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SKANA WATER SERVICE COMMITTEE
Notice of Meeting on **Tuesday, June 28, 2022 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) P. Brent, Acting Electoral Area Director M. Bentley
B. Hill R. Johnston

AGENDA

1. APPROVAL OF AGENDA

2. ADOPTION OF MINUTES 3

***Recommendation**: That the minutes of the February 22, 2022 meeting be adopted.*

3. CHAIR'S REMARKS

4. PRESENTATIONS/DELEGATIONS

The public are welcome to attend Committee meetings in-person.

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

- Bylaw No. 4450 – A Bylaw to Amend Appointments for the Skana Water Service Committee (Bylaw No. 3133)
- Verbal discussion to introduce draft Local Service Area Water Conservation Bylaw

6. COMMITTEE BUSINESS

6.1. Project and Operations Update 6

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

6.2. 2021 Annual Report.....9

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

7. CORRESPONDENCE

*To ensure quorum, advise **Mikayla Risvold 250.474.9518** if you cannot attend.*

IWSS-297445977-8471

8. NEW BUSINESS

9. ADJOURNMENT

Next Meeting: November 2022

Making a difference...together

MINUTES OF A MEETING OF THE Skana Water Service Committee, held Tuesday, February 22, 2022 at 9:30 a.m., in the Goldstream Room, 479 Island Highway, Victoria, BC

PRESENT: **Committee Members:** W. Korol (Chair) (EP); P. Brent (EP); B. Hill (EP); R. Johnston (EP)

Staff: M. McCrank, Senior Manager, Wastewater Infrastructure Operations; D. Puskas, Manager, Capital Projects; C. Moch, Manager, Water Quality Operations; D. Robson, Manager, Saanich Peninsula and Gulf Islands Operations (EP); T. Duthie, Manager, Administrative Services; M. Risvold, Committee and Administrative Clerk (Recorder)

REGRETS: D. Howe, Electoral Area Director; M. Bentley

EP = Electronic Participation

The meeting was called to order at 9:30.

1. ELECTION OF CHAIR

The Senior Manager called for nominations for the position of Chair of the Skana Water Service Committee for 2022.

R. Johnston 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 2022 by acclamation.

2. APPROVAL OF AGENDA

MOVED by B. Hill, **SECONDED** by R. Johnston,
That the agenda be approved.

CARRIED

3. ADOPTION OF MINUTES

MOVED by B. Hill, **SECONDED** by R. Johnston,
That the minutes of the October 28, 2021 meeting be adopted.

CARRIED

MOVED by R. Johnston, **SECONDED** by B. Hill,
That the minutes of the February 1, 2022 meeting be adopted.

CARRIED

4. CHAIR'S REMARKS

The Chair had no remarks.

5. PRESENTATIONS/DELEGATIONS

There were no presentations or delegations.

6. SENIOR MANAGER'S REPORT

M. McCrank provided the committee meeting schedule for the year, advising there will be three meetings held in 2022. The meetings will be held in the months of February, June and in the Fall. Additional meetings remain at the call of the Chair.

7. COMMITTEE BUSINESS

7.1. Project and Operations Update

D. Puskas provided the capital project update.

Staff responded to questions from the committee related to the well decommissioning project. Staff advised the project will begin in September which will allow time for staff to gain consent to access private properties and for the ground to be less wet. Completing the work when the ground is wet can increase remediation costs. Once the work has finished, the land owners will be notified and staff will ensure the remediation work is satisfactory.

M. McCrank provided the operational update.

Staff advised the Skana Water System had no negative impacts and no report of damage from the weather events that occurred in November and December.

Staff responded to questions from the committee. Staff also advised there were elevated disinfection byproducts reported in the quarterly testing completed in February which resulted in the annual rolling average exceeding the Maximum Acceptable Concentration. Information will be sent to the community shortly in the form of a Water Quality Advisory.

MOVED by B. Hill, **SECONDED** by R. Johnston,
The Skana Water Service Committee receives this report for information.

CARRIED

8. CORRESPONDENCE

There was no correspondence.

9. NEW BUSINESS

The committee requested the annual cost of the storage tanks per parcel if the grant is successful.

10. ADJOURNMENT

MOVED by R. Johnston, **SECONDED** by B. Hill,
That the February 22, 2022 meeting be adjourned at 10:06.

CARRIED

_____
CHAIR

_____
SECRETARY

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REPORT TO SKANA WATER SERVICE COMMITTEE
MEETING OF TUESDAY, JUNE 28, 2022

SUBJECT **Capital Project Status Reports and Operational Updates – June 2022**

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 48 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 Division.

