



Capital Regional District

Notice of Meeting and Meeting Agenda Sticks Allison Water Local Service Committee

Tuesday, June 25, 2024

9:30 AM

Goldstream Conference Room, 479 Island
Highway, Victoria, BC

For members of the public who wish to listen to the meeting via telephone please call 1-833-353-8610 and enter the Participant Code 1911461 followed by #. You will not be heard in the meeting room but will be able to listen to the proceedings.

MEMBERS:

H. Schofield (Chair); J. Fenby (Vice Chair); P. Brent (EA Director); C. Menyhart; B. Russell

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

- 3.1. [24-666](#) Minutes of the February 14, 2024 Sticks Allison Water Local Service Committee

Recommendation: That the minutes of the February 14, 2024 meeting be adopted.

Attachments: [Minutes - February 14, 2024](#)

4. Chair's Remarks

5. Presentations/Delegations

Delegations will have the option to participate electronically. Please complete the online application for "Addressing the Board" on our website and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the Sticks Allison Water Local Service Committee at iwsadministration@crd.bc.ca. Requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.

6. Senior Manager's Report

- 6.1. Union of British Columbia Municipalities Grant for Disaster Risk Reduction - Climate Adaptation 2024

7. Commission Business

7.1. [24-638](#) 2023 Annual Report

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

Attachments: [Staff Report: 2023 Annual Report](#)
[Appendix A](#)

7.2. [24-573](#) Asset Replacement Report Card

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

Attachments: [Staff Report: Asset Replacement Report Card](#)
[Appendix A](#)

7.3. [24-562](#) Capital Project Status Reports and Operational Updates - June 2024

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

Attachments: [Staff Report: Project and Operations Update - June 2024](#)

8. Correspondence

9. New Business

10. Adjournment

Next Meeting: November 2024

MINUTES OF A MEETING OF THE Sticks Allison Water Local Service Committee, held Wednesday, February 14, 2024 at 9:30 a.m., In the Goldstream Meeting Room, 479 Island Highway, Victoria, BC

PRESENT: Committee Members: H. Schofield (Chair) (EP); J. Fenby (Vice Chair) (EP); P. Brent (EA Director) (EP); C. Menyhart (EP); B. Russell (EP)

Staff: J. Marr, Senior Manager, Infrastructure Engineering; D. Robson, Manager, Saanich Peninsula & Gulf Island Operations; M. Risvold (Recorder)

EP = Electronic Participation

The meeting was called to order at 9:32 am.

1. ELECTION OF CHAIR

The Senior Manager called for nominations for the position of Chair of the Sticks Allison Water Local Service Committee for the term ending December 31, 2024.

B. Russell nominated H. Schofield. H. Schofield accepted the nomination.

The Senior Manager called for nominations a second time.

The Senior Manager called for nominations a third and final time.

Hearing no further nominations, the Senior Manager declared H. Schofield Chair of the Sticks Allison Water Local Service Committee for the term ending December 31, 2024, by acclamation.

2. ELECTION OF VICE CHAIR

The Chair called for nominations for the position of Vice Chair of the Sticks Allison Water Local Service Committee for the term ending December 31, 2024.

C. Menyhart nominated J. Fenby. J. Fenby accepted the nomination.

The Chair called for nominations a second time.

The Chair called for nominations a third and final time.

Hearing no further nominations, the Chair declared J. Fenby Vice Chair of the Sticks Allison Water Local Service Committee for the term ending December 31, 2024, by acclamation.

3. APPROVAL OF AGENDA

MOVED by H. Schofield, **SECONDED** by B. Russell,
That the agenda be approved.

CARRIED

4. ADOPTION OF MINUTES

The following amendments were added to the November 7, 2023, minutes.

Item 6.1:

- “The CRD is not underfunded in the sense that it meets current obligations.
- A cap of about \$5,000 on the CRF seems reasonable.
- Majority of Sticks Allison stakeholders may prefer to "self-fund" the reserve, by using personal funds at the time needed, in preference to having CRD hold the funds.
- The committee is aware of future infrastructure needs over the next decade or so and is taking that into consideration.”

Item 8.2:

“Staff advised the fire service requires 1,000 litres per minute over a two-hour period which the current system is unable to provide. As per the senior manager's email to the chair on November 3, 2023, the fire underwriters survey requires a water system in Canada to be capable of delivering not less than 1000 liters per minute for two hours to qualify for insurance, which is also in addition to the domestic consumption at the maximum daily demand. Given the size of our storage tank and pumping rate, staff does not see how the Sticks Allison system could meet this requirement. Staff added that hydrants also serve an important maintenance function for system flushing and would be able to supplement fire protection at a throttled rate during an emergency through a gate valve. The information has been provided to the South Galiano Fire Service. Tank capacity is 90,000 litres.”

MOVED by H. Schofield, **SECONDED** by B. Russell,
That the minutes of the November 7, 2023 meeting be adopted as amended.

CARRIED

5. CHAIR'S REMARKS

The Chair made the following remarks:

“Thanks to everyone on this committee for their effort and commitment to serving the stakeholders. Special thanks to Brian Russell who has supported this committee as Chair for so many years and been diligent in attention to detail and bringing his knowledge of water chemistry and potability. And thanks to CRD staff for providing this meeting session and attending today. I appreciate how we all work together to make 37 stakeholders have fresh clean water every minute of every day all year around. I think it's pretty impressive how it all hangs together.

I've noted several new residents of our tiny water community during the past year, and there is still a lot of potential for more since cottage buildout has not yet reached the maximum possible. As we see increased water usage and increasing drought, our efforts here on the committee become even more significant. I note that the rainfall in 2023 is somewhere between 3/4 and 2/3 of the average and that's worrying. Reducing our consumption per capita even though the population grows, encouraging conservation, and suggesting rainwater capture are all increasingly important goals. Thanks, all.”

6. PRESENTATIONS/DELEGATIONS

There were none.

7. SENIOR MANAGER'S REPORT

D. Robson advised he is taking on a more senior role with the committee moving forward and is looking forward to working with the committee in 2024.

Staff advised that 9 of the 37 stakeholders receive their bills electronically. The committee noted that when an insert is included with the paper bills, the 9 stakeholders receiving electronic bills do not receive the inserts. Staff will follow-up with the Water Billing department to determine the process for electronic water bill inserts.

The committee requested to receive the previous year's Annual Report data before June. Staff advised the data is collected and unaudited until it has been reviewed in the first quarter. The data can be provided to the committee via email but cautioned the committee as it is raw and unaudited data. Staff also noted that if Water Billing detects high consumption, they have processes in place to notify the residence. The committee requested to receive the data, acknowledging that the data will be provided unaudited. Discussion ensued.

Requests from the committee:

- Staff to follow up with Water Billing to determine the process for electronic water bill inserts.
- Staff to confirm the percentage of water use that triggers an alert with Water Billing.

