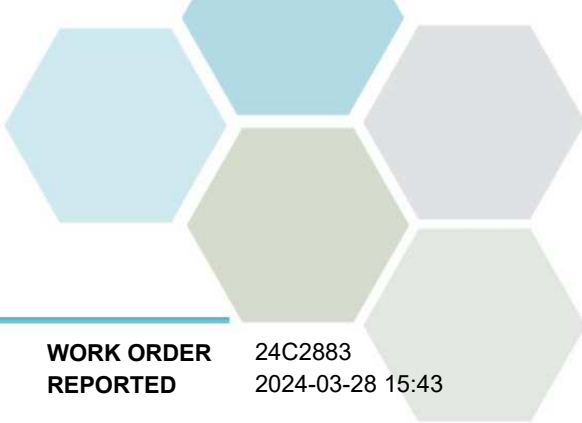
REPORTED TO PROJECT Regional District of Central Okanagan
Westshore Estates

WORK ORDER REPORTED 24C2415
2024-03-27 16:31

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Lakeshore reservoir (24C2415-01) Matrix: Drinking Water Sampled: 2024-03-20 10:00, Continued					
<i>Total Metals, Continued</i>					
Manganese, total	0.00437	MAC = 0.12	0.00020 mg/L	2024-03-23	
Mercury, total	< 0.000010	MAC = 0.001	0.000010 mg/L	2024-03-22	
Molybdenum, total	0.00363	N/A	0.00010 mg/L	2024-03-23	
Nickel, total	0.00042	N/A	0.00040 mg/L	2024-03-23	
Potassium, total	2.49	N/A	0.10 mg/L	2024-03-23	
Selenium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2024-03-23	
Sodium, total	15.7	AO ≤ 200	0.10 mg/L	2024-03-23	
Uranium, total	0.00241	MAC = 0.02	0.000020 mg/L	2024-03-23	
Zinc, total	< 0.0040	AO ≤ 5	0.0040 mg/L	2024-03-23	

Sample Qualifiers:

- CT6 Results were based on lab temperature & lab pH.
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Westshore Estates

WORK ORDER REPORTED 24C2883
2024-03-28 15:43

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Mountain reservoir (24C2883-01) Matrix: Drinking Water Sampled: 2024-03-25 10:40						
<i>Field Parameters</i>						
Chlorine, Free	1.80	N/A	0.02	mg/L	2024-03-25	
<i>Microbiological Parameters</i>						
Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-03-26	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-03-26	



TEST RESULTS

REPORTED TO PROJECT Regional District of Central Okanagan
Westshore Estates

WORK ORDER REPORTED 24F0226
2024-06-10 11:01

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Lakeshore reservoir (24F0226-01) | Matrix: Drinking Water | Sampled: 2024-06-03 09:45

Calculated Parameters

Total Trihalomethanes	0.0461	MAC = 0.1	0.00400	mg/L	N/A	
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Field Parameters

Chlorine, Free	1.85	N/A	0.02	mg/L	2024-06-03	
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Haloacetic Acids

Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-06	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-06	
Dichloroacetic Acid	0.0161	N/A	0.0020	mg/L	2024-06-06	
Trichloroacetic Acid	0.0200	N/A	0.0020	mg/L	2024-06-06	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-06	
Total Haloacetic Acids (HAA5)	0.0361	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	116		70-130	%	2024-06-06	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2024-06-04	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2024-06-04	

Volatile Organic Compounds (VOC)

Bromodichloromethane	0.0045	N/A	0.0010	mg/L	2024-06-07	
Bromoform	< 0.0010	N/A	0.0010	mg/L	2024-06-07	
Chloroform	0.0416	N/A	0.0010	mg/L	2024-06-07	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	2024-06-07	
Surrogate: Toluene-d8	93		70-130	%	2024-06-07	
Surrogate: 4-Bromofluorobenzene	85		70-130	%	2024-06-07	

