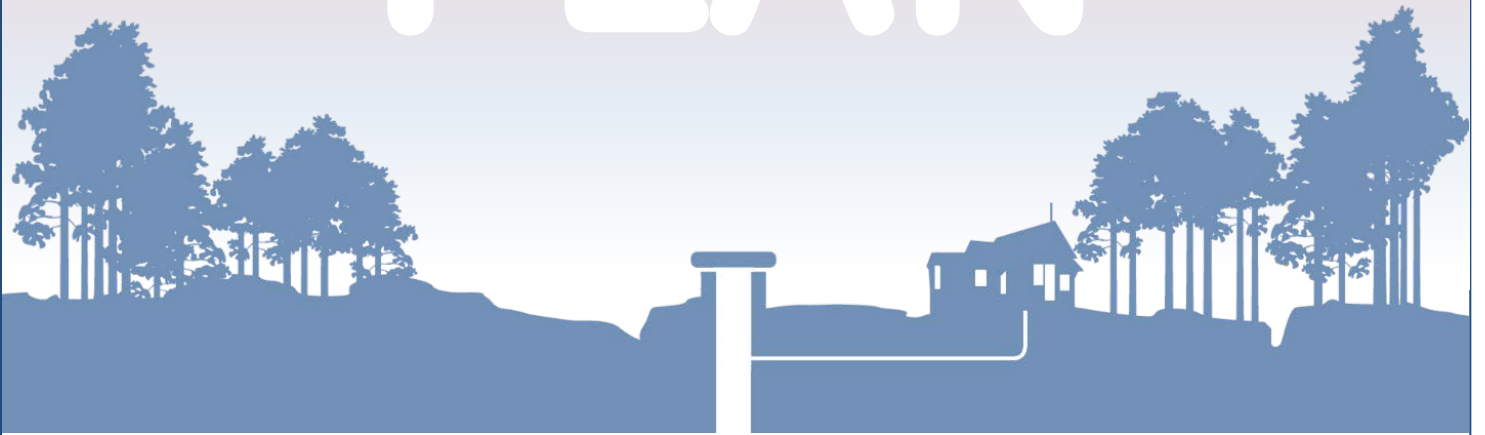


EMERGENCY RESPONSE PLAN



REGIONAL DISTRICT OF NANAIMO

WATER SYSTEMS



This page is intentionally blank.

Table of Contents

Prime Responsibilities	1
Emergency Response and Recovery Actions	1
Communication Checklist	2
- RDN Priority Contacts	2
- Key Communication Options	2
Emergency Contact Numbers	3-7
Emergency Response <u>ACTION PLANS</u>	8
- Backflow or Back Siphonage	8
- Bacteria Count (RDN Lab)	9
- Broken/Leaking Water Main	10
- Chlorine - High Levels	10
- Chlorination Failure	11
- Contamination of Source	11
- Drought Management Plan	12
- Flood Conditions	12
- Illness or Quarantine	13
- Loss of Source	13
- Power Failure, Pump Failure	14
- Turbidity (Elevated)	14
- UV Failure	15

Prime Responsibilities

- Provide safe drinking water.
- Provide potable water for sanitation purposes.
- Provide water for fire suppression.
- Prevent unnecessary loss of stored water.
- Restore the integrity of the entire water system as soon as possible.
- Maintain integrity and quality of supply.

Emergency Response and Recovery Actions

- Analyze the type and severity of the emergency.
- Provide emergency assistance to save lives.
- Reduce the probabilities of additional injuries or damage.
- Provide situational reporting to appropriate agencies as required.
- Perform emergency repairs based on priority demand.
- Return system to normal levels (recovery).
- Evaluate response and preparedness plan.
- Revise plan as necessary.
- Provide maps, notices, and direction necessary for water recovery.

Communication Checklist

In an emergency it will be important to contact the key people shown below. This will help reduce confusion and assist in ensuring any important messaging is done so correctly and quickly.

**IF REQUIRED, CONTACT EMBC or Island Health BEFORE
MAKING THE FOLLOWING CONTACTS AS PER THE EMERGENCY PLANS**

RDN Priority Contacts

MANAGER OF WATER SERVICES	MURRAY WALTERS (250) 668-4199
WATER SERVICES PROJECT ENGINEER	GERALD ST. PIERRE (250) 713-6957
DIRECTOR OF WATER/WASTEWATER SRVCS	SEAN DE POL (250) 713-5896
COMMUNICATIONS COORDINATOR	REBECCA TAYLOR (250) 713-2400
MANAGER OF EMERGENCY SERVICES	CATHERINE MORRISON (250) 713-2057

Key Communication Options

Management Support

- Contact Electoral Area Director
- Contact the local radio station and provide a brief message if public health and safety are at risk. Follow up with a press release and post on social media.

