

District of Ucluelet
Water Shortage Response Plan



July 2015

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1.0 OVERVIEW

The purpose of the Water Shortage Response Plan is to provide the District of Ucluelet with a guidance document to be used during periods of water shortage. This plan will help personnel respond quickly and efficiently to a variety of scenarios, so that water supplies may be safeguarded, maintained, or returned to working condition as quickly as possible.

The Water Shortage Response Plan uses a 4-staged approach to focus on water conservation during the summer months, or other dry periods. These stages range from initial standard levels of water restrictions, through to the highest levels of restriction intended for emergency water shortages. Stage 1, when required, is implemented when Provincial Weather forecast indicate drier than normal condition and The District of Ucluelet's two water supplies show evidence of potential issue. Once initiated the advancement to increased conservation stages is subject to ongoing assessments of water availability. For each stage, important conservation, monitoring and public communications actions are outlined.

The District of Ucluelet encourages and assists local businesses in developing or adapting existing response plans to match the 4 stages presented herein (see Appendix A).

This plan should be reviewed and updated regularly. Suggestions and changes to the plan should be forwarded to the Public Works Superintendent (wcannon@ucluelet.ca).

1.1 FUTURE CHANGES TO THE *Water Shortage Response Plan*

Additional measures will be required in the future, to compliment the response measures specified in this plan. The intent of some of these suggestions will assist staff members from District of Ucluelet in responding to emergency water situations, as well as providing a more informed and ready-to-respond community.

2.0 UCLUELET WATER SUPPLY SYSTEM

The District of Ucluelet's (the District) water supply system services approximately 2200 permanent area residents and approximately 5,500 additional users during peak tourism periods. Included in the permanent area residents are members of the Ucluelet First Nation – Yuulu?il?ath, and Alberni Clayoquot Regional District (ACRD) residents adjacent to Pacific Rim Highway. Several fish processing plants use the District's drinking water in their operations.

The District relies on two sources:

1. Lost Shoe Creek Aquifer
2. Mercantile Creek

Groundwater from Lost Shoe Creek Aquifer is accessed by way of a well field located at the junction of Pacific Rim Highway and Highway 4. There are four active wells, numbered 1 to 4, with provision within the well control building for a fifth well. Disinfection treatment is located at the well field. Lost Shoe Creek aquifer has a Well Head Protection Area, due to the unconfined aquifer. A transmission line connects the wells and the water distribution system.

Surface water from Mercantile Creek is accessed by way of a surface intake on Mercantile Creek. This supply is piped under Ucluelet Inlet to treatment facilities located on Bay Street. The Mercantile Creek source was upgraded in 2014 to comply with the Vancouver Island Health Authority (VIHA) requirement that Municipal surface water sources meet VIHA 4-3-2-1 Treatment. The source is treated with Ultraviolet (UV) treatment cells and sodium hypochlorite which is located at the pump station at the foot of Bay Street. A transmission line connects the creek to the distribution system.

2.1 WATER DISTRIBUTION SYSTEM

Water is distributed to customers through a piped distribution system. The distribution system includes two water storage reservoirs, their location and operation is detailed in the attached Water System Plan. The reservoirs have different top elevations and cannot be connected without pressure loss throughout the system. Three operational situations can be implemented, they are:

- One zone system-Lost Shoe: In this situation, the well field supplies water to the Highway storage reservoir, all customers are supplied from this reservoir. The

Matterson reservoir is filled and isolated from the distribution system; the stored water is an emergency source of fire protection water.

- One zone system-Mercantile: Mercantile Creek water can be treated at the Bay Street treatment plant and pumped to both the Highway and Matterson reservoirs. Due to the lower elevation of the Matterson reservoir, pressures throughout the distribution system will be dictated by the Matterson reservoir and will be approximately half of normal operating pressures. This operational situation would be limited to emergency events (see 3.1 Power Failure).
- Two zone system: Mercantile Creek supplies the Matterson reservoir and distributes to customers in a lower pressure zone in the southern area of the District. The Lost Shoe aquifer supplies the Highway reservoir and distributes to customers in the northern area of the District. Due to the differing top elevations of these reservoirs, the Matterson zone has lower pressures than the Highway zone. Valves isolate the lower pressure zone from a higher pressure zone.