Appendix 3

Monthly Water System Data - total coliform, free chlorine, and turbidity

Killiney Water System Data

Date	Sample Location	Sample Time Time	Chlorine Residual mg/L	Total Coli counts/100	E.Coli counts/100
2024-01-03	Lakeside Reservoir	10:40	1.8	<1	<1
2024-01-08	Winchester Reservoir	9:30	1	<1	<1
2024-01-15	Lakeside	9:51	1.2	<1	<1
2024-01-22	Lakeside Reservoir	10:14	2	<1	<1
2024-02-06	Winchester Reservoir	10:18	1.2	<1	<1
2024-02-12	Udell Reservoir	9:20	0.6	<1	<1
2024-02-13	Udell Reservoir	10:45	0.7	<1	<1
2024-02-21	Lakeside	9:20	1.4	<1	<1
2024-03-01	Lakeside	9:51	1.6	<1	<1
2024-03-04	Winchester	10:00	1.1	<1	<1
2024-03-11	Lakeside	10:40	1.5	<1	<1
2024-03-20	Lakeside Reservoir	9:45	1.6	<1	<1
2024-03-25	Winchester Pumphouse	10:30	1	<1	<1
2024-03-28	Udell Reservoir	8:40	1.21	<1	<1
2024-04-02	Udell	10:05	1.29	<1	<1
2024-04-09	Lakeside	10:25	1.9	<1	<1
2024-04-12	Houghton Road SS	9:00	0.85	<1	<1
2024-04-15	Houghton Rd SS	9:40	1.18	<1	<1
2024-04-22	Lakeside	11:15	2	<1	<1
2024-05-07	Winchester Reservoir	9:41	0.95	1	<1
2024-05-10	Winchester		2.1	<1	<1
2024-05-14	Shalal sample station	10:10	0.82	<1	<1
2024-05-22	Lakeside	9:55	1.6	<1	<1
2024-05-28	Winchester Reservoir	10:30	1.1	<1	<1
2024-06-03	Lakeside Reservoir	9:30	1.8	<1	<1
2024-06-11	Winchester Reservoir	10:00	1.15	<1	<1
2024-06-17	Houghton Rd SS	9:45	0.86	<1	<1
2024-06-24	Lakeside	9:00	1.3	<1	<1
2024-07-02	Houghton Rd SS	8:24	0.7	<1	<1
2024-07-10	Lakeside	9:30	1.35	<1	<1
2024-07-15	Winchester Reservoir	10:00	0.89	<1	<1
2024-07-22	Houghton Rd SS	10:30	1.11	<1	<1
2024-07-30	Winchester Reservoir	8:30	1.08	<1	<1
2024-07-31	Lakeside reservoir	9:00	1.4	<1	<1
2024-08-07	Lakeside Reservoir	9:00	1.4	<1	<1
2024-08-15	Winchester Reservoir	10:55	0.9	<1	<1
2024-08-19	Lakeside Reservoir	10:00	2.2	<1	<1
2024-08-29	Houghton Rd SS	10:30	0.9	<1	<1

2024-09-05 Lakeside Reservoir	9:30	1.5	<1	<1
2024-09-09 Winchester Reservoir	10:15	1	<1	<1
2024-09-16 Houghton RD SS	9:40	0.66	<1	<1
2024-09-23 Lakeside Reservoir	10:30	2.2	<1	<1
2024-10-01 Lakeside Reservoir	10:30	2	<1	<1
2024-10-07 Winchester	10:10	1.07	<1	<1
2024-10-16 Lakeside	9:15	1.7	<1	<1
2024-10-21 Winchester Reservoir	10:45	1.07	<1	<1
2024-10-25 Kildare PRV	8:30	0.94	<1	<1
2024-10-28 Kildare PRV	9:15	1.36	<1	<1
2024-11-06 Lakeside	10:10	1.7	<1	<1
2024-11-12 Winchester	10:45	1	<1	<1

Sunset Ranch Water System Data

Date	Sample Location	Sample Time Time	Chlorine Residual mg/L	Total Coli counts/100	E.Coli counts/100
2024-01-03	Reservoir	1:18	0.6	<1	<1
2024-01-08	Reservoir	12:10	1.2	<1	<1
2024-01-15	Reservoir	11:30	0.3	<1	<1
2024-01-22	Well	11:38	0	<1	<1
2024-02-05	Reservoir	12:25	0.7	<1	<1
2024-02-13	Reservoir	10:53	0.83	<1	<1
2024-02-20	Reservoir	11:45	0.7	<1	<1
2024-03-01	Well	11:15	0	<1	<1
2024-03-04	Reservoir	12:15	0.9	<1	<1
2024-03-13	Reservoir	12:15	0.7	<1	<1
2024-03-20	Well	11:30	0	<1	<1
2024-03-25	Reservoir	12:00	0.7	<1	<1
2024-04-03	Reservoir	10:40	0.6	<1	<1
2024-04-10	reservoir	11:15	0.4	<1	<1
2024-04-15	Well	11:30	0	<1	<1
2024-04-22	well	1:00	0	<1	<1
2024-05-06	Reservoir	11:27	0.85	<1	<1
2024-05-13	Camelback road SS	12:00	0.57	<1	<1
2024-05-21	Well	11:30	0	<1	<1
2024-05-29	Well	11:00	0	<1	<1
2024-06-04	Camelback Rd SS	11:00	0.6	<1	<1
2024-06-11	Reservoir	12:30	0.6	<1	<1
2024-06-17	Well	12:00	0	<1	<1
2024-06-26	Camelback Road SS	10:00	0.6	<1	<1
2024-07-02	Camelback Rd SS	11:15	0.59	<1	<1
2024-07-08	Reservoir	11:15	0.65	<1	<1
2024-07-15	Well	12:00	0	<1	<1
2024-07-23	Reservoir	10:45	1.3	<1	<1
2024-08-06	Camelback Rd SS	2:00	0.4	<1	<1
2024-08-12	Reservoir	12:00	0	<1	<1
2024-08-20	Well	11:15	0	<1	<1
2024-08-29	Camelback Rd SS	12:30	0.5	<1	<1
2024-09-05	Reservoir	11:00	0.1	<1	<1
2024-09-10	Camelback Rd SS	12:00	0.1	<1	<1
2024-09-17	Well	10:10	0	<1	<1
2024-09-25	Camelback Rd SS	10:45	0.44	<1	<1
2024-10-02	Reservoir	12:35	0.08	<1	<1
2024-10-09	Camelback RD SS	11:00	0.76	<1	<1

