island health

DRINKING WATER SYSTEM ANNUAL REPORT

Reporting Period: January 1st to December 31st, 2024 (year)

Water System Honeymoon Bay Water System

Water System Owner Cowichan Valley Regional District

Primary Contact Name (Operator or Manager) Vanessa Thomson

Phone Number (Operator or Manager) 250-746-2535

E-mail (Operator or Manager) Vanessa.Thomson@cvrd.bc.ca

DESCRIBE YOUR WATER SUPPLY SYSTEM

What is the Source(s) of Raw Water?

☒ Deep Well ☐ Shallow Well ☐ Surface Water ☐ Other

If other, specify details:

Does the Drinking Water System have Primary Disinfection? ☒ Yes ☐ No

☒ Chlorination ☐ Ultraviolet Light ☐ Ozone ☐ Other

If other, specify details:

Does the Drinking Water System have Secondary Disinfection? ☒ Yes ☐ No

☒ Chlorination ☐ Other

If other, specify details:

Does the Drinking Water System have Filtration? ☐ Yes ☒ No

Check all boxes that apply

☐ Cartridge Filter(s) ☐ Carbon Filter ☐ Sand Filtration ☐ Reverse Osmosis ☐ Other

If other, specify details:

PUBLIC REPORTING

Emergency Response & Contingency Plan (ERCP)

Is your ERCP up to Date? ☒ Yes ☐ No

How do you Inform the System Users of the ERCP?

☒ Hand Delivered ☒ Bulletin Board ☒ Newspaper ☐ Utility Bill Insert ☒ Website

☒ Other (specify details) Radio, Social Media

Drinking Water System Annual Report

How do you Inform the System Users of the Annual Report?

☐ Hand Delivered ☐ Bulletin Board ☐ Newspaper ☐ Utility Bill Insert ☒ Website

☐ Other (specify details)

COMPLIANCE WITH OPERATING PERMIT

List the conditions of your Operating Permit (Contact the DWO for a copy if needed):

Are you in compliance with your Operating Permit? ☑ Yes ☐ No

BACTERIOLOGICAL TESTING AND DRINKING WATER PROTECTION REGULATION WATER QUALITY STANDARDS

How many bacteriological samples were collected during this reporting period? 52

What is the minimum required sampling frequency for this system? (#samples/month) 4 samples/month

Additional sampling details:

Was the minimum required sampling frequency achieved? ☑ Yes ☐ No

Comments:

Bacteriological summary attached to this report? ☑ Yes ☐ No

If no, how do the users of the system view the results?

WATER QUALITY STANDARDS FOR POTABLE WATER

Parameter:	***Standard:***	**Did this system meet standard?**	
Escherichia coli (for all samples)	No detectable *Escherichia coli* per 100ml	☑ Yes	☐ No
Total Coliform Bacteria *(if only 1 sample collected in a 30 day period)*	No detectable total coliform bacteria per 100ml	☑ Yes	☐ No
Total Coliform Bacteria *(if more than 1 sample collected in a 30 day period)*	No more than 10% of samples contain total coliform bacteria, **and** No sample has more than 10 total coliform bacteria per 100ml	☑ Yes	☐ No

If the system did not meet any of above Drinking Water Protection Regulation standards, record the results in the table below; attach additional sheets if necessary.

Date	TC/100ml	E.coli/100ml	Reason	Corrective Action

CHEMICAL SAMPLING COMPLETED DURING THIS REPORTING PERIOD

Was any chemical sampling conducted during reporting period?	■ Yes	☐ No
If no, when were the last chemical samples conducted for this system? (date)		☐ Don't know
If yes, attach a list of the chemical results	Full Spectrum Report for Source - September 2024	
If any water samples did not meet the Guidelines for Canadian Drinking Water Quality, record the results in the table below; attach additional sheets if necessary.		
Next scheduled full chemical test (date)	Distribution - September 2025	

Parameter	Result	Corrective Action / Treatment / Comments

ADDITIONAL TESTING

Does the system have analyzers for continuous monitoring? ■ Yes ☐ No

If yes, check all boxes that apply:

■ Chlorine ☐ Turbidity ☐ Other (details)

Are the results available on request?

If any additional testing or sampling was conducted, record results in the table below; attach additional sheets if necessary.

