



Notice of Meeting and Meeting Agenda Fulford Water Service Commission

Monday, October 21, 2024

1:00 PM

SIMS Boardroom
124 Rainbow Road
Salt Spring Island BC

Annual General Meeting

MS Teams Link: [Click here](#)

C. Eyles (Chair), G. Holman, A. Martin, D. Thompson, B. Walker

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

Purpose of the Annual General Meeting

The agenda for the Annual General Meeting (AGM) is approved by the members of the Commission. The purposes (and hence the agenda items) of the meeting are:

- To have the last year's AGM minutes approved (by Commission members), and to present reports on the work of the Commission on the past year's operation, maintenance, capital upgrades and financial information of the service to the service residents and owners,*
- To nominate members for appointment to the Commission, and*
- To enable the public to share comments on subjects which relate to the work of the Commission. The Commission can identify (under "new business") issues on which it wants feedback at the meeting. Motions raised by the public at the AGM will be considered by the commission at a subsequent regular meeting.*

The Annual General Meeting is for the 2023 fiscal year

1. Territorial Acknowledgment

2. Approval of Agenda

3. Adoption of Minutes

3.1. [24-1055](#) Minutes of June 12, 2023 and May 24, 2024 Fulford Water Service Commission

Recommendation: That the minutes of the following meetings be adopted as presented:

- June 12, 2023 Annual General Meeting (AGM)
- June 12, 2023 Special Meeting
- May 24, 2024 Special Meeting

Attachments: [Minutes: June 12, 2023 AGM](#)
[Minutes: June 12, 2023 Special Meeting](#)
[Minutes: May 24, 2024 Special Meeting](#)

4. Director and Chair's Report

5. Report

5.1. [24-705](#) Fulford Water Service Annual Report 2023

Recommendation: There is no recommendation. This report is for information only.

Attachments: [Fulford Water Service Annual Report 2023](#)

6. Election of Commissioner

7. New Business

None

8. Outstanding Business

None

10. Adjournment

Next Meeting:

*-Monday, October 21, 2024, at 02:00pm in the Salt Spring Island Multi Space (SIMS)
Boardroom, 124 Rainbow Road, Salt Spring Island, BC V8K 2V5*



Making a difference...together

**Minutes of the Annual General Meeting of the Fulford Water Service Commission
Held June 12, 2023 for the 2022 Fiscal Year at the Salt Spring Island Multi Space (SIMS)
Boardroom, 124 Rainbow Road, Salt Spring Island, BC**

DRAFT

Present: **Director:** Gary Holman
 Commission Members: Carole Eyles, Alan Martin and Bren Walker
 Staff: Karla Campbell, Senior Manager, Salt Spring Island Electoral Area,
 Dean Olafson, Manager SSI Engineering, Dan Robson, Manager, Saanich
 Peninsula and Gulf Islands Operations (Via Zoom), Lia Xu, Manager, Finance
 Services (Via Zoom), and Shayla Burnham, Recording Secretary

These minutes follow the order of the agenda although the sequence may have varied.

1. Territorial Acknowledgement / Call Meeting to Order

A Territorial Acknowledgement was provided by Commissioner Eyles and the meeting was called to order at 10:00am.

2. Approval of Agenda

MOVED By Commissioner Eyles, **SECONDED** by Commissioner Martin, that the Fulford Water Service Commission approve the Monday, June 12, 2023 Annual General Meeting for the 2022 fiscal year as presented.

CARRIED

4. Adoption of Minutes of the 2021 Annual General Meeting held on June 20, 2022

MOVED By Commissioner Eyles, **SECONDED** by Commissioner Walker, that the Fulford Water Service Commission adopt the minutes of the 2021 Annual General Meeting held on June 3, 2022 as presented.

CARRIED

MOVED By Commissioner Eyles, **SECONDED** by Commissioner Martin, that the Fulford Water Service Commission adopt the Special minutes of April 14, 2023 as presented.

CARRIED

5. Director and Chairs Report

There was no report.

6. Report

6.1 Annual Report for the 2022 Fiscal Year

- McElhanney report discussed
- Security fence completed
- New strategy for recording leaks

There is no recommendation. This report is for information only.

7. New Business

Don Thompson submitted a nomination to be appointed to the commission.

The chair called for nominations a second time.

Hearing no further nominations the chair that requested the Capital Regional District Board appoint Don Thompson to the Commission for the August 1, 2023 to December 31, 2024 term.

8. Outstanding Business

- Discussion regarding capacity to system for June-August.
- Moss to be removed from treatment plant roof

Carole Eyles stated her intent to serve on the Commission for the January 1, 2024 to December 31, 2025 term.

9. Next Meeting – TBD

10. Adjournment

MOVED By Commissioner Eyles, that the Cedar Lane Water Service Commission adjourn the meeting at 10:52am.

