



SKANA WATER SERVICE COMMITTEE
 Notice of Meeting on **Friday, June 16, 2023 at 9:30 a.m.**
 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.

W. Korol (Chair)	M. Bentley (Vice-Chair)	B. Hill
P. Brent (Electoral Area Director)	R. Johnston	

AGENDA

1. APPROVAL OF AGENDA

2. ADOPTION OF MINUTES3

Recommendation: That the minutes of the February 10, 2023 meeting be adopted.

3. CHAIR’S REMARKS

4. 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 Skana Water 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.

5. SENIOR MANAGER’S REPORT

- Electoral Areas Water Conservation Bylaw No. 1, 2022 (Bylaw No. 4492) – Update

6. COMMITTEE BUSINESS

6.1. 2022 Annual Report.....7

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

6.2. Project and Operations Update.....17

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

7. CORRESPONDENCE

To ensure quorum, advise IWSAdministration@crd.bc.ca if you cannot attend.

**Skana Water Service Committee
Agenda – June 16, 2023**

8. NEW BUSINESS

9. ADJOURNMENT

Next Meeting: Thursday, November 9, 2023 at 9:30am



Making a difference...together

MINUTES OF A MEETING OF THE Skana Water Service Committee, held Friday, February 10, 2023 at 9:30 a.m., In the Goldstream Meeting Room, 479 Island Highway, Victoria, BC

PRESENT: Committee Members: W. Korol (Chair); M. Bentley (Vice-Chair); P. Brent, (Electoral Area Director); R. Johnston

Staff: J. Dales, Senior Manager, Wastewater Infrastructure Operations; J. Marr, Acting Senior Manager, Infrastructure Engineering; J. Kelly, Manager, Capital Projects; C. Moch, Manager, Water Quality Operations; L. Xu, Manager, Finance Services (EP); T. Duthie, Manager, Administration Services; M. Risvold, Committee and Administrative Clerk (Recorder)

REGRETS: B. Hill

EP = Electronic Participation

The meeting was called to order at 9:35.

1. ELECTION OF CHAIR

The Senior Manager called for nominations for the position of Chair of the Skana Water Service Committee for the term ending December 31, 2023.

R. Johnson nominated W. Korol. W. Korol 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 W. Korol Chair of the Skana Water Service Committee for the term ending December 31, 2023 by acclamation.

2. ELECTION OF VICE CHAIR

The Chair called for nominations for the position of Vice Chair of the Skana Water Service Committee for the term ending December 31, 2023.

W. Korol nominated M. Bentley. M. Bentley 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 M. Bentley Vice Chair of the Skana Water Service Committee for the term ending December 31, 2023 by acclamation.

3. APPROVAL OF AGENDA

MOVED by M. Bentley, **SECONDED** by R. Johnson,
That the agenda be approved.

CARRIED

4. ADOPTION OF MINUTES

MOVED by R. Johnson, **SECONDED** by M. Bentley,
That the minutes of the November 24, 2022 meeting be adopted.

CARRIED

5. CHAIR'S REMARKS

The Chair made no remarks.

6. PRESENTATIONS/DELEGATIONS

There were none.

7. SENIOR MANAGER'S REPORT

J. Dales advised that staff are working on a contract for an on-island operator and the request for proposal (RFP) will be issued in the coming days. In the interim, island support and maintenance activities are conducted by Capital Regional District (CRD) operations staff.

Responding to questions from the committee regarding how the RFP is communicated, staff advised that it is published online and in local media. Staff will provide the RFP details to the Chair as requested. Discussion ensued.

Staff provided an update on communications and advised CRD emails are unable to be provided for the following reasons:

- There is a different requirement and level of control for staff and non-staff members.
- Staff are unable to maintain public email addresses.
- Risk management and liabilities.

CRD will continue to provide service notifications by doorhangers, social media and additional educational resources online. System users who did not receive an alert from the Public Advisory Notification System (PANS) are encouraged to ensure they are signed up to receive the alerts. The Chair inquired if alerts can be sent to subscribers through the same platform as CRD Agendas and Minutes. Staff will determine if this is possible. Discussion ensued.

Staff advised a document is being created which will indicate meter box locations and challenging to locate boxes will be marked with a stake.

8. COMMITTEE BUSINESS

8.1. Skana Water Service Presentation Orientation

Staff provided the orientation and responded to the following questions:

- Water samples being at risk due to travel times. Staff advised timelines can be tight. If travel is delayed the samples can be ruined. Staff will confirm the timelines and provide an update to the committee.
- Budget approval. Staff advised committee review takes place in the fall and the budget presented to them is provisional.
- Installing a one draw meter on water tanks with the tank replacement project and potential grant funds. Staff advised the grant was rejected.

- The reason for the grant being rejected. Staff advised that a brief and generic response was received for the grant rejection. Staff will request further feedback as to why the grant was rejected.
- Possibility of reapplying for the grant once the rejection feedback is received. Staff advised it is an option to reapply for the grant and noted the alternative approval process (AAP) is an option even if the grant were to be accepted. The tank could fail at any time, is showing corrosion and is not up to code. The project will not get less expensive, and the estimates received are likely no longer valid.
- Which company drilled the well located at 500 Aya Reach. Staff advised the well was drilled by Drill Well and will confirm the year it was drilled.
- Timeline for well decommissioning. Staff advised it is beneficial to decommission the wells when the ground is dry. There are risks of completing the work during the wet season. Staff will ensure insurance is current and will confirm how the terms are laid out in the contract in the event there is ground damage. The committee advised they want the work completed as soon as possible.
- The plan for Capital Project 24-01 Source Water Surveillance project. Staff advised a high-level plan will be in place and provided back to the committee at the next meeting. The project is proposed to take place in 2024.

