



DRINKING WATER SYSTEM

EMERGENCY RESPONSE PLAN

for

COWICHAN BAY WATERWORKS DISTRICT

Revised
January 2, 2024.

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INTRODUCTION

The *Drinking Water Protection Act* requires a water supplier to monitor and protect its drinking water. Water Suppliers are required to submit an Emergency Response and Contingency Plan (ERCP). An ERCP is a written document that spells out a water system’s plan of action for responding to potential emergencies, disasters or abnormal operational circumstances.

Purpose

The purpose of the Cowichan Bay Water Improvement District Emergency Response Plan is to outline the variety of emergencies that the District could face and proposes a framework to plan for emergencies, minimize disruption of customer service in order to protect public health and safety.

Background

Cowichan Bay Waterworks District is an Improvement District charged with the safe supply of domestic water.

- Cowichan Bay Waterworks District is a Class III Water Distribution System.

RISK / EMERGENCIES

- Backflow
- Broken Water Line
- Chlorination System Failure
- Climate Change
- Drought
- Earthquake
- Flood
- Fire
- Loss of Water
- Power Outage
- Rain
- Reservoir Lead
- Snow
- Source Water
- System Failure
- Water Advisory
- Wildfire
- Wind Event

This Plan is under development.

**See Appendix 1 for the existing
Emergency Response Action
Plan and Inventory**

Cowichan Bay Waterworks District **Emergency Response Process**

1. SYSTEM OVERVIEW

Cowichan Bay Waterworks District groundwater comes from two wells, supplied by the Valleyview Wells located off Cowichan Bay Road. This site draws from a deep aquifer of high-quality groundwater. All sites are equipped with chlorination pumps with liquid chlorine used to eliminate or prevent the growth of bacteria within the distribution system. Annual flushing occurs each year.

Cowichan Bay Waterworks District water is high quality and falls within the Canadian Drinking Water Standard Guidelines. Water testing is undertaken on a regular basis by the Vancouver Island Health Authority, with the Public Health Officer from Island Health notifying CBWD should there be any issues.

While the availability of water at the Valleyview Wells is substantial, the draw down is limited to our pumping capacity. During the warmer days of summer, the pumps run around the clock. The District participates in a region wide sprinkling regulation program.

Facts and Figures:

- Class III Water Distribution System
- 20 km of watermains
- 2 wells currently in use [Valleyview Wells]
- 2 wells not used [Pavenham Well, and Kidd Well]
- 3 reservoirs [Pavenham Road reservoir, Telegraph Road reservoir, Ordano Road reservoir]
- 1 booster pump [Ordano Station]
- 1 fire pump [Ordano Station]
- 2 Pressure Reducing Valves [Cowichan Bay Rd and Pavenham Rd]
- 1 Water Treatment facility [Valleyview]
- water treated with minor amounts of sodium hypochlorite
- 2 Pressure Zones [above and below the 47 m elevation line]
- 80+ fire hydrants
- five Trustees
- five part time Staff and one quarterly meter reader
- contracted services: engineering, computer services

WATER PRODUCTION STATION LOCATIONS

1. Valleyview Wells and Pumping Station
1410 Cowichan Bay Road (just north of the Country Grocer parking lot)
2. Pavenham Road Well, Pumping Station and Reservoir
Old Firehall Building (storage, inventory, office)
1760 Pavenham Road
3. Kidd Well & Pumping Station
2284 Cowichan Bay Road
4. Ordano Reservoir, Booster Pump/Fire Pump and Pumping Station
1700 Ordano Road
5. Telegraph Water Storage Reservoir Station
4361 Telegraph Road
6. Pressure Reducing Valves
road right of way, 47 m elevation, 1765 Wilmot Road and 1625 Cowichan Bay Road

Note: Standard Operating Procedures, Manuals and Log Books are held at each station and/or well site.