CHAIR

SENIOR MANAGER



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Minutes of the Fulford Water Service Commission Special Meeting
Held June 12, 2023 at the Salt Spring Island Multi Space (SIMS) Boardroom, 124 Rainbow Road, Salt Spring Island, BC

DRAFT

Present: **Director:** Gary Holman
 Commission Members: Carole Eyles, and Alan Martin
 Staff: Karla Campbell, Senior Manager, Salt Spring Island Electoral Area,
 Dean Olafson, Manager SSI Engineering, Dan Robson, Manager, Saanich
 Peninsula and Gulf Islands Operations (Via Zoom), and Shayla Burnham,
 Recording Secretary
 Regrets: Bren Walker

These minutes follow the order of the agenda although the sequence may have varied.

The meeting was called to order at 10:43am.

1. Approval of Agenda

MOVED By Commissioner Eyles, **SECONDED** by Commissioner Martin, that the Fulford Water Service Commission approve the Monday, June 12, 2023, Special Meeting agenda as presented.

CARRIED

2. Adoption of Minutes – None

3. Report

3.1 Request Additional Funds to Complete 2023 Capital Works Projects

That the Fulford Water Service Commission recommends to the Capital Regional District Board that the Fulford 2023-2027 Five-Year Capital Plan be amended to increase:

1. The project budget for the installation of a turbidity meter on the influent line at the water treatment plant (22-02) by an additional \$3,500, from \$4,500 to \$8,000, to be funded from the Capital Reserve Fund (CRF).
2. The project budget for the replacement of the impellers in the pumps at the Sunnyside pump station (23-01) by an additional \$4,400, from \$6,600 to \$11,000, to be funded from the Capital Reserve Fund (CRF).

CARRIED

4. **New Business** – None
5. **Outstanding Business** – None
6. **Next Meeting** – TBD
7. **Adjournment**

MOVED By Commissioner Eyles, that the Fulford Water Service Commission adjourn the meeting at 10:46am.

CHAIR

SENIOR MANAGER



Making a difference...together

**Minutes of the Special Meeting of the Fulford Water Services Commission
Held Friday, May 24, 2024 at the Salt Spring Island Multi-Space (SIMS)
124 Rainbow Rd, Salt Spring Island, BC V8K 2K3**

DRAFT

Present: Commissioners: C. Eyles, G. Holman, A. Martin, D. Thompson, B. Walker,

Staff: K. Campbell, Senior Manager, Salt Spring Island Administration, D. Ovington, Parks and Recreation Manager, Senior Manager, Salt Spring Island Administration, M. Williamson, Committee Clerk, (Recorder)

These minutes follow the order of the agenda although the sequence may have varied.

The meeting was called to order at 10:00 am.

1. TERRITORIAL ACKNOWLEDGEMENT

The Senior Manager provided a Territorial Acknowledgement.

2. Election of Chair

The Senior Manager, Salt Spring Island Administration called for nominations for the position of Chair of the Ganges Sewer Local Services Commission for 2024.

Commissioner Martin nominated Commissioner Eyles, Commissioner Eyles accepted the nomination.

K. Campbell called for nominations a second time.

K. Campbell called for nominations a third time.

Hearing no further nominations, the Senior Manager, Salt Spring Island Administration declared Commissioner Eyles Chair of the Fulford Water Services Commission by acclamation.

3. APPROVAL OF AGENDA

MOVED by Director Walker, **SECONDED** by Commissioner Martin,
That agenda for the May 24, 2024, Special meeting of the Fulford Services
Commission be approved as circulated.

CARRIED

4. DELEGATIONS/PRESENTATIONS

4.1. Presentations

There were no presentations

4.2. Delegations

4.2.1. Delegation - David Fullbrook; Merchant House Capital Re: Item 5.1. 2621 and 2661 Fulford-Ganges Road - Application for Inclusion in the Fulford Water Local Service Area

Discussion regarding rules of quorum and public meetings.

D. Fullbrook spoke regarding item 5.1.

4.2.2. Delegation - Ian Peace; Resident Salt Spring Island Re: Item 5.1. 2621 and 2661 Fulford-Ganges Road - Application for Inclusion in the Fulford Water Local Service Area

I. Peace spoke regarding item 5.1.

5. Special Meeting Matters

5.1. 2621 and 2661 Fulford-Ganges Road - Application for Inclusion in the Fulford Water Local Service Area

-Properties along the new proposed pipeline would need to apply to be apart of the service area to connect

-Pipe sizes based on possible growth but not on required growth.

-4.5 L/s capacity of treatment plant. 2.8 L/s is projected capacity for project and current properties

MOVED by Director Holman, **SECONDED** by Commissioner Walker,
To defer further consideration of the proposal until responses to commission written questions are provided and discussed in person meeting with the proponent, consultants, and CRD staff engineer.

CARRIED

MOVED by Director Holman, **SECONDED** by Commissioner Martin,
Direct staff to request the proponent to develop estimates of full development build out including demographic changes in the service area and related water demand in consultation with islands trust.

CARRIED

D. Fullbrook stated their intent to withdraw application for inclusion.

6. ADJOURNMENT

MOVED by Commissioner Eyles, **SECONDED** by Commissioner Martin,
That the Local Community Commission adjourn the meeting at 11:48 am.

CARRIED

CHAIR

SENIOR MANAGER

Fulford Water Service

2023 Annual Report



INTRODUCTION

This report provides a summary of the Fulford Water Service for 2023. It includes a description of the service, summary of the water supply, demand, and production, drinking water quality, operations highlights, capital project updates and financial report.