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	Q2

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.

Project Update and Milestones:

Milestone	Completion Date
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 a number of 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, but relocation of the first customer's service line was not complete.

Project Update and Milestones:

Milestone	Completion Date
Project planning phase	In progress
Relocation of the first customer service line is being evaluated on delivery through CRD staff or contracted services	In progress
Service line replacement and well improvements	September 2022

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.

Project Update and Milestones:

Milestone	Completion Date
CRD staff have spent time confirming ownership and location of wells, due to the age of the records and duplication of well records, additional time was required to confirm ownership and locations.	In progress
Well decommissioning scheduled to occur in September 2022	September 2022
Five more wells were located with letters to go to those home owners. Not all homeowners have responded to provide	Letter sent April 6, 2022

Milestone	Completion Date
permission for access and confirmation is still being sought with regards to whether the wells are being used for the landowners own purposes	
CRD have contacted, through mail, the majority of property owners 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 2022 through May 2022.

- Leak detection activities, including issuing a water service interruption notification to the public, performed on May 19.
- Public notifications issued regarding exceedances of allowable concentrations of disinfection by-products (DBP) within the drinking water system.
- Preparation of Well #8 for periodic use. Work included pump operation, system flushing, turbidity monitoring and water sampling in February, March, April and May.
- Operational response to low chlorine levels at the Well #13 water treatment plant. Chlorine analyzer was found to be in “stop” mode and required resetting to operate.
- Continued optimization of the chlorination dosage that allows for adequate secondary disinfection at the far ends of the system in order to reduce DBP production.

RECOMMENDATION

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

Submitted by:	Matthew McCrank, M.Sc., P.Eng., PMP., Senior Manager, Wastewater Infrastructure Operations
Submitted by:	Ian Jesney, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Services

Skana Water System

2021 Annual Report

CRD | Drinking Water

Introduction

This report provides a summary of the Skana Water Service for 2021 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 2021.

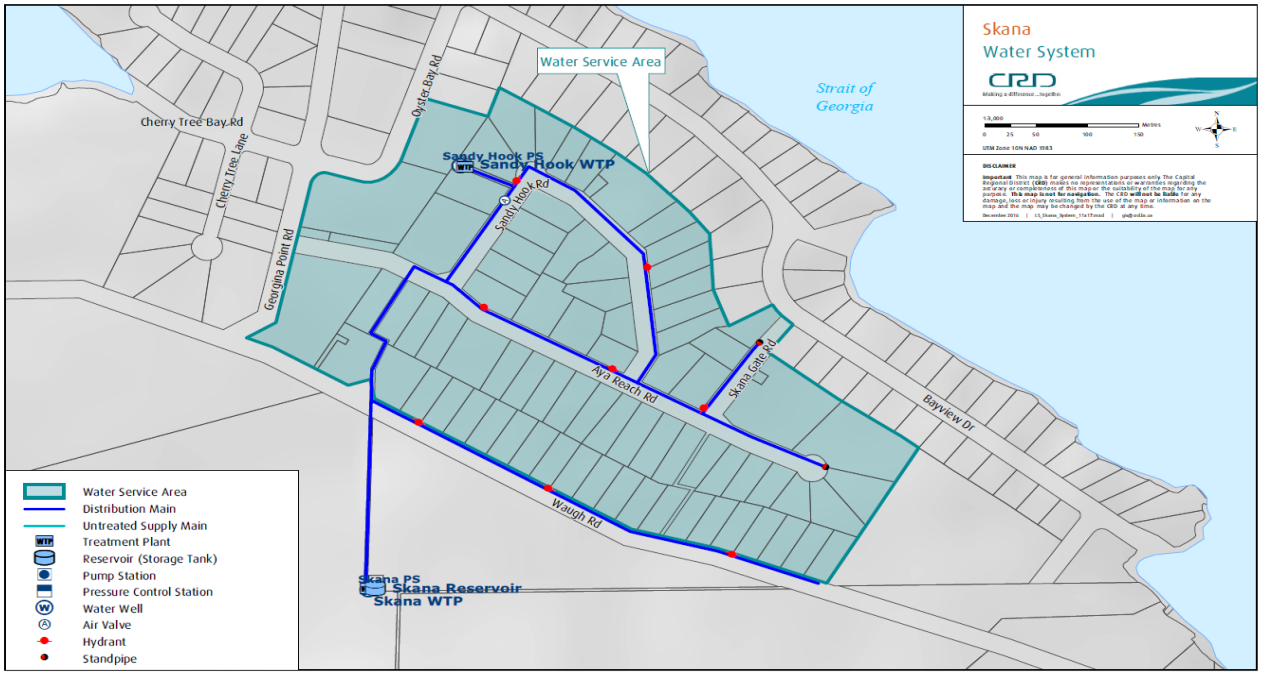

Figure 1: Map of Skana Water System

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: 48 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 2021 in Figure 2. Resource water levels in 2021 ranged from 20% to 50% lower than the historical three year average readings. July 2021 water level reading is anomalous as a result of the service switching to Well #8 for a period while Well #13 was off.

