



Small Water Systems Drinking Water Annual Report 2022

Upper Fintry/Shalal Road/Valley of the Sun, Falcon Ridge, Dietrich (Star Place), Joe Rich Fire/Community Hall and Goudie Fire Hall



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1.0 Introduction

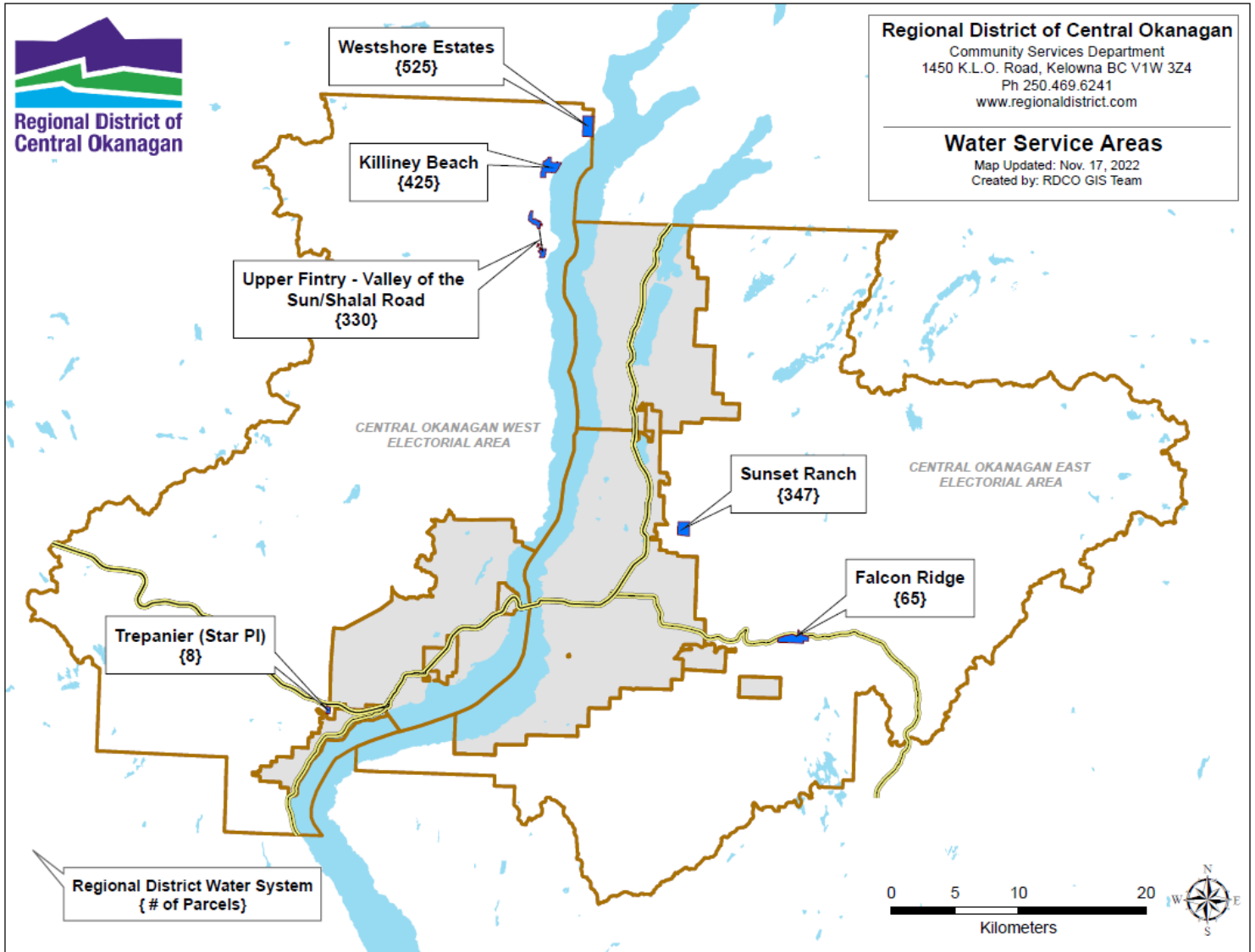
The purpose of this report is to provide information on the monitoring and maintenance of the Regional District of Central Okanagan's (RDCO) water distribution systems directed by the Interior Health Authority (IH) as set forth by the Drinking Water Protection Act.

During 2022 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.

2.0 Water Distribution System

The RDCO administers eight water systems. These systems vary in size with five of the systems classified as Small and three as Large. This Report will contain information for the small systems only – Upper Fintry/Shalal Road/Valley of the Sun, Falcon Ridge, Dietrich, Joe Rich Fire/Community Hall and Goudie Fire Hall (both Fire Halls located in the Falcon Ridge area). **Figure 1** depicts the number of parcels in each Water Service Area.