2. EMERGENCY CALL-OUT LIST

WATER OPERATIONS EMERGENCY CALL OUT

- **Scott McCartney, Chief Water Operator – 250 710 8207**

SYSTEM OPERATOR - COWICHAN BAY WATERWORKS DISTRICT

- District Administrator and Incident Command: Cheryl Wirsz, Cell - 250 710 8705
- 1760 Pavenham Road, Cowichan Bay
- Telephone: 250-748-1687 Fax: 250-748-1627
- Office Hours: Tuesday-Wednesday-Thursday, 9:00 am to 4 pm.
- Emergency Back Up – 250 710 8705

CBWD ENGINEER

- McElhanney Ltd. Office 250-748 3335
Jon Irving, PEng, MMCD CCA, LEED Green Associate, Engineering Division Manager

BOARD MEMBERS

- Judi Baker 250 748 1687
- Julia Balabanowicz 250 748 1687
- Peter Edgar 250-748-1687
- Wendy Gregg 250 748 1687
- Calvin Slade - Chair 250-748-1687

3. STAFF

- Cheryl Wirsz District Administrator 250 710 8705 / 250 748 1687
- Anne Nippard Finance Officer – Receivables 250 748 1687
- Pam Bendes Finance Officer – Payables 250 748 1687
- Scott McCartney Chief Water Operator 250 748 1687 / 250 710 8207
- Rob Knechtle Meter Reader 250-748-1687

4. COWICHAN BAY FIRE RESCUE

- Emergency 911
- Non-Emergency Cowichan Bay Fire Rescue 250-701-2948
- Fire Chief 250-743-7111
firechief@cbvfr.com

5. GOVERNMENT

- Vancouver Island Health Authority
Environmental Health Officer/ VIHA Sarah Gilcrest Office 250-737-2010 ext. 42022
Email @viha.ca
- Vancouver Island Health Authority Medical Department
After Hours Emergencies Tel 1-800-204-6166
Chief Medical Health Officer Fax 250-519-3441
- **Vancouver Island Health Authority** **Tel 250-850-2142**
Medical Health Officer, **Cell 236-594-0555**
Dr. Shannon Waters **Email Shannon.waters@viha.ca**
- Vancouver Island Health Authority Tel 250-755-6299
Public Health Engineer, Murray M. Sexton, P. Eng.
Web: <https://www.islandhealth.ca/about-us/medical-health-officers>
- Ministry of Municipal Affairs & Housing Office 250-387-4020

8. COWICHAN VALLEY REGIONAL DISTRICT

- CVRD Utilities (Water) Emergency Office 1-888-453-0148
- Cowichan Valley Regional District (CVRD Sewer) Office 250-746-2500
- CVRD Emergency Program Coordinator Office Office 250-746-2560

9. FLAGGERS

- DOMCOR International Inc. Office 250-388-7748
- JSK Traffic Control Services Office 250-883-6317
250-618-0232

10. SUPPLIERS

- Bunzl Cleaning & Hygiene. (chlorine – 20 litre- 12% bleach carboy) 1-800-667-2263
1-250-383-8822
- Four Star Waterworks Ltd. – Emco Corporation 250-954-3546
- BC Aquifer (after hours forwarded to pager) 250-748-4041
- Andrew Sheret – Duncan [Mel]
- Iconix Waterworks Products 250-746-8877
- 24 Hour Emergency Part Line (Jeffrey) 250-710-0173
- 24 Hour Emergency Part Line (Chad) 250-709-1885

11. SUBCONTRACTORS

- Superior Excavating, Brent Cell 250 715 7241 / 250 709 8241
- Best Coast Excavating - Andre Cell 250 732 7705
- Sinclair Utility Construction Ltd. Cell 250-217-2595
- Wendell's Welding Services Inc. 250-216-2264
- G. Kendall Welding & Backhoe Cell 250-715-6142
- Greg Kendall Home 250-743-9064
- James Excavating, Kenny James Cell 1-250-812-0266
- Slenty Excavating, Ryan Little Cell 250 507 3775
- Independent Pump & Mechanical Office 250-743-3075
- Shane Black Cell 250-715-6108
- Reg Ogden Trucking Ltd. Cell 250-715-6610
- Reg Ogden Home 250-743-9828
- Emcon¹ – South Vancouver Island Office 778-698-3582
24/7 1 866 353 3136
- Save on Duncan [hydrovac],
- Gerritson
- Kellys 1st call [locating services]
- Best Excavating

12. OFFICE ALARM SYSTEM

- ADT/Telus Custom Security Systems (Price's Alarms) 1-250-746-7757

13. OFFICE CLEANERS

- Clean Choice Cleaners, Tracey Hanson 250-929-8381

14. ELECTRICIANS

- Guardian Electric Cell 250 891 7116
Dave Patterson
- METS Electric Ltd. Cell 250-857-7551
Jeff Metcalfe