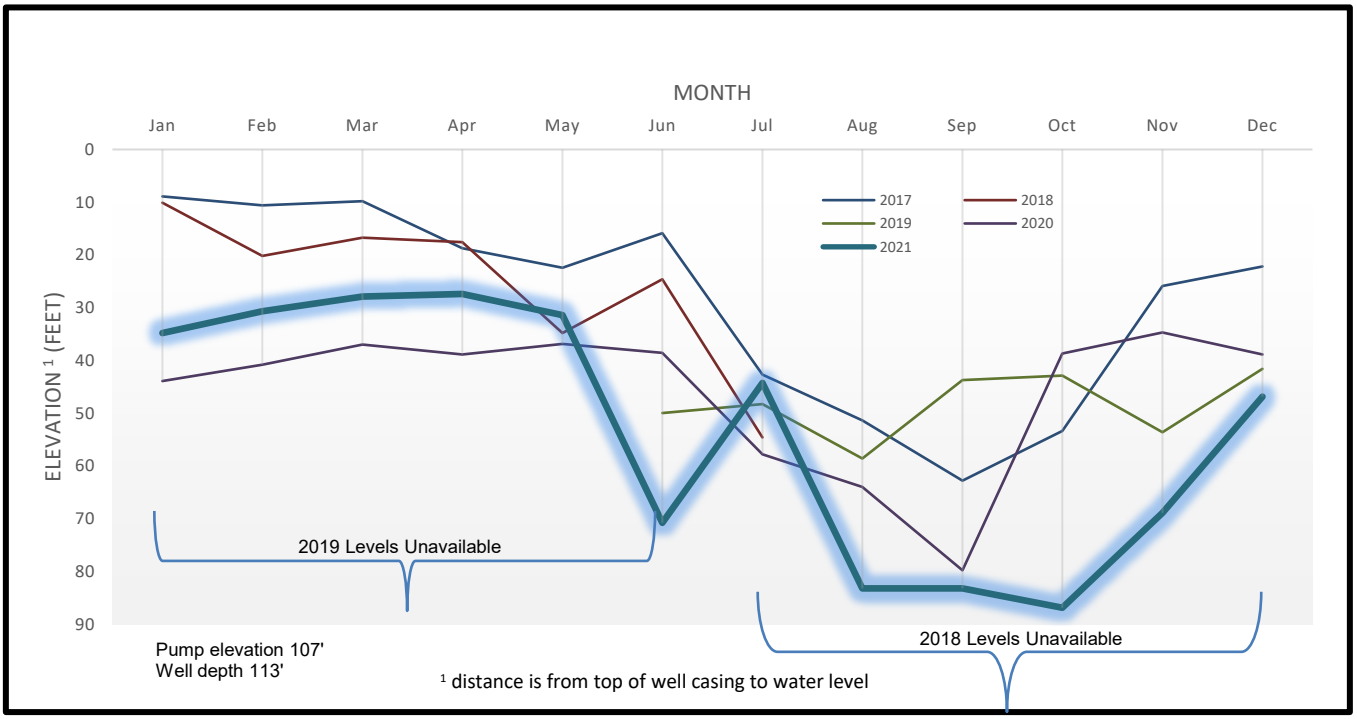

Figure 2: Skana Well #13 Groundwater Supply Monthly Water Level

Water Production and Demand

Referring to Figure 3, 4,433 cubic meters of water was extracted (water production) from the groundwater source (Well #13) in 2021; an 11% decrease from the previous year and a 4% increase from the five year average. Water demand (customer water billing) for the service totaled 3,529 cubic meters of water; a 7% decrease from the previous year and a 9% increase from the five year average.