Each reservoir has shut off valves to isolate them from the system.

2.2 WATER SHORTAGE

If the water supply is impeded by low rainfall and high consumption, the District must initiate water conservation measures through water restrictions and drought measures identified in the District of Ucluelet's Water management plan. Records of consumption and supply must be compared to determine what stage of water conservation should be implemented.

The Water Shortage Response Plan includes four stages of water conservation. Each stage corresponds to a specific set of measures that include means to manage water demands in the community, and restrict water usage during periods of drought. The measures corresponding with each of the four stages of water conservation are described below and correspond with the following categories:

- Stage One Water Shortage Response: Initial Advisory
- Stage Two Water Shortage Response: Moderate Water Supply Shortage
- Stage Three Water Shortage Response: Severe Water Supply Shortage
- Stage Four Water Shortage Response: Critical Water Supply Shortage

Stage Four Water Shortage Response corresponding with a critical water supply shortage will result in declaration of a State of Local Emergency (see appendix 1). Each Stage of Water Shortage Response will correspond and be referred to as each Stage of Water Restrictions.

STAGE 1 - Initial Advisory

Implementation: Based on rainfall data, predicted weather forecast by the Province and aquifer levels at Lost Shoe Creek

Conservation Actions:

- Outdoor watering restricted to twice per week which includes washing of vehicles. Watering will be permitted between the hours of 6:00 AM to 10:00 AM and 6:00 PM to 10:00 PM. Maximum 2 hours per day
- Odd addresses may water on Monday and Thursday at time specified above
- Even addresses may water on Tuesday and Friday at times specified above
- Voluntary request to begin actively conserving water by both residential and business community
- By-Law enforcement of outdoor watering
- Visible leaks to be repaired immediately

Monitoring Activities:

- Daily monitoring of all supplies
- Daily monitoring of Environment Canada weather forecasts

Communications Actions:

- Issue an advisory to key stakeholders group that Stage One restrictions are in place and provide information about the status of supplies and demand
- Advise tourism sector of the stage 1 restrictions and advise on conservation methods to be implemented by them.
- Contact local media (radio station and/or newspaper) and provide a copy of the advisory and key facts
- Post advisory and key facts on Municipal website, social media and distribute through e-mail distribution list
- Post notices at municipal hall, UCC, schools, Chamber building, Co-Op, Post office and other prominent locations
- Update CAO of conditions on a weekly basis
- Brief Mayor and council of current condition

Recommended Bylaw Fines:

- \$100 for first violation
- \$200 per repeat offense

STAGE 2 - Moderate Water Supply Shortage / Dry Stage

Implementation: Mercantile Creek: Water no longer flows over the Mercantile Weir; AND/OR
LSCA Wellfield: Drawdown is between 70 to 80% of the total available
drawdown

Conservation Actions:

- Outdoor watering restricted to twice per week which includes washing of vehicles. Watering will be permitted between the hours of 6:00 AM to 9:00 AM and 6:00 PM to 9:00 PM. Watering is restricted to a maximum of 1 hour per designated day.
- Odd addresses may water on Monday and Thursday at time specified above
- Even addresses may water on Tuesday and Friday at times specified above
- If necessary, be prepared to close down public washrooms and replace with port-a-potty and hand sanitizer
- Discourage use of dishwashers for household and commercial use
- Active bylaw enforcement Monitoring Activities
- Daily monitoring of supplies
- Daily monitoring of Environment Canada weather forecasts
- Institute self-monitoring by large users and require daily reports of meter readings
- Require tourism sector to monitor occupancy rates and project expected future visitor numbers

Communications Actions:

- Issue an advisory to key stakeholders group that Stage 2 restrictions are in place and provide information about the status of supplies and demand
- Hold a meeting with key stakeholders group to identify any potential concerns and develop mitigation strategies
- Advise tourism sector of the stage 2 restrictions and advise on conservation methods to be implemented by them.
- Brief Mayor and Council on situation
- Advise VIHA on situation
- Contact local media (radio station and/or newspaper) and provide a copy of the advisory and key facts
- Post advisory and key facts on Municipal website, social media and distribute through e-mail distribution list