Additional Testing & Reason for Sampling	Corrective Action Taken
Giardia and Cryptosporidium testing	Twice from Well 4 annually in wet and dry seasons
Additional Bacti samples (24/48hr samples)	Sutton Rd watermain extension project bacteriological sampling

WATER QUALITY COMPLAINTS

Were there any water quality complaints in this reporting period? (e.g. taste, odour, colour etc.) ■ Yes ☐ No

If yes, complete the table below; attach additional sheets if necessary.

Date	Water Quality Complaint	Corrective Action / Treatment
2024-03-28	Water tastes like plastic/cloudy	found pipe lubricant from WTM extension at EOL, flushed until LT1 NTU

OPERATIONAL PROBLEMS

Were there any operational problems during this reporting period? (e.g. insufficient water supply, malfunction of disinfection equipment, line breaks, elevated turbidity etc.). ☐ Yes ■ No

If yes, complete the table below; attach additional sheets if necessary.

Incident Date	Type of Operational Problem	Corrective Action Taken

MAJOR UPGRADES/REPAIRS & EXPENSES

Were there any major upgrades/repairs or any major costs incurred during this reporting period? ■ Yes ☐ No

If yes, complete the table below; attach additional sheets if necessary.

Major Upgrades/Expenses	Details
Improvements required by DWO	
Additions/changes to system	Sutton Road WTM replacement and extension
Purchase or install new equipment	
Equipment repair or replacement	
Annual maintenance of system	System flushing, hydrant/standby generator /chlorine equip maintenance
Specialist report	
Other	

FUTURE IMPROVEMENTS

Are there any plans for future improvements? ■ Yes ☐ No

If yes, complete the table below; attach additional sheets if necessary.

Future Upgrades or Improvements	Estimated Date of Completion
Dam Assessment & Mitigation Plan	Future

Click here to enter a date. February 20, 2025 **DATE COMPLETED:**	Tyler Sousa **COMPLETED BY:**

Honeymoon Bay Water System

Facility Information

Location 175 Ingram Street Duncan

Type 15 - 300 Connections

Facility Sampling History

Location	Date	Total Coliform	E. Coli/Enterococci
S1 10254 South Shore Road	17-Dec-2024	LT1	LT1
S2 6918 Beach Drive	10-Dec-2024	LT1	LT1
S5 6765 Park Drive	02-Dec-2024	LT1	LT1
S6 6751 Wall Street	02-Dec-2024	LT1	LT1
S1 10254 South Shore Road	27-Nov-2024	LT1	LT1
S2 6918 Beach Drive	18-Nov-2024	LT1	LT1
S5 6765 Park Drive	13-Nov-2024	LT1	LT1
S6 6751 Wall Street	04-Nov-2024	LT1	LT1
S1 10254 South Shore Road	29-Oct-24	LT1	LT1
S2 6918 Beach Drive	23-Oct-24	LT1	LT1
S5 6765 Park Drive	15-Oct-24	LT1	LT1
S6 6751 Wall Street	07-Oct-24	LT1	LT1
S1 10254 South Shore Road	01-Oct-24	LT1	LT1
S2 6918 Beach Drive	24-Sep-24	LT1	LT1
S6 6751 Wall Street	10-Sep-24	LT1	LT1
S1 10254 South Shore Road	04-Sep-24	LT1	LT1
S2 6918 Beach Drive	27-Aug-24	LT1	LT1
S5 6765 Park Drive	20-Aug-24	LT1	LT1
S6 6751 Wall Street	12-Aug-24	LT1	LT1
S1 10254 South Shore Road	06-Aug-24	LT1	LT1
S2 6918 Beach Drive	29-Jul-24	LT1	LT1
S5 6765 Park Drive	22-Jul-24	LT1	LT1
S6 6751 Wall Street	16-Jul-24	LT1	LT1
S1 10254 South Shore Road	09-Jul-24	LT1	LT1
S2 6918 Beach Drive	02-Jul-24	LT1	LT1
S5 6765 Park Drive	25-Jun-24	LT1	LT1
S6 6751 Wall Street	18-Jun-24	LT1	LT1
S1 10254 South Shore Road	10-Jun-24	LT1	LT1
S2 6918 Beach Drive	04-Jun-24	LT1	LT1
S5 6765 Park Drive	28-May-24	LT1	LT1
S6 6751 Wall Street	21-May-24	LT1	LT1
S1 10254 South Shore Road	14-May-24	LT1	LT1
S2 6918 Beach Drive	07-May-24	LT1	LT1
S5 6765 Park Drive	29-Apr-24	LT1	LT1
S6 6751 Wall Street	29-Apr-24	LT1	LT1
S6 6751 Wall Street	23-Apr-24	1	LT1
S1 10254 South Shore Road	15-Apr-24	LT1	LT1
S2 6918 Beach Drive	09-Apr-24	LT1	LT1
S5 6765 Park Drive	02-Apr-24	LT1	LT1
S6 6751 Wall Street	26-Mar-24	LT1	LT1
S1 10254 South Shore Road	19-Mar-24	LT1	LT1
S5 6765 Park Drive	12-Mar-24	LT1	LT1
S6 6751 Wall Street	27-Feb-24	LT1	LT1
S1 10254 South Shore Road	20-Feb-24	LT1	LT1