SERVICE DESCRIPTION

The Fulford Water Utility is a semi-rural residential community located on Salt Spring Island. It services the Fulford Elementary School and a small commercial component, including the BC Ferries Terminal. The service was created in 1968 as the Fulford Water Improvement District and became a CRD service in 2004. The Fulford Water Utility (Figure 1) is comprised of 102 parcels of land with 95 single-family equivalents (SFE) as the use on some parcels represents more than one dwelling.

The utility obtains its drinking water from Lake Weston, a small lake that lies within an uncontrolled multi-use watershed outside and northeast of the service area. The Capital Regional District (CRD) holds two licenses to divert a total of up to 291.6 cubic metres per day and store up to 49,339 cubic metres. Lake Weston is estimated to have a total volume of 1,090,000 cubic metres. Lake Weston is subject to seasonal water quality changes and is affected by periodic algae blooms.

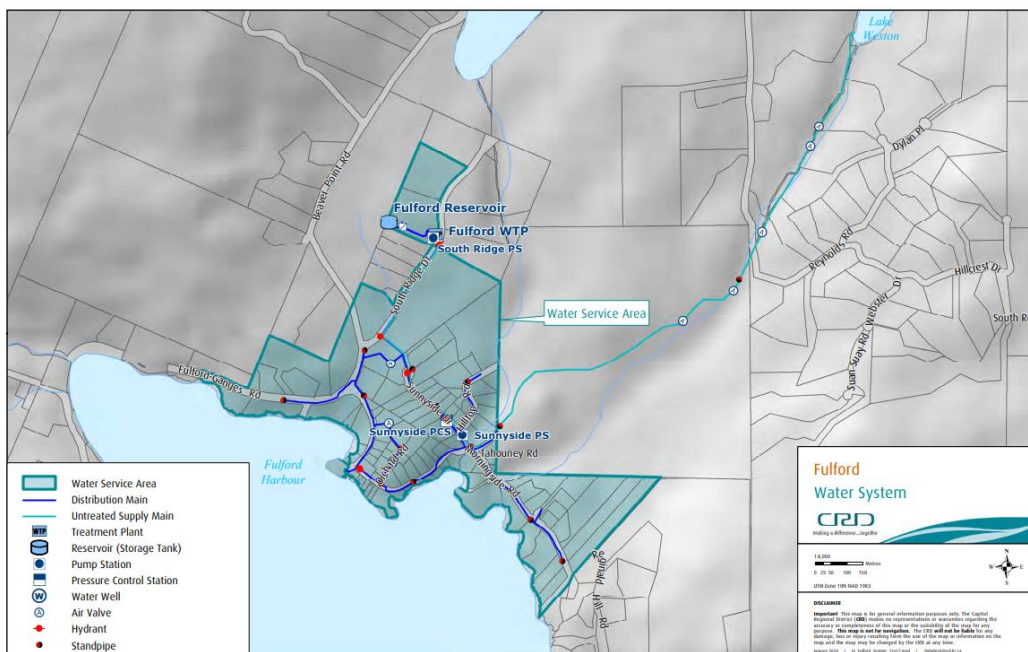


Figure 1: Fulford Water Service

The Fulford water system is primarily comprised of:

- a water treatment plant (WTP) that draws water from Lake Weston and treats it at a location on South Ridge Drive, adjacent to the Fulford Elementary School. The water is treated using

a rapid mix system, flocculation, dissolved air floatation (DAF) and filters, ultraviolet disinfection, then chlorination prior to being pumped, via the distribution system to a reservoir. The water treatment plant (WTP) design flow rate is 4.5 litres/sec (60 lpm);

- one raw water pump station on Sunnyside Drive near Hilltop Road (flow rate of two pumps running is 2.3 litres/sec (30 lpm);
- approximately 4,500 m of water distribution pipe;
- 1 water reservoir – 360 m³ (80,000 l);
- fire hydrants, standpipes, and gate valves;
- water service connections complete with water meters to commercial properties only;
- 1 pressure regulating station (PCS) on Sunnyside Drive near Hilltop Road.

WATER PRODUCTION AND DEMAND

Annual water production since 2018 is shown in Figure 2. A total of 28,881m³ of water was extracted from Lake Weston in 2023. This is a 15% decrease from the previous year and a 5% decrease from the 5-year rolling average.