8.2. Project and Operations Update

Staff provided updates on capital projects and operations.

Staff advised the investing in Canada Infrastructure Program (ICIP) grant was rejected and suggested the consensus of the committee should be to proceed with an AAP, noting the process can take up to one year. The committee advised they feel an AAP is high risk and would like to look at alternative options.

Discussion ensued regarding:

- Concern and risk of the AAP failing
- Water system design requirements
- Detailed options analysis
- Community Works Funds for well decommissioning
- Disinfection byproducts quarterly sampling

P. Brent left the meeting at 12:03 pm.

8.3. Water Conservation Bylaw

The committee provided feedback to staff prior to the meeting. The feedback is on file and available upon request. The Committee noted there was nothing in the bylaw indicating restrictions regarding once-through cooling.

9. CORRESPONDENCE

There was none.

10. NEW BUSINESS

There was none.

11. ADJOURNMENT

MOVED by R. Johnson, **SECONDED** by M. Bentley,
That the February 10, 2023 meeting be adjourned at 12:23 pm.

CARRIED

CHAIR

SECRETARY

DRAFT

Skana Water System

2022 Annual Report

CRD | Drinking Water

Introduction

This report provides a summary of the Skana Water Service for 2022 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 Skana is a rural residential development located on the north side of Mayne Island in the Southern Gulf Islands Electoral Area, originally serviced by a private water utility. In 2003, the service converted to the Capital Regional District (CRD). The Skana Water Service (Figure 1) is made up of 73 parcels encompassing a total area of approximately 19 hectares. Of the 73 parcels, 50 were customers of the water system in 2022.

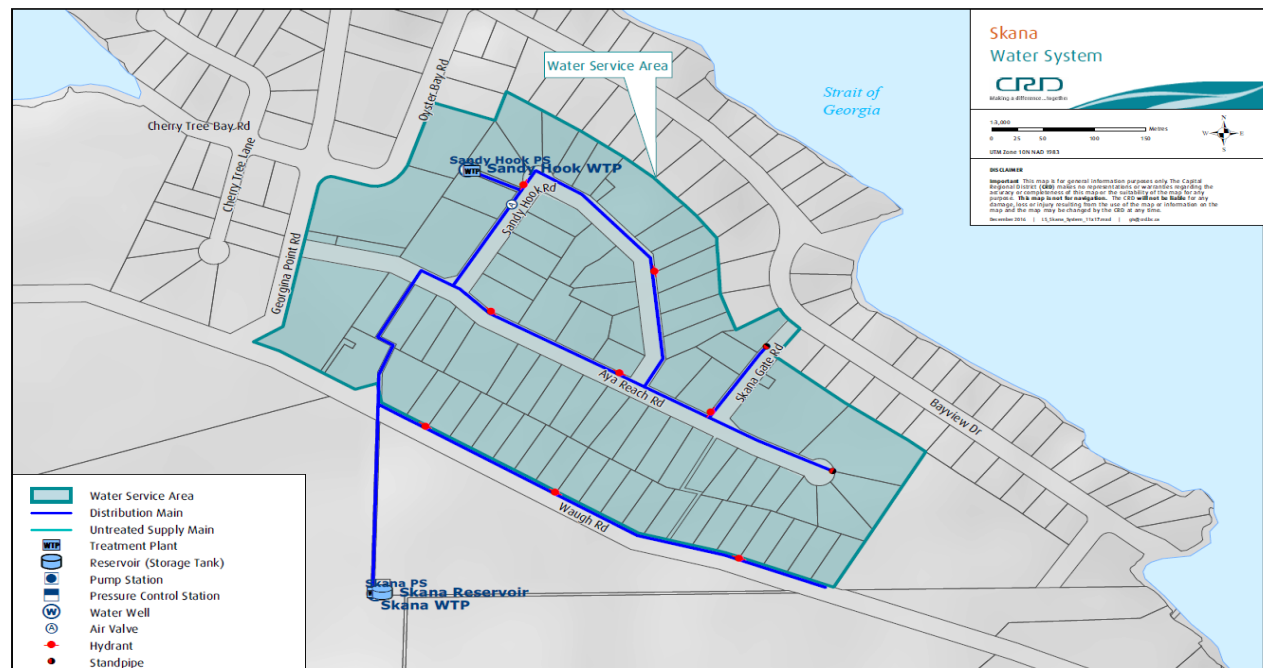


Figure 1: Map of Skana Water System

The Skana water system is primarily comprised of:

- Two groundwater wells, related pumping and control equipment and buildings (Production Wells #8 and Well #13).
- Disinfection process equipment (ultraviolet light and chlorine at each well).
- Two steel storage tanks (total volume is 91 cubic meters).
- Distribution system (1,977 meters of water mains).

- Other water system assets: 50 service connections and meters, eight flushing hydrants, three flushing standpipes, 15 gate valves, one air release valve, Supervisory Control and Data Acquisition (SCADA) system and auxiliary generator.

Water Supply

Groundwater supply monthly water levels are highlighted for 2022 in Figure 2. Resource water levels in 2022 about 10% lower than the 4 year average.