8. COMMITTEE BUSINESS

8.1. Project and Operations Update

D. Robson spoke to item 8.1.

Staff responded to the following questions:

- If there was an official arborist report completed prior to removing the danger tree. Staff advised an assessment was provided on the overall health of the tree, but it was not an official arborist report.
- If there was a request for proposal (RFP) to choose the contractor for the danger tree removal. Staff advised CRD's procurement policy procedures were followed due to the dollar value being under \$5,000.
- Why the committee was not consulted prior to engaging services required to remove the danger tree. Staff advised this was an operating administrative action which is spent under the operating budget as it is not a capital project. Staff do not typically seek committee approval for operating costs as the authority is granted to staff through the budgeting process and is outlined in the bylaw.

Staff welcomed all feedback and cautioned the committee of overstepping into the operational management of the system which is defined by in the bylaws. Staff noted they are open to improving communications, however, cautioned the committee with directing the overall operation of the service. The committee advised they would appreciate consultation to reduce costs and improve efficiency. Discussion ensued.

Requests from the committee:

- Staff to send CRD's Procurement Policy to the Chair.

9. STICKS ALLISON WATER LOCAL SERVICE COMMITTEE MEETING SCHEDULE

Regular meetings of the Sticks Allison Water Local Service Committee shall be held in the Goldstream Conference Room, 479 Island Highway, Victoria, BC in February, June, and in November to approve the Operating and Capital Budget.

10. CORRESPONDENCE

There was none.

11. NEW BUSINESS

There was none.

12. ADJOURNMENT

MOVED by H. Schofield, **SECONDED** by B. Russell,
That the February 14, 2024 meeting be adjourned at 10:08 am.

CARRIED

CHAIR

SECRETARY

Sticks Allison Water System

2023 Annual Report



Introduction

This report provides a summary of the Sticks Allison Water Service for 2023 and 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 community of Sticks Allison is a rural residential development located on the north side of Galiano Island in the Southern Gulf Islands Electoral Area which was originally serviced by a private water utility. In 1996 the service converted to the Capital Regional District (CRD). The Sticks Allison water service (Figure 1) is made up of 38 parcels encompassing a total area of approximately 23 hectares. Of the 38 parcels, 37 were customers connected to the water system in 2023.

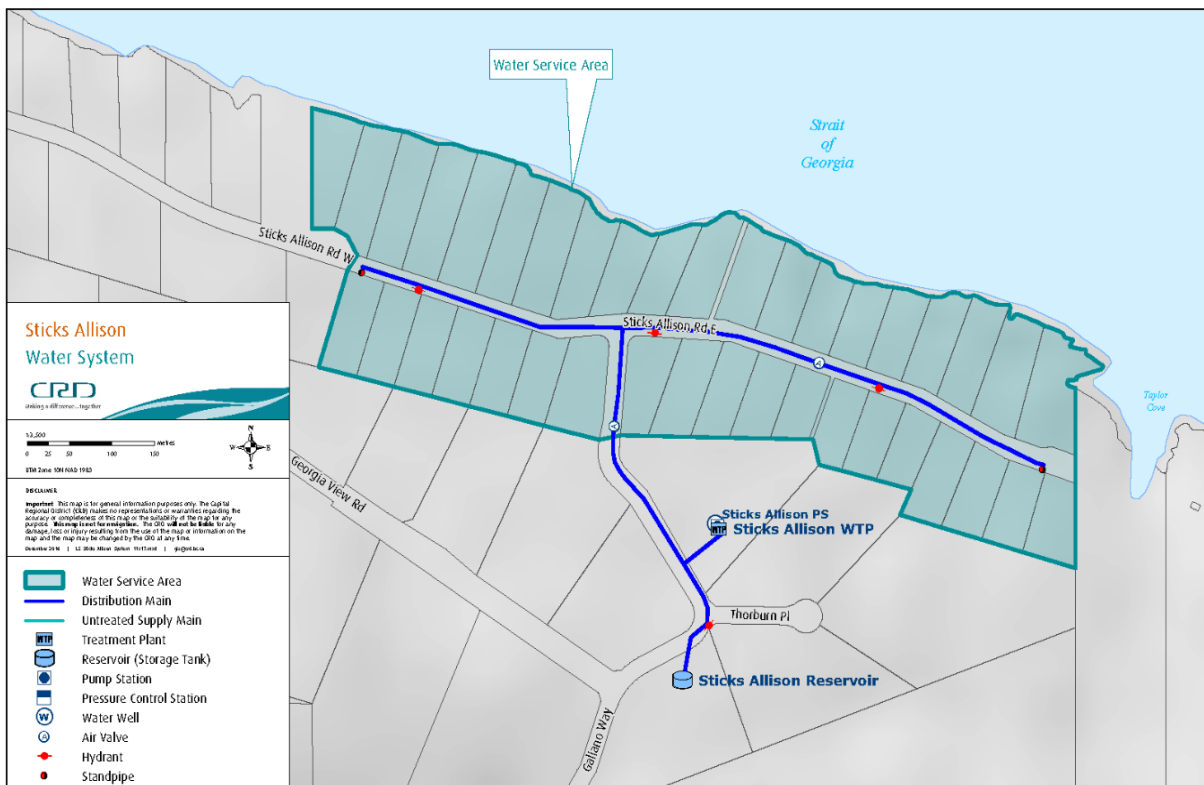


Figure 1: Map of Sticks Allison Water System

The Sticks Allison water system is primarily comprised of:

- One groundwater well, related pumping and control equipment and building.
- Disinfection process equipment (ultraviolet light and chlorine).
- One steel storage tank (total volume is 90 cubic meters).
- Distribution system (approx. 1,400 meters of water mains).
- Other water system assets: service connections and meters, five hydrants, two standpipes, 10 gate valves, Supervisory Control and Data Acquisition (SCADA) system and auxiliary generator.

Water Supply

Groundwater supply monthly water levels are highlighted for 2023 in Figure 2. Groundwater levels for the most part during 2023 are within the typical historical range.

