**Appendix B: Possible Emergencies with Planned Responses**

This provides examples of common possible emergencies and sample responses. You may need to modify the list and/or the responses (including example actions) to ensure it suits the needs of your system. For example, the type of response, the contact list and the order of response will vary, depending on the size of your system, the type of source you use, and other factors.

Use the list of possible emergencies that you created to fill in the blanks under “other”. Use the blank templates at the end of the appendix to develop your own emergency responses. You should work with your Drinking Water Officer to make sure you are on the right track.

**Examples of Possible Emergencies**

|  |  |
| --- | --- |
| **Source(s) / Intake(s)**  🞎 Contamination of source (chemical)  🞎 Loss of source  🞎 Flood conditions  🞎 Turbidity (no example response)  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **Distribution System**  🞎 Broken water main  🞎 Backflow or Back Siphonage  🞎 Blocked / faulty valve (no example response)  🞎 Contaminated Reservoir (no example response)  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Treatment / Pump House**  🞎 Pump failure  🞎 Chlorine gas leaks (no example response)  🞎 Chlorinator failure  🞎 Disinfection system failure (UV, filters, etc.)  🞎 Power failure  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **Other**  🞎 Spills of disinfected water into fish-bearing streams (no example response)  🞎 Earthquake (no example response)  🞎 Fire (no example response)  🞎 Unacceptable Water Sample (Total Coliform or E. coli bacteria)  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  🞎 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Examples of Planned Responses**

**General Emergency Shut-Down and Start-Up Procedures**

**Shut-Down Procedure**

**In case of any emergency in which the water is not safe for consumption or general use:**

1. Issue a Boil Water Notice, Do Not Consume or Do Not Use Notice.
2. Shut off water supply (if necessary).
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will contact the drinking water officer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or other health authority contact(s) (as per specified emergency procedures).
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will notify affected water users (as per the communication protocols).
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will notify appropriate government agencies (as per specified emergency procedures).
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will post warning signs in public spaces and other necessary locations.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will coordinate repairs.
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will arrange for alternate source of safe drinking water.

**Start-Up Procedure**

1. Identify and correct the source of contamination.
2. The entire system should be flushed and disinfected (as per attached procedures).
3. Send water sample(s) to the appropriate approved lab for testing. For bacteriological contamination, two or three consecutive sampling results must be negative.
4. Contact the drinking water officer or delegate for approval to resume normal operations of the water supply system (e.g., lifting the Boil Water Notice).

**Chemical Contamination of Source: Spill, Vehicle Accident, Etc.**

**ACTIONS**

🞎 Shut down pump.

🞎 Notify health authority.

🞎 Notify all users.

🞎 Contact government agencies (see below) for advice and assistance.

🞎 Contact local media for public service announcement (where all customers cannot be notified by phone).

🞎 Arrange alternate source if necessary—i.e., bottled water, bulk hauler and storage tank.

**CONTACTS**

* Drinking water officer
* Local government’s emergency program coordinator
* Emergency Management BC
* Police
* Ministry of Forests, Lands and Natural Resource Operations
* Department of Fisheries
* Others as necessary, depending on severity.

**Loss of Source: Intake Damaged, Creek Dried Up, etc.**

**ACTIONS**

🞎 Ensure pump is shut off (to protect pump).

🞎 Notify all users.

🞎 Contact government agencies (see below) for advice and assistance.

🞎 Arrange alternate source (e.g., bottled water, bulk hauler and storage tank)

**CONTACTS**

* Drinking water officer
* Local government’s emergency program coordinator
* Ministry of Forests, Lands and Natural Resource Operations
* Others as necessary, depending on severity (possibly, the Fire Department).

**Flood Conditions**

**ACTIONS**

🞎 Notify all users regarding the potential for water contamination, loss of pump, power, etc. Users should be advised to store some drinking water in advance, and to boil any suspect water for two minutes or disinfect with chlorine when flood conditions exist.