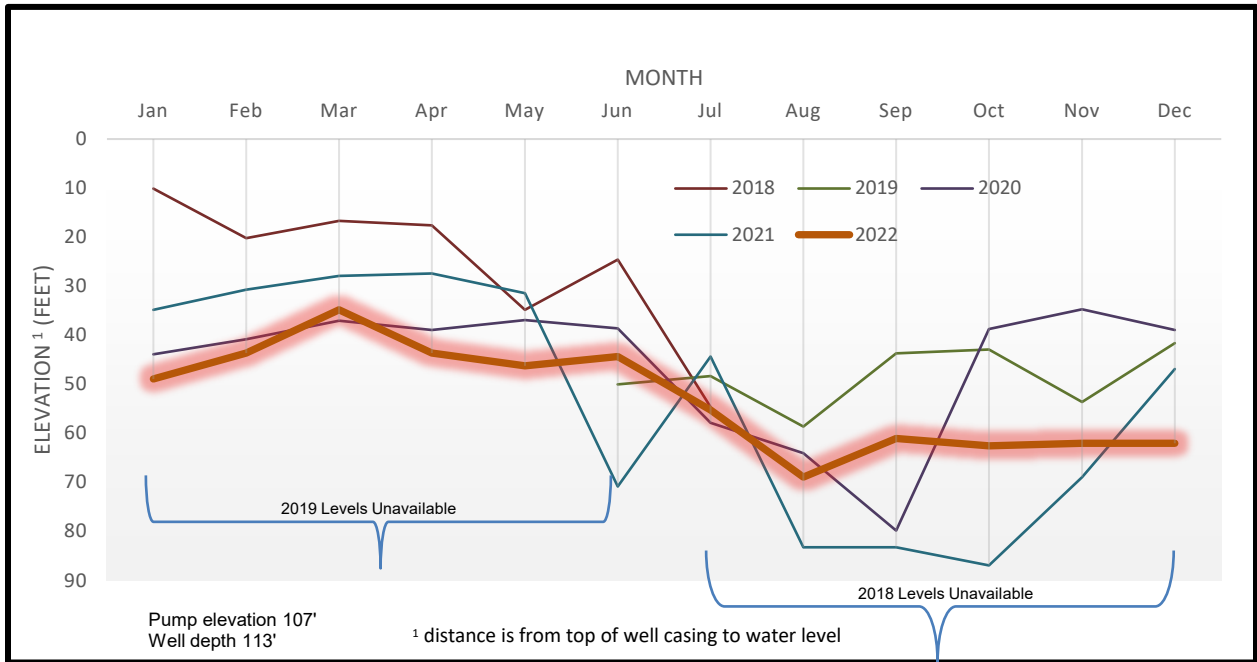


Figure 2: Skana Well #13 Groundwater Supply Monthly Water Level

Water Production and Demand

Referring to Figure 3, 4,889 cubic meters of water was extracted (water production) from the groundwater source (Well #13 and Well #8) in 2022; a 10% increase from the previous year and a 10% increase from the five year average. Water demand (customer water billing) for the service totaled 3,401 cubic meters of water; a 4% decrease from the previous year and a 1% increase from the five year average.

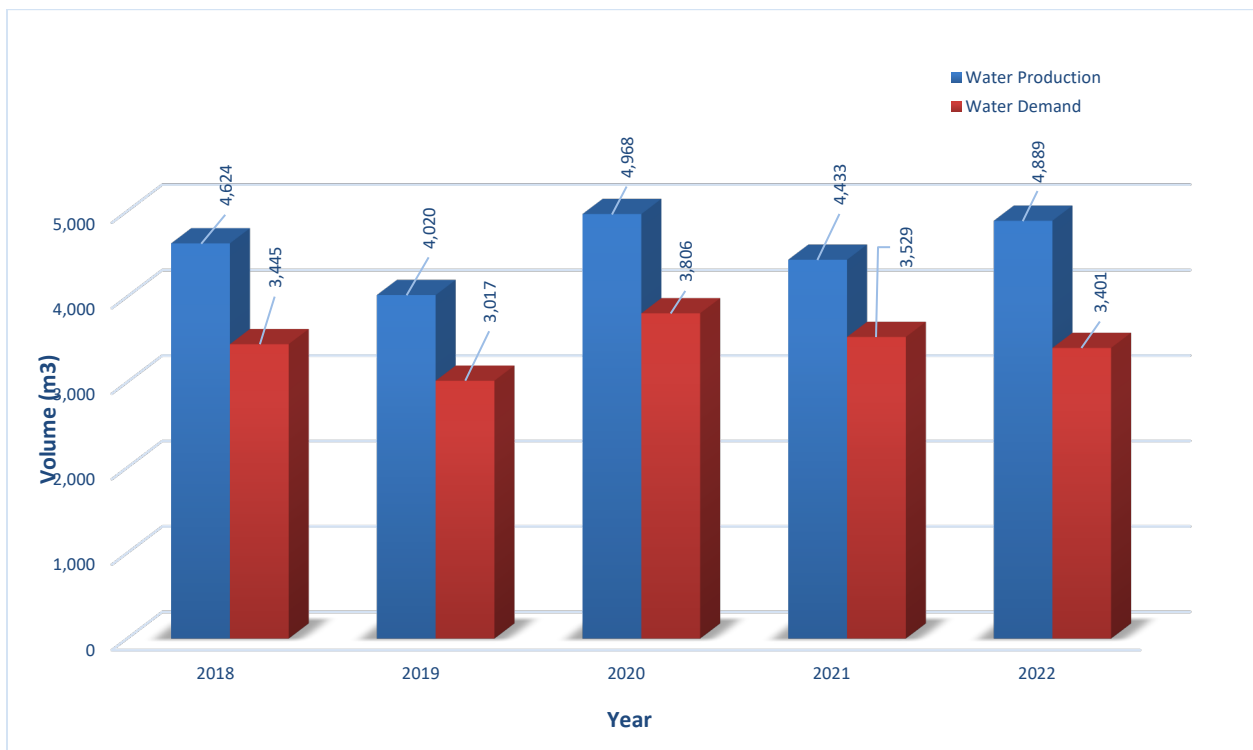


Figure 3: Skana Water Service Annual Water Production and Demand

The difference between annual water production and annual customer 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 2022 non-revenue water (1,488 cubic meters) represents approximately 30% of the total water production for the service area. However, approximately 600 cubic meters is attributed to operational use resulting in a non-revenue water volume of approximately 18%. The non-revenue water is much higher for 2022 than previous years and is attributed to water system leaks that were identified and repaired.