Honeymoon Bay Water System

Facility Information

Location 175 Ingram Street Duncan

Type 15 - 300 Connections

Facility Sampling History

Location	Date	Total Coliform	E. Coli/Enterococci
S2 6918 Beach Drive	12-Feb-24	LT1	LT1
S5 6765 Park Drive	06-Feb-24	LT1	LT1
S6 6751 Wall Street	29-Jan-24	LT1	LT1
S1 10254 South Shore Road	22-Jan-24	LT1	LT1
S2 6918 Beach Drive	16-Jan-24	LT1	LT1
S5 6765 Park Drive	09-Jan-24	LT1	LT1
S6 6751 Wall Street	02-Jan-24	LT1	LT1

HONEYMOON BAY WATER SYSTEM

SOURCE - Well 1 & Well 3

			Sample ID	WELL 3-LILLY'S PARK (WTX 40CC8)	WELL 1 BESIDE TREATMENT BUILDG (WTX 27AD4)
			Sampling Date	09/26/24	09/26/24
			Sampling Time	10:45 AM	10:55 AM
Parameter Name	***MAC***	***AO***	***Units***	***Result***	***Result2***
Nitrite (N)	1		mg/L	<0.0050	<0.0050
Nitrate (N)	10		mg/L	0.112	0.048
Conductivity			uS/cm	88	80
pH			pH	6.74	6.49
Total Dissolved Solids		500	mg/L	60	54
Alkalinity (PP as CaCO3)			mg/L	<1.0	<1.0
Alkalinity (Total as CaCO3)			mg/L	41	29
Bicarbonate (HCO3)			mg/L	50	35
Carbonate (CO3)			mg/L	<1.0	<1.0
Hydroxide (OH)			mg/L	<1.0	<1.0
Chloride (Cl)		250	mg/L	1.2	4.7
Sulphate (SO4)		500	mg/L	2.1	2
True Colour		15	Col. Unit	<2.0	<2.0
Nitrate plus Nitrite (N)			mg/L	0.112	0.048
Langelier Index (@ 20C)			N/A	-1.83	-2.35
Langelier Index (@ 4C)			N/A	-2.08	-2.6
Saturation pH (@ 20C)			N/A	8.57	8.84
Saturation pH (@ 4C)			N/A	8.82	9.09
Dissolved Fluoride (F)	1.5		mg/L	<0.050	<0.050
Tannins and Lignins			mg/L	<0.2	<0.2
Turbidity	see remark	see remark	NTU	0.11	0.17
Total Hardness (CaCO3)			mg/L	37.2	30
Total Aluminum (Al)	2900		ug/L	<3.0	<3.0
Total Antimony (Sb)	6		ug/L	<0.50	<0.50
Total Arsenic (As)	10		ug/L	<0.10	<0.10
Total Barium (Ba)	2000		ug/L	4.1	2.6
Total Beryllium (Be)			ug/L	<0.10	<0.10
Total Bismuth (Bi)			ug/L	<1.0	<1.0
Total Boron (B)	5000		ug/L	<50	<50
Total Cadmium (Cd)	7		ug/L	<0.010	<0.010
Total Chromium (Cr)	50		ug/L	<1.0	<1.0
Total Cobalt (Co)			ug/L	<0.20	<0.20
Total Copper (Cu)	2000	1000	ug/L	<0.20	0.57
Total Iron (Fe)		300	ug/L	<5.0	<5.0
Total Lead (Pb)	5		ug/L	<0.20	<0.20
Total Manganese (Mn)	120	20	ug/L	<1.0	<1.0
Total Molybdenum (Mo)			ug/L	<1.0	<1.0
Total Nickel (Ni)			ug/L	<1.0	<1.0
Total Selenium (Se)	50		ug/L	<0.10	<0.10
Total Silicon (Si)			ug/L	2630	3380
Total Silver (Ag)			ug/L	<0.020	<0.020
Total Strontium (Sr)	7000		ug/L	35.5	34.4