🞎 Phone government contacts (see below).

🞎 Contact local media for public service announcement (where all customers cannot be notified by phone).

🞎 Arrange alternate source if possible – i.e., bottled water, bulk hauler, storage tank.

**CONTACTS**

* Drinking water officer
* Local government’s emergency program coordinator
* Emergency Management BC
* Ministry of Forests, Lands and Natural Resource Operations

**Pump Failure**

**ACTIONS**

🞎 Notify all users of interruption of service.

🞎 Call for repairs: pump manufacturer.

🞎 Advise drinking water officer (if interruption not short-term).

🞎 Arrange alternate source if necessary (e.g., bottled water, bulk hauler, etc.).

**CONTACT**

* Drinking water officer

**Chlorinator Failure**

**ACTIONS**

🞎 Advise local health authority.

🞎 Notify all users to boil water for two minutes or take other disinfection procedures in accordance with recommendation of local health officials.

🞎 Arrange chlorinator repairs.

**CONTACTS**

* Drinking water officer
* Chlorinator manufacturer

**DIsinfection System Failure (Ultraviolet lamp, filtration system, OZONE etc.)**

**ACTIONS**

🞎 Advise local health authority.

🞎 Notify all users to boil water for two minutes or take other disinfection procedures in accordance with recommendation of local health officials.

🞎 Arrange disinfection system repairs.

**CONTACTS**

* Drinking water officer
* Disinfection system manufacturer

**Power Failure**

**ACTIONS**

🞎 Call BC Hydro.

🞎 Start back-up generator.

🞎 Notify all users about interruption of service if back up not capable of maintaining supply.

🞎 Advise drinking water officer.

🞎 Arrange alternate source if necessary (e.g., bottled water, bulk hauler, etc.).

**CONTACT**

* Drinking water officer
* BC Hydro

**Broken Water Main**

**ACTIONS**

🞎 Reduce pressure (but maintain enough pressure to prevent backflow – at least 20 psi/140 kpa).

🞎 Call for repairs (e.g., plumber, excavator).

🞎 Notify all users of interruption of service.

🞎 Advise local drinking water officer

🞎 Arrange alternate source if necessary (e.g., bottled water, bulk hauler, etc.).

**CONTACT**

* Drinking water officer

**Backflow or Back Siphonage**

**ACTIONS**

🞎 Advise Medical Health Officer at local health authority.

🞎 Notify users to boil water for two minutes or take other disinfection procedures in accordance with recommendation of local health officials.

🞎 Purge and disinfect lines as directed, after corrections have been made.

**CONTACT**

* Drinking water officer

**Template for Planned Responses**

Fill in the following blank template with your planned responses to the list of possible emergencies that you listed under “other”. Make more copies of this page as necessary.

**Emergency: UNACCEPTABLE BACTERIOLICAL WATER SAMPLE RESULT**

**(Total coliform bacteria or E. coli bacteria)**

**ACTIONS**

🞎

🞎

🞎

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**CONTACTS**

**Emergency:**

**ACTIONS**

🞎

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**CONTACTS**

**Template for Planned Responses**

Fill in the following blank template with your planned responses to the list of possible emergencies that you listed under “other”. Make more copies of this page as necessary.

**Emergency:**

**ACTIONS**

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**CONTACTS**

**Emergency:**

**ACTIONS**

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**CONTACTS**

**Template for Planned Responses**

Fill in the following blank template with your planned responses to the list of possible emergencies that you listed under “other”. Make more copies of this page as necessary.

**Emergency:**

**ACTIONS**

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**CONTACTS**

**Emergency:**

**ACTIONS**

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**CONTACTS**

**Template for Planned Responses**

Fill in the following blank template with your planned responses to the list of possible emergencies that you listed under “other”. Make more copies of this page as necessary.

**Emergency:**

**ACTIONS**

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**CONTACTS**

**Emergency:**

**ACTIONS**

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**CONTACTS**