Figure 4 below illustrates the monthly water production for 2022 along with the historical water production information. The monthly water production trends are typical for small water systems such as the Skana water system. However, water production in July 2022 was abnormally higher because of water system leaks that were identified and repaired.

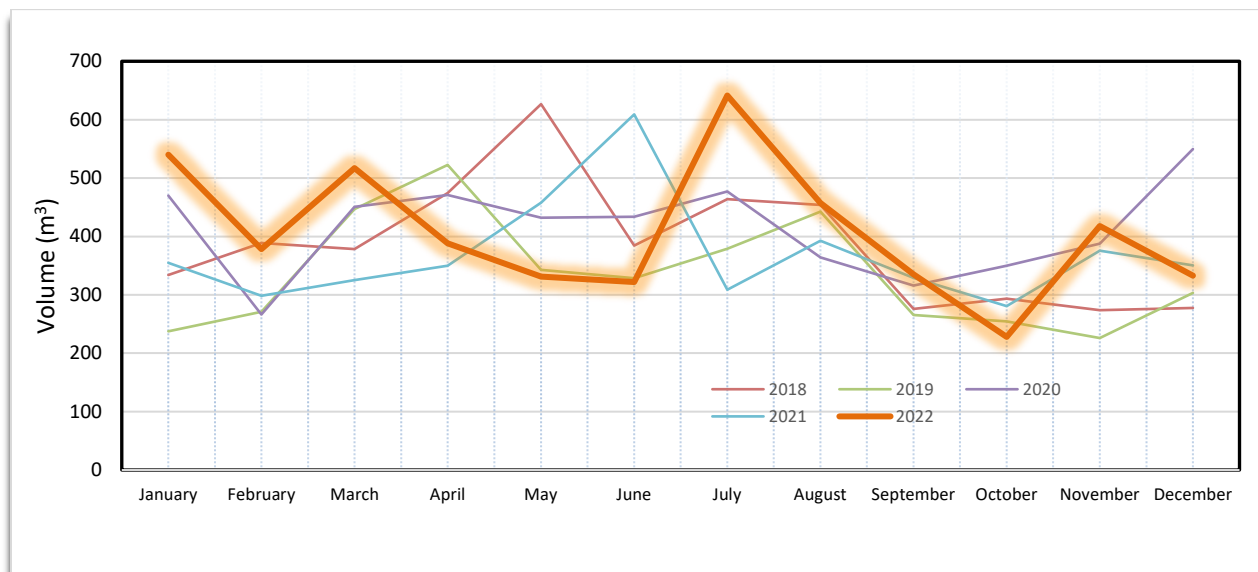


Figure 4: Skana Water Service Monthly Water Production.

Drinking Water Quality

Staff completed the water quality monitoring program at Skana based on regulatory requirements and system specific risks. Samples were collected at regular frequencies from the raw water, at the treatment plant as well as from a number of sampling stations 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 such as disinfection by-products or metals.

The water system had challenges in 2022 to consistently supply drinking water of good quality to its customers. The main source Well #13 ran low during the peak of the fall drought event and backup Well #8 had to be used with its more turbid raw water. The raw water also experienced periods with elevated iron concentrations; in particular during the aquifer recharge season. Iron then accumulates and concentrates in dead end portions of the distribution system, such as the end of Skana Gate Road, and can lead to water discoloration issues. A cold snap in late December caused multiple pipe breaks which depressurized the system. This resulted in a system-wide Boil Water Advisory from December 25, 2022 to January 4, 2023.

During the wet season, disinfection by-product (DBP) concentrations in the distribution system exceeded the maximum acceptable concentration (MAC) listed in the Guidelines for Canadian Drinking Water Quality (GCDWQ) and caused the continuation of the DBP related water quality advisory that was issued in February 2022.

The data below provides a summary of the water quality characteristics in 2022:

Raw Water:

- Well #13, the primary source, supplied raw water free of indicator bacteria total coliform and *E. coli*. This is improved from previous years.

- During the summer and fall, source supply was supplemented 1 day per week with water from Well #8, the utility's backup water source. In July 2022, the service line for a Bayview property was relocated to achieve proper chlorine disinfection which allowed staff to utilize Well #8 without issuing a BWA to this one property. No total coliform or *E.coli* bacteria were found in Well #8 in 2022. Water from Well #8 had consistently elevated turbidity from 1.5 to 2.9 Nephelometric Turbidity Unit (NTU), which is typical for this well.
- The median raw water turbidity was 0.65 NTU. This is slightly lower than last year but in line with previous years.
- The raw water was hard (hardness 77.65 mg/L CaCO₃).
- The total organic carbon (TOC) concentration in the raw water ranged from 1.2 to 4.0 mg/L with the higher concentrations recorded in the winter during rainy periods. Episodes of high TOC have the potential for high disinfection by-product concentrations.