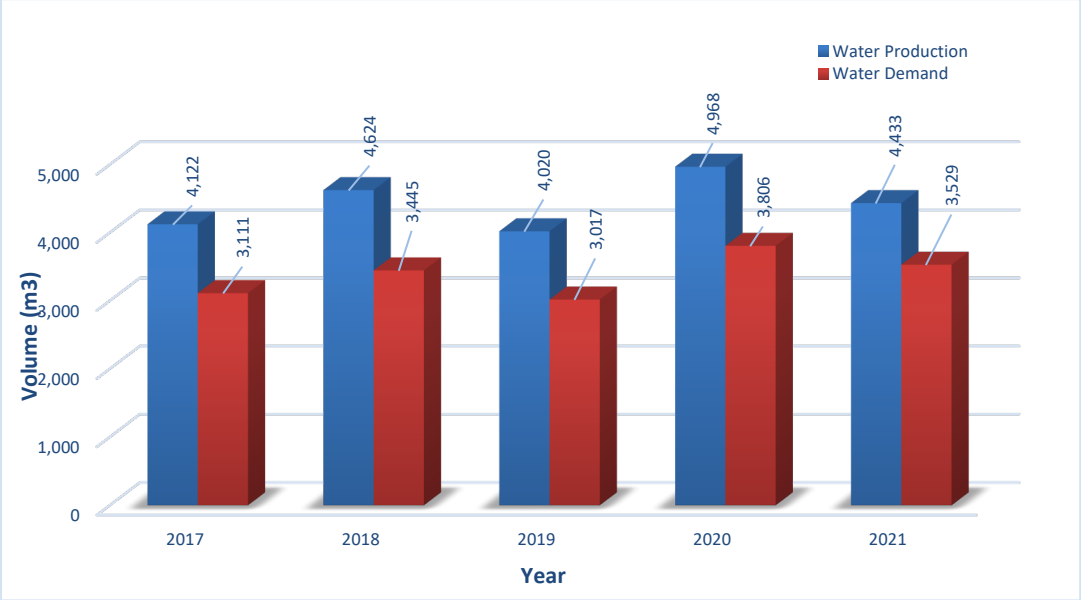

Figure 3: Skana Water Service Annual Water Production and Demand

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 2021 non-revenue water (904 cubic meters) represents approximately 20% 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 7%. This is considered to be acceptable for a small water system.

Figure 4 below illustrates the monthly water production for 2021 along with the historical water production information. The monthly water production trends are typical for small water systems such as the Skana water system. June 2021 water production is much higher than previous years and is likely attributed to the extreme heat weather event (heat dome) that occurred near the end of June.