15. PLUMBERS

- Geoff Doran Cell 250-709-4600 Pager 250-715-4422
- Gerry Hawkes Office 250-748-0502 Cell 250-715-7045

16. TECH SUPPORT

- 3TEC Information Technologies Ltd. 1-800-748-9983
Computer Support 250-732-4416

17. UTILITIES

- BC Hydro 1-888-769-3766
- Fortis Gas BC Emergency 24-Hours 1-800-663-9911
- BC One (1) Call Call before you dig 1-800-474-6886
Emergency request 712-538-4089
Request online at <https://www.bc1c.ca/> Cowichan Bay Water Account #2477

18. COMMUNICABLE DISEASE PREVENTION

Viral Epidemic/Pandemic/Influenza event:

BC Health Officials recommend or enforce physical distancing or isolation.

- Notify:
1. District Administrator at 250-748-1687 or cell 250-709-2470
 2. CBWD Chair & Board of Trustees
 3. Environmental Health Officer/ VIHA Office 250-737-2010
 4. Notify all Landowners/Users: website, distribute notice to customers on website.

- Restrict public access to CBWD office. Stay 2 meters away (6 feet) away from other people. Wash hands for a minimum of 20 secs.
- See Covid Pandemic Safety Plan

19. RADIO / COMMUNITY NEWS MEDIA - NEWSPAPER

- JUICE FM (Duncan) 250-746-0897
 - Mike Patterson [mpatterson@vistaradio.com]
- The Q newsroom: 250 475 2800
 - Call rockline/controlroom 250 475 1003
 - Email Victoria-new-mail@pattisonmedia.com
- Citizen Editor text 250 709 2958
 - Comment box on the website
 - Email editor@cowichanvalleycitizen.com
- Chek News
 - info@cheknews.ca
 - 250 480 3700 tips@cheknews.ca
- Black Press Media Group [newspaper ads] Office 604-994-1026
Contact Jas Rayat, Multi-Media Sales Consultant Email jas.rayat@blackpress.ca

20. SOCIAL MEDIA

- Facebook [Cowichan Bay and Friends, Cowichan Community, Cowichan Bay]
- Website [alert, news item]

EMERGENCY RESPONSE PLAN ACTION LIST

21. Backflow or Back Siphonage

Action: Call 250 710 8207

- Locate and remove backflow source.
- Contact VIHA (office: 250-737-2010 or cell 250-715-7000) and
- District Administrator (office: 250-748-1687) or cell 250-709-2470
- Notify all users to boil water for two minutes or take other disinfection procedures in accordance with recommendation of local health officials.
- Notify all users: road signage, radio, website, local media, hand deliver notice & phone Public Business Consumers.
- Erect proper signage and update the alerts system on CBWD website.
- Purge and disinfect lines as directed, after corrections have been made.

22. Well Pump / Booster Pump Failure

Action: Call 250 710 8207

Initiate repairs, monitor situation and proceed accordingly.

23. Broken Water Main

- Call 250 710 8207
- Reduce pressure (but maintain enough pressure to prevent backflow).
- Shut down pumps.
- Place signs showing “Work in Progress” and “Possible Outage Time”.
- Advise local Health Unit if requested by Operations.

24. Fire

- Call 911 and request fire services.
- Coordinate response with Fire Department.

25. Fire Hydrant Break

- Call 250 710 8207
- Advise Fire Chief

26. Chlorination System Failure

- Call 250 710 8207
- Notify all users to boil water for two minutes or take other disinfection procedures in accordance with recommendation of local health officials.
- Notify all users: road signage, radio, website, local media, hand deliver notice & phone Public Business Consumers.

27. Contamination of Source – Spills, Vehicle Accidents, Sewage Line Break

- Call 250 710 8207
- Shut down pump if requested.
- Notify Health Unit
- Call District Administrator; Cheryl Wirsz at 250-748-1687 or cell 250-710 8507
- Notify all users: road signage, radio, website, local media, hand deliver notice & phone Public Business Consumers.
- Contact local media for public service announcement.
- Arrange alternate source if necessary—i.e., bottled water, bulk hauler, storage tank.

28. Earthquake

In the event of a major earthquake capable of causing damage to the waterworks:

- Call 250 710 8207
- Check reservoirs.
- Check well sites
- Check pump houses.
- Check pressure reducing valves
- Check entire system for leaks.