Field Staff Support

- Post notices on household front doors.
- Attach warning signs to existing Watering Restriction signs in each community.
- Put up roadside signage at the entrance to the community.

Administrative Support

- Provide information message on the RDN web site and social media.
- Review after-hours office and voice mail messaging.
- Provide notification to other RDN staff.

Emergency Contact Numbers

Personnel Contacts

NAME	POSITION	PHONE / CELL
Heather D	Chief Operator	(250) 248-4914
Dave W	Utilities Technician II	(250) 248-4914
Brian H	Utilities Technician III	(250) 248-4914
Brad L	Utilities Technician III	(250) 248-4914
Lyndon J	Utilities Technician II	(250) 248-4914
Greg R	Utilities Technician II	(250) 248-4914
Shane P	Utilities Technician II	(250) 248-4914
Murray Walters	Manager of Water Services	(250) 668-4199
Gerald St. Pierre	Project Engineer, Water Services	(250) 390-6560
Deb Churko	Engineering Technologist	(778) 674-1700
Joe McCallum	Engineering Technician	(250) 816-0721
Dion Klassen	Bylaw Officer <i>(Emerg. Coord. Alternate- 24hrs)</i>	(250) 668-9064
Chris Basara	Bylaw Officer <i>(Emerg. Coord. Alternate- 24hrs)</i>	(250) 713-4872

After-Hours Emergency Contact Numbers

Water Services (on-call)	(800) 862-3429
Wastewater Services (on-call)	(250) 729-6778

Electoral Area Directors

Electoral Area	Director	Phone	E-mail Address
Chair	Tyler Brown	250-755-4400	tyler.brown@nanaimo.ca
A	Keith Wilson	250-722-3356	keith.wilson@rdn.bc.ca
B	Vanessa Craig	250-741-4589	vanessa.craig@rdn.bc.ca
C	Maureen Young	250-754-5896	maureen.young@rdn.bc.ca
E	Bob Rogers	250-468-9986	bob.rogers@rdn.bc.ca
F	Leanne Salter	250-248-8097	leanne.salter@rdn.bc.ca
G	Lehann Wallace	250-951-5327	lehann.wallace@rdn.bc.ca
H	Stuart McLean	250-240-2263	stuart.mclean@rdn.bc.ca

Government Agency Contacts

Ministry of Forests, Lands, and Natural Resource Operations (former Ministry of Environment)

	Nanaimo	(800) 661-8773
RAPP Line (Report All Poachers & Polluters)	Nanaimo	(877) 952-7277
Department of Fisheries and Oceans	Nanaimo	(250) 754-0230

Emergency Management BC (EMBC) and Dangerous Goods Spills	Victoria	1-800-663-3456
--	----------	----------------

Island Health (Environmental Health Officer)	Parksville	(250) 947-8222
--	------------	----------------

- Stacey Sowa- Nanoose Bay Peninsula, Englishman River (Rivers Edge), and San Pareil Water Systems
- Elizabeth Thomson- Surfside, Melrose, Whiskey Creek, Westurne Heights, and Horne Lake Water Systems
- Shuja Awan- French Creek Water System

Island Health (Environmental Health Officer)	Nanaimo	(250) 755-6215
--	---------	----------------

- Anthony Griffin- Decourcey Water System
- Jill Lucko- Descanso Bay and Rollo McClay Water Systems
- Murray Sexton, Public Health Engineer (250) 755-6293
- Dr. Richard Stanwick, Medical Health Officer (800) 204-6166

City of Parksville	(250) 248-5412
• Chief Operator, Scott Churko	(250) 927-1856 (cell)

Town of Qualicum Beach	(250) 752-6921
• Foreman, Cam Purdon	(250) 927-1144 (cell)

District of Lantzville	(250) 390-4006
• Superintendent, Fred Spears	(250) 713-0980 (cell)

North Cedar Improvement District	(250) 722-3711
----------------------------------	----------------

