Island Health

# EMERGENCY RESPONSE AND CONTINGENCY PLAN

**(For small water systems)**

**NAME OF WATER SYSTEM:** _____

Physical Address: _____

Mailing Address: _____

Prepared on: _____

**EMERGENCY NUMBERS** *(must include after-hours numbers in case of emergency)

| Name | Phone Number | Alt Phone | Email | Fax |
|---|---|---|---|---|
| 1st Operator: | | | | |
| | | | | |
| 2nd Operator: | | | | |
| | | | | |
| All Owners: | | | | |
| | | | | |
| Electrician: | | | | |
| Plumber: | | | | |
| Bulk Water Hauler/Alternate Water Source: | | | | |
| Equipment Supplier (e.g. UV bulbs, pumps): | | | | |
| | | | | |
| Drinking Water Officer Delegate: | | | | |
| Public Health Engineer: | | | | |
| Medical Health Officer: | | | | |
| Island Health After-Hour (Emergency) | 1-800-204-6166 | | | |
| Ministry of Environment (Emergency) | 1-800-663-3456 | | | |
| RAPP Line | 1-877-952-7277 | | | |
| Local First Nations Contact: | | | | |
| | | | | |

**In the case of emergency contacts, provide as many avenues of communication as possible. The emergency contacts are to be reviewed on an annual basis to ensure the contact information is up to date. Forward changes to your local Drinking Water Officer Delegate.**

**IN CASE OF EMERGENCY WHERE WATER IS NOT SAFE FOR CUSTOMERS TO USE (e.g. E. coli present, vandalism/tampering), list who is responsible for the following:**

_____ Activating the emergency response plan procedures.

_____ Contact appropriate person from list of emergency contacts

_____ Contact Drinking Water Officer delegate.

_____ Notify affected users through communication process.

_____ Post warning or advisory signage.

_____ Notify appropriate health officers and agencies.

_____ Coordinate necessary repairs.

_____ Coordinate water sample submission for additional testing.

_____ Arrange for alternate drinking water source.

**NOTIFICATION OF USERS THAT EMERGENCY CONDITIONS EXIST WILL OCCUR VIA (check all that apply):**

| | |
|---|---|
| ☐ | Phoning individual users (Include phone list with ERP) |
| ☐ | Phoning and emailing individual users (Include contact list with ERP) |
| ☐ | Using a community phone tree (Provide details) |
| ☐ | Posting on internal social-media group page |
| ☐ | Posting to a webpage (Webpage link: ) |
| ☐ | Posting sandwich board signage at community/facility access points |
| ☐ | Door-to-door notification |
| ☐ | Posting signage in common use areas (e.g. washroom facilities, front door) |
| ☐ | Broadcasting via radio or other media |
| ☐ | Communicating through applicable/partner agencies |

**ADDITIONAL ITEMS TO INCLUDE WITH THIS EMERGENCY RESPONSE AND CONTINGENCY PLAN:**

1. Drawing or schematic of the drinking water system that shows water mains, source water location / well location, pump house, treatment room, key valves, electrical panel, other buildings, maintenance equipment, etc.
2. Draft communications to be used for notification of users.
3. Template signs for “Boil Water Notice”, “Do Not Consume”, and “Do Not Use” scenarios.
4. Cleaning and disinfecting procedures for system infrastructure (e.g. well shock-chlorination, flushing or disinfecting water mains)
5. Any other key procedures that may need to be undertaken during an abnormal or emergency situation.

**EXAMPLES OF ABNORMAL CIRCUMSTANCE OR EMERGENCIES THAT SHOULD BE ADDRESSED**

(address all items below that apply to your system, this list is not exhaustive, consider your own water system components and details)

| | |
|---|---|
| Biological Contamination (Bacteria, viruses, pathogens, etc.) | |
| Water sample results indicate presence of total coliforms | Water samples results indicate presence of E. coli |
| Algal bloom in source water | Contaminated reservoir or cistern |
| Suspected or known back-siphonage event | Sewage system or force main failure causing effluent to spill near source water |
| Wellhead damaged / intake damaged | Flooding |
| Chemical Contamination (natural presence, incident) | |
| Turbidity spike in source or finished water | Chemical sample results indicate exceedance of a MAC (e.g. elevated arsenic) |
| Tampering or vandalism of water source or storage | Recirculation system in reservoir failed |
| Chemical spill near source water | |
| Infrastructure/treatment/disinfection malfunction or failure | |
| Loss of pressure in water main | Chlorine disinfection malfunction |
| UV unit/bulb malfunctioned / UV unit alarming | Faulty or broken valve |
| Pressure tank failure | Sand/cartridge filter malfunction |
| Failure of SCADA or other online monitoring system | Loss of chlorine residual in distribution |
| Treatment equipment malfunction | |
| Loss or depletion of water | |
| Leak reported on water mains | Leak reported for user connection |
| Well pump failure / intake pump failure | Low quantity of water in well / source / reservoir |
| Water main break | Fire event resulting in low water quantity |
| Excessive demand for system (e.g. possible leak in distribution) | |
| Other | |
| Earthquake | Landslide |
| Wildfire | Loss of key staff |

**EMERGENCY RESPONSE AND COTINGENCY PLAN – ACTION LIST**

| **Type of Emergency:** | |
|---|---|
| Actions: | |
| Contacts (who to notify): | |
| | |
| | |
| | |

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|---|---|
| Actions: | |
| Contacts (who to notify): | |
| | |
| | |
| | |

**QUICK REFERENCE GUIDE**

It can be stressful when an emergency happens. It is important to be thoroughly prepared so you can confidently take the necessary actions to efficiently deal with the emergency. This requires that you put detail into your plan so your operators and alternates can follow the plan and take all the necessary actions. Here are some tips to ensure your emergency response plan is satisfactory:

1. Be thorough.
2. Consider all components of your water supply system (i.e. sources, storage vessels, treatment equipment, distribution system) and think about what could go wrong.
    - Address everything that you come up with.
3. Outline specific actions for each type of emergency. Where actions are the same, you could consider grouping different types of emergencies together.
4. When outlining the actions to be taken, provide them in order that the steps should be completed. In general:
    - Handle any immediate items first (e.g. stopping an active leak)
    - Communicate issue to all personnel, water users, your Drinking Water Officer Delegate, and anyone else deemed critical.
    - Investigate issue to determine sources of the problem.
    - Repair or remediate any identified issues.
    - Restore system to regular operation through cleaning/disinfecting infrastructure, flushing lines, or any other maintenance services.
    - Verify what quality is satisfactory through sampling.
    - Notify all critical contacts.
    - Return to normal operation.
5. Consider having grab-and-go templates/directions/contact lists for efficiency.
6. Be aware of the types of public notices available and when to use these:
    - <u>Boil Water Notice</u> – used to inform water users that the water has microbiological contamination and could make them sick. Boiling the water will make the water safe to consume and use for other purposes like food preparation.
    - <u>Do Not Consume Advisory</u> – used to inform water users that there is contamination in the water that makes it unsafe to drink, prepare food with, prepare baby formula with, and otherwise ingest. They can still use the water for handwashing, showering, washing dishes, and doing laundry.
    - <u>Do Not Use Advisory</u> – used to inform water users that there is contamination in the water that makes the water unsafe to drink and to use for other domestic household purposes. They **cannot** use the water to wash their handwashing, showering, washing dishes, and doing laundry.
7. Use the Ministry of Health's Guide to Emergency Response and Contingency Plans for Water Supply Systems for further information and guidance.
8. Contact your Drinking Water Officer Delegate for further support.