Treated Water:

- The treated water was bacteriologically safe to drink with no confirmed *E. coli* or total coliform bacteria. Two samples in March and one sample in July tested positive for total coliform bacteria. Immediate resamples confirmed that no actual drinking water contamination occurred.
- Several pipe breaks during a cold snap in late December led to a Boil Water Advisory from December 25, 2022 to January 4, 2023.
- The median treated water turbidity was 0.7 NTU. On one occasion in March, the turbidity in a distribution system sample exceeded slightly 1 NTU.
- The disinfection by-product total trihalomethanes (TTHM) exceeded the maximum acceptable concentration of 100 µg/L at the Skana Gate Road and the Waugh Road sampling location in February and May (100 to 150 µg/L). Samples from August and November recorded much lower TTHM concentrations. Haloacetic acids (HAA) concentrations, another regulated disinfection by-product, also exceeded the MAC of 80 µg/L at Skana Gate Road in February and May (93 to 140 µg/L) while the August and November samples exhibited low concentrations. This is an improvement over 2021 DBP concentrations and is in part due to the efforts by staff to optimize chlorine concentrations, but also due to an unusually dry fall which resulted in lower than usual DBP formation during the fall months. However, due to the stark seasonal differences, there were long periods throughout the year when the rolling annual average of DBPs was above the MAC and therefore the water system remained under a DBP related water quality advisory.
- During the wet season, particularly February, the iron concentrations in the treated water from Well #13 and in the distribution system on Skana Gate Road were above the aesthetic limit in the GCDWQ. However no customer complaints about discolored water were received. During the dry season, iron concentrations in the raw and treated water are low.
- The free chlorine residual concentrations ranged from 0.24 to 1.46 mg/L with a median of 0.67 mg/L in the distribution system indicating satisfactory secondary disinfection.

Table 1 and 2 below provide a summary of the 2022 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 CRD Integrated Water Services staff:

- Water system leak repair on Sandy Hook Road and Aya Reach standpipe connection.
- Well #8 (back up supply) water pump electrical protection system repair.
- Well #13 SCADA communications modem failure replacement.
- Emergency response to water system leaks during cold weather event late December 2022 that resulted in the water system depressurizing and a Boil Water Advisory to be issued for the service in consultation with Island Health.

Capital Projects Update

The Capital Projects that were in progress or completed in 2022 include:

- Well Decommissioning – The project which is related to unused groundwater wells in the area started in 2021. Due to inaccurate well records staff continued in the review and confirmation of ownership of wells and coordinated access agreements with some residents. A contract was entered into with Drillwell Enterprises Ltd. with the anticipation of conducting further field investigations and decommissioning of wells during drier weather in 2023.

Financial Report

Please refer to the attached 2022 Statement of Operations and Reserve Balances.

Revenue includes parcel taxes (Transfers from Government), fixed user fees (User Charges), 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. 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 then 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., Acting Senior Manager, Infrastructure Engineering
	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
	Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence:	Ian Jesney, P.Eng., Acting General Manager, Integrated Water Services
	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services

Attachments: Table 1 - Summary of Raw Water Test Results
 Table 2 - Summary of Treated Water Test Results
 2022 Statement of Operations and Reserve Balances