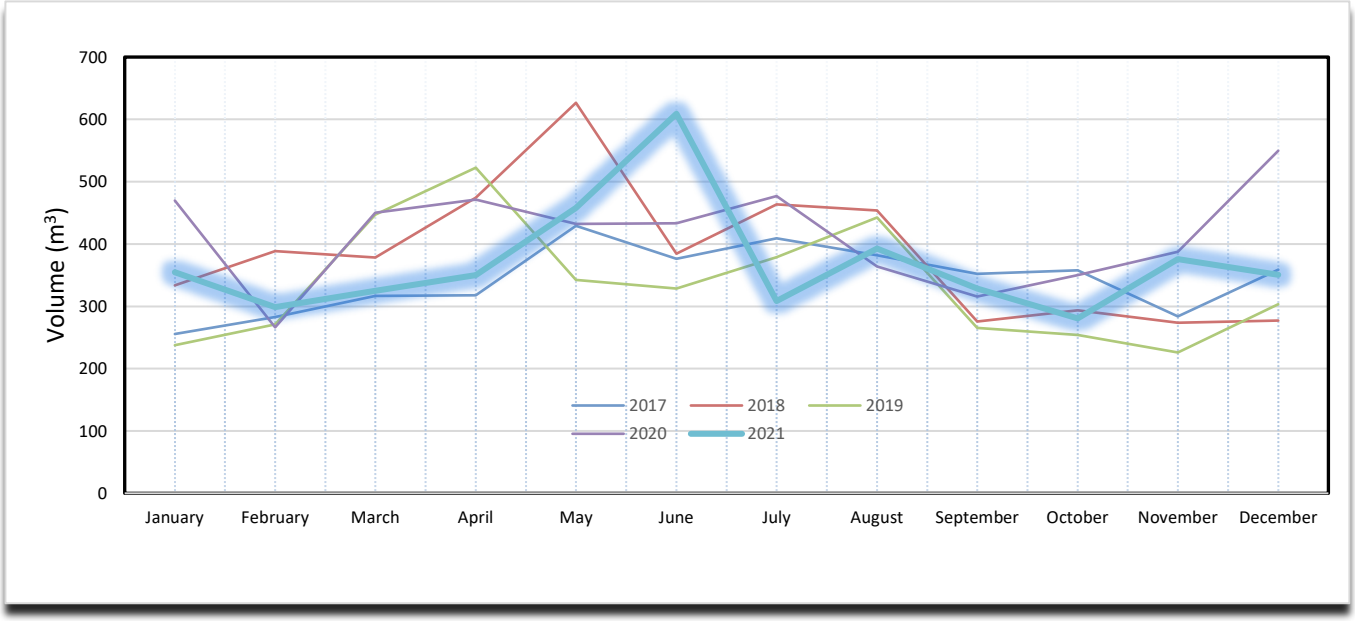

Figure 4: Skana Water Service Monthly Water Production.

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 2021 to consistently supply drinking water of good quality to its customers. The main source Well #13 ran dry during the peak of summer and backup Well #8 had to be used with its more turbid raw water. As a result, the Skana water system was put under a boil water advisory between July 16 and August 20, 2021. Once Well #13 became usable again, the raw water quality improved despite the occasional episode of indicator bacteria presence and elevated turbidity especially following the severe rain event on November 14 and 15, 2021. The presence of total coliform and even *E.coli* bacteria, and a turbidity – rainfall response, are common seasonal phenomena during the wet season. This indicates that Well #13 is still under surface water influence during the rainy season. The raw water also experienced periods with elevated iron concentrations; in particular during the fall 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. The treated water supplied to the customers was generally of good quality and safe to drink.

During the latter part of the year, disinfection by-product concentrations in the distribution system started to exceed the maximum acceptable concentration (MAC) listed in the Guidelines for Canadian Drinking Water Quality (GCDWQ). One treated water sample from Waugh Road collected on November 15 tested positive for *E.coli* bacteria. This triggered the CRD emergency response procedures and an immediate investigation concluded that this bacteria hit was caused by poor sampling conditions during the severe rainstorm and overland flooding that day. The results from the resampling/retesting confirmed this conclusion on November 17.

The data below provides a summary of the water quality characteristics in 2021:

Raw Water:

- Well #13, the primary source, supplied raw water free of indicator bacteria except for the months of January, July and November when total coliform and *E.coli* bacteria were detected.
    - Samples from Well #8 were collected between June and August. Low concentrations of total coliform bacteria were found in one sample from August 10. Water from Well #8 had consistently elevated turbidity from 1.4 to 70 Nephelometric Turbidity Unit (NTU), which is fairly typical for this well.
- The median raw water turbidity was 0.7 NTU. This is higher than in previous years due to the longer use of Well #8 during the summer drought.
- The raw water was hard (hardness 73.1 mg/L $CaCO_3$).
- The total organic carbon (TOC) concentration in the raw water ranged from 1.4 to 4.9 mg/L with the higher concentrations recorded in the fall and 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. One sample on November 15 tested positive for total coliform and *E.coli* bacteria. Immediate investigations and resamples confirmed that no actual drinking water contamination occurred.

- The median treated water turbidity was 0.6 NTU.
- The annual average levels of the disinfection by-products total trihalomethanes (TTHM) were slightly above the maximum acceptable concentration of 100 µg/L at the 223 Skana Gate Road sampling location (109.5 µg/L) and lower at the 537/539 Waugh Road sampling location (88.5 µg/L). Haloacetic acids (HAA), another regulated disinfection by-product, were also above the MAC of 80 µg/L at 223 Skana Gate Road (91 µg/L).
- During the extreme rain event on November 15, 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.
- The free chlorine residual concentrations ranged from 0.16 to 1.66 mg/L with a median of 0.88 mg/L in the distribution system indicating satisfactory secondary disinfection.

Table 1 and 2 below provide a summary of the 2021 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:

- Well #8 (back up supply) water quality issues that resulted in a boil water advisory to be issued.
- Well #13 SCADA control investigation and repairs.
- Aya Reach water service line leak repairs.
- 45.5 cubic meters of water delivered from Victoria to supplement water demand during Well #13 low water production.
- Corrective maintenance performed on Well #13 chlorine analyzer and dosing system.

Capital Projects Update

The Capital Projects that were in progress or completed in 2021 include:

- Well Decommissioning – The project, related to unused CRD-owned groundwater wells in the area, was started in 2021. Due to inaccurate well records, staff have been confirming ownership of wells through letters and on site meetings. Work is currently scheduled for September 2022.