29. Flood Conditions

- Call District Administrator at 250-710 8705 and/or Chief Water Operator 250 710 8207
- Notify all users regarding the potential for water contamination.
- Users should be advised to store some drinking water and to boil water for two minutes.
- Notify all users: road signage, radio, website, local media, hand deliver notice & phone Public Business Consumers.
- Contact local media for public service announcement.
- Check reservoirs.
- Check well sites
- Check pump houses.
- Check pressure reducing valves

30. Power Failure

- Call BC Hydro. 1-888-769-3766
- Determine how long before service is restored.
- If prolonged, check water tank located at 1760 Pavenham Road.
- Put up signs requesting customers conserve water.
- Subscribers will be notified on an annual basis that they should conserve water whenever the electric power is interrupted to their home. Not only is the CBWD's ability to pump water affected, but also the individual homes may have septic systems that require electricity to pump water **out** of the home.

31. DROUGHT RESPONSE PLAN AND LOSS OF SOURCE / LOW WATER LEVELS

- Call 250 710 8207 and 250 710 8705
- Notify users of immediate water restrictions; utilize signage, Alerts and the website, social media and media sources for public announcements.
 - Use volunteer teams to hand deliver door to door notices
- Triggers and indicators of significantly reduced water availability that would prompt an emergency response:
 - Chlorine level notification
 - Turbidity testing results
 - Transducer data
 - Reservoir level warnings
 - SCADA alarms
- Communications
 - Participation in the CVRD Water Restrictions Roundtable
 - Sprinklering Regulation page on the website
 - Conservation page on the website
 - Notify all residents and commercial / industrial users via Alerts! , the website, install signage, door to door delivery of notices by volunteer teams
 - Notify all commercial / industrial users via email
 - Drinking Water Officer – Island Health
 - Notify Fire Department
 - Follow s.19 - RADIO / COMMUNITY NEWS MEDIA - NEWSPAPER

Priority Water Users – Cowichan Bay Waterworks District ²	
1 st	Fire Department
2 nd	Residential users for drinking water purposes and human consumption only
3 rd	Commercial users
4 th	Agricultural/Industrial users

Reservoir Storage Capacity			
Date / Station	Remaining Volume (Liters)	Current Use (L/min or hour)*	Capacity at current use (time)
Telegraph	734 m ³	TWL 127 m	95%
		Sea level	
Ordano	545 m ³	TWL 100 m	95%
		Sea level	
Pavenham	1568 m ³	TWL 73 m	95%
		Sea level	
*Flow meters on the Valleyview Wells - 1080 l / min. *Flow meter for the Pavenham Well is in the process of being upgraded. *Flow meter for the Kidd Well is not in service. *No flow meters in the reservoirs.			

² A Risk Assessment for the 1st and 2nd priority order will be conducted on a case by case basis to re-assess need[s], depending upon circumstances at that particular time.

Supplemental or Alternate Source of Water				
	Contact	Capacity	Delivery ETA	Cost Estimate
Primary Water Source	Chief Water Operator	Valleyview Wells 31 l/s 12 l/s		
Back up Water Source	Chief Water Operator	Pavenham Well 6.3 l/s		
Back up Water Source	Chief Water Operator	Kidd Well 17 l/s		
Back up Reservoir	Chief Water Operator			
Bottled Water	District Administrator		2 days	\$3000 / day
Bulk Water	District Administrator		1 day	\$245 / load <small>[3000 gal]</small>

Operational Instructions	
Action	Responsibility
• Pump shut off	• Water Operators
• Alert!	• District Administrator
• Restrict sprinklering	• District Administrator
• Boil Water Notice	• District Administrator
• Alternate Water Supply	• Chief Water Operator
• Close reservoir	• Water Operators
• Close Water System	• Water Operators
• Business Closure	• District Administrator
• Shut Off Individual Water Supply Lines	• Water Operators

32. BULK WATER SUPPLIER

- | | |
|---|--------------|
| • Water on Wheels, Duncan, BC | 250-748-8881 |
| • Island H2O | 250 754 4721 |
| • Waterworks Bulk Water Delivery, Victoria BC | 250-388-2712 |
| • South Island Water Ltd. Sooke BC | 250-516-5066 |

33. Water Test Results Indicating Danger

- Call Chief Water Operator 250 710 8207
- Re-test immediately.
- Consult with the Public Health Inspector.
- Be prepared to issue water warnings or boil water advisory.