Figure 1



The Water Systems administered by the RDCO, the approximate number of connections for each system and the assigned EOCP number (Environmental Operators Certification Program) are outlined in *Table 1*.

Table 1

RDCO Water Systems

<i>Water System</i>	<i>EOCP #</i>	<i>EOCP Classification</i>	<i># of Connections (approx.)</i>	<i>Water Source</i>	<i>Meets IH Drinking Water Objectives</i>
Falcon Ridge	1851	SWS	65	Mission Creek, Well – sodium hypo-chlorite injection disinfection, treatment by filtration and UV	no
Dietrich (Star Place)	1853	SWS	8	Trepanier Creek – sodium hypo-chlorite injection disinfection, treatment by filtration	no
Upper Fintry, Shalal Road, Valley of the Sun	2060	SWS	128	Groundwater Well – sodium hypo-chlorite injection disinfection	yes

3.0 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 1370**. User fees and asset renewal fees vary according to the number of users and the maintenance required for each particular system. Water System Fees are set under the RDCO Water System Fees & Charges Amended **Bylaws No. 1442, 1435-1440** (*Appendix 1*).

4.0 Testing and Monitoring Program

The monitoring program integrates source monitoring 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 on a monthly basis. Beginning in July 2014 (and after consultation with Interior Health) - half of the monthly samples (2 samples/month) were collected by RDCO Staff and forwarded to a private lab for microbiological testing. The other half (2 samples/month) were tested in house using the EPA approved IDEXX Colisure system. If any of the in-house bacterial samples are positive,

the site is re-sampled the next business day and taken to a private lab for verification. All bacterial results are reported to Interior Health on a monthly basis.

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 also 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 2022 is included in (*Appendix 2*).

5.0 Maintenance and Repairs

The RDCO continued to implement 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.

Fintry Park

Re: Validated Park use Permit #105373 - Under Special Provision 6 in the permit the RDCO is required to describe the annual maintenance of the water line and the environmental monitoring and treatment completed. This report speaks to both those requirements in *Section(s) 5.0, 12.0 and 13.0*.

6.0 Conditions on Permit/ System Improvements

6.1 Falcon Ridge – conditions on permit for 2022 in compliance: Section 8 Long-Term plans for Systems improvements are in progress to meet DWO (Drinking Water Objectives)

- Hydrant maintenance
- Expansion of system
- Well access road improvements

6.2 Dietrich (Star Place) – no present conditions on permit: Section 8 Long-Term Plans for Systems improvements are in progress to meet DWO

- Possibility of alternate source ongoing – Trepanier Ditch Users Association in discussion with Peachland (changing boundaries and tying into the community water system)

6.3 Upper Fintry/Valley of the Sun/Shalal Road – no present conditions on permit

- Hydrant maintenance

6.4 Joe Rich Fire Hall and Community Hall

- None

6.5 Goudie Road Fire Hall

- None

7.0 Grants/Water Conservation

Grants

No grants were received in 2022.

Water Conservation

Outdoor Irrigation restrictions are in place for the customers of the RDCO water systems, as outlined below in **Table 2** - (Stage 2 water restrictions were implemented for all water systems on June 27, 2022).

Table 2

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>

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 2022, discussing system updates, new construction and conservation tips and ideas.

8.0 Operator Education and Training

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. The Regional District of Central Okanagan currently employs seven (7) staff working in the utilities department as seen in **Table 3**.

Table 3**EOCP Certifications**

Employee	Certification #	Level
Shane Dorey	9216	WT-1, WD-1
Kevin Trottier	4607	WT-3, WD-3, CH
Doug Murray	8918	WD-1
Peter Meersma	8244	CCCT, WD-2, WT-2, plumber
Angela Lambrecht	6468	WT-1, WD-1, CH
Greg Beloin	7787	CH
Travis Spurn		Instrumentation Technician

9.0 Cross Connection Control

On-going assessments of all RDCO managed facilities continued in 2022 to minimize the risk of cross connections. Certified staff conducted annual servicing and maintenance on any back flow preventers in the water systems and documentation will added to a Maintenance Management Program for future scheduling and tracking.

The Water Meter Reader had a software update in 2021 - 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.

Neptune water meter

10.0 SCADA System

In 2021 the RDCO upgraded the *Supervisory Control and Data Acquisition* (SCADA) system that was implemented in 2012. This system 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 has the ability to make changes on an as needed basis.