Financial Report

Please refer to the attached 2021 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:	Matt McCrank, M.Sc., P.Eng., Senior Manager, Wastewater Infrastructure Operations
	Ian Jesney, P.Eng., Senior Manager, Infrastructure Engineering
	Glenn Harris, Ph.D., RPBio., Senior Manager, Environmental Protection
	Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence:	Ted Robbins, BSc, C.Tech, General Manager, Integrated Water Services

Attachment: 2021 Statement of Operations and Reserve Balances

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

Table 1

Table 1: 2021 Summary of Raw Water Test Results, Skana Water System									
PARAMETER		**2021 ANALYTICAL RESULTS**				**CANADIAN GUIDELINES**	**2011-2020 RESULTS**		
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum	Range 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	**73.1**	4	66.1	92.3	No Guideline Required	87.1	24	27.5 - 114
Turbidity	NTU	**0.7**	19	ND	70.0		0.22	49	ND- 4.56
Water Temperature	deg C	**6.5**	59	5.1	6.8		10.5	106	5.8 - 21.3
pH	pH units	Not analyzed in 2021				AO pH 7.0 -10.5	7.24	26	6.70 - 8.12
Total Organic Carbon	mg/L	**2.85**	**4**	1.20	4.9		2.35	18	1.30 - 6.09
Metals									
Aluminum	ug/L as Al	**36.50**	4	3.8	95.6	2900 MAC / 100 OG	18.8	25	ND - 110.0
Antimony	ug/L as Sb	**ND**	4	ND	ND	6 MAC	ND	25	ND
Arsenic	ug/L as As	**0.17**	4	0.12	0.2	10 MAC	0.2	25	0.15 - 0.99
Barium	ug/L as Ba	**2.20**	4	1.6	2.4	1000 MAC	2.5	25	ND - 9.00
Beryllium	ug/L as Be	**ND**	4	ND	ND		ND	25	ND
Bismuth	ug/L as Bi	**ND**	4	ND	ND		ND	16	ND
Boron	ug/L as B	**101**	4	73	146.0	5000 MAC	135	25	ND - 360
Cadmium	ug/L as Cd	**ND**	4	ND	ND	5 MAC	ND	25	ND
Calcium	mg/L as Ca	**23.3**	4	20.4	29.0	No Guideline Required	27.2	25	10.1 - 36.0
Chromium	ug/L as Cr	**ND**	4	ND	1.9	50 MAC	ND	25	ND
Cobalt	ug/L as Co	**ND**	4	ND	ND		ND	25	ND
Copper	ug/L as Cu	**7.6**	4	4.3	16.7	2000 MAC / ≤ 1000 AO	4.3	22	ND - 39.0
Iron	ug/L as Fe	**34.5**	4	15.6	464.0	≤ 300 AO	15	25	ND - 266
Lead	ug/L as Pb	**0.38**	4	0.22	0.6	5 MAC	ND	25	ND - 0.93
Lithium	ug/L as Li	**9.4**	4	7.30	10.3		12.2	4	10.9 - 15.9
Magnesium	mg/L as Mg	**3.75**	4	3.5	4.9	No Guideline Required	4.57	25	0.57 - 5.96
Manganese	ug/L as Mn	**6.4**	4	1.6	13.4	120 MAC / ≤ 20 AO	4.4	25	0.08 - 48.6
Molybdenum	ug/L as Mo	**ND**	4	ND	ND		ND	25	ND
Nickel	ug/L as Ni	**ND**	4	ND	ND		ND	25	ND - 0.0
Potassium	mg/L as K	**0.21**	4	0.17	0.3		0.26	25	0.09 - 0.60
Selenium	ug/L as Se	**ND**	4	ND	ND	50 MAC	ND	25	ND - 1.07
Silicon	ug/L as Si	**8590**	4	6750	9120.0		8,220	25	2610 - 12100
Silver	ug/L as Ag	**ND**	4	ND	ND	No Guideline Required	ND	25	ND
Sodium	mg/L as Na	**36.3**	4	27.6	47.1	≤ 200 AO	44.6	25	25.7 - 86.5
Strontium	ug/L as Sr	**62.7**	4	59.3	67.2	7000 MAC	76	25	53.0 - 99.7
Sulfur	mg/L as S	**8.0**	4	6.50	9.7		8.9	16	3.2 - 12.6
Thallium	ug/L as Tl	**0.01**	4	ND	0.01		ND	16	ND
Tin	ug/L as Sn	**ND**	4	ND	ND		ND	25	ND
Titanium	ug/L as Ti	**ND**	4	ND	ND		ND	25	ND
Uranium	ug/L as U	**ND**	4	ND	0.2	20 MAC	0.11	16	ND - 0.18
Vanadium	ug/L as V	**ND**	4	ND	ND		ND	25	ND
Zinc	ug/L as Zn	**7.8**	4	6	9.2	≤ 5000 AO	6.2	25	ND - 198.0
Zirconium	ug/L as Zn	**0.19**	4	ND	0.3		ND	16	ND
Microbial Parameters									
Indicator Bacteria									
Coliform, Total	CFU/100 mL	**ND**	19	ND	17		ND	141	ND - 43
E. coli	CFU/100 mL	**ND**	19	ND	2		ND	147	ND - 2
Heterotrophic bacteria, 7 day	CFU/mL	Not analyzed in 2021					10	1	10 - 10
Parasites									
Cryptosporidium, Total oocysts	oocysts/100 L	Last tested in 2015				Zero detection desirable	ND	8	ND
Giardia, Total cysts	cysts/100 L	Last tested in 2015				Zero detection desirable	ND	8	ND