Government Agency Contacts Cont'd

Islands Trust Organization (Main office)	Gabriola Isl	(250) 247-2063
<ul style="list-style-type: none"> • Trustee Scott Colbourne • Trustee Kees Langereis 	Gabriola Isl	(778) 679-1110
	Gabriola Isl	(250) 247-8281

Emergency Services

Hospital	Nanaimo	(250) 754-2141
	Parksville	(250) 248-2332 (Nan hospital)
	Oceanside Ctr	(250) 951-9550
	Gabriola Clinic	(250) 247-9922
Ambulance	Nanaimo	911 or (250) 758-8181
	Parksville	911 or (250) 248-3511
Police	Nanaimo	911 or (250) 754-2345
	Parksville	911 or (250) 248-6111
	Gabriola Isl	911 or (250) 247-8333
Fire Department	Parksville	911 or (250) 248-3242
	Errington	911 or (250) 248-5601
	Coombs-Hilliers	911 or (250) 752-2144
	Nanoose Bay	911 or (250) 468-7141
	Qualicum Beach	911 or (250) 752-6921
	Dashwood	911 or (250) 752-5434
	Cedar	911 or (250) 722-3122
Gabriola Isl	911 or (250) 247-5601	

Priority Services

BC Hydro (Qualicum Beach number)	(250) 752-8012 or
BC Hydro (Power Outages & Electrical Emergencies)	1-888-769-3766
Telus	(250) 811-2323 or
<ul style="list-style-type: none"> • Amarjit Mann cell 250-927-0913 • Mark Vonhagen cell 250-927-3462 	(250) 741-7713 or 741-7716
FortisBC (Terasen Gas)	(250) 248-4880
Shaw Cable (Nanaimo)	(250) 754-5571
CP Rail	1-800-716-9132
French Creek Pollution Control Centre	(250) 248-5794
Chlorine Manufacturer (ClearTech)	1-800-387-7503

Community Contacts

District 69 School Board Office	(250) 248-4241
Nanoose Bay School	(250) 468-7414
Nanoose Children's Centre	(250) 468-1784
Nanoose Place	(250) 468-5339
Nanoose Post Office	(250) 468-7722
Canadian Forces Base Nanoose (250) 756-5021 or 468-5004 or	(250) 468-2260 (MP Stn-24hr)
Descanso Bay Reg Park- Calvin Nguyen/Jessica Sedlock	(250) 668-9161
Horne Lake Reg Park- Bill Woodhouse/RLC Enterprises	(250) 927-4790

Excavation Services

Shoreline Equipment (Doug Penny)	(250) 468-7759 or 755-9502
Rite on Time Excavation & Trucking (Cody)	(250) 927-1645
Degnen Excavators (Gabriola Isl)	(250) 247-8817

Electrical Contractors

Raylec Power servicerequest@raylecpower.ca	(250) 400-4266
Canem Electric	(250) 468-1887
Denmar Electric	(250) 758-8464
Ron Ruckman (Descanso Bay/Gabriola Isl)	(250) 247-0050

Other Services

Plumbing Services (Maci Motor - Pump Repair)	(250) 248-4423
JC Plumbing (Descanso Bay/Gabriola Isl)	(250) 247-7574 or 713-6700
EPCOR (Parksville)	(250) 951-2460
Sand and Gravel (Ozero)	(250) 752-1482
Sand and Gravel (Lussier & Sons)	(250) 468-9994
Sand and Gravel (DBL)	(250) 248-3693
Mainroad Contracting Road Maintenance Hotline	1-877-215-6006
Mainroad Contracting (Parksville) midisland@mainroad.ca	(250) 586-8884
Mainroad Contracting (Nanaimo/Cedar) rheaslip@mainroad.ca	1-877-215-6006

Other Services

Water Testing Lab (Bureau Veritas)	(250) 385-6112
Pump Truck (Action Tank Service)	(250) 248-3833
Pump Truck (Coast Environmental)	(250) 390-5080
Pump Truck and Toilet Rentals (A-1 Septic)	(250) 248-4438
Portable Washrooms (Coast Toilet Rentals)	(250) 753-7552
Running Water Enterprises (Red Williams)	(250) 947-5197
BC Water Service (bulk water supply)	(250) 954-3628
Island Water Hauling (bulk water supply)	(250) 323-6363
VIP Water Inc (bulk water supply & bottled water)	(250) 748-7309
Summer Rain Water Delivery (Gabriola Isl)	(250) 247-9136
Kalicum Drilling	(250) 245-1220
Bottled water supply (Water Pure & Simple)	(250) 752-1373

