

HAGENSBORG WATERWORKS DISTRICT

EMERGENCY RESPONSE PLAN

PLAN EFFECTIVE AS OF:

July 2020

LOCATION OF ALL EMERGENCY RESPONSE PLAN COPIES:

Board Members

Board Office

Maintenance Contractor

Emergency Repair Contractor

SECTION 13 OF THE DRINKING WATER PROTECTION REGULATION (BC REG. 200/2003) PURSUANT TO THE DRINKING WATER PROTECTION ACT [SBC 2001] REQUIRES THAT A WATER SUPPLIER HAVE A WRITTEN EMERGENCY RESPONSE AND CONTINGENCY PLAN

HAGENSBORG WATERWORKS DISTRICT
Emergency Response Plan

Table of Contents

Presence Of Fecal Coliform/E.Coli Bacteria 1
Total Coliform Bacteria Present..... 2
High Turbidity Levels at Water Source Intake..... 3
Broken Water Main or Damaged Reservoir..... 4
Chemical Contamination 5
Waterborne Disease Outbreak 6
Emergency Contact List..... 7
Emergency Activity Duties 8

PUBLIC ADVISORY NOTICES

Boil Water NOTICE (Fecal Coliform/E.coli bacteria) PA#1
Water Quality Advisory (High Turbidity Levels) PA#2
Boil Water Notice (Waterborne Disease Outbreak)..... PA#3
Do Not use water notice (Chemical Contamination) PA#4
Voluntary Conservation Notice (Loss of Source)..... PA#5
Mandatory Conservation Notice (Loss of Source)..... PA#6
Water System Recovering..... PA#7
Drinking water problem corrected (Do not use water notice removed)..... PA#8

Hagensborg Waterworks District Emergency Response Plan

Fecal Coliform or E.coli Bacteria Present

Background

The presence of fecal coliform or Escherichia coli (E. coli) bacteria in a water sample indicates that the water source has been exposed to recent fecal contamination from the intestines of humans and other warm-blooded animals. Fecal contamination may be introduced to unprotected water sources by surface runoff that can carry pathogens from animal droppings or carcasses, etc. Most fecal coliform bacteria don't survive more than a week or two in the environment. The presence of these bacteria in drinking water supplies represents a significant public health threat and it is probable that enteric pathogens are present. **Pathogens** are disease-causing microorganisms.

Actions

- Continue with the already existing *PA#1 Boil Water Notice*.
- Resample at the identical sampling point and take a couple more samples from various points on the distribution system. This is important to determine whether sampling error occurred and to ensure that samples are representative of the water throughout the water system.

Hagensborg Waterworks District Emergency Response Plan

Total Coliform Bacteria Present

Background

Total coliform bacteria are free-living and naturally present in the environment (in soil and on vegetation, etc.) and thus their presence in drinking water does not necessarily represent fecal contamination. Surface water sources such as lakes, creeks, springs and shallow wells are unprotected water sources that are subject to contamination from total and fecal coliform bacteria. The presence of total coliform bacteria often occur because of improper sample collection, a cross connection or, inadequate maintenance (flushing, etc.) of the distribution pipes and reservoirs. Waterborne pathogens (i.e., disease-causing microorganisms) may or may not be present when total coliforms are detected.

Actions

- Continue with the already existing *PA#1 Boil Water Notice*.

Hagensborg Waterworks District Emergency Response Plan

High Turbidity Levels

Background

Surface water sources may contain high turbidity (cloudiness) levels due to seasonal weather changes causing excessive surface runoff, flooding or lake turnover. Turbidity levels are measured in units referred to as “NTU” or Nephelometric Turbidity Unit. Turbidity in excess of 5 NTU can be observed and water users may express concerns. Elevated levels of disease-causing microorganisms are also common with high turbidity events.

Actions

- Ensure that the screening system continues to operate correctly.
- May wish to use Drinking Water NOTICE – *PA#2 Water Quality Advisory* for High Turbidity Levels
- Attempt to determine what may have caused the increase in turbidity. Note the incident and details of the suspected cause in the water system log journal.
- Commence unidirectional flushing of the distribution system after the high turbidity event has subsided.
- If Drinking Water NOTICE PA#2 was used, *PA#7 Notice – Water System Recovering* may be used at the discretion of the Administrator.

Hagensborg Waterworks District Emergency Response Plan

Broken Water Main or Damaged Reservoir

Background

The following actions will be initiated when a water main breaks or a reservoir is damaged. The cause of the damage may be man-made (e.g. excavation, explosion, etc.) or natural (e.g. earthquake, high winds, forest fire, etc.).