HONEYMOON BAY WATER SYSTEM

SOURCE - Well 1 & Well 3

			Sample ID	WELL 3-LILLY'S PARK (WTX 40CC8)	WELL 1 BESIDE TREATMENT BUILDG (WTX 27AD4)
			Sampling Date	09/26/24	09/26/24
			Sampling Time	10:45 AM	10:55 AM
Parameter Name	***MAC***	***AO***	***Units***	***Result***	***Result2***
Total Thallium (Tl)			ug/L	<0.010	<0.010
Total Tin (Sn)			ug/L	<5.0	<5.0
Total Titanium (Ti)			ug/L	<5.0	<5.0
Total Uranium (U)	20		ug/L	<0.10	<0.10
Total Vanadium (V)			ug/L	<5.0	<5.0
Total Zinc (Zn)		5000	ug/L	<5.0	<5.0
Total Zirconium (Zr)			ug/L	<0.10	<0.10
Total Calcium (Ca)			mg/L	13.6	10.3
Total Magnesium (Mg)			mg/L	0.757	1.05
Total Potassium (K)			mg/L	0.132	0.145
Total Sodium (Na)		200	mg/L	1.83	2.5
Total Sulphur (S)			mg/L	<3.0	<3.0
Total Mercury (Hg)	1		ug/L	<0.0019	<0.0019
Total Total Kjeldahl Nitrogen (Calc)			mg/L	<0.020	0.036
Total Organic Carbon (C)			mg/L	<0.50	<0.50
Total Nitrogen (N)			mg/L	0.103	0.083
Total Ammonia (N)			mg/L	<0.015	<0.015
Sulphide (as H2S)		0.05	mg/L	<0.0020	<0.0020
Total Sulphide		0.05	mg/L	<0.0018	<0.0018
Total Coliforms	0		CFU/100mL	0	0
E. coli	0		CFU/100mL	0	0
Heterotrophic Plate Count			CFU/mL	1	1
Fecal Coliforms			CFU/100mL	<1	<1
Non-Coliform (Background)			CFU/100mL	<1	<1
Iron Bacteria			CFU/mL	<25	<25
Sulphate reducing bacteria			CFU/mL	<75	<75

Cowichan Valley Reg. Dist. - E
*A PO 23-223 (2023)
*A 175 Ingram Street
Duncan, BC
V9L 1N8

01Mar24 12: 9p
Parasite
filter(s)
3

W179238

TEL: (250) 746-2530
group

Arrival temp.: 12.0C

PARASITE ANALYSIS

	Sample	Cysts/100L	Organisms Identified	Comments
1	MBW Well 4	ND	Giardia (cysts)	-protozoan; enteric parasite
	29Feb24 09:30	ND	Cryptosporidium (oocysts)	-protozoan; enteric parasite
	115gal @3.5gpm			
2	ShwngnVllgWW Source	ND	Giardia (cysts)	-protozoan; enteric parasite
	29Feb24 11:48	ND	Cryptosporidium (oocysts)	-protozoan; enteric parasite
	123gal @3.5gpm			
3	ShwngnVllgWW Post T	ND	Giardia (cysts)	-protozoan; enteric parasite
	29Feb24 12:45	ND	Cryptosporidium (oocysts)	-protozoan; enteric parasite
	120gal			

Detection Limit = 1 per 100L *
Lab Test Recovery = 94.6%
* test is strongly influenced by volume collected, amount & type of sediment present