- Post notices at municipal hall, UCC, schools, Chamber building, Co-Op, Post office and other prominent locations

Recommended Bylaw Fines:

- \$200 for first offense
- \$500 per repeat offence

STAGE 3 - Severe Water Supply Shortage / Very Dry Stage

Implementation: Mercantile Creek: Water level is within 1 meter of the inlet pipe; AND/OR
LSCA Wellfield: Drawdown is between 80 to 90% of the total available
drawdown

Conservation Actions:

- Recommend 30% reduction for both residential and commercial users
- All outdoor watering is strictly prohibited this includes vehicle washing, boats, and water-related gear (kayaks, surfboards, wetsuits, etc.)
- Recommend voluntary compliance with residential restrictions on shower use (i.e., 5 minute showers)
- Recommend voluntary compliance with residential sector for reduced use of washers
- Provide port-a-potties and hand sanitizer in key locations and neighbourhoods to minimize residential use of washroom facilities
- Implement bottled water program for residential sector
- Coordinate alternative laundry services for residential sector
- Active bylaw enforcement

Monitoring Activities:

- Twice daily monitoring of supplies
- Daily monitoring of Environment Canada weather forecasts
- Continue to require daily reports of meter readings by large users

Communications Actions:

- Issue advisory to key stakeholders that Stage 3 restrictions are in place
- Hold meeting with key stakeholders group to identify any potential concerns and develop mitigation strategies
- Brief Mayor and Council on situation
- Advise tourism sector of the stage 3 restrictions and advise on conservation methods to be implemented by them.
- Hold public meeting with residents and commercial sector to explain situation and expectations
- Advise VIHA of the situation
- Advise Emergency Management BC of the situation as appropriate
- Advise Office of the Fire Commissioner

- Contact local media (radio station and/or newspaper) and provide a copy of the advisory and key facts
- Post advisory and key facts on Municipal website, social media and distribute through e-mail distribution list
- Post notices at municipal hall, UCC, schools, Chamber building, Co-Op, Post office and other prominent locations

Recommended Bylaw Fines:

- \$500 for first offence
- \$1000 per repeat offence

STAGE 4 - Critical Water Supply Shortage / Extremely Dry Stage

Implementation: Mercantile Creek: Water level is at the inlet pipe AND/OR LSCA Wellfield:
Drawdown is at the top of the screens.

Conservation Actions:

STATE OF EMERGENCY

- Turn off water valves to customers
- Maintain emergency supply to schools, medical centers and senior center
- Maintain emergency supply in reservoirs for firefighting purposes
- Customers pick up water from Public Works Yard
- Bottled water available from central locations
- Provide washroom facilities at Tugwell Fields, the District Office and the Public Works Yard
- Water trucked in to provide potable water and replenish reservoirs as required
- Public works staff operates valves and pump stations manually
- Prepare evacuation of Elderly and critical care patients from senior center

Monitoring Activities:

- Twice daily monitoring of supplies
- Daily monitoring of Environment Canada weather forecasts

Communications Actions:

- Assign one person to develop key daily messages for media briefings and provide these messages to key stakeholder groups and the public to ensure understanding of facts
- Advise VIHA of situation
- Advise Emergency Management BC of the situation
- Provide leaflets to all residents and commercial businesses
- Contact local media (radio station and/or newspaper) and provide a copy of the advisory and key facts
- Post advisory and key facts on Municipal website, social media and distribute through e-mail distribution list
- Post notices at municipal hall, UCC, schools, Chamber building, Co-Op, Post office and other prominent locations
- Use pre-developed phone tree or devise another effective method to inform all residents and visitors of situation

- If necessary, inform residents by going door-to-door or using a drive-around loudspeaker

Recommended Bylaw Fines:

- \$1000 for first offence
- \$2000 per repeat offence

3.0 EMERGENCY CONTACT NUMBERS

District of Ucluelet Contacts

Name	Title	Work	Ext.	Home	Fax	Cell	Email
Warren Cannon	Public Works Superintendent	250 726-4773	230	250 726-2386	250 726-7335	250 726-5507	wcannon@ucluelet.ca
Steve Lang	Public Works Foreman	250 726-7133		250 726-2436	250 726-7335	250 266-0598	slang@ucluelet.ca
Public Works - Emergency Number						250 726-8587	
Karla Robison	Emergency Manager	250 726-4780		250 266-1447		250 266-2254	krobison@ucluelet.ca
Chief Ted Eeftink	Ucluelet Volunteer Fire Dept.	911		250 726-7404		250 726-5497	ukeeted@gamil.com
Dianne St. Jacques	Mayor	250 726-7744	232	250 726-7074	250 726-7335	250 726-6413	dstjacques@ucluelet.ca
Andrew Yeates	Chief Admin Officer	250 726- 4777	224	250 726-3441	250 726-7335	250 730-0719	ayeates@ucluelet.ca

In the event of a failure where widespread water contamination is possible, the following agencies will also be contacted:

Vancouver Island Health Authority Contacts

Name	Title	Work	Ext.	Fax	Cell	Email
Christine Chen	Environmental Health Officer	250 731-1315	41768	250 731-1316	1-800 204-6166	Christine.Chen@viha.ca
Paul Hasselback	Senior Health Officer	250 739-6304			250 619-4305	paul.hasselback@viha.ca
Tofino General Hospital		250 725-3212			250 725-3324	
Ucluelet Medical Clinic		250 726-4443			250 726-7333	

Seniors Housing		250 726-2789				
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Alberni-Clayoquot Regional District

Name	Title	Work	Ext.	Home	Fax	Cell	Email
Alberni-Clayoquot Regional Office	Janice Hill Environmental Services Assistant	250 720-2714				250 206-0021	janice.hill@acrd.bc.ca
Tony Bennett	Area "C" Director			250 726-1224	250 726-1225		

First Nations Contacts

Name	Title	Work	Toll Free	Fax	Cell	Email
Yuulu?il?ath Government House		250 726-7342	1-877 726-7342	250 726-7552		
Yuulu?il?ath Department of Community Services		250 726-7343	1-866 900-7343	250 726-7396		
Ittatsoo Preschool/ Daycare		250 726-2208				
Health Canada		1-250 754-4004				

Emergency Management BC

Name	Title	Work	Fax	Email
Provincial Operation Centre - 24 hour Emergency Reporting Line		1.800.663.3456		
Clare Fletcher	Regional Manager	250.952.4904	250.952.4888	Clare.Fletcher@gov.bc.ca
Ralph Mohrmann	Sr. Regional Manager	250.952.4895	250.952.4888	Ralph.Mohrmann@gov.bc.ca

Office of the Fire Commission

Name	Work	Toll Free	Fax	Email
Office of the Fire Commission	(250) 952-4913	1-888-988-9488	(250) 952-4888	OFC@gov.bc.ca

Key Stakeholders

Name	Title	Work	Fax	Email
Alberni School District No.70		250.723.3565	250.723.0318	
Ucluelet Elementary School		250.726.7793	250.726.2732	
Ucluelet Secondary School		250.726.7796	250.726.7710	
Forest Glenn Senior Home		250.726.2789		

Emergency Water Haulers

Name	Phone Number
H2O 2 GO	1-250-337-5049
Island H2O Service	1-250-754-4721
Stan Wood Trucking	1-250-758-2677
Summer Rain Water Delivery	1-250-247-9136
Water on Wheels	1-250-748-8881
Drillwell Enterprises	1-250-746-5268
Cascadia Pure Water	1-250-391-6575
Waterworks Bulk Water Delivery	1-250-388-2712
BC Water Service	1-250-954-3628
Running Water Enterprises	1-250-248-5552

APPENDIX A - PUBLIC WATER CONSERVATION TIPS

We all need to do our part!