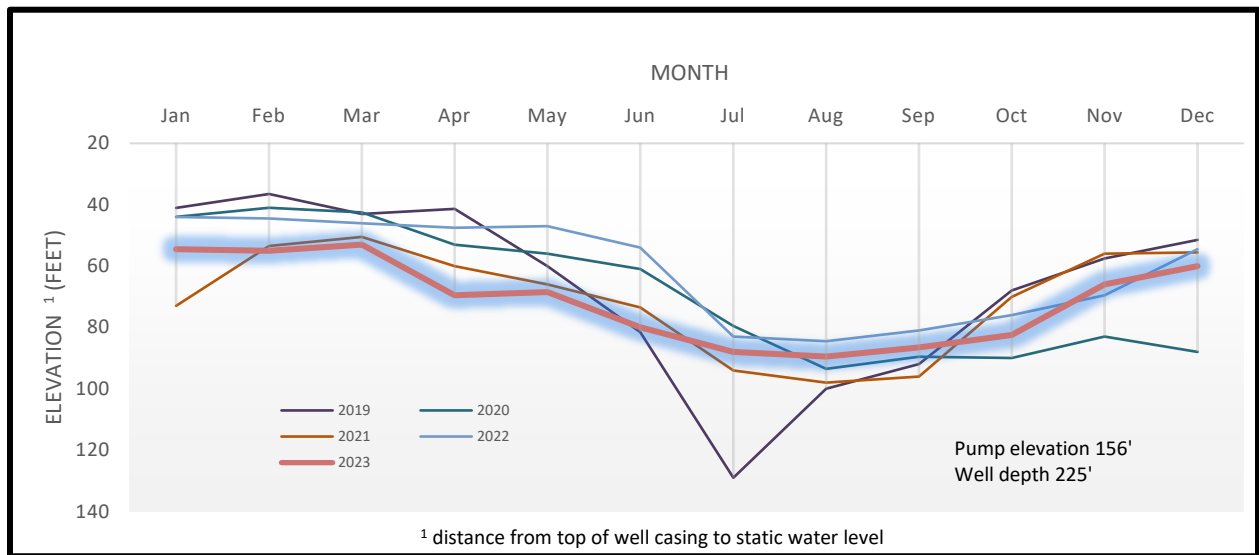


Figure 2: Sticks Allison Monthly Groundwater Water Level

Water Production and Demand

Referring to Figure 3; 6,317, cubic meters of water were extracted (water production) from the ground water source in 2023. This is an 9% decrease from the previous year and a 4% decrease from the five-year average. Water demand (customer water billing) for the service totaled 4,900 cubic meters of water; a 2% increase from the previous year and a 6% decrease from the five-year average.

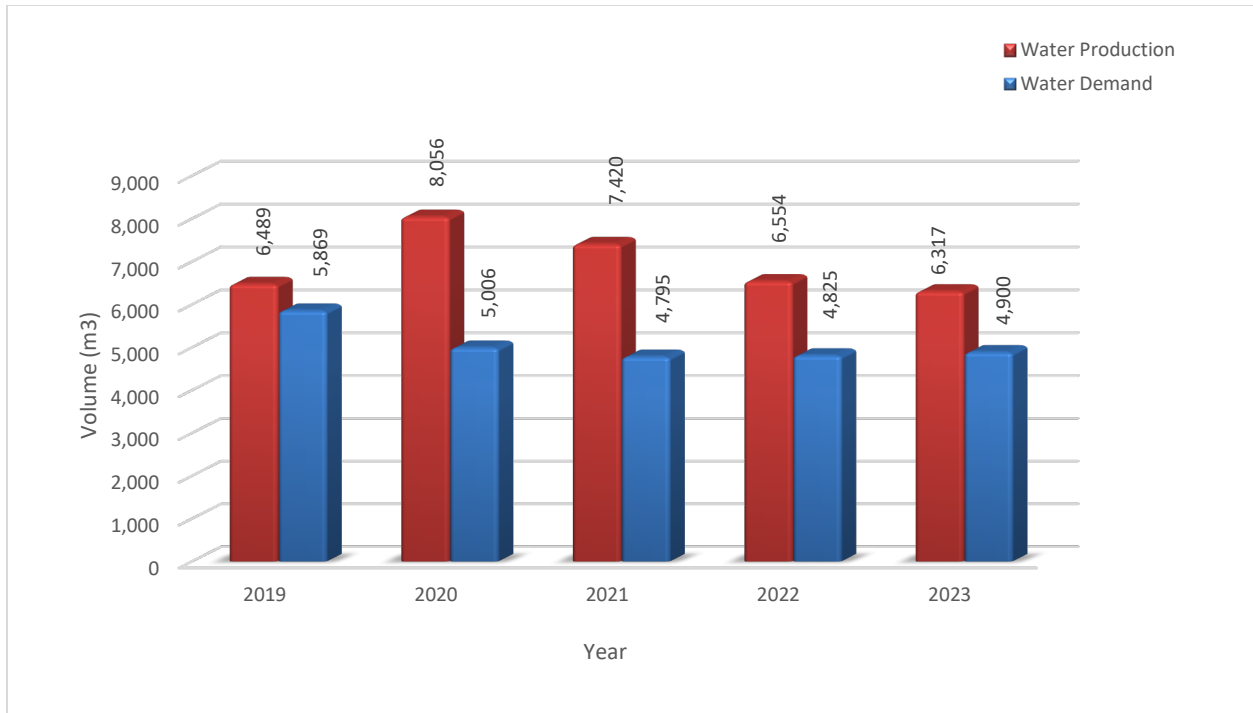


Figure 3: Sticks Allison Water Service Annual Water Production and Demand

The difference between annual water production and annual water demand is referred to as non-revenue water and can include water system leaks, water system maintenance and operational use (e.g. water main flushing, filter system backwashing), potential unauthorized use and fire-fighting use.

The 2023 non-revenue water (1,417 cubic meters) represents approximately 22% of the total water production for the service area. However, approximately 80 cubic meters can be attributed to operational use resulting in a non-revenue water of approximately 21%. Historically, non-revenue water for the service has been about 8%-10%. The higher percentage of non-revenue water for 2023 continues to suggest there is likely ongoing water system leak or leaks that require further investigation.

Figure 4 below illustrates the monthly water production for 2023 along with the historical water production information. The monthly water production trends are typical for small water systems such as the Sticks Allison water system.

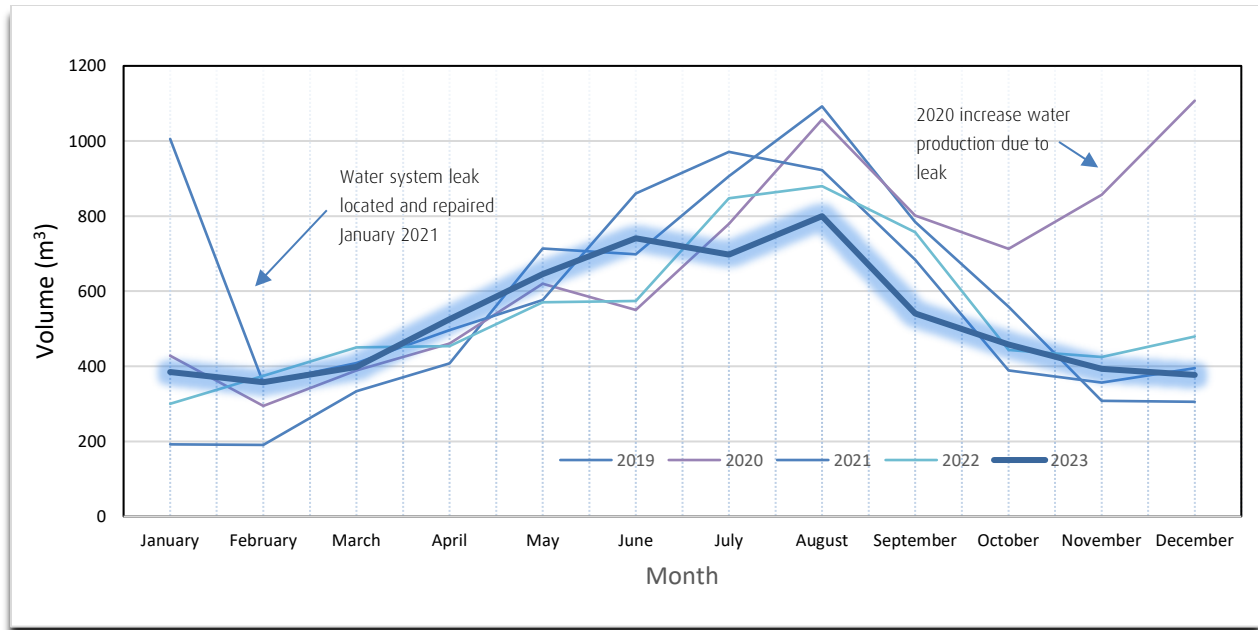


Figure 4: Sticks Allison Water Service Monthly Water Production.