Table 2

Table 2: 2021 Summary of Treated Water Test Results, Skana Water System									
PARAMETER	**2021 ANALYTICAL RESULTS**					**CANADIAN GUIDELINES**	**2011-2020 RESULTS**		
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum	Range Maximum	≤ = Less than or equal to	Median	Samples Analyzed	Range Min.-Max.
ND means Not Detected by analytical method used									
Physical Parameters									
Hardness	mg/L as CaCO3	**76.6**	8	59.7	90.3		85.6	31	26.8 - 107
pH	pH units	**7**	5	7	7.04	AO pH 7.0 -10.5	7.1	8	6.9 - 7.7
Turbidity	NTU	**0.6**	42	ND	40		0.64	111	ND - 10.7
Total Organic Carbon	mg/L	**2.7**	8	1.10	5		1.8	23	0.77 - 5.0
Water Temperature	deg C	**6.6**	213	0.6	6.9		10.2	1495	0.0 - 23.4
Microbial Parameters									
Indicator Bacteria									
Coliform, Total	CFU/100 mL	**ND**	69	ND	99	0 MAC	ND	300	ND - 10
E. coli	CFU/100 mL	**ND**	69	ND	10	0 MAC	ND	300	ND
Hetero. Plate Count, 7 day	CFU/1 mL	Not tested in 2021				No Guideline Required	ND	45	ND
Disinfectants									
Disinfectants									
Chlorine, Free Residual	mg/L as Cl2	**0.88**	218	0.16	1.66		0.72	1554	0.16 - 4.80
Chlorine, Total Residual	mg/L as Cl2	**0.91**	17	0.37	1.37		0.76	1315	0.18 - 5.90
Disinfection By-Products									
Disnfection Byproducts									
Bromodichloromethane	ug/L	**15.5**	8	14.0	17.0		20	43	9.2 - 29.0
Bromoform	ug/L	**ND**	8	ND	ND		ND	43	ND - 1.20
Chloroform	ug/L	**89.5**	8	22	140		50	43	10.6 - 170
Chlorodibromomethane	ug/L	**2.65**	8	ND	6.5		2.85	43	0.77 - 73.8
Total Trihalomethanes	ug/L	**109.5**	8	43	150	100 MAC	72	43	23.1 - 190
Haloacetic Acids (HAAs)									
HAA5	ug/L	**102**	4	20	140	80 MAC	11.5	3	7.7 - 19.0
Metals									
Aluminum	ug/L as Al	**32.9**	8	4.2	118	2900 MAC / 100 OG	24.7	31	3.1 - 121
Antimony	ug/L as Sb	**ND**	8	ND	ND	6 MAC	ND	31	ND
Arsenic	ug/L as As	**0.19**	8	ND	0.28	10 MAC	0.18	31	0.12 - 0.97
Barium	ug/L as Ba	**2.35**	8	2.00	2.70	1000 MAC	2.4	31	1.4 - 3.0
Beryllium	ug/L as Be	**ND**	8	ND	ND		ND	31	ND
Bismuth	ug/L as Bi	**ND**	8	ND	ND		ND	31	ND
Boron	ug/L as B	**94.5**	8	57.0	138	5000 MAC	121	31	53.0 - 347
Cadmium	ug/L as Cd	**ND**	8	ND	ND	5 MAC	ND	31	ND
Calcium	mg/L as Ca	**24.5**	8	18.4	28.0	No Guideline Required	26.8	31	9.8 - 34.4
Chromium	ug/L as Cr	**ND**	8	ND	ND	50 MAC	ND	31	ND
Cobalt	ug/L as Co	**ND**	8	ND	ND		ND	31	ND
Copper	ug/L as Cu	**7.73**	8	3.48	7.59	2000 MAC / ≤ 1000 AO	6.72	31	3.85 - 24.0
Iron	ug/L as Fe	**162.5**	8	23.6	607	≤ 300 AO	49	31	14.3 - 303
Lead	ug/L as Pb	**0.32**	8	ND	0.55	5 MAC	0.33	31	ND - 10.0
Lithium	ug/L as Li	**9.7**	8	7.4	10.7		11.4	3	7.6 - 11.7
Magnesium	mg/L as Mg	**3.7**	8	3.4	4.95	No Guideline Required	4.3	31	0.55 - 5.2
Manganese	ug/L as Mn	**3**	8	ND	13.7	120 MAC / ≤ 20 AO	2.8	31	ND - 42.9
Molybdenum	ug/L as Mo	**ND**	8	ND	ND		ND	31	ND - 1.10
Nickel	ug/L as Ni	**ND**	8	ND	ND		ND	31	ND - 9.10
Potassium	mg/L as K	**0.21**	8	0.17	0.28		0.25	31	0.16 - 0.35
Selenium	ug/L as Se	**ND**	8	ND	ND	50 MAC	ND	31	ND
Silicon	ug/L as Si	**8335**	8	6550	9240		8,450.00	31	7090 - 9230
Silver	ug/L as Ag	**ND**	8	ND	ND	No Guideline Required	ND	31	ND
Sodium	mg/L as Na	**38**	8	28.6	48.7	≤ 200 AO	43.9	31	28.2 - 87.4
Strontium	ug/L as Sr	**67.7**	8	55.5	82.6	7000 MAC	76.7	31	53.5 - 89.7
Sulphur	mg/L as S	**7.45**	8	5.9	9.7		8.7	31	3.1 - 12.8
Thallium	ug/L as Tl	**ND**	8	ND	ND		ND	31	ND
Tin	ug/L as Sn	**ND**	8	ND	ND		ND	31	ND
Titanium	ug/L as Ti	**ND**	8	ND	5.3		ND	31	ND - 5.6
Uranium	ug/L as U	**ND**	8	ND	0.16	20 MAC	ND	31	ND - 0.18
Vanadium	ug/L as V	**ND**	8	ND	ND		ND	31	ND
Zinc	ug/L as Zn	**9.4**	8	ND	27.7	≤ 5000 AO	8.6	31	ND - 34.2
Zirconium	ug/L	**0.16**	8	ND	0.41		ND	31	ND