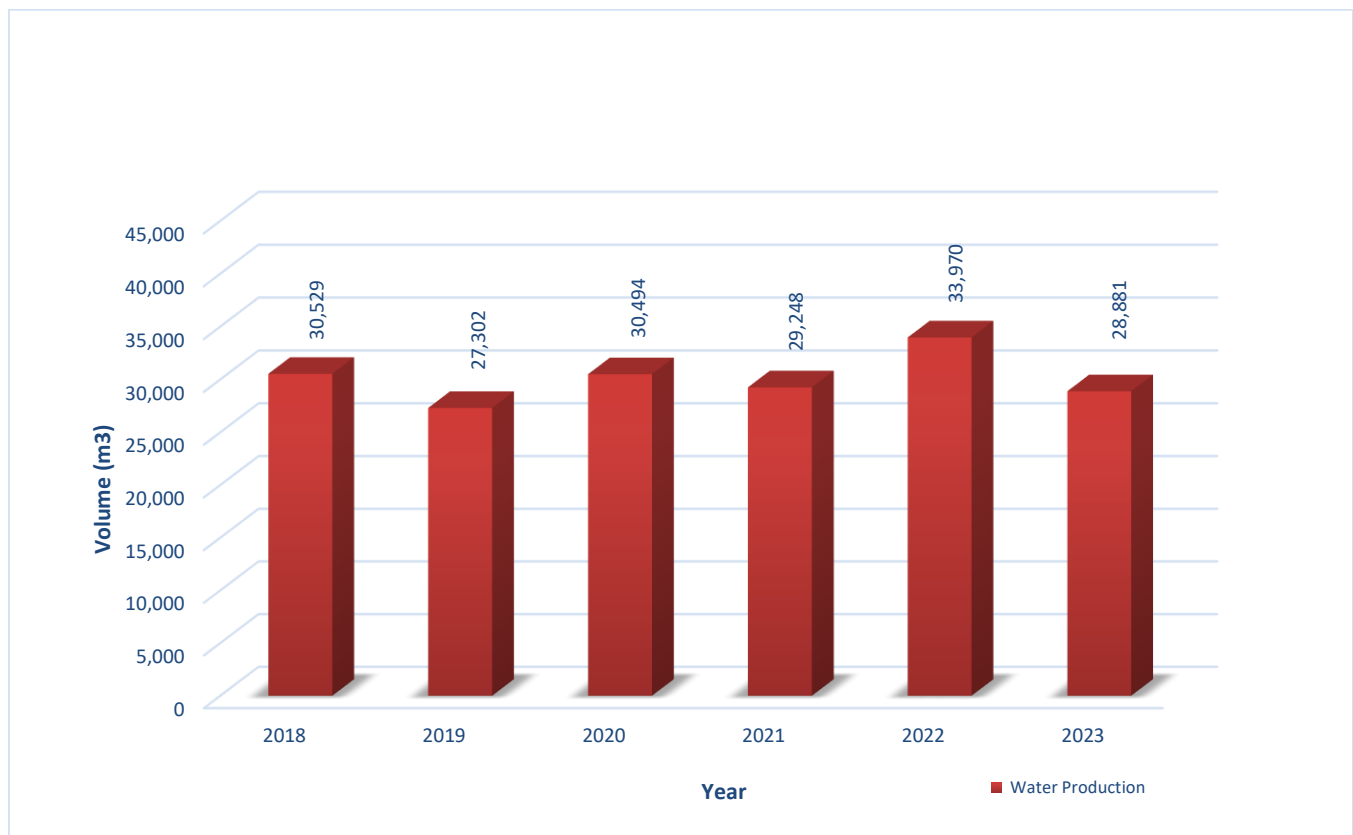


Figure 2: Fulford Water Service Annual Water Production

Water production by month for the past five years is shown in Figure 3. The monthly water production trends are typical for small water systems such as the Fulford water system. Water production from in the fall of 2020 and 2022 were higher due to water system leaks that were difficult to locate.