Drinking Water Quality

Staff completed the water quality monitoring program at Sticks Allison based on the regulatory requirements and system specific risks. Samples were collected at regular frequencies from the raw water as well as from a number of sampling stations at the treatment plant and in the distribution system. The samples were shipped for various analyses to the CRD's Water Quality Lab or to external laboratories for special analyses, including disinfection by-products or metals.

The water system performed well in 2023 and consistently supplied safe drinking water to its customers. The groundwater well produced generally good quality source water. It contained low levels of iron but slightly elevated manganese concentrations. Accumulation effects at the end of the system have occasionally exacerbated these manganese concentrations. Manganese concentrations improved at the east end of Sticks Allison Road with additional flushing efforts. Manganese and or iron exceedances can lead to brown/yellow water discoloration. Monthly spot flushes at the system ends were performed as mitigation to prevent these metals from accumulating in higher concentrations that would potentially exceed the maximum acceptable concentration, and/or lead to water customer complaints. The well water was free of indicator bacteria in 2023.

The data below provides a summary of the water quality characteristics in 2023:

Raw Water:

- The Sticks Allison well water was free of the indicator bacteria *E.coli* and total coliforms.
- The raw water had a median manganese concentration of 12.1 µg/L which is consistent with previous years. It was also below the aesthetic objectives in the GCDWQ. Iron concentrations were also low and well below the aesthetic objective.
- The raw well water had a median hardness of 32.9 mg/L (CaCO₃). pH was not tested in 2023 but is typically between 7.5 and 8.0.
- The raw water turbidity was consistently under 1 Nephelometric Turbidity Unit (NTU) with an annual median of 0.2 NTU.

Treated Water:

- The treated water was safe to drink and free of *E.coli* and total coliform bacteria.
- The treated water turbidity was consistently below 1 NTU with an annual median of 0.38 NTU.
- The manganese concentrations in the distribution system only exceeded the aesthetic limits in the GCDWQ at the east end of Sticks Allison Road in August. This is a significant improvement over previous years and a result of additional flushing efforts to remove old, stale water with accumulated manganese containing pipe sediment. While the manganese concentrations exceeded the aesthetic limit in August, they never reached the health limit. Iron concentrations were also elevated through accumulation effects but remained well below the aesthetic limit. It is expected that the west end of Sticks Allison Road experienced similar effects, but this was not tested. No customer complaints were received. Regular spot flushes were carried out by the operators.
- The annual average levels of the disinfection by-product total trihalomethanes (TTHM) were well below the maximum allowable concentration. Haloacetic acids (HAA) were not tested in 2023 but are typically low when TTHM are low.
- The free chlorine residual concentrations in the distribution system ranged from 0 to 1.26 mg/L with a median of 0.23 mg/L indicating that on occasion the secondary disinfection could be insufficient at the ends of the system. Staff will try to balance the need for proper secondary disinfection and the risk of disinfection by-product formation through higher chlorine levels.

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

- Water Treatment Plant (WTP) driveway maintenance in December.
- Arbutus tree removed that was hanging over WTP in December.

Capital Projects Updates

No capital works were planned or completed in 2023. In alignment with the approved capital plan, funds were held for replacement of failed/leaking service lines, which did not end up being utilized.

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), and interest on savings (Interest earnings), a transfer 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 services. CRD Labour and Operating Costs include CRD staff time as well as the costs of equipment, tools, and vehicles. 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 added to any surplus or deficit carry forward from the prior year, yielding an Accumulated Surplus (or deficit) that is carried forward to the following year.

Submitted by:	Jason Dales, B.Sc., WD IV, Senior Manager, Wastewater Infrastructure Operations
	Joseph Marr, P.Eng., Senior Manager, Infrastructure Engineering
	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
	Angela Linwood, CPA, CMA, Controller, Financial Services
Concurrence:	Alicia Fraser, P.Eng., General Manager, Integrated Water Services
	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services

Attachments: Table 1
Table 2
2023 Statement of Operations and Reserve Balances

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

Table 1

Table 1: 2023 Summary of Raw Water Test Results, Sticks Allison Water System										
PARAMETER		2023 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2013-2022 RESULTS			
Parameter	Units of	Annual	Samples	Range		≤ = Less than or equal to	Median	Samples	Range	
Name	Measure	Median	Analyzed	Minimum	Maximum		Median	Analyzed	Minimum	Maximum
ND means Not Detected by analytical method used										
Physical Parameters										
Carbon, Total Organic	mg/L	Not tested in 2023					5.2	1	5.2	5.2
Hardness as CaCO ₃	mg/L	32.9	4	28.8	34.7	No Guideline Required	29.2	21	26.2	41.3
pH	pH units	Not tested in 2023				7.0 - 10.5 AO	7.94	13	7.4	8.42
Turbidity	NTU	0.2	12	0.1	0.25		0.25	61	0.12	0.95
Water Temperature	°C	Not tested in 2023					10.5	69	9.5	12
Metals										
Aluminum	ug/L as Al	5.05	4	3.7	5.2	2900 MAC / 100 OG	5.5	21	3.4	< 65
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	21	< 0.5	< 0.6
Arsenic	ug/L as As	0.505	4	0.49	0.54	10 MAC	0.53	21	0.45	1.29
Barium	ug/L as Ba	< 1	4	< 1	< 1	1000 MAC	< 1	21	< 1	11
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	18	< 1	< 1
Boron	ug/L as B	379	4	350	404	5000 MAC	355	21	< 50	400
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	7 MAC	< 0.01	21	< 0.01	< 0.1
Calcium	mg/L as Ca	11.25	4	9.86	12	No Guideline Required	9.93	21	8.69	15.5
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	1.745	4	1.53	2.8	2000 MAC / ≤ 1000 AO	1.48	21	0.65	10.9
Iron	ug/L as Fe	17.1	4	13.7	23.5	≤ 300 AO	64.1	21	12.5	395
Lead	ug/L as Pb	0.225	4	< 0.2	0.28	5 MAC	0.23	21	< 0.2	0.64
Lithium	ug/L as Li	12.5	4	12.3	13		12.3	11	11.6	13.9
Magnesium	mg/L as Mg	1.14	4	1.02	1.22	No Guideline Required	1.07	21	0.635	1.28
Manganese	ug/L as Mn	12.1	4	7.6	14	120 MAC / ≤ 20 AO	21.8	21	7.4	84.7
Molybdenum	ug/L as Mo	3.95	4	3.5	4.5		4.3	21	3.7	< 20
Nickel	ug/L as Ni	1.25	4	< 1	1.8		< 1	21	< 1	< 50
Potassium	mg/L as K	0.2735	4	0.265	0.281		0.291	21	0.264	0.587
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	21	< 0.1	< 0.5
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	83.5	4	82.4	87.1	≤ 200 AO	84.5	21	75.2	101
Strontium	ug/L as Sr	47.2	4	40.9	49	7000 MAC	42.5	21	32	65.1
Sulphur	mg/L as S	9	4	7.9	9.5		9.05	18	7.3	10.9
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	21	< 5	< 20
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	21	< 5	< 10
Thallium	ug/L as Tl	< 0.01	4	< 0.01	< 0.01		< 0.01	18	< 0.01	< 0.01
Uranium	ug/L as U	< 0.1	4	< 0.1	< 0.1	20 MAC	< 0.1	18	< 0.1	0.22
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	21	< 5	< 10
Zinc	ug/L as Zn	7.15	4	5.1	9.7	≤ 5000 AO	9.1	21	< 5	39
Zirconium	ug/L as Zr	< 0.1	4	< 0.1	< 0.1		< 0.1	18	< 0.1	0.16
Non-Metallic Inorganic Chemicals										
Silicon	mg/L as Si	7240	4	6640	7920		6590	21	4.19	11500
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	< 1	12	< 1	< 1		< 1	119	< 1	15
<i>E. coli</i>	CFU/100 mL	< 1	12	< 1	< 1		< 1	118	< 1	2
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2022								
Parasites										
<i>Cryptosporidium</i> , Total oocysts	oocysts/100 L	Not analyzed in 2022				Zero detection desirable	0.5	2	< 1	< 1
<i>Giardia</i> , Total cysts	cysts/100 L	Not analyzed in 2022				Zero detection desirable	0.5	2	< 1	< 1