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

Table 1

Table 1: 2022 Summary of Raw Water Test Results, Skana Water System										
PARAMETER		2022 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2012-2021 ANALYTICAL RESULTS			
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum Maximum		≤ = Less than or equal to	Median	Samples Analyzed	Range Minimum Maximum	
ND means Not Detected by analytical method used										
Physical Parameters										
Hardness as CaCO ₃	mg/L	77.65	4	64.8	100	No Guideline Required	84.65	26	27.5	114
Turbidity	NTU	0.65	17	0.15	2.9		0.275	68	< 0.14	70
Water Temperature	deg C	6.45	16	5.5	13.9		6.5	194	5.1	21.3
pH	pH units	Not analyzed in 2022				AO pH 7.0 -10.5	7.24	24	6.7	8.12
Total Organic Carbon	mg/L	2.95	4	1.2	4		2.35	22	1.2	6.09
Metals										
Aluminum	ug/L as Al	51.95	4	4.6	105	2900 MAC / 100 OG	13.9	27	< 3	110
Antimony	ug/L as Sb	< 0.5	4	< 0.5	< 0.5	6 MAC	< 0.5	27	< 0.5	< 0.5
Arsenic	ug/L as As	0.18	4	0.18	0.19	10 MAC	0.2	27	0.12	0.99
Barium	ug/L as Ba	1.9	4	1.7	2.4	1000 MAC	2.4	27	1.3	< 9
Beryllium	ug/L as Be	< 0.1	4	< 0.1	< 0.1		< 0.1	27	< 0.1	< 3
Bismuth	ug/L as Bi	< 1	4	< 1	< 1		< 1	20	< 1	< 1
Boron	ug/L as B	115	4	89	146	5000 MAC	123	27	< 50	345
Cadmium	ug/L as Cd	< 0.01	4	< 0.01	< 0.01	5 MAC	< 0.01	27	< 0.01	< 0.1
Calcium	mg/L as Ca	24.4	4	20	32	No Guideline Required	26.8	27	10.1	36
Chromium	ug/L as Cr	< 1	4	< 1	< 1	50 MAC	< 1	27	< 1	< 10
Cobalt	ug/L as Co	< 0.2	4	< 0.2	< 0.2		< 0.2	27	< 0.1	< 20
Copper	ug/L as Cu	5.955	4	4.34	10.9	2000 MAC / ≤ 1000 AO	< 8	27	1.48	39
Iron	ug/L as Fe	105.45	4	5.2	336	≤ 300 AO	15.6	27	< 5	464
Lead	ug/L as Pb	0.365	4	< 0.2	0.56	5 MAC	0.48	27	< 0.2	0.93
Lithium	ug/L as Li	9.05	4	7.5	10.7		10.6	8	7.3	15.9
Magnesium	mg/L as Mg	4.075	4	3.62	4.97	No Guideline Required	4.42	27	0.566	5.96
Manganese	ug/L as Mn	11.15	4	4.1	26.7	120 MAC / ≤ 20 AO	4.4	27	0.077	48.6
Molybdenum	ug/L as Mo	< 1	4	< 1	< 1		< 1	27	< 1	< 20
Nickel	ug/L as Ni	< 1	4	< 1	< 1		< 1	27	< 1	< 50
Potassium	mg/L as K	0.2115	4	0.203	0.235		0.251	27	0.093	0.606
Selenium	ug/L as Se	< 0.1	4	< 0.1	< 0.1	50 MAC	< 0.1	27	< 0.1	1.07
Silicon	ug/L as Si	8605	4	8190	9040		8220	27	3170	12100
Silver	ug/L as Ag	< 0.02	4	< 0.02	< 0.02	No Guideline Required	< 0.02	27	< 0.02	< 10
Sodium	mg/L as Na	39.95	4	31.2	47.7	≤ 200 AO	41.4	27	25.7	86.5
Strontium	ug/L as Sr	64.05	4	57.8	87.2	7000 MAC	75.9	27	53	99.7
Sulfur	mg/L as S	7.75	4	6.2	10.5		8.75	20	3.2	12.6
Thallium	ug/L as Tl	< 0.01	4	< 0.01	0.016		< 0.01	20	< 0.01	< 0.05
Tin	ug/L as Sn	< 5	4	< 5	< 5		< 5	27	< 5	< 20
Titanium	ug/L as Ti	< 5	4	< 5	< 5		< 5	27	< 5	< 10
Uranium	ug/L as U	< 0.1	4	< 0.1	0.13	20 MAC	0.105	20	< 0.1	0.18
Vanadium	ug/L as V	< 5	4	< 5	< 5		< 5	27	< 5	< 10
Zinc	ug/L as Zn	6.8	4	< 5	9.2	≤ 5000 AO	6.2	27	< 1	198
Zirconium	ug/L as Zn	0.175	4	< 0.1	0.31		< 0.1	20	< 0.1	< 0.5
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	< 1	15	< 1	< 1		< 1	149	< 1	200
<i>E. coli</i>	CFU/100 mL	< 1	15	< 1	< 1		< 1	149	< 1	11
Heterotrophic bacteria, 7 day	CFU/mL	Not analyzed in 2022					10	1	10	10
Parasites										
<i>Cryptosporidium</i> , Total oocysts	oocysts/100 L	Last tested in 2015				Zero detection desirable	< 1	7	< 1	< 1
<i>Giardia</i> , Total cysts	cysts/100 L	Last tested in 2015				Zero detection desirable	< 1	7	< 1	< 1