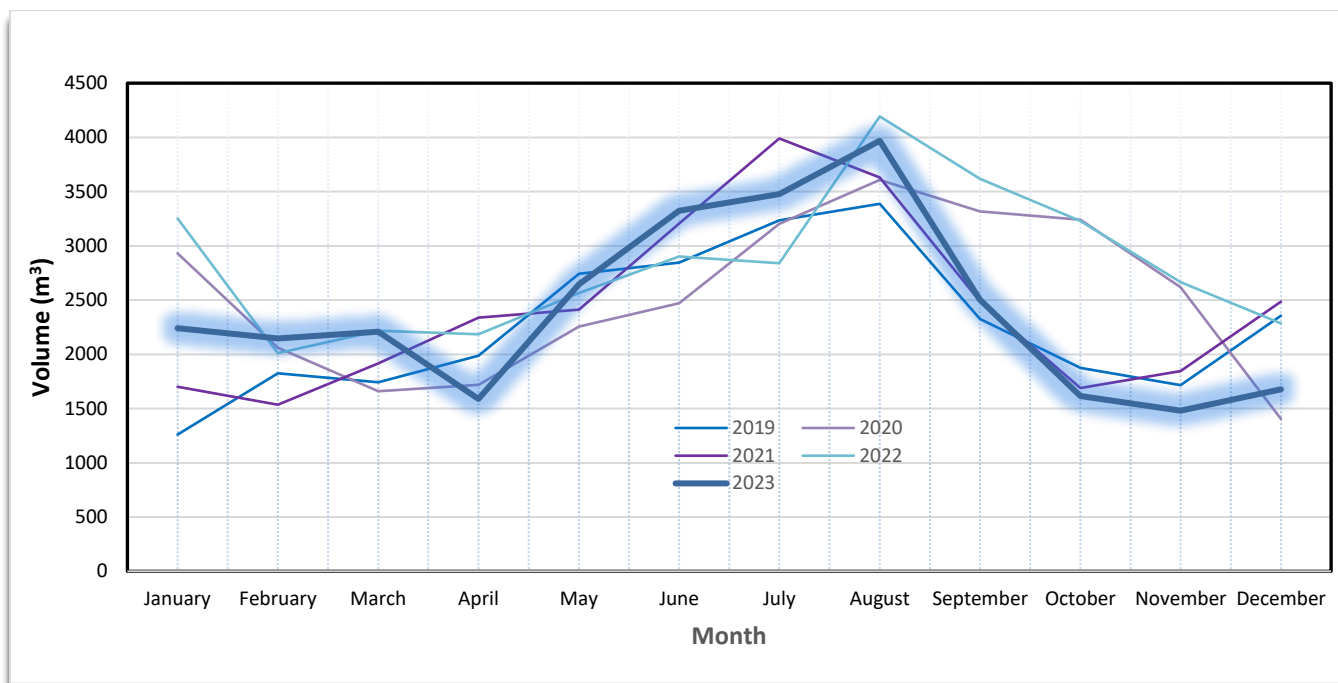


Figure 3: Fulford Water Service Monthly Water Production

The Fulford Water System does not have residential water meters and therefore the average per single-family equivalent (SFE) is simply a calculated value. Utilizing 95 SFE and deducting an allowance of 20% for non-revenue water such as water system leaks, fire hydrant usage and water system maintenance and operational use (water main flushing, filter system backwashing), the average SFE is 243m³ per year for 2023. This is a 15% decrease from the previous year.

WATER QUALITY

In general, the Fulford Water System provided good quality drinking water to its customers in 2023. Numerous samples for a variety of water quality parameters were collected and analysed throughout the year. The results confirmed that the DAF and disinfection treatment stages were effective in treating raw water from Lake Weston.

Typical Fulford drinking water quality characteristics for 2023 are summarized as follows:

Raw Water:

Lake Weston exhibited low concentrations of total coliform bacteria (TC) throughout most parts of the year with higher concentrations during the summer months. *E.coli* bacteria were only found in very low concentrations in the summer.

No parasitic cysts (*Giardia*) and no of parasitic oocysts (*Cryptosporidium*) were detected in the raw source water from the lake.

Raw water from the lake was slightly hard (annual median 34.95 mg/L CaCO₃).

A total organic carbon (TOC) concentration range from 5.3 to 5.7 mg/L indicates a mesotrophic (semi-productive) lake status. This has been consistent with historic data.

Four metal test results showed moderately low iron and manganese concentrations in the raw water, consistently below the aesthetic objective in the Guidelines for Canadian Drinking Water Quality (GCDWQ). Either of these metals in exceedance of the aesthetic objectives can cause, if untreated,

aesthetic issues such as water discolouration. The raw water colour was consistently elevated above the aesthetic objective, which may be a result of tannin and lignin, all natural components found in local lakes.

The raw water turbidity (cloudiness) was consistently below 1 NTU. In the past, Weston Lake has experienced occasionally elevated turbidity during heavy rainfall and runoff events. The absence of any periods with elevated turbidity indicates the lack of extreme rainfall events in 2023.

Treated Water:

Treated water was bacteriologically safe to drink; no indicator bacteria were found in any sample throughout the year.

Treated water turbidity was well below the GCDWQ limit of 1 NTU for the entire year.

TOC (median 2.25 mg/L) in the treated water was consistent with historic trends. As TOC is a precursor for disinfection by-products, concentrations consistently much higher than 2 mg/L can lead to exceedances with these substances.

Regulated disinfection by-products such as trihalomethanes (THM) were well below the GCDWQ limits (100 µg/L) with an annual average of 54.5 µg/L. Haloacetic acids (HAA) were not tested in 2023; historic data has shown that HAA concentrations are typically low when THM concentrations are low.

The water temperature was in exceedance of the aesthetic objective of 15°C from the end of May to September 2023. There is no mitigation for this.

The free chlorine residual concentrations in the distribution system were within the desired range (0.07 – 2.19 mg/L) and indicate a mostly effective secondary disinfection process. To achieve better residuals, distribution system ends should be flushed regularly during the summer months.

Table 1 and 2 below provide a summary of the 2023 raw and treated water test results.

Water Quality data collected from this drinking water system can be reviewed on the CRD website:

<https://www.crd.bc.ca/about/data/drinking-water-quality-reports/>

OPERATIONAL HIGHLIGHTS

The following is a summary of the major operational issues that were addressed by during the 2023 reporting period:

Water Treatment Plant:

- Replacement of Hand-Off-Auto (HOA) electrical switches.
- Electrical Improvements to Chlorine Pump and Chlorine Analyzer power source.
- Replaced a failed electrical component (Analog Input Card) on SCADA equipment.

Fulford Water System:

- Water leak investigation – High water consumption. Resulted in 3 service lines being abandoned.
- Water leak investigation – Public complaint. Water in the perimeter drains on Fulford-Ganges Rd.
- Water leak investigation—There was high water consumption. A new water main installation near Weston Creek needed repair work.
- Water leak investigation – High water consumption. Found a hose left running on a property.
- Troubleshooting water service connection at 2914 Fulford-Ganges Rd.