Suppliers

Northstar Propane (Coombs)	(250) 586-9660
Four Star Waterworks (piping)	(250) 954-3546
EMCO Water Works	(250) 756-3344
Iconix Water Products	(250) 746-8877
Andrew Sheret (Parksville)	(250) 954-9997
Andrew Sheret (Nanaimo)	(250) 758-7383
Island Equipment Rentals (equipment & pumps)	(250) 248-1100
Irritex Pumps and Irrigation (pumps)	(250) 248-7028
Windsor Plywood (miscellaneous building supplies)	(250) 752-3122
Albertsons Hardware (miscellaneous building supplies)	(250) 248-6888
Robinson Rentals	(250) 753-2465
United Rentals	(250) 758-3911

Media Services

Rebecca Taylor, RDN Communications Coordinator	(250) 713-2400
Radio Station (CKWV) Nanaimo and Parksville	(250) 758-1131
TV Station (CHEK)	(250) 383-2435
Newspaper (PQ News and The Weekender)	(250) 248-4341
Gabriola Sounder	(250) 247-9337

Emergency Response *ACTION PLANS*

Emergency (Listed Alphabetically)	Actions	Contact
Backflow or Back Siphonage	<ul style="list-style-type: none"> - Notify Env. Health Officer - If microbiological contamination, notify users to boil water - If chemical contamination, notify users “Do Not Use” - Isolate the affected area - Use alternate supply if necessary (i.e. truck-in water to fill reservoir) - Verify integrity of distribution syst. - Check for cross connections - Check for pressure losses - Complete repairs - Purge and disinfect lines - Sample and re-sample 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel

Emergency (Listed Alphabetically)	Actions	Contact
<p>Bacteria Count (RDN Lab)</p>	<ul style="list-style-type: none"> - Notify Env. Health Officer - If Total coliforms found, verify integrity of treatment process - Verify chlorine residual present - Flush watermain in suspect area - Re-sample - If E.Coli found, post signs and/or deliver notices to boil water - Isolate the affected area - Increase disinfectant dosage in affected area - Flush watermains in affected area - Verify chlorine residual present - Verify integrity of distribution system - Check for cross connections - Check for pressure losses - Use alternate supply if necessary (i.e. truck-in water to fill reservoir) - Re-sample 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel

Emergency (Listed Alphabetically)	Actions	Contact
<p>Broken Water Main (also Leaking Water Main)</p>	<ul style="list-style-type: none"> - Isolate the affected area - Throttle back the water main but keep positive pressure - Prevent backflow into main - Notify Env. Health Officer - Notify local fire chief - Post notice on social media - Arrange alternate water supply if necessary - Obtain utility clearance for excav. - Arrange for traffic control - Notify users of interruption - Complete repairs - Swab and flush the repaired section - Sample to verify disinfection residuals - Take bacteriological samples - Clean up site, restore surfaces - Enter the repair in asset database 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel - Electoral Area Director - Local Fire Chief - Communications Coordinator - Receptionists
<p>Chlorine- High Levels</p>	<ul style="list-style-type: none"> - Verify integrity of chlorinator - Reduce the chlorine dosing rate - Notify users of high chlorine level - Notify Env. Health Officer - Arrange for repairs - Post notice on social media - Flush distribution system, if necessary - Follow dechlorination procedure for water discharged near creeks - Verify chlorine residuals present - Arrange alternate water supply if necessary (i.e. bottled water) 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel - Communications Coordinator

Emergency (Listed Alphabetically)	Actions	Contact
Chlorination Failure	<ul style="list-style-type: none"> - Shut off well pumps and monitor reservoir levels - Batch chlorinate in reservoir (if no UV present) - Arrange chlorinator repairs - Notify Env. Health Officer - If no chlorine residual in distribution system, notify users (use Boil Water Notice) - Post notice on social media - Arrange for alternate disinfection if necessary (i.e. trucking chlorine from another RDN site) - Arrange alternate water supply if necessary (i.e. bottled water) 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel - Chlorinator Manufacturer
Contamination of Source (Spills, Accidents, Vandalism)	<ul style="list-style-type: none"> - Shut down pumps - Verify source of contamination - Notify Env. Health Officer - Notify users “Do Not Use” - Contact local media - Post notice on social media - Arrange alternate source if necessary – i.e., bottled water - Contact environmental consulting firm (with P.Geo or P.Eng) to determine extent of contamination and plan for remediation 	<ul style="list-style-type: none"> - Island Health - EMBC (Emergency Management BC) - RCMP if there has been vandalism - Ministry of Environment - RDN Supervisory personnel