Actions

- Isolate affected portion(s) of the system where the damage occurred using the appropriate valves. If the event has damaged a dedicated supply main or a primary reservoir, shut down water system immediately. Contact qualified contractor to proceed with immediate repairs.
- Issue *Public Advisory #5 Voluntary Conservation Notice* or *#6 Mandatory Conservation Notice* (depending on the severity of situation) and notify the Public Health Inspector. Upon completion of repairs, re-open the affected section of system.
- Flush the affected line or reservoir. Do not use chlorine or any other chemical to disinfect the reservoir or lines as water enters the Snootli River as part of the overflow and natural flushing process and DFO receives raw water from the system further down the intake.
- *Public Advisory #7 Notice – Water System Recovering* may be used at the discretion of the Administrator, once all is back to normal

Hagensborg Waterworks District Emergency Response Plan

Chemical Contamination

Background

This plan addresses the loss of water source because of chemical contamination that may be due to accidental spills or acts of vandalism/terrorism. In the case of vandalism, this plan should also be used if there is significant indirect evidence of chemical contamination (e.g. a steel drum with a hazardous wastes symbol laying beside a well).

Actions

- In the event of chemical contamination or suspected chemical contamination of the water supply due to a spill, an act of vandalism or an act of terrorism; the system may need to be shut down immediately. Issue ***Public Advisory #4 Do Not Use Water Notice (Chemical Contamination)***. Immediately notify the Public Health Inspector and Fire Chief and Captain.
- If the source may not be restored for some time; investigate the use of bottled water, the import of bulk water or the use of another alternate source. Ensure that the Public Health Inspector has approved any alternate water source prior to distribution to the water users.

When the Provincially accredited laboratory has reported satisfactory chemical sample results to the Public Health Inspector and the source is restored, flush the distribution system. Ensure that approvals from the Ministry of Environment and the Department of Fisheries and Oceans Canada are obtained prior to discharging contaminated water onto the ground or into a watercourse. Issue ***Public Advisory #7 Notice – Water System Recovering*** may be used at the discretion of the Administrator and issue ***Public Advisory #8 Drinking Water Problem Corrected (Do Not Use Water Notice Removed)*** and notify the Public Health Inspector.

Hagensborg Waterworks District Emergency Response Plan

Waterborne Disease Outbreak

Background

In the event or suspicion of a waterborne disease outbreak, the following actions shall be implemented:

Actions

- When given information from a Public Health Inspector concerning at least three confirmed cases of waterborne illness (within a 14 day period) related to your water system, issue ***Public Advisory #3 Boil Water Notice (Waterborne Disease Outbreak)***.
- Take a number of water samples from various points on the distribution system representative of the water throughout the water system.

Hagensborg Waterworks District Emergency Response Plan

Emergency Contact List

BC Hydro	1 888 769 3766
Emergency Response contacts: - Emergency Repair: Gordon Gibbs Bella Coola Backhoe - Maintenance and Water shut off: Chris Matthews	250 982 2231 250 982 0040
Bottled Water Supplier: - Hagensborg Shop Easy - Bella Coola Consumers Co-op	250-982-2637 250-799-5325
Community Emergency Program: - Nuxalk EOC - CCRD	250-799-5959 205 799 5291
Department of Fisheries and Oceans Canada: - DFO Local Office - DFO Snootli Creek Hatchery	1 800 465 4336 250 799 5345 250 982 2214
Electrician: Bill Andersen (Wilmax Electrical) 250-982-2741/ Jim Ward Central Coast Maintenance	250-267-9914
Fire Department: Emergency Number for Hagensborg Fire Department: - General inquiry line:	250-982 2366 250 982 2777
Health Authority: Vancouver Coastal Health: - Public Health Nurse - Environmental Health Officer (EHO) : Phil Muirhead 604-983-6700 or 604-983-6756 - EHO on call (after hours and weekend) - Medical Health Officer (MHO): Dr. Geoff McKee - Bella Coola General Hospital	250-799-5722 604-983-6756 604-886-5600 604-983-6701 250-799-5311
Media - Newspaper: Coast Mountain News	250-982-2696
Province Wide Spill Reporting: MoE Local Office:	1-800-663-3456 250-982-2701
Provincial Emergency Program:	1-800-663-3456
RCMP:	250-799-5363
Call List for Emergency Water Shut Off and Line Flushing:	
- Bella Coola Mountain Lodge, info@bcmountainlodge.com	250 982 2298
- Central Coast Regional District, info@ccrd-bc.ca	250 799 5291
- Dept. Fisheries & Oceans; denis.tippie@dfo-mpo.gc.ca	250 982 2250
- Hagensborg Shop Easy	250 982 2637
- Mecham Sales and Service	250 982 2345
- Moore's Market	250 799 5975
- Pacific Coastal	250 982 2225
- Rip Rap Campground; amberrirap@gmail.com	250 982 2752
- My Lunch Stop	250 982 0095
- Dragonfly Studio Coffee Shop	250 9820005
- Mountain Valley Organics	250 982 2205
- Forest Service	250 982 2000
- MOE	250 982 2701
- Post Office	250 982 2338
- School Dist. #49; hzhao@sd49.ca	250 982 2691
- Seventh Day Adventist School	250 799 5910
- Gnomes Home Campground	780 232 5716
- Rip Rap Campground	250 982 2752
- Bella Coola Grizzly Tours	250 982 0098