CAPITAL IMPROVEMENTS

The following is a summary of the major capital improvements, including year-end spending for 2023:

Weston Creek Watermain Crossing on Morningside Road (CE.507.4601): The water main along Morningside Road is exposed and spans Weston Creek, making it susceptible to damage by people, vehicles, rocks, or stream debris.

Project	Spending
Budget	\$169,100
Project Management	(\$83,456)
Design	(\$10,007)
Contract	(\$63,282)
Balance Remaining	\$12,355

Safe Work Procedures (CE.699.4504): The work scope includes reviewing and developing safe work procedures for operational and maintenance tasks. Ongoing as capital improvements necessitate.

Project	Spending
Budget	\$11,000
Project Management	(\$457)
Contract	(\$2,292)
Supplies/Materials	(\$209)
Balance Remaining	\$8,042

Power Generation Equipment Study (CE.735.4504): Preliminary investigation of electrical requirements for new onsite backup power.

Project	Spending
Budget	\$10,000
Project Management	(\$0)
Balance Remaining	\$10,000

Replacement of AC Water Pipelines – Study and Design (CE.794.6001): Investigation, analysis, criticality assessment and option review to replace the asbestos cement water supply and distribution lines for the Fulford water system.

Project	Spending
Budget	\$90,000
Project Management	(\$22,209)
Contract	(\$27,368)
Balance Remaining	\$40,423

Installation of Turbidity Meter on Influent Line (CE.794.1601): Supply and install a turbidity meter on the influent line to improve water quality monitoring and process operation.

Project	Spending
Budget	\$8,000
Project Management	(\$1,445)
Equipment	(\$0)
Balance Remaining	\$6,555

New Pump Impellers (CE.794.1701): Replacement of impellers of pumps at Sunnyside pump station to match WTP processing capacity.

Project	Spending
Budget	\$11,000
Project Management	(\$234)
Equipment	(\$0)
Balance Remaining	\$10,766

Fulford WTP Lifting Apparatus (CE.837.2001): Support for a lifting apparatus is required at ceiling level to lift the 80lb lid for the Saturator and the confined space entry apparatus.

Project	Spending
Budget	\$55,000
Project Management	(\$1,470)
Equipment	(\$0)
Balance Remaining	\$53,530

2023 FINANCIAL REPORT

Please refer to the attached 2023 Statement of Operations and Reserve Balances.

Revenue includes parcel taxes (Transfers from Government), fixed user fees (User Charges), water sales (Sale-Water), interest on savings (Interest earnings), transfers from the Operating Reserve Fund, and miscellaneous revenue such as late payment charges (Other revenue).

Expenses include all costs of providing the service. General government services include budget preparation, financial management, utility billing, and risk management. CRD Labour and Operating Costs include CRD staff time as well as the costs of equipment, tools, and vehicles. Debt servicing costs are interest and principal payments on long-term debt. Other Expenses include all other costs to administer and operate the water system, including insurance, supplies, water testing, and electricity.

The difference between Revenue and Expenses is reported as Net revenue (expenses). Any transfers to or from capital or reserve funds for the service (Transfers to own funds) are deducted from this amount and it is then added to any surplus or deficit carry forward from the prior year, yielding an Accumulated Surplus (or deficit). In alignment with Local Government Act Section 374 (11), any deficit must be carried forward and included in the next year's financial plan.

WATER SYSTEM PROBLEMS - WHO TO CALL:

To report any event or to leave a message regarding the Fulford water system, call either:

CRD water system *emergency call* centre: **1-855-822-4426 (toll free)**

1-250-474-9630 (toll)

CRD water system *general enquiries* (toll free): **1-800-663-4425**

When phoning with respect to an emergency, please specify to the operator, the service area in which the emergency has occurred.

Submitted by:	Jason Dales, Senior Manager B.Sc, WD IV, Infrastructure Operations
	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
	Dan Ovington, BBA , Senior Manager, Salt Spring Island Electoral Area
	Angela Linwood, CPA, CMA, Controller, Financial Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

Attachment: [2023 Statement of Operations and Reserve Balances](#)