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CAPITAL REGIONAL DISTRICT

SKANA WATER
Statement of Operations (Unaudited)
For the Year Ended December 31, 2021

		2021	2020
Revenue			
Transfers from Government		22,885	23,070
User Charges		45,089	43,651
Other revenue from own sources:			
Interest Earnings		2	2
Transfer from Operating Reserve		10,000	-
Other Revenue		173	164
Total Revenue		**78,149**	**66,887**
Expenses			
General Government Services		2,631	2,841
Contract for Services		14,482	12,462
CRD Labour and Operating costs		29,225	24,984
Debt Servicing Costs		2,123	2,124
Other Expenses		22,144	14,374
Total Expenses		**70,604**	**56,785**
Net revenue (expenses)		7,545	10,101
Transfers to own funds:			
Capital Reserve Fund		6,485	9,061
Operating Reserve Fund		1,060	1,040
Annual surplus/(deficit)		-	-
Accumulated surplus/(deficit), beginning of year		-	-
Accumulated surplus/(deficit), end of year	$	-	-

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CAPITAL REGIONAL DISTRICT

SKANA WATER
Statement of Reserve Balances (Unaudited)
For the Year Ended December 31, 2021

	Capital Reserve	
	2021	**2020**
Beginning Balance	82,024	77,042
Transfer from Operating Budget	6,485	9,061
Transfers from Completed Capital Projects	-	9,470
Transfer to Capital Projects	(50,000)	(15,000)
Interest Income	875	1,451
Ending Balance	39,384	82,024

	Operating Reserve	
	2021	**2020**
Beginning Balance	9,820	8,604
Transfer from Operating Budget	1,060	1,040
Transfer to Operating Budget	(10,000)	-
Interest Income	161	177
Ending Balance	1,041	9,820

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