Table 2

Table 2: 2023 Summary of Treated Water Test Results, Sticks Allison Water System											
PARAMETER		2023 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2013-2022 ANALYTICAL RESULTS				
Parameter	Units of Measure	Annual Median	Samples Analyzed	Range		≤ = Less than or equal to	Median	Samples Analyzed	Range		
Name				Minimum	Maximum				Minimum	Maximum	
ND means Not Detected by analytical method used											
Physical Parameters											
Carbon, Total Organic	mg/L as C	2.25	4	2	2.9		2.63	26	1.08	7.73	
Hardness as CaCO3	mg/L	36.65	4	31.4	39.9		33.15	20	29.7	38.7	
pH	No Units	Not tested in 2023					7.89	18	7.6	8.3	
Turbidity	NTU	0.375	12	0.25	0.6	>1 MAC	0.335	98	0.2	4.8	
Water Temperature	°C	9	84	3	15	≥15 AO	10.5	2325	0.45	22	
Microbial Parameters											
Indicator Bacteria											
Coliform, Total	CFU/100 mL	< 1	48	< 1	< 1	0 MAC	< 1	322	< 1	64	
<i>E. coli</i>	CFU/100 mL	< 1	48	< 1	< 1	0 MAC	< 1	321	< 1	< 1	
Hetero. Plate Count, 7 day	CFU/1 mL	90	9	20	800	No Guideline Required	80	65	< 10	11000	
Disinfectants											
Disinfectants											
Chlorine, Free Residual	mg/L as Cl2	0.23	84	0	1.26	3.0 MAC	0.36	2350	0	1.88	
Chlorine, Total Residual	mg/L as Cl2	0.255	84	0.04	1.27		0.4	2353	0	1.98	
Disinfection By-Products											
Trihalomethanes (THMs)											
Bromodichloromethane	ug/L	12.5	4	8.1	18		15	28	6.4	19.3	
Bromoform	ug/L	< 1	4	< 1	1.6		< 1	28	< 0.1	1.3	
Chloroform	ug/L	18	4	14	20		19	28	7.4	33	
Chlorodibromomethane	ug/L	5.7	4	2.8	13		5.8	28	2.5	11.3	
Total Trihalomethanes	ug/L	36.5	4	25	53	100 MAC	39.7	27	18	59.3	
Haloacetic Acids (HAAs)											
HAA5											
HAA5	ug/L	Not tested in 2022				80 MAC					
Metals											
Aluminum	ug/L as Al	8.05	4	6.2	9.6	2900 MAC / 100 OG	17.25	20	5	39.4	
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	20	< 0.5	< 0.5	
Arsenic	ug/L as As	0.49	4	0.46	0.54	10 MAC	0.58	20	0.51	0.89	
Barium	ug/L as Ba	< 1	4	< 1	1	1000 MAC	1.3	20	< 1	2.2	
Beryllium	ug/L as Be	< 0.1	4	< 0.1	< 0.1		< 0.1	20	< 0.1	< 0.1	
Bismuth	ug/L as Bi	< 1	4	< 1	< 1		< 1	20	< 1	< 1	
Boron	ug/L as B	385.5	4	360	416	5000 MAC	367	20	319	400	
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	7 MAC	< 0.01	20	< 0.01	< 0.01	
Calcium	mg/L as Ca	13.15	4	11.1	14.4	No Guideline Required	11.75	20	10.7	14.1	
Chromium	ug/L as Cr	< 1	4	< 1	< 1	50 MAC	< 1	20	< 1	< 1	
Cobalt	ug/L as Co	< 0.2	4	< 0.2	< 0.2		< 0.2	20	< 0.2	< 0.5	
Copper	ug/L as Cu	22.9	4	9.66	49	2000 MAC / ≤ 1000 AO	12.5	20	0.87	46.2	
Iron	ug/L as Fe	52.1	4	21.5	99.8	≤ 300 AO	173.5	20	47.8	747	
Lead	ug/L as Pb	0.86	4	0.36	1.8	5 MAC	0.765	20	0.22	2.32	
Lithium	ug/L as Li	12.4	4	12.2	13		12.5	12	11.5	13.3	
Magnesium	mg/L as Mg	0.911	4	0.866	0.96	No Guideline Required	0.84	20	0.476	1.3	
Manganese	ug/L as Mn	14.25	4	6.8	20.4	120 MAC / ≤ 20 AO	70.8	20	26.5	200	
Molybdenum	ug/L as Mo	3.65	4	3.6	3.8		3.3	20	1	5.6	
Nickel	ug/L as Ni	< 1	4	< 1	< 1		< 1	20	< 1	< 1	
Potassium	mg/L as K	0.279	4	0.275	0.29		0.3	20	0.27	0.351	
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	20	< 0.1	0.11	
Silicon	ug/L as Si	7260	4	6850	7950		6910	20	6340	7740	
Silver	ug/L as Ag	< 0.02	4	< 0.02	< 0.02	No Guideline Required	< 0.02	20	< 0.02	< 0.02	
Sodium	mg/L as Na	83.25	4	82.4	86.2	≤ 200 AO	84.35	20	79.6	92	
Sulphur	ug/L as S	8.2	4	6.7	9.5		9.25	20	7	11.6	
Strontium	ug/L as Sr	55.45	4	47.5	58.6	7000 MAC	51.65	20	46.3	60.3	
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	20	< 5	< 5	
Thallium	ug/L as Tl	< 0.01	4	< 0.01	< 0.01		< 0.01	20	< 0.01	< 0.05	
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	20	< 5	< 5	
Uranium	ug/L as U	< 0.1	4	< 0.1	0.1	20 MAC	< 0.1	20	< 0.1	0.16	
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	20	< 5	< 5	
Zinc	ug/L as Zn	12.35	4	9	14.3	≤ 5000 AO	16.35	20	5.9	34.1	
Zirconium	ug/L as Zr	< 0.1	4	< 0.1	< 0.1		0.17	20	< 0.1	< 0.5	