For questions related to this Annual Report please email saltspring@crd.bc.ca

Table 1: 2023 Summary of Raw Water Test Results, Fulford Water System										
PARAMETER		2023 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2013 - 2022 ANALYTICAL RESULTS			
Parameter	Units of	Annual	Samples	Range		≤ = Less than or equal to		Samples	Range	
Name	Measure	Median	Analyzed	Minimum	Maximum		Median	Analyzed	Minimum	Maximum
ND means Not Detected by analytical method used										
Physical Parameters/Biological										
Colour, True	TCU	19.5	12	11	26	≤ 15 AO	21	91	1.2	34
Hardness as CaCO ₃	mg/L	34.95	4	32.8	37.2	No Guideline Required	34.6	28	28.9	61.3
pH	pH Units	7.8	2	7.6	8	7.0-10.5 AO	7.1	35	6.2	7.59
Carbon, total organic	mg/L	5.65	4	5.3	5.7		5.325	32	3.92	7
Turbidity	NTU	0.45	12	0.2	0.65		0.62	128	0.2	4.92
Water Temperature	Degrees C	13.7	36	7	20.5		12	513	2.5	20
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	120	11	< 1	420		26	125	<1	5500
<i>E. coli</i>	CFU/100 mL	< 1	12	< 1	1		< 1	128	<1	< 10
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2023					1110	39	90	3960
Parasites						No MAC Established				
<i>Cryptosporidium</i> , Total oocysts	oocysts/100 L	<1	2	<1	<1	Zero detection desirable	< 1	4	< 1	< 1
<i>Giardia</i> , Total cysts	cysts/100 L	<1	2	<1	<1	Zero detection desirable	< 1	4	< 1	< 1
Algal Toxins										
Total Microcystins	ug/L	Last analyzed in 2011				1.5 MAC				
Metals										
Aluminum	ug/L as Al	16.8	4	7.3	32.4	2900 MAC / 100 OG	23.4	28	5.5	4600
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	28	< 0.5	< 0.5
Arsenic	ug/L as As	0.245	4	0.23	0.26	10 MAC	0.255	28	0.2	0.82
Barium	ug/L as Ba	6.45	4	5.7	6.9	100 MAC	6.45	28	5.5	< 9
Beryllium	ug/L as Be	< 0.1	4	< 0.1	< 0.1		< 0.1	28	< 0.1	< 3
Bismuth	ug/L as Bi	< 1	4	< 1	< 1		< 1	24	< 1	< 1
Boron	ug/L as B	< 50	4	< 50	< 50	5000 MAC	< 50	28	< 50	139
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	7 MAC	< 0.01	28	< 0.01	0.2
Calcium	mg/L as Ca	11.3	4	10.4	12	No Guideline Required	11.15	28	9.2	17.5
Chromium	ug/L as Cr	< 1	4	< 1	< 1	50 MAC	< 1	28	< 1	< 10
Cobalt	ug/L as Co	< 0.2	4	< 0.2	< 0.2		< 0.2	28	< 0.2	< 20
Copper	ug/L as Cu	8.175	4	6.22	14.3	2000 MAC / ≤ 1000 AO	< 8	28	5.92	55
Iron	ug/L as Fe	59.55	4	42.1	102	≤ 300 AO	81.7	28	< 10	285
Lead	ug/L as Pb	0.3	4	0.28	0.63	5 MAC	0.4	28	<0.2	1.08
Lithium	ug/L as Li	< 2	4	< 2	< 2		< 2	15	< 2	< 2
Magnesium	mg/L as Mg	1.68	4	1.58	1.74	No Guideline Required	1.64	28	1.44	4.28
Manganese	ug/L as Mn	3.7	4	2.9	14.3	120 MAC / ≤ 20 AO	6.85	28	1.1	48.4
Molybdenum	ug/L as Mo	< 1	4	< 1	< 1		< 1	28	< 1	< 20
Nickel	ug/L as Ni	3.4	4	1.6	5.1		< 1	28	< 1	< 50
Potassium	mg/L as K	0.616	4	0.609	0.677		0.5565	28	0.032	0.672
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	27	< 0.1	< 0.5
Silicon	ug/L as Si	1125	4	601	2840		2015	28	2.48	10800
Silver	ug/L as Ag	< 0.02	4	< 0.02	< 0.02	No Guideline Required	< 0.02	28	< 0.02	< 10
Sodium	mg/L as Na	5.49	4	5.17	5.88	≤ 200 AO	5.32	28	3.98	9.66
Sulphur	mg/L as S	< 3	4	< 3	< 3		< 3	24	< 3	< 3
Strontium	ug/L as Sr	31.2	4	30.3	35	7000 MAC	31.75	28	25	57
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	27	< 5	< 20
Thallium	ug/L as Tl	< 0.01	4	< 0.01	< 0.01		< 0.01	24	< 0.01	< 0.05
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	28	< 5	< 10
Uranium	ug/L as U	< 0.1	4	< 0.1	< 0.1	20 MAC	< 0.1	24	< 0.1	< 0.1
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	28	< 5	< 10
Zinc	ug/L as Zn	13.85	4	12.8	17.5	≤ 5000 AO	14.15	28	< 1	297
Zirconium	ug/L as Zr	< 0.1	4	< 0.1	< 0.1		< 0.1	24	< 0.1	< 0.5