34. Sample Notification:

Re: Boil Water Advisory for Bacterial Contamination

The Environmental Officer has advised the Cowichan Bay Waterworks District that unacceptable levels of coliform bacterial have been detected in the drinking water system of the Cowichan Bay Waterworks District boundaries. Residents are advised to boil their drinking water for two minutes prior to consumption or prior to washing vegetables, brushing their teeth or using it in the preparation of foods that won't be cooked such as salads, ice cubes or juices. Bottled water may be used as an alternative to tap water. Tap water is still acceptable for other household uses such as laundry or showering, but care should be taken not to swallow water when showering or bathing. For further information contact Cowichan Bay Waterworks District at 250-748-1687.

35. SIGNAGE

- Restricted Water usage in Effect (+ Cancelled) - 5 large signs – 3' x 3'
- Boil Advisory in Effect (+ Cancelled) - 5 large signs – 3' x 3' / 24 smaller signs
- Waterline Flushing (Date from and to)
- Waterline Repairs in Progress (Estimated down time)
- Construction Planned signage
- Construction Ahead signage

35.1. Emergency Signage Locations - Volunteer teams to assist in posting and delivery

<ul style="list-style-type: none">• Bench - west• Cow Bay Rd – Kidd Well• Cow Bay Rd / Bench• Cow Bay Rd / Hillbank• Cow Bay Rd / Wessex• Cow Bay Rd, Village – Boat launch• Cow Bay Rd, Village – Post office or community policing building or bus stop?• Cow Bay Rd / Wilmot• Cow Bay Rd / Pritchard• Cow Bay Rd / Glen• Cow Bay Rd / Longwood• Cow Bay Rd / Regatta Place• Cow Bay Rd / Koksilah• Cow Bay Rd / Telegraph• Telegraph / Koksilah• Telegraph / Sears• Cow Bay Rd – Valleyview Upper Bunker• Wilmot / Coverdale Watson park• Wilmot / Falcon at Vee• Wilmot / George• Wilmot / Vee E• Wilmot / Pavenham• Wilmot / Pritchard	<p><u>Ground Water Protection Zone signs</u></p> <ul style="list-style-type: none">• Each Station• To be installed:<ul style="list-style-type: none">○ Bench West○ Koksilah West○ Hillbank West○ Telegraph East○ Cow Bay Rd – N and S
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36. PUBLIC BUSINESS CONSUMERS

Village	
Art Gallery	
Barber	
Bench Elementary School	
Community Policing Office	
Cook & Butcher Jen / Matt	
Cowichan Bay Pub chris@baypub.ca	
Cowichan Tribes	
Estuary Nature Centre	
Genoa Bay Café [marina] Pier #	
Hairdresser, 1760 Pavenham	
Island Farmhouse Poultry	
Maritime Centre	
Masthead Restaurant	
Oceanfront Hotel Dan Gowland – Facilities Edie Lui – Facilities Spa	
Pier 65	
Pier 66 - Market	
Pizzeria Prima Strada	
Pottery Shop	
Realtor Office – Peter Miller	
Retail Store - clothing	
Retail Store - clothing	
Retail Store – perfumery	
Retail Store – gift shop	
Rob’s Lighthouse Eatery	
Rock Cod Café	
Salon / Hair dresser	
Sathian Thai Food	
Spa – Cow Bay Rd – Ocean Bliss	
The Vine	
True Grain Bakery	
Udders Ice Cream & Candy	
Wessex Inn	

Strata / Multi Family	
4 Ways	
Cannery	
Cowichan Bay Arms	
Mariner Ridge	
The Landing	
Villas on the Bay	

Valleyview	
Bookstore	
Cobble Hill Dental	
Computer Store	
Country Grocer	
Cure Artisan Meat & Cheese	
Doctors Office	
Dragon Yuan Restaurant - VV	
Drum Roaster	
Gym	
Hairdresser	
Hearing Services	
Island Pharmacy [store and head office]	
Liquor Plus	
Optometrist	
Physiotherapy	
Simply Smiles Denture Clinic	
Spa	
Valley View Manager Adam	
VV Sewage System	

CBWD SERVICE AREA WATER MAINS, VALVES & HYDRANTS MAP