Ways You Can Conserve Water in Your Home:

- Set a goal to use less water!
- Fix leaking faucets and toilets
- Wash only full loads in the dishwasher and clothes washer
- Minimize faucet use when brushing teeth, shaving, and washing dishes
- Don't pre-rinse dishes unless you need to. Most new dishwashers don't require pre-rinsing
- Save luke warm water for watering plants, etc., while you wait for hot water in kitchens and showers
- Install a water-efficient toilet or high-efficiency clothes washer
- Install an efficient showerhead
- Spend less time in the shower. Try to limit showers to 5 minutes or less
- Flush your toilets less often

Ways You Can Conserve Outside:

- Aerate lawns in the spring to better absorb water
- Avoid watering between 10AM and 6PM to reduce evaporation
- Reduce lawn watering or let your lawn go dormant during the summer
- Mulch planting beds to decrease evaporation
- Tune-up and improve your irrigation system
- Don't wash your car unless absolutely necessary
- Never leave a hose running, always use a shut off nozzle
- Use a broom rather than a hose or pressure washer to clean sidewalks and driveways
- Refrain from filling empty pools and hot tubs
- Use a rain barrel to catch water and use this to water your garden

Ways You Can Conserve at Work:

- Check for and fix leaks in sinks, toilets, and urinals (or install water-efficient models)
- Increase employee awareness of water conservation with memos and newsletters, or signs in restrooms or areas that use water
- Serve water only on request in restaurants
- Hospitality businesses can offer guests the option for clean linens each day

APPENDIX B - PUBLIC NOTICE FOR STAGE 1
IMPORTANT NOTICE

Stage 1 Water Restrictions in Effect

Please be advised that the District of Ucluelet is implementing **Stage 1 Water Restrictions**, effective Wednesday, July 1, 2015. This restriction will remain in effect until further notice. Due to the dry weather conditions the District of Ucluelet is experiencing lower than normal recharging rates in both of its water supplies. By adhering to these water restrictions, you will assist in stabilizing our supply of potable water for drinking, household use and fire protection. **Watering Restrictions apply to sprinkling, irrigating, and all outdoor washing.**

STAGE 1

Even numbered civic addresses may water on even numbered days within the permitted hours of 6:00 A.M and 10:00 A.M **or** between the hours of 6:00 P.M and 10:00 P.M

Odd numbered civic addresses may water on odd numbered days within the permitted hours of 6:00 A.M and 10:00 A.M **or** between the hours of 6:00 P.M and 10:00 P.M

Watering is restricted to a maximum of 2 hours per designated day.

Please be sure to conserve water and exercise conservation measures as much as possible. The District of Ucluelet thanks you for your cooperation and encourages you to contact the District Office if you have any questions 250-726-7744.

APPENDIX C - PUBLIC NOTICE FOR STAGE 2

Important Notice

Stage 2 Water Restrictions in Effect

Please be advised that the District of Ucluelet is implementing **Stage 2 Water Restrictions**, effective Friday, July 17, 2015. This restriction will remain in effect until further notice. Due to ongoing weather conditions, the District of Ucluelet's water supply is not recharging at a rate satisfactory to continue outdoor watering under **Stage 1**. By adhering to these water restrictions you will assist in stabilizing our supply of potable water for drinking, household use and fire protection. **Watering Restrictions apply to sprinkling, irrigating, and all outdoor washing.**

Stage 2

Even numbered civic addresses may water on **Thursdays & Sundays** within the permitted hours of 6:00 A.M and 9:00 A.M **or** between the hours of 6:00P.M and 9:00P.M

Odd numbered civic addresses may water on **Tuesdays & Saturdays** within the permitted hours of 6:00A.M and 9:00A.M **or** between the hours of 6:00P.M and 9:00P.M

Watering is restricted to a maximum of 1 hour per designated day.

Please be sure to conserve water and exercise conservation measures as much as possible. The District of Ucluelet thanks you for your cooperation and encourages you to contact the District Office if you have any questions 250-726

7744

APPENDIX D - PUBLIC NOTICE FOR STAGE 3

APPENDIX E - PUBLIC NOTICE FOR STAGE 4