ND = none detected
ref: Direct Antibody -Hydrofluor Meridian
Monitoring for Giardia & Cryptosporidium, JL Clancy, WD Gollnitz & Z Tabib, 1994
Prop. ICR Protozoan Methods for Detection of Giardia Cysts and Cryptospordium Oocysts in Water by Fluorescent Antibody Procedures 1993
US EPA Consensus Method for Determining Groundwaters Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis (MPA), Vasconcelos, J., S. Harris., 1992
Manual of Clinical Microbiology, EH Lennette etal. Am. Soc for Microbiology
Clinical Diagnosis by Laboratory Methods, Davidson & Henry
Veterinary Clinical Parasitology, MW Sloss, RL Kemp. Iowa State Univ. Press 5th ed.
Parasitology for Veterinarians, JR Georgi & ME Georgi. WB Saunders & Co, 1990
Personal Communications re methodologies & taxonomy: US EPA -S. Harris,
US EPA (Cinc) F. Schaefer
US EPA (retired) J.Vasconcelos
BC CDC Magda Moricz (1995)

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*A PO 23-223 (2023)
*A 175 Ingram Street
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V9L 1N8

TEL: (250) 746-2530
Group

01Oct24 3:18p W183193
Source: FWS
Type of Sample: Filter(s)
No. of Samples: 1

Arrival temp.: 11.0C

PARASITE ANALYSIS

Sample	Date	Time	Cysts/100L	Organisms Identified	Comments
1 Vol Fltrd: 120gal	26Sep24	10:40	ND	Giardia (cysts)	-protozoan; enteric parasite
			1.0	Cryptosporidium (oocysts)	-protozoan; enteric parasite

Detection Limit = 1 per 100L *
Lab Test Recovery = 94.6%
* test is strongly influenced by volume collected, amount & type of sediment present

ND = none detected
ref: Direct Antibody -Hydrofluor Meridian
Monitoring for Giardia & Cryptosporidium, JL Clancy, WD Gollnitz & Z Tabib, 1994
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Clinical Diagnosis by Laboratory Methods, Davidson & Henry
Veterinary Clinical Parasitology, MW Sloss, RL Kemp. Iowa State Univ. Press 5th ed.
Parasitology for Veterinarians, JR Georgi & ME Georgi. WB Saunders & Co, 1990
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V9L 1N8
TEL: (250) 746-2530
Group

14Mar24 2:09p W179460
Source: FWS
Type of Sample: Water
No. of Samples: 3
Arrival temp.: 6.0C
RUSH

Sample: HBW Sutton Creek

	Site Code	Date	Time	CFU/100 ml TC	T-NC	CFU/100 ml FC	F-NC	CFU/100 mL E.coli
1	S1 - 6918 Beach Dr	14Mar24		0	0	0	0	0
2	10254 South Shore Rd	14Mar24		0	18	0	0	0
3	7150 Walton Road	14Mar24		0	0	0	0	0

TC = total coliform bacteria
FC = fecal coliform bacteria (aka thermotolerant coliforms)
NC = non-coliform bacteria
CFU/100 ml = colony forming units per 100 milli-litres

Results may be adversely affected if samples are submitted to the laboratory more than 24 to 30 hours after collection.

E. coli = Escherichia coli, FDA/BAM 9th ed, Oct 2020
Bergy's Manual of Systematic Bacteriology vol 1, AOAC 1984; J.Clin.Micro., J.Intern.Systm.Bact.

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Duncan, BC
V9L 1N8
TEL: (250) 746-2530
Group

15Mar24 2:07p W179492
Source: FWS
Type of Sample: Water
No. of Samples: 3

Arrival temp.: 4.0C
RUSH

	Site Code	Date	Time	CFU/100 ml TC	T-NC	CFU/100 ml FC	F-NC	CFU/100 mL E.coli
1	6918 Beach Drive	15Mar24		0	0	0	0	0
2	10254 S Shore Road	15Mar24		0	0	0	0	0
3	7150 Walton Road	15Mar24		0	0	0	0	0

TC = total coliform bacteria
FC = fecal coliform bacteria (aka thermotolerant coliforms)
NC = non-coliform bacteria
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E. coli = Escherichia coli, FDA/BAM 9th ed, Oct 2020
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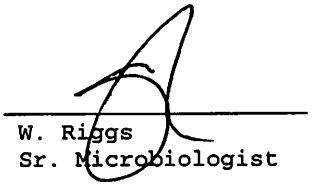

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