CAPITAL REGIONAL DISTRICT

STICKS ALLISON WATER

Statement of Operations (Unaudited)

For the Year Ended December 31, 2023

	2023	2022
Revenue		
Transfers from government	5,100	5,000
User Charges	64,740	64,113
Other revenue from own sources:		
Interest earnings	126	60
Transfer from Operating Reserve	-	5,000
Other revenue	2,107	2,107
Total Revenue	72,073	76,280
Expenses		
General government services	2,626	2,450
CRD Labour and Operating costs	36,320	36,229
Other expenses	12,449	9,723
Total Expenses	51,395	48,402
Net revenue (expenses)	20,678	27,878
Transfers to own funds:		
Capital Reserve Fund	13,178	7,000
Operating Reserve Fund	7,500	10,894
Annual surplus/(deficit)	-	9,984
Accumulated surplus/(deficit), beginning of year	-	(9,984)
Accumulated surplus/(deficit), end of year	\$ -	-

CAPITAL REGIONAL DISTRICT

STICKS ALLISON WATER

Statement of Reserve Balances (Unaudited)

For the Year Ended December 31, 2023

	Capital Reserve	
	2023	2022
Beginning Balance	11,392	4,250
Transfer from Operating Budget	13,178	7,000
Transfer from Completed Capital Projects	-	-
Transfer from Operating Reserve	(93)	-
Interest Income	576	142
Ending Balance	25,053	11,392

	Operating Reserve	
	2023	2022
Beginning Balance	7,433	1,426
Transfer from Operating Budget	7,500	10,894
Transfer to Operating Budget	-	(5,000)
Interest Income	510	113
Ending Balance	15,443	7,433



**REPORT TO STICKS ALLISON WATER LOCAL SERVICE COMMITTEE
MEETING OF TUESDAY, JUNE 25, 2024**

SUBJECT Asset Replacement Report Card

ISSUE SUMMARY

To provide the Sticks Allison Water Local Service Committee with an asset replacement report card for the Sticks Allison Water Local Service.

BACKGROUND

The Capital Regional District (CRD) has prepared an asset replacement report card for the Sticks Allison Water Local Service. The objective of this report card is to provide an overview of asset replacement values and an asset renewal forecast for the next 40 years.

DISCUSSION

An asset register was prepared using the inventory of all existing assets from the CRD's maintenance management and Geographic Information Systems (GIS). There are 101 asset components in the register that are grouped by asset class with replacement values as follows:

Asset Class	Average Asset Condition	Replacement Value
Hydrants & Standpipes	Fair	\$161,000
Water Mains	Fair	\$2,039,000
Water Meters	Fair	\$66,000
Water Storage	Fair	\$405,000
Water Treatment	Good	\$16,000
Water Wells	Fair	\$270,000
Total	Fair	\$2,960,000

Replacement values are in 2024 dollars, based on inflated historical costs or unit rates from suppliers. The total asset replacement value for the service is approximately \$3.0 million dollars.

Assets are due for replacement at varying times, based on their installation year, expected service life, and condition. A report card is provided in Appendix A, which includes graphical breakdowns of current asset condition and forecasted replacement year for each asset class. An analysis of the asset register indicates that most assets will require replacement in the next 40 years with 46% of assets requiring replacement more than once over that timeframe. The estimated cost of asset replacements over the next 40 years is \$3.8 million.

The asbestos cement water distribution mains that were installed in the 1960s make up the bulk of the replacement costs for the system. Since these water mains are nearing their expected service life of 60 years, they should be planned for replacement in the near term.

The report card provides a 40-year asset renewal forecast. Based on current revenue, there appears to be insufficient capital budget to sustain an asset replacement program.

The consequences of an insufficient capital budget are increased service interruptions due to failing assets, reduced level of service including fire flows and an inability to invest in new assets to meet demands and to meet regulatory requirements. Debt financing and grants are options to address revenue shortfalls; these options should be supported by a long-term financial plan.

Investment in new assets to expand or optimize the service have not been captured in the capital renewal forecast. This report card is intended for budgeting and capital planning purposes in conjunction with other asset and financial processes. The report card could be further developed into a long-term financial plan and asset management plan.

RECOMMENDATION

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

Submitted by:	Laura Hardiman, P.Eng., Manager, Asset Management
Submitted by:	Stephen Henderson, BSc, PG.Dip.Eng., MBA, Senior Manager of Real Estate and Administration of the Southern Gulf Islands Electoral Area
Concurrence:	Joseph Marr, P.Eng, Senior Manager, Infrastructure Engineering
Concurrence	Alicia Fraser, P.Eng, General Manager, Integrated Water Services

ATTACHMENT

Appendix A: Asset Replacement Report Card

19 Asset Replacement Report Card

2.665 Sticks Allison Water Service

Services Provided:

- Water Distribution
- Water Supply
- Water Treatment

Total Asset Replacement Value

\$3.0M

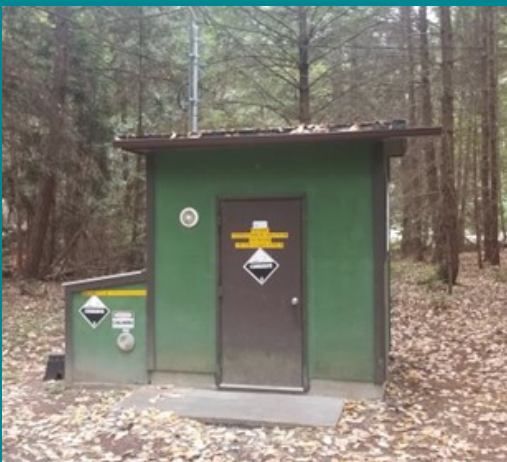
Average Condition

Fair

Total Number of Assets

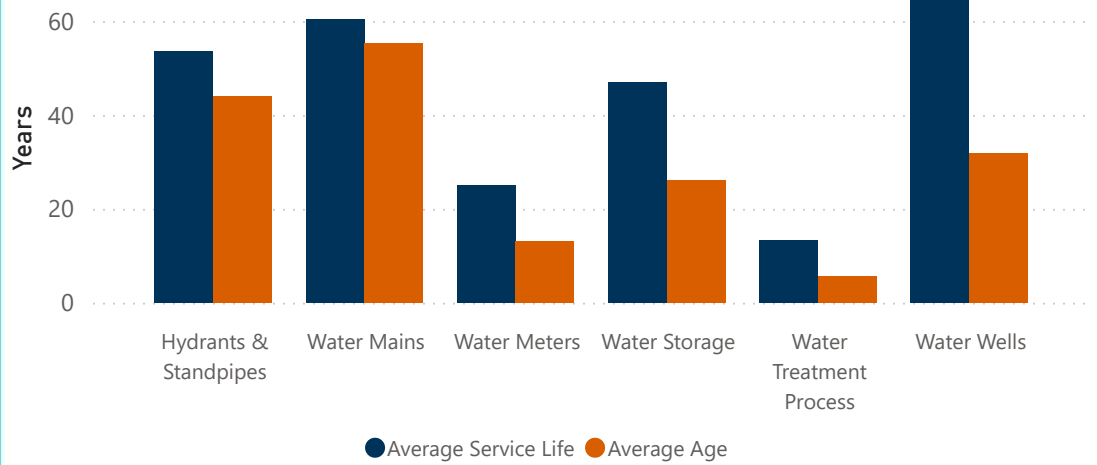
101

Asset Class	Quantity
Hydrants & Standpipes	8
Water Mains	1375 m
Water Meters	37
Water Storage	1
Water Treatment Process	1
Water Wells	1



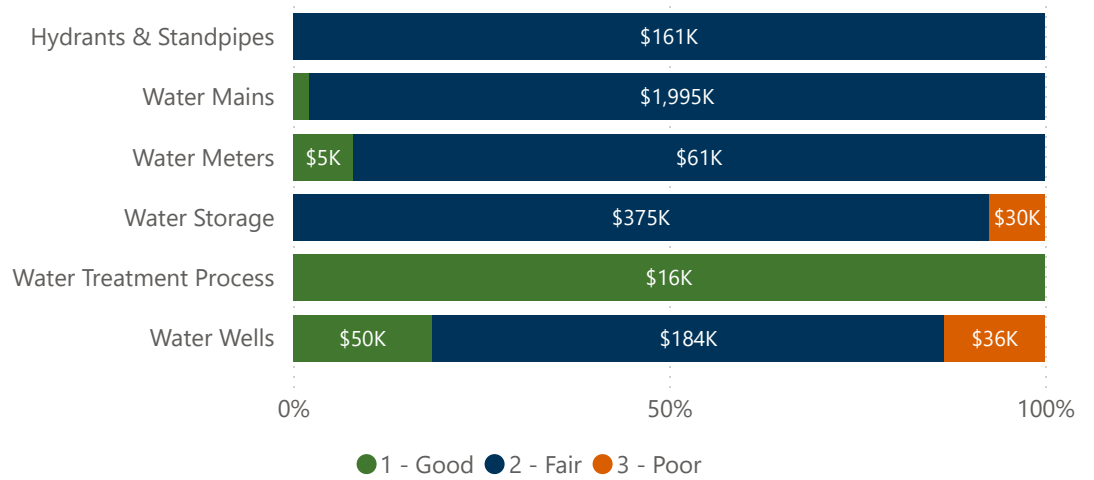
Stick Allison Pump Station

Asset Service Life



The Asset Service Life chart shows the average expected service life of each asset class in relation to the average age of the assets within the class. A weighted average is used based on replacement value.

Overall Asset Condition by Asset Class



Overall condition rating of the asset classes is based on remaining expected service life. Replacement values are shown in relation to the condition rating.

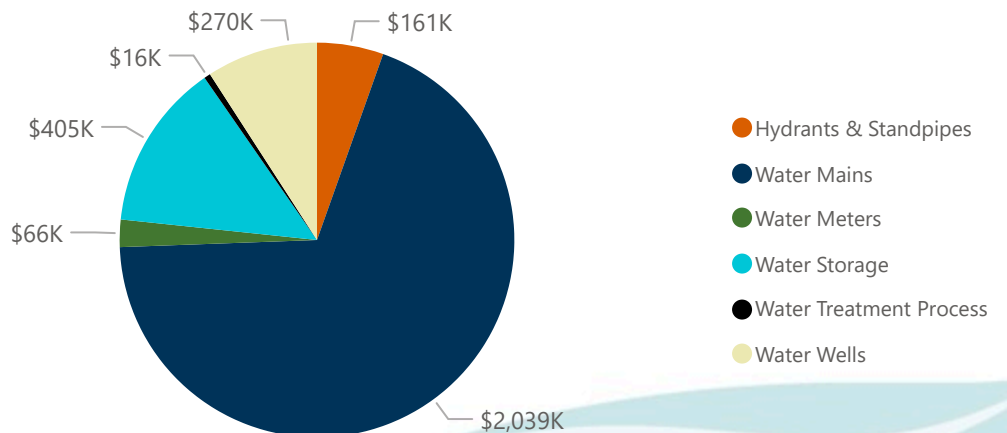
Good - Asset has more than 50% of remaining expected service life.

Fair - Asset has between 1% and 50% of remaining expected service life.

Poor - Asset has reached the end of expected service life.

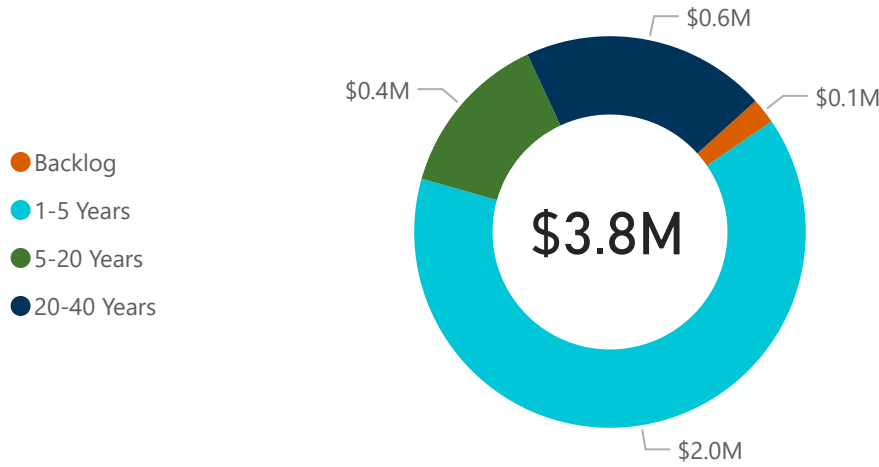
Assets identified in poor condition may still be performing adequately for the service. A condition assessment is advised prior to replacement.