2024-10-15 Well	11:00	0	<1	<1
2024-10-22 Reservoir		0.02	<1	<1
2024-10-29 Well	11:30	0	<1	<1
2024-11-04 Reservoir	9:25	2.3	<1	<1
2024-11-13 Reservoir	11:15	1.2	<1	<1
2024-11-20 Well	8:10	0	<1	<1
2024-11-25 Reservoir	14:15	0.6	<1	<1
2024-12-04 Reservoir	12:10	0.6	<1	<1
2024-12-10 Reservoir	14:00	0.1	<1	<1
2024-12-16 Well	10:40	0	<1	<1
2024-12-23 Reservoir	11:48	0.85	<1	<1

Westshores Water System Data

Date	Sample Location	Sample Time Time	Chlorine Residual mg/L	Total Coli counts/100	E.Coli counts/100
2024-01-03	Lakeshore Reservoir	10:55	2.2	<1	<1
2024-01-08	Mountain Reservoir	9:51	1.3	<1	<1
2024-01-15	Lakeshore	10:10	2.3	<1	<1
2024-01-22	Lakeshore Reservoir	10:28	2.1	<1	<1
2024-02-06	Mountain Reservoir	10:36	1.3	<1	<1
2024-02-12	Mountain Reservoir	10:11	1.5	<1	<1
2024-02-21	Mountain Reservoir	9:30	1.7	<1	<1
2024-03-01	Lakeshore	10:00	2.1	<1	<1
2024-03-04	Lakeshore	10:15	2.2	<1	<1
2024-03-11	Lakeshore	11:00	2	<1	<1
2024-03-20	Lakeshore Reservoir	10:00	2	<1	<1
2024-03-25	Mountain Reservoir	10:40	1.8	<1	<1
2024-04-02	Lakeshore	10:30	1.71	<1	<1
2024-04-09	Mountain Reservoir	10:40	1.6	<1	<1
2024-04-15	Lakeshore Reservoir	9:55	2.2	<1	<1
2024-04-22	Lakeshore	11:30	2.1	<1	<1
2024-05-07	Mountain Reservoir	10:03	0.95	<1	<1
2024-05-14	Hillcrest Sample station	10:30	1.09	<1	<1
2024-05-22	Lakeshore	10:10	1.18	<1	<1
2024-05-28	Westshore Park SS	10:50	1.3	<1	<1
2024-06-03	Lakeshore Reservoir	9:45	1.85	<1	<1
2024-06-11	Mountain Reservoir	10:10	1.3	<1	<1
2024-06-17	Westshore Rd SS	10:00	1.45	<1	<1
2024-06-24	Lakeshore	9:15	2.3	<1	<1
2024-07-02	Hillcrest Rd SS	8:48	0.95	<1	<1
2024-07-10	Lakeshore	9:45	1.65	<1	<1
2024-07-15	Mountain Reservoir	10:30	1.1	<1	<1
2024-07-22	Westshore Rd SS	10:45	1.27	<1	<1
2024-07-30	Hillcrest RD SS	8:55	0.82	<1	<1
2024-07-31	Lakeshore Reservoir	9:10	2.2	<1	<1
2024-08-07	Lakeshore Reservoir	9:10	2.3	<1	<1
2024-08-15	Mountain Reservoir	11:15	1.9	<1	<1
2024-08-19	Lakeshore Reservoir	10:15	2	<1	<1
2024-08-29	Mountain Reservoir	11:00	1.7	<1	<1
2024-09-05	Lakeshore Reservoir	9:45	2.2	<1	<1
2024-09-09	Mountain Reservoir	10:30	1.5	<1	<1
2024-09-16	Westshore Park SS	10:00	0.2	<1	<1
2024-09-23	Lakeshore Reservoir	10:45	2	<1	<1

2024-10-01 Lakeshore Reservoir	10:40	1.5	<1	<1
2024-10-07 Mountain Reservoir	10:40	1.5	<1	<1
2024-10-16 Lakeshore	9:30	2.2	<1	<1
2024-10-17 Hillcrest Rd SS	10:15	1.48	<1	<1
2024-10-18 Hillcrest Rd SS		1.12	<1	<1
2024-10-21 Lakeshore	11:00	1.7	<1	<1
2024-10-28 Lakeshore	9:30	2.1	<1	<1
2024-11-06 Lakeshore	10:30	1.7	<1	<1
2024-11-12 Mountain	11:00	1.1	<1	<1
2024-11-18 Mountain Reservoir	10:15	0.88	<1	<1
2024-11-26 lakeshore	11:00	2	<1	<1
2024-12-02 Lakeshore	11:00	1.9	<1	<1