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

10.1 Falcon Ridge

- Reservoir Level trending (level and pump hours)
- On-line turbidity, chlorine, temperature, and pH
- Pump control (hours, pressure)
- Total flow m³
- Remote control of pumps (start/stop times)
- Well level

10.2 Dietrich (Star Place)

- Reservoir level
- Pump control (hours)
- Pump faults
- On-line turbidity, chlorine, temperature
- Remote control of pumps (start/stop times)
- Total flow m³

10.3 Upper Fintry/Valley of the Sun/Shalal Road

- Reservoir level – Firwood
- Well Levels
- Pump control (amps, hours, pressure)
- Remote control of pumps (start/stop times)
- Total flow m³
- Fintry, Booster station trending (levels/pump hours)
- On-line chlorine and temperature

10.4 Joe Rich Fire Hall

- Reservoir Level
- Pump control
- Total flow m³
- On-line chlorine and temperature

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.

11.0 Emergency Response/Events

Emergency Response

Emergency Response Procedures were enacted 3 times in 2022 – twice each for Falcon Ridge and once for Dietrich. All notifications were put on and lifted after consultation with IH and in accordance with guidelines set forth in the RDCO Emergency Response Manual (*Appendix 3*).

- **Falcon Ridge Water System**
 1. Water Quality Advisory (WQA) was issued from June 3 – July 25, 2022, because of increased turbidity in the source water.
 2. Precautionary WQA was issued Nov 4, 2022 – Nov 23, 2022, for 7411-7481 Hawk Road due to contractors working in the area
- **Dietrich Water System**
 1. WQA was issued April 13 – July 6, 2022, due to high turbidity in the source water.

12.0 Future Plans for 2023

12.1 Falcon Ridge

- Mission Creek Intake channel improvements
- Eastside fire hydrant
- Expansion of system to service approximately 11 new customers
- Instrumentation critical spares

12.2 Dietrich (Star Place)

- Instrumentation critical spares
- Replace turbidity meter

12.3 Upper Fintry/Valley of the Sun/Shalal Road

- General improvements
- Fiber cable/communication replacement
- Hypo tank level sensor
- Chlorine analyzer replacement
- Firwood Reservoir floor and roof finishing
- Instrumentation critical spares

12.4 Joe Rich Fire Hall and Community Hall

- No capital works planned for 2023

12.5 Goudie Road Fire Hall

- No capital works planned for 2023

13.0 Sample Analysis Results

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

14.0 Turbidity Analysis (NTU)

Turbidity must be monitored on-line for surface water distribution systems with greater than 300 connections. The following figures show turbidity trends and events throughout the year.