Hagensborg Waterworks District Emergency Response Plan

Emergency Activity Duties

If the water in the water system becomes contaminated (or you feel it may be), or you receive an unsatisfactory water result:

1. Shut off water supply, if appropriate.
2. The administrator will:
 - a. Contact the Drinking Water Officer or back up health contact.
 - b. Notify any affected businesses, utilizing the emergency contact data
 - c. Contact other appropriate person(s) from the list of emergency numbers.
 - d. Organize alternate source of safe drinking water (if available)
3. The Maintenance Contractor will post appropriate signage and coordinate repairs

Hagensborg Waterworks District

BOIL WATER NOTICE

**Laboratory tests indicate the presence of fecal coliform bacteria
in the drinking water.**

If fecal coliform bacteria are present in drinking water supplies, this is a serious concern because disease-causing microorganisms (pathogens) may be present. These pathogens include bacteria, viruses and parasites that can cause enteric symptoms (diarrhea, cramps, nausea, vomiting or other symptoms). People with weakened or undeveloped immune systems are most at risk [this includes: elderly people, pregnant women and their unborn, very young children (under 2), people with AIDS, cancer, diabetes or kidney disease and people being treated with immuno-suppressing medications (antibiotics, chemotherapy, etc.)] Boiling the water kills these organisms.

Water users are reminded to bring all water to a rolling boil for at least one minute and let it cool before using it or, use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation.

<p>ENQUIRIES? Please call the administrator of the Waterworks System at 250 982 2777 or the following numbers below : 604-983-6756 or 6700 Health Authority – Public Health Inspector Ph: 604-983-6701</p>
--

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____

Water Supplier

Hagensborg Waterworks District

WATER QUALITY ADVISORY

High turbidity levels have been detected in the drinking water supply. Water users wish to filter the water and are reminded to bring all water to a rolling boil for at least one minute and let it cool before using it or, use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, and food preparation until further notice. We will inform you when the Water Quality Advisory is removed.

THIS WATER QUALITY ADVISORY

IS EFFECTIVE _____ UNTIL FURTHER NOTICE

**ENQUIRIES? Please call the administrator of the Waterworks System at 250 982 2777 or the following numbers: 604-983-6756 or 6700
Health Authority – Public Health Inspector Ph: 604-983-6701**

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____
Water Supplier

Hagensborg Waterworks District

BOIL WATER NOTICE

Contaminated water has entered the distribution system and we've received reports from Vancouver Coastal Health Authority of people with symptoms typical of waterborne illness. Disease-causing organisms (bacteria, viruses or parasites) may have entered the distribution system. These organisms can cause symptoms such as diarrhea, abdominal cramps, headaches, nausea vomiting or other symptoms. People with weakened or undeveloped immune systems are most at risk [this includes: elderly people, pregnant women and their unborn, very young children (under 2), people with AIDS, cancer, diabetes or kidney disease and people being treated with immuno-suppressing medications]. Boiling the water kills these organisms.

Water users are reminded to bring all water to a rolling boil for at least one minute and let it cool before using it or, use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice.

<p>ENQUIRIES? Please call the administrator of the Waterworks System at 250 982 2777 or the following numbers: Health Authority – Public Health Inspector</p>	<p>604-983-6756 or 6700 Ph: 604-983-6701</p>
--	---

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____
Water Supplier

Hagensborg Waterworks District

DO NOT USE WATER NOTICE

We have recently discovered that an unknown quantity of a chemical contaminant may have entered the water supply system. Water samples are being collected to determine if the water quality meets the standards in the *Guidelines for Canadian Drinking Water Quality (6th Edition)*. The chemical contaminant may be at a level that makes our water supply toxic and unfit for drinking or bathing.