Table 2

Table 2: 2022 Summary of Treated Water Test Results, Skana Water System										
PARAMETER		2022 ANALYTICAL RESULTS				CANADIAN GUIDELINES ≤ = Less than or equal to	2012-2021 ANALYTICAL RESULTS			
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum Maximum			Median	Samples Analyzed	Range Minimum Maximum	
ND means Not Detected by analytical method used										
Physical Parameters										
Hardness	mg/L as CaCO3	77.5	8	64.8	95.9		85.4	41	27	107
pH	pH units	Not tested in 2022				AO pH 7.0 - 10.5	7.05	14	7	8.1
Turbidity	NTU	0.7	27	0.25	1.02		0.41	158	< 0.14	40
Total Organic Carbon	mg/L	2.4	8	0.78	4.5		1.5	38	0	5
Water Temperature	deg C	6.7	69	5.4	18.2		6.6	1907	1	23.5
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	< 1	57	< 1	2	0 MAC	< 1	405	< 1	99
<i>E. coli</i>	CFU/100 mL	< 1	57	< 1	< 1	0 MAC	< 1	405	< 1	10
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2022				No Guideline Required	< 10	45	< 10	15000
Disinfectants										
Disinfectants										
Chlorine, Free Residual	mg/L as Cl2	0.67	69	0.24	1.46		0.88	1928	0.06	>2.2
Chlorine, Total Residual	mg/L as Cl2	1.03	1	1.03	1.03		0.67	1584	0.1	5.9
Disinfection By-Products										
Disinfection Byproducts										
Bromodichloromethane	ug/L	15.5	8	< 1	18.0		20	57	9.15	29
Bromoform	ug/L	< 1	8	< 1	< 1		< 1	57	< 0.1	1.71
Chloroform	ug/L	56.0	8	15.0	130.0		61.5	57	10.6	170
Chlorodibromomethane	ug/L	2.4	8	< 1	7.0		5.1	57	< 0.1	73.8
Total Trihalomethanes	ug/L	73.0	8	24.0	150.0	100 MAC	73.8	57	23.1	190
Haloacetic Acids (HAAs)										
HAA5	ug/L	55.5	4	18	140	80 MAC	20	7	7.7	140
Metals										
Aluminum	ug/L as Al	48.45	8	3.1	110	2900 MAC / 100 OG	25.6	42	3.1	164
Antimony	ug/L as Sb	< 0.5	8	< 0.5	< 0.5	6 MAC	< 0.5	42	< 0.5	< 0.5
Arsenic	ug/L as As	0.17	8	0.14	0.2	10 MAC	0.19	42	< 0.1	0.97
Barium	ug/L as Ba	2.1	8	1.6	2.5	1000 MAC	2.4	42	1.4	< 9
Beryllium	ug/L as Be	< 0.1	8	< 0.1	< 0.1		< 0.1	42	< 0.1	< 3
Bismuth	ug/L as Bi	< 1	8	< 1	< 1		< 1	39	< 1	< 1
Boron	ug/L as B	114	8	84	150	5000 MAC	119.5	42	53	507
Cadmium	ug/L as Cd	< 0.01	8	< 0.01	< 0.01	5 MAC	< 0.01	42	< 0.01	< 0.1
Calcium	mg/L as Ca	24.35	8	20	30.8	No Guideline Required	26.75	42	9.8	34.3
Chromium	ug/L as Cr	< 1	8	< 1	< 1	50 MAC	< 1	42	< 1	< 10
Cobalt	ug/L as Co	< 0.2	8	< 0.2	< 0.2		< 0.2	42	< 0.2	< 20
Copper	ug/L as Cu	7.575	8	4.26	11.6	2000 MAC / ≤ 1000 AO	7.33	42	3.48	66
Iron	ug/L as Fe	137.95	8	27.7	346	≤ 300 AO	49.9	42	< 10	607
Lead	ug/L as Pb	0.315	8	< 0.2	0.67	5 MAC	0.35	42	< 0.2	10
Lithium	ug/L as Li	9.1	8	7.6	10.9		9.95	16	7.4	15.9
Magnesium	mg/L as Mg	4.07	8	3.55	4.63	No Guideline Required	4.32	42	0.55	5.15
Manganese	ug/L as Mn	3.85	8	2.5	7.2	120 MAC / ≤ 20 AO	2.85	42	< 0.004	42.9
Molybdenum	ug/L as Mo	< 1	8	< 1	< 1		< 1	42	< 1	< 20
Nickel	ug/L as Ni	< 1	8	< 1	< 1		< 1	42	< 1	< 50
Potassium	mg/L as K	0.2125	8	0.193	0.253		0.2505	42	0.162	0.409
Selenium	ug/L as Se	< 0.1	8	< 0.1	< 0.1	50 MAC	< 0.1	42	< 0.1	0.564
Silicon	ug/L as Si	8640	8	8000	9160		8380	42	939	11800
Silver	ug/L as Ag	< 0.02	8	< 0.02	< 0.02	No Guideline Required	< 0.02	42	< 0.02	< 10
Sodium	mg/L as Na	40.05	8	30.6	54.7	≤ 200 AO	42.45	42	28.2	87.4
Strontium	ug/L as Sr	63.35	8	57	79.1	7000 MAC	74.55	42	53.5	89.7
Sulphur	mg/L as S	7.6	8	6.1	9.2		8.7	39	3.1	12.8
Thallium	ug/L as Tl	< 0.01	8	< 0.01	< 0.01		< 0.01	39	< 0.01	< 0.05
Tin	ug/L as Sn	< 5	8	< 5	< 5		< 5	42	< 5	< 20
Titanium	ug/L as Ti	< 5	8	< 5	< 5		< 5	42	< 5	31
Uranium	ug/L as U	< 0.1	8	< 0.1	0.13	20 MAC	< 0.1	39	< 0.1	0.18
Vanadium	ug/L as V	< 5	8	< 5	< 5		< 5	42	< 5	< 10
Zinc	ug/L as Zn	13.75	8	< 5	30.9	≤ 5000 AO	9	42	< 5	201
Zirconium	ug/L	0.17	8	< 0.1	0.33		< 0.1	39	< 0.1	< 0.5

CAPITAL REGIONAL DISTRICT

SKANA WATER

Statement of Operations (Unaudited)

For the Year Ended December 31, 2022

	2022	2021
Revenue		
Transfers from Government	24,000	22,885
User Charges	53,984	45,089
Other revenue from own sources:		
Interest Earnings	15	2
Transfer from Operating Reserve	-	10,000
Other Revenue	644	173
Total Revenue	78,643	78,149
Expenses		
General Government Services	2,567	2,631
Contract for Services	8,315	14,482
CRD Labour and Operating costs	47,418	29,225
Debt Servicing Costs	1,998	2,123
Other Expenses	11,701	22,143
Total Expenses	71,999	70,604
Net revenue (expenses)	6,644	7,545
Transfers to own funds:		
Capital Reserve Fund	1,757	6,485
Operating Reserve Fund	4,887	1,060
Annual surplus/(deficit)	-	-
Accumulated surplus/(deficit), beginning of year	-	-
Accumulated surplus/(deficit), end of year	\$ -	-

CAPITAL REGIONAL DISTRICT

SKANA WATER

Statement of Reserve Balances (Unaudited)

For the Year Ended December 31, 2022

	Capital Reserve	
	2022	2021
Beginning Balance	39,384	82,024
Transfer from Operating Budget	1,757	6,485
Transfer from Completed Capital Projects	-	-
Transfer to Capital Projects	(30,000)	(50,000)
Interest Income	497	875
Ending Balance	11,638	39,384

	Operating Reserve	
	2022	2021
Beginning Balance	1,041	9,820
Transfer from Operating Budget	4,887	1,060
Transfer to Operating Budget	-	(10,000)
Interest Income	164	161
Ending Balance	6,092	1,041



**REPORT TO SKANA WATER SERVICE COMMITTEE
MEETING OF FRIDAY, JUNE 16, 2023**

SUBJECT Capital Project Status Reports and Operational Updates – June 2023

ISSUE SUMMARY

To provide the Skana Water Service Committee with capital project status reports and operational updates.