Asset Replacement Cost by Asset Class



2.665 Sticks Allison Water Service

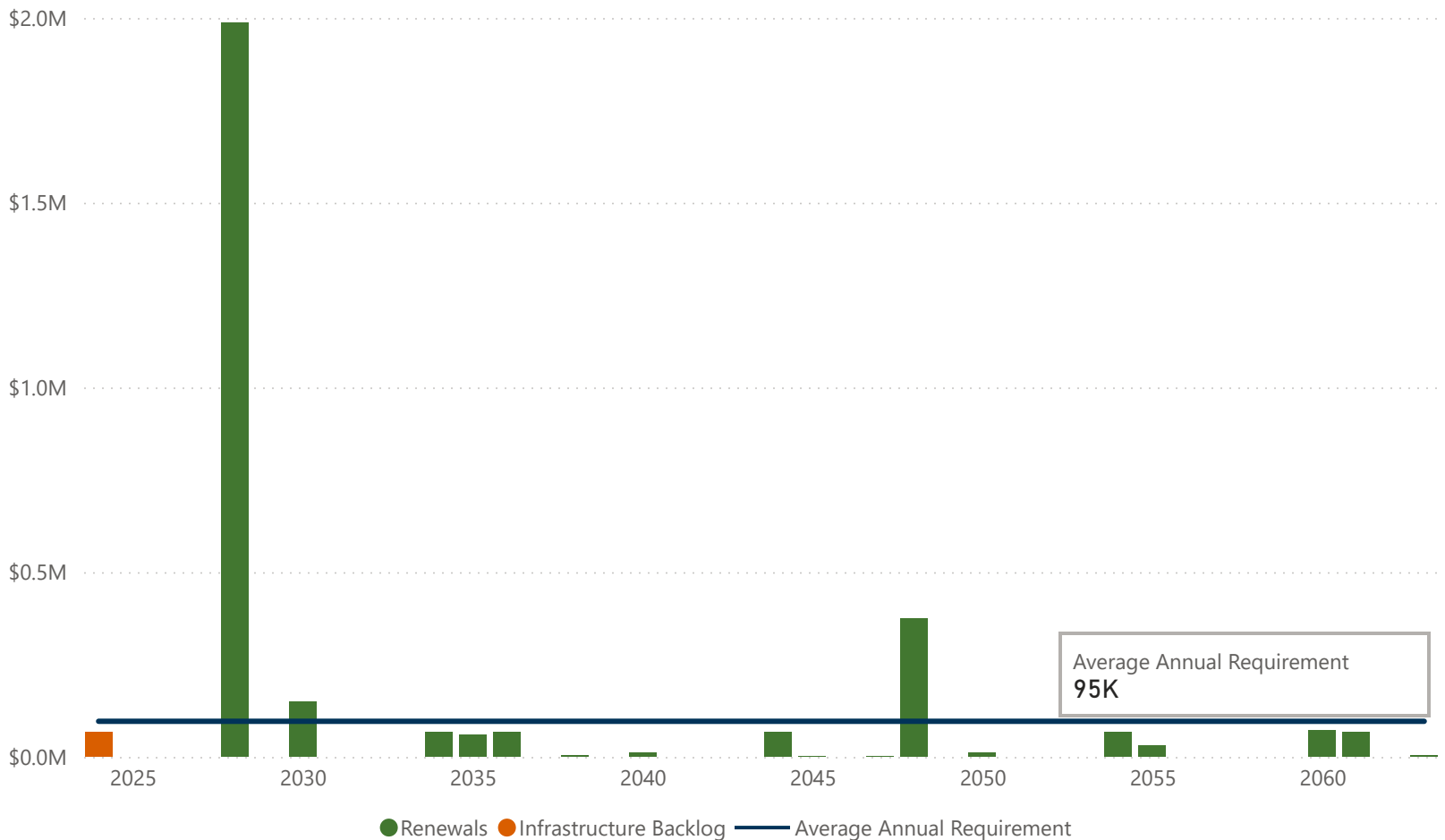
40-Year Asset Replacement Cost Timeframe



In the next 40 years, it is estimated that \$3.8M in assets will need to be replaced (an average of \$95,000 per year).

There are \$0.1M in assets identified as backlog; these are assets that have passed their expected service life and are due for replacement.

40-Year Capital Renewal Forecast



The capital renewal forecast is based on the expected service life of assets and their replacement cost (in 2024 dollars). Instances where an asset requires multiple replacements over the 40 year period are accounted for in the projection. Backlog clearance is shown for the first 10 years to distribute these costs. Since these assets are beyond their expected service life, they may fail prior to renewal. Given the large renewal cost in 2028, a replacement plan should be developed to spread the renewals out over multiple years. A more comprehensive long-term financial plan will inform replacement planning for budgeting purposes.

The report card is intended for providing a high level overview and for budgeting and capital planning purposes in conjunction with other asset and financial planning processes.



**REPORT TO STICKS ALLISON WATER LOCAL SERVICE COMMITTEE
MEETING OF TUESDAY, JUNE 25, 2024**

SUBJECT Project and Operations Update - June 2024

ISSUE SUMMARY

To provide the Sticks Allison Water Local Service Committee with capital project status reports and operational updates.

BACKGROUND

The Sticks Allison Water System is located on the north shore of Galiano Island in the Southern Gulf Islands Electoral Area and provides drinking water to approximately 37 customers. Capital Regional District (CRD) Integrated Water Services is responsible for the overall operation of the water system with day-to-day operation, design and construction of water system facilities provided by the CRD Infrastructure Engineering and Operations Division. The quality of drinking water provided to customers in the Sticks Allison Water System is overseen by the CRD Water Quality Section.

CAPITAL PROJECT UPDATE

22-01 | Service Line Replacement (Provisional)

Project Description: Provisional account available to replace failed/leaking water service lines if/when required.

Project Rationale: Funds are required to be available to address potential water service leaks promptly if identified. This funding is considered provisional and will only be utilized if leaks are identified.

Project Update and Milestones:

Milestone	Completion Date
Operations will utilize funds to replace failed or leaking service lines.	As and when needed basis

OPERATIONAL UPDATE

This is an operational update reporting period from February through May 2024.

- Follow up to emergency response to frozen sodium hypochlorite chemical feed line at the water treatment plant as previously reported. The event occurred during a cold weather event in January. The chemical feed line was repaired, and a subsequent insurance claim was submitted and approved that covered the cost of the emergency repairs. Additional freeze protection corrective measures were completed during the repairs. The total claim amount was \$2,321 with a \$300 deductible amount being paid by the service.

Sticks Allison Water Local Service Committee – June 25, 2024
Project and Operations Update - June 2024

2

- Completed hydrant inspection and distribution valve preventative maintenance during this reporting period.
- WorkSafeBC regulatory annual formal safety inspection completed.
- Water treatment plant building maintenance that included minor improvement to the of gutters and downspouts.
- Operations coordinated with Island Health at their request for an inspection of the water system. The health inspection was scheduled for April 23 but is now deferred to the fall.
- Leak detection follow up activities completed during this reporting period.
- Preparations started for the draining cleaning and inspection of the water tank. Water tanks are typically inspected on a five-year cycle unless operating conditions indicate a need to inspect more frequently. The cost for the inspection work is funded by the services Operating Reserve Fund (ORF) and is included in the Sticks Allison Water Services 2024 operating budget in the amount of \$7,000.

RECOMMENDATION

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

Submitted by:	Jared Kelly, P.Eng., Manager, Capital Projects
Submitted by:	Dan Robson, A.Sc.T., Manager, Saanich Peninsula and Gulf Islands Operations
Concurrence:	Joseph Marr, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Jason Dales, B.Sc., WD IV., Senior Manager, Wastewater Infrastructure Operations
Concurrence:	Alicia Fraser, P.Eng., General Manager, Integrated Water Services