Figure 2: Falcon Ridge Turbidity

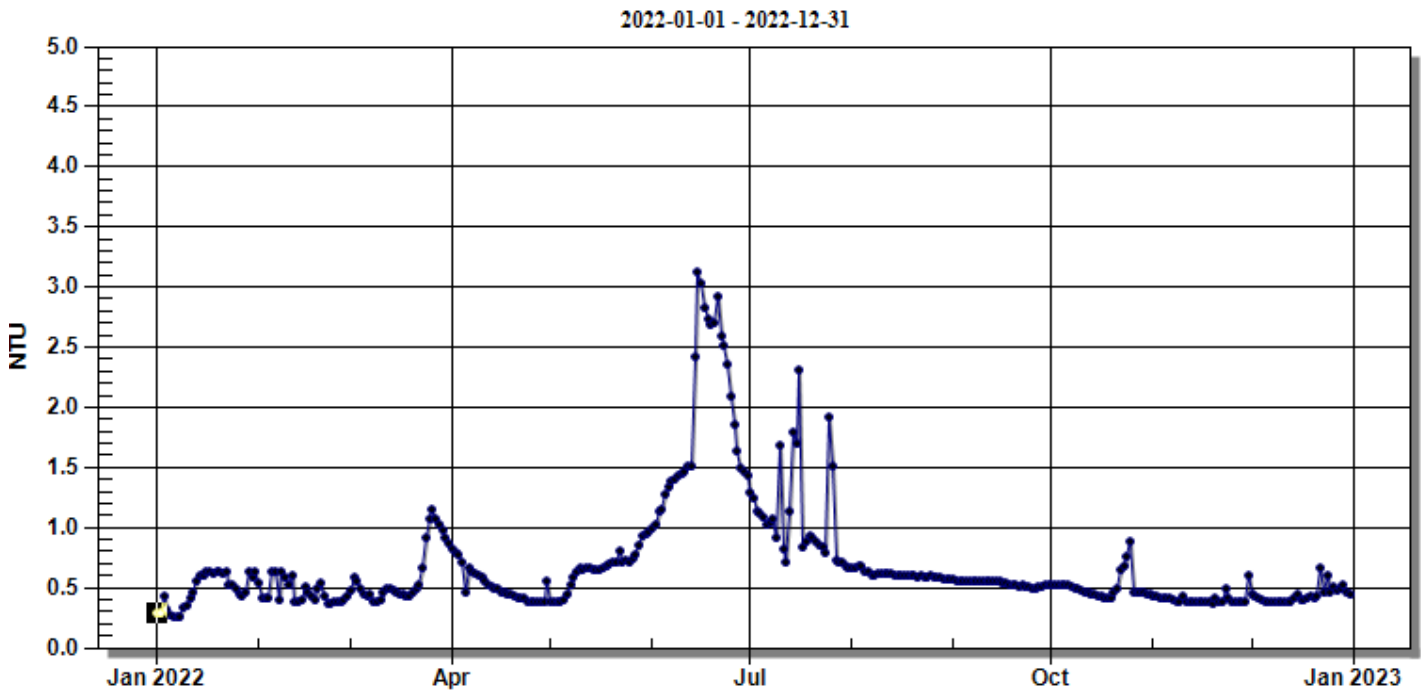


Figure 3: Dietrich (Star Place) Turbidity

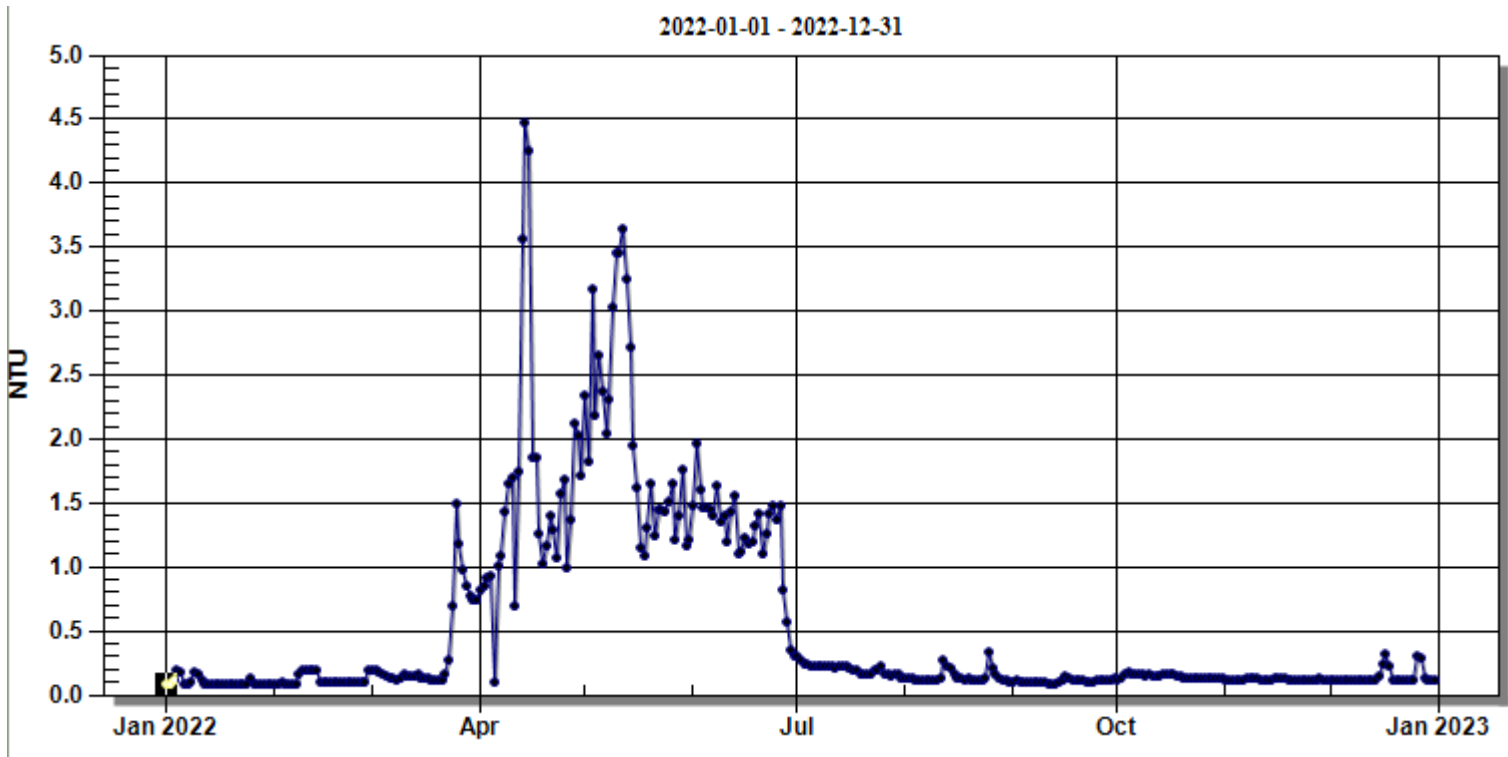
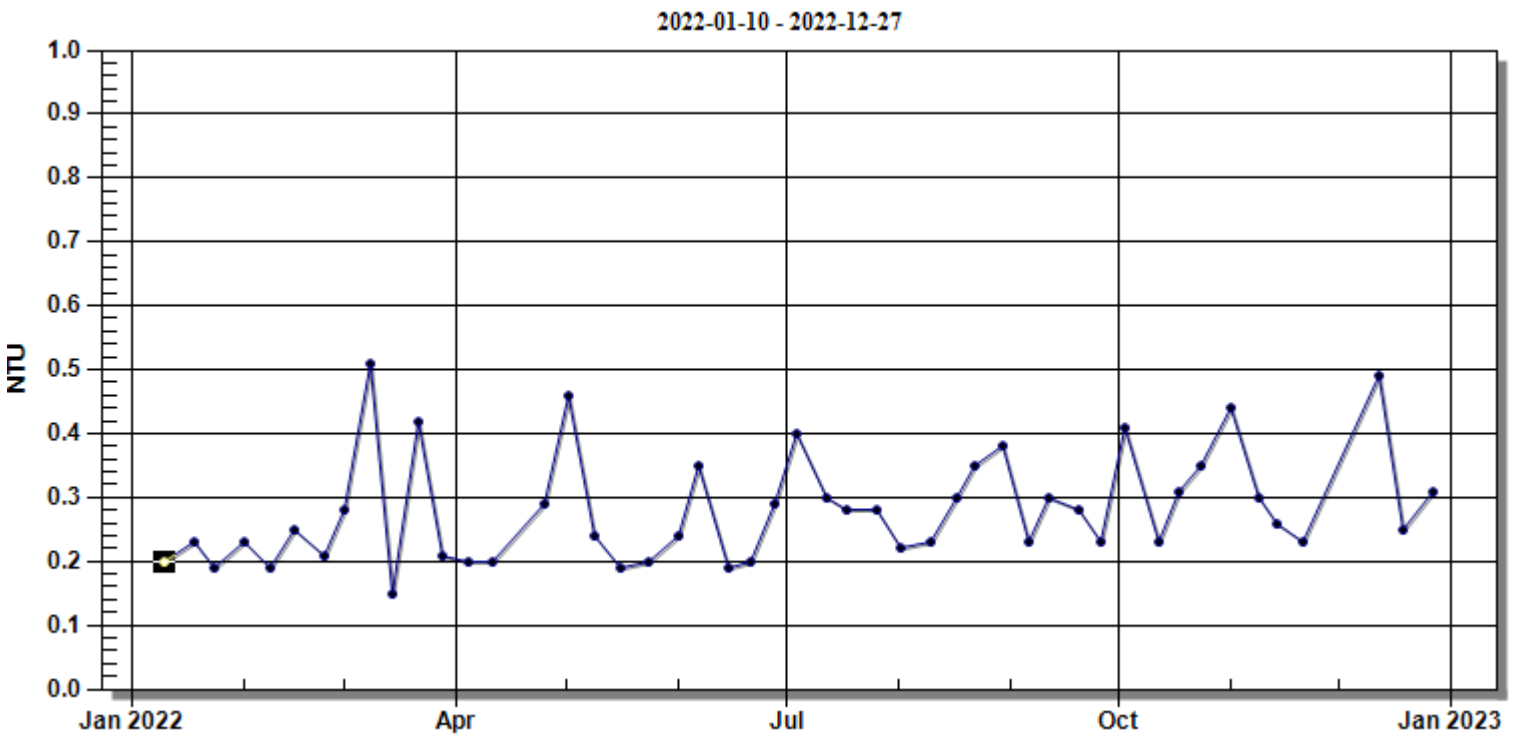


Figure 4: Upper Fintry/Valley of the Sun/Shalal Road Turbidity



15.0 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 the IH 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

**Regional District of Central Okanagan
Amended Bylaws 1370, 1442, 1436, 1438, 1440**

Appendix 2

Additional Chemical Data

Appendix 3

RDCO Monthly Water System Data