BACKGROUND

The Skana Water System is located on the north side of Mayne Island in the Southern Gulf Islands Electoral Area and provides drinking water to approximately 50 customers. Capital Regional District (CRD) Integrated Water Services is responsible for the overall operation of the water system. The design and construction of water system facilities are overseen by the CRD Infrastructure Engineering and Operations Division. The day-to-day operations and maintenance is conducted by a contractor. The quality of drinking water provided to customers in the Skana Water System is overseen by the CRD Water Quality Section.

CAPITAL PROJECT UPDATE

17-03 | Alternative Approval Process (AAP) – Storage Tank Replacement Project

Project Description: Conduct an AAP to seek elector assent to borrow funds for storage tank replacement and well protection upgrades.

Project Rationale: A loan will be required to fund the storage tank replacement, Supervisory Control and Data Acquisition (SCADA), tank level and flow monitoring installation, and well protection upgrades for Well #8 and #13. The proposed loan will require public engagement and voter assent.

Project Update and Milestones:

Milestone	Completion Date
Project information is being gathered for the communications strategy.	Ongoing
Project funding will have final approval at the CRD Board.	March 16, 2022
AAP process will commence with communications and coordination with CRD Legislative Services.	Pending

18-01 | Storage Tank Replacement

Project Description: Replace the existing storage tanks.

Project Rationale: The existing storage tanks are at the end of their design life and do not meet seismic requirements. It is proposed to replace the existing tanks with bolted steel tanks. Tank level and flow monitoring are included with the scope of work.

Skana Water Service Committee – June 16, 2023
Capital Project Status Reports and Operational Updates – June 2023

2

Project Update and Milestones:

Milestone	Completion Date
Growing Communities Fund – Internal CRD Grant Program. CRD assessing if this project could meet the requirements for funding	June 12, 2023 (target application)
ICIP-EQ Grant Rejected	February 7, 2023
ICIP-EQ Grant Application Submitted	February 23, 2022
Prepared grant application for the Investing in Canada Infrastructure Program – Environmental Quality has been prepared for funding	Completed

17-04 | Well #8 Upgrade

Project Description: Conduct well improvements including new well liner, replacement of well seal and SCADA automation; relocate first customer service line to achieve proper chlorine contact time.

Project Rationale: An inspection of Well #8 identified several deficiencies. Most recommended improvements were carried out in 2018 including the installation of a new well liner, replacement of the well seal, and steel casing. Relocation of the first customer's service line was completed in July 2022. The remaining scope is related to SCADA automation and staff are reviewing the scope and available funding.

Project Update and Milestones:

Milestone	Completion Date
Project planning phase	Completed
Relocation of the first customer service line is being evaluated on delivery through CRD staff or contracted services	Completed
Service line replacement and well improvements	Completed
SCADA Automation – The work associated with the automation of Well #8 requires rescoping and overall project delivery to ensure all aspects of the project requirements are identified to establish project budget	Q4 2024

20-02 | Well Decommissioning

Project Description: Numerous wells are not in use and are required to be decommissioned as per BC Ministry of Environment and Climate Change Strategy requirements.

Project Rationale: A high level hydrogeologic assessment was undertaken in 2019. Numerous wells were identified that were not in use and required to be decommissioned as per the Water Sustainability Act. Additionally, the wells are a contamination risk to the aquifer.

Skana Water Service Committee – June 16, 2023
Capital Project Status Reports and Operational Updates – June 2023

3

Project Update and Milestones:

Milestone	Completion Date
CRD has entered into a Contract with Drillwell for decommissioning of three CRD wells and four wells on private property. As of May 2023, five wells have been located on site and will proceed to decommissioning.	Ongoing
Four private residents with wells on their property have granted permission (License of Occupation) to CRD to decommission the wells on their property. Two property owners have not granted permission. CRD to obtain pricing for decommissioning three wells on CRD property as well as four wells on private property.	December 2022
Five more wells were located with letters to go to those homeowners. Not all homeowners have responded to provide permission for access and confirmation is still being sought with regards to whether the wells are being used for the landowner's own purposes.	Letter sent April 6, 2022
CRD have contacted majority of the property owners through mail where the identified wells are located.	Letter sent November 5, 2021
Letter to affected property owners.	November 24, 2021
CRD Staff Meeting with community members to obtain additional information.	July 5, 2021
Well drilling specialist contacted in spring 2021 to confirm the budget is adequate for the approximate number of wells.	Spring 2021

OPERATIONAL UPDATE

This is an operational update reporting period from February 2023 through May 2023.

- Weekly operational site visits by Saanich Peninsula and Gulf Island Operations Staff. Routine site visits are typically performed on Thursdays.
- Replacement of Well #13 Water Treatment Plant chlorine mixing storage tank and spill tray.
- Ongoing chlorine chemical feed pump optimization to address disinfection by-product creation while maintaining chlorine residual regulatory requirements within the extents of the water distribution system.
- Rescinded DBP advisory for the service which included communications with the Committee and public through email, posting of advisory update information on the CRD website and on sandwich boards within the community.
- Well No. 13 Water Treatment Plant SCADA system corrective maintenance. A system power outage that occurred in February resulted in damage to the power system monitoring equipment.

Skana Water Service Committee – June 16, 2023
Capital Project Status Reports and Operational Updates – June 2023

4

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.ScT., Manager, Saanich Peninsula and Gulf Islands Operations
Concurrence:	Joseph Marr, P.Eng., Acting Senior Manager, Infrastructure Engineering
Concurrence:	Jason Dales, B.Sc., WD IV., Acting Senior Manager, Wastewater Infrastructure Operations
Concurrence:	Ian Jesney, P.Eng., Acting General Manager, Integrated Water Services