Emergency (Listed Alphabetically)	Actions	Contact
Drought Management Plan	<ul style="list-style-type: none"> - Monitor local well levels, streamflow, prov. drought rating, and prov. wildfire rating - Review history, predict shortages - Promote conservation strategies - Post notices on social media - Maintain storage for fire flows - Implement watering restrictions - Reduce flows from all wells - Adjust chlorine dosing levels 	<ul style="list-style-type: none"> - Island Health - EMBC (Emergency Management BC)
Flood Conditions	<ul style="list-style-type: none"> - For well supplies, ensure well casing stickup is over 200 yr flood level, and a surface seal in place - Monitor turbidity - For surface water supplies, monitor turbidity levels and continue treatment if <1NTU - If source water is compromised, shut off supply pumps - Notify Env. Health Officer - Notify EMBC - Notify users Do Not Use - Post notice on social media - Contact local media - Arrange alternate source if necessary – i.e., bottled water 	<ul style="list-style-type: none"> - Island Health - EMBC (Emergency Management BC) - Ministry of Environment - RDN Supervisory personnel

Emergency (Listed Alphabetically)	Actions	Contact
Illness or Quarantine	<ul style="list-style-type: none"> - Notify Env. Health Officer - Clean and sanitize work surfaces - Follow CDC health guidelines for self-quarantine if required - Use social distancing practices - Avoid sharing equipment, computers, keys, vehicles - Vary shifts if necessary - Administrative staff to work from remote location if possible - Keep at least 1 months' worth of disinfection supplies and spare parts on hand in case of delivery delays or shortages - Employ multiple operators in each water system - Train all operators in all operational duties, in all water systems, where possible - Seek advice from senior operators and manager by phone 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel - Emergency Ops Center (EOC) - Communications Coordinator - Employee and family resource programs
Loss of Source (Loss Of Reservoir or Supply Lines)	<ul style="list-style-type: none"> - Notify Env. Health Officer - Ensure pumps are shut off (to protect pump) - Notify users of interruption - Post notice on social media - Arrange alternate source (i.e. trucked-in water from another RDN water system) - Arrange for temporary storage cistern - Call for repairs 	<ul style="list-style-type: none"> - Island Health - Ministry of Environment - RDN Supervisory personnel - Local Fire Chief

Emergency (Listed Alphabetically)	Actions	Contact
Power Failure	<ul style="list-style-type: none"> - Call BC Hydro. Ask how long? - Install back-up generators & fuel supply at each pumphouse - Use a portable back-up generator where necessary - Check on-site generators for effective operation & fuel supply - Notify Env. Health Officer - Notify users of interruption if necessary - Post signs and/or deliver notices - Post notice on social media - Arrange alternate source (i.e. trucked-in water from another RDN water system) - Arrange for temporary storage cistern if necessary - Arrange alternate disinfection if necessary (i.e. batch chlorinate in reservoir) 	<ul style="list-style-type: none"> - BC Hydro - Island Health - RDN Supervisory personnel - Local Fire Chief
Pump Failure	<ul style="list-style-type: none"> - Notify users of interruption - Call for repairs - Notify Env. Health Officer - Arrange alternate source (i.e. trucked-in water from another RDN water system) 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel
Turbidity (Elevated)	<ul style="list-style-type: none"> - Use Turbidity Decision Tree (attached on Page 34) - If source water has elevated turbidity, notify Env. Health Officer - Use alternate source if necessary (i.e. truck-in water from other RDN water system) - If elevated turbidity is within distribution system, flush affected area, notify Env. Health Officer - Monitor turbidity 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel

Emergency (Listed Alphabetically)	Actions	Contact
UV Failure	<ul style="list-style-type: none"> - Maintain disinfection residual with chlorine - Check if UV unit is working and clean the UV bulb - Arrange for UV repairs - Notify Env. Health Officer - Use alternate source if necessary (i.e. bottled water) - Sample for disinfection by-products such as trihalomethanes 	<ul style="list-style-type: none"> - Island Health - RDN Supervisory personnel - UV Manufacturer