Table 2: 2023 Summary of Treated Water Test Results, Fulford Water System										
PARAMETER		2023 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2013 - 2022 RESULTS			
Parameter	Units of	Annual	Samples	Range		≤ = Less than or equal to		Samples	Range	
Name	Measure	Median	Analyzed	Min.	Max.		Median	Analyzed	Minimum	Maximum
ND means Not Detected by analytical method used										
Physical Parameters										
Carbon, Total Organic	mg/L as C	2.25	4	2	2.5		2.25	40	0.23	3.45
Colour, True	TCU	< 2	12	< 2	4	≤ 15 AO	< 2	25	0.7	23
Hardness as CaCO ₃	mg/L	34.7	4	32.6	36.4	No Guideline Required	33.3	21	28.8	46.7
pH	pH units	7	4	6.9	7.1	7.0-10.5 AO	6.9	36	6.1	7.76
Turbidity	NTU	0.1	12	0.05	0.2	1 MAC and ≤ 5 AO	< 0.14	159	0.06	4.71
Water Temperature	Degress C	11	232	4.5	22		11	2656	0.5	24
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	< 1	76	< 1	< 1	0 MAC	< 1	558	0	9
<i>E. coli</i>	CFU/100 mL	< 1	76	< 1	< 1	0 MAC	< 1	558	<1	< 1
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2023				No Guideline Required	< 10	40	< 10	110
Algal Toxins										
Total Microcystins	ug/L	Last analyzed in 2011				1.5 MAC				
Disinfectants										
Disinfectants										
Chlorine, Free Residual	mg/L as Cl ₂	0.575	250	0.07	2.19	No Guideline Required	0.66	2815	0.16	2.43
Chlorine, Total Residual	mg/L as Cl ₂	1.07	59	0.03	2.2	No Guideline Required	0.79	2648	0.2	2.24
Disinfection By-Products										
Trihalomethanes (THMs)										
Bromodichloromethane	ug/L	11.15	4	9.1	16		12.8	39	8	24
Bromoform	ug/L	< 1	4	< 1	< 1		< 1	39	< 0.1	< 1
Chloroform	ug/L	42	4	34	57		51	39	27	130
Chlorodibromomethane	ug/L	1.8	4	1	2.6		1.6	39	<0.1	5.46
Total Trihalomethanes	ug/L	54.5	4	44	75	100 MAC	66.7	39	38.8	160
HAA5	ug/L	Not tested in 2023					28.6	9	5.1	44
Metals										
Aluminum	ug/L as Al	13.15	4	9.5	14.5	2900 MAC / 100 OG	12.05	22	7.3	228
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	21	< 0.5	< 0.5
Arsenic	ug/L as As	0.13	4	0.11	0.18	10 MAC	0.145	21	<0.1	0.837
Barium	ug/L as Ba	6	4	5.5	6.5	100 MAC	6.3	21	5.2	< 9
Beryllium	ug/L as Be	< 0.1	4	< 0.1	< 0.1		< 0.1	21	< 0.1	< 3
Bismuth	ug/L as Bi	< 1	4	< 1	< 1		< 1	16	< 1	< 1
Boron	ug/L as B	< 50	4	< 50	< 50	5000 MAC	< 50	21	< 50	161
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	7 MAC	< 0.01	21	< 0.01	0.352
Calcium	mg/L as Ca	11.15	4	10.4	11.8	No Guideline Required	10.8	21	9.2	15.6
Chromium	ug/L as Cr	< 1	4	< 1	< 1	50 MAC	< 1	21	< 1	< 10
Cobalt	ug/L as Co	< 0.2	4	< 0.2	< 0.2		< 0.2	21	< 0.2	< 20
Copper	ug/L as Cu	20.15	4	2.99	50.1	2000 MAC / ≤ 1000 AO	17.1	21	< 8	130
Iron	ug/L as Fe	< 5	4	< 5	< 5	≤ 300 AO	< 5	21	< 5	47
Lead	ug/L as Pb	0.86	4	0.52	1.11	5 MAC	< 0.5	21	0.23	2.43
Lithium	ug/L as Li	< 2	4	< 2	< 2		< 2	9	< 2	< 2
Magnesium	mg/L as Mg	1.66	4	1.59	1.74	No Guideline Required	1.59	21	0.886	1.85
Manganese	ug/L as Mn	< 1	4	< 1	< 1	120 MAC / ≤ 20 AO	< 1	21	< 1	< 4
Molybdenum	ug/L as Mo	< 1	4	< 1	< 1		< 1	21	< 1	< 20
Nickel	ug/L as Ni	< 1	4	< 1	< 1		< 1	21	< 1	< 50
Potassium	mg/L as K	0.6145	4	0.596	0.651		0.551	21	< 0.03	0.624
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	20	< 0.1	< 0.1
Silicon	ug/L as Si	1002.5	4	598	2640		1880	21	317	3390
Silver	ug/L as Ag	< 0.02	4	< 0.02	< 0.02	No Guideline Required	< 0.02	21	< 0.02	< 10
Sodium	mg/L as Na	7.46	4	7.1	8.11	≤ 200 AO	6.99	21	4.56	7.93
Sulphur	mg/L as S	< 3	4	< 3	< 3		< 3	16	< 3	< 3
Strontium	ug/L as Sr	30.6	4	29.5	35.6	7000 MAC	31.3	21	26	39
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	20	< 5	< 20
Thallium	ug/L as Tl	< 0.01	4	< 0.01	< 0.01		< 0.01	16	< 0.01	< 0.01
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	21	< 5	< 10
Uranium	ug/L as U	< 0.1	4	< 0.1	< 0.1	20 MAC	< 0.1	16	< 0.1	< 0.1
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	21	< 5	< 10
Zinc	ug/L as Zn	44.4	4	13.8	171	≤ 5000 AO	21.5	21	< 1	186
Zirconium	ug/L as Zr	< 0.1	4	< 0.1	< 0.1		< 0.1	16	< 0.1	< 0.1