As a precautionary measure to avoid health risks, we are advising water users to use bottled water or an alternate source of water for drinking, making ice, washing dishes, brushing teeth, bathing, and food preparation until further notice. Boiling the water will not make it safe. If alternate water sources are used, the water must be from Health Authority approved sources only. Water bottles may be filled at an approved tap at the Hagensborg Water District office location.

The water in your hot water tank may also be unsafe. Please consult a qualified plumber before draining your hot water tank.

THIS DO NOT USE WATER NOTICE

IS EFFECTIVE _____ UNTIL FURTHER NOTICE

<p>ENQUIRIES? Please call the administrator of the Waterworks System at 250 982 2777 or the following numbers :</p> <p>Health Authority – Public Health Inspector</p>	<p>604-983-6756 or 6700</p> <p>Ph : 604-983-6701</p>
---	--

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____
Water Supplier

Hagensborg Waterworks District

VOLUNTARY CONSERVATION NOTICE

As a result of the recent incident involving _____, there is a strong possibility that the water system will have to be shut down. All water users are requested to reduce water consumption immediately and to be prepared for a temporary water shortage. It is recommended that you store a small quantity of water for consumption and general household use. As an extra precaution, you may want to disinfect this emergency water supply by adding household chlorine bleach (two drops of bleach to 1 Litre of water or 0.5 mL bleach to 1 Imperial Gallon/4.55 Litres of water). Please ensure that only clean potable water containers are used for storing these emergency supplies. If alternate water sources are used, the water must be from Health Authority approved sources only. Water bottles may be filled at an approved tap at the Hagensborg Water District office location.

EFFECTIVE _____ UNTIL FURTHER NOTICE

THANK YOU FOR YOUR PATIENCE AND COOPERATION

<p>ENQUIRIES? Please call the administrator of the Waterworks System at 250 982 2777 or the following numbers :</p> <p>Health Authority – Public Health Inspector</p>	<p>604-983-6756 or 6700</p> <p>Ph : 604-983-6701</p>
---	--

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____
Water Supplier

Hagensborg Waterworks District

MANDATORY CONSERVATION NOTICE

As a result of the recent incident involving _____, the water system is not in operation – there is no water entering the distribution system. Please refrain from using faucets and other plumbing fixtures and please use stored water, bottled water or an alternate source of water for domestic purposes. Draining your hot water tank is not recommended unless you have consulted a qualified plumber. If alternate water sources are used, the water must be from Health Authority approved sources only. Water bottles may be filled at an approved tap at the Hagensborg Water District office location.

EFFECTIVE _____ UNTIL FURTHER NOTICE

THANK YOU FOR YOUR PATIENCE AND COOPERATION

<p>ENQUIRIES? Please call the administrator of the Waterworks System at 250 982 2777 or the following numbers : 604-983-6756 or 6700</p> <p>Health Authority – Public Health Inspector Ph : 604-983-6701</p>
--

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Hagensborg Waterworks District

NOTICE

WATER SYSTEM RECOVERING

The water supply system has been inspected and, where necessary, repairs have been made. The water system is now fully operational. While the system is recovering to normal operating levels, your assistance with conservative water use over the next two or three days would be appreciated.

Water users are reminded the system is still on a Boil Water Notice requiring water to be brought to a rolling boil for at least one minute and let it cool before using it or, use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice.

EFFECTIVE _____

THANK YOU FOR YOUR PATIENCE AND COOPERATION

**ENQUIRIES? Please call the administrator of the Waterworks System
at 250 982 2777 or the following numbers : 604-983-6756 or 6700**

Health Authority – Public Health Inspector Ph : 604-983-6701

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____
Water Supplier

Hagensborg Waterworks District

Drinking Water Problem Corrected

The Do Not Use Water Notice is Removed

Water samples collected from our water system indicate that it is no longer required to use bottled water or other alternate sources of drinking water but as a part of the permanent Boil Water Notice, the use of alternate potable sources of water is still recommended. Alternately the water can now be made safe to drink by bringing all water to a rolling boil for at least one minute and let it cool before using it or, use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation

EFFECTIVE _____

THANK YOU FOR YOUR PATIENCE AND COOPERATION

ENQUIRIES? Please call the administrator of the Waterworks System
at 250 982 2777 or the following numbers : 604-983-6756 or 6700

Health Authority – Public Health Inspector Ph : 604-983-6701

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example; people in apartments, rental units, nursing homes, schools, preschools, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____

Water Supplier