Introduction to Emergency Response Planning

Presented by:

Date:

EOCP continuing education credits:

Interior Health

Every person matters

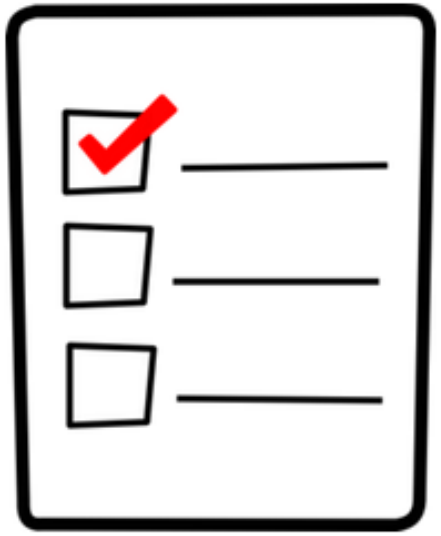
Introductions

Course Outline

- Explain what is an Emergency Response and Contingency Plan (ERCP) and Why is it Necessary
- Types of Drinking Water Emergencies
- Components of an ERCP
- Public Notification and Advisories
- Responding to Emergency Events
  - Scenario activity
- Reviewing and Updating your ERCP
- Multiple Choice Quiz/Assessment

What is an Emergency Response and Contingency Plan (ERCP)?

Learning Objective: Understand the significance of an Emergency Response and Contingency Plan



What is an ERCP?

Definition:

A written document that outlines what to do and whom to call in case of an emergency.

An ERCP will:

- provide an efficient systematic step-by-step response to and recovery from an emergency event
- reduce the impact the event has on your water system and water users.

Source: ***Emergency Response and Contingency Planning for Small Water Systems June* 2016,** BC Ministry of Health, Health Protection Branch

What is an ERCP?

An ERCP enables water system operators to:

1. Inventory all possible emergencies
2. Assess system vulnerabilities
   - Know your risks (do a Source to Tap assessment)
3. Establish procedures to follow in the event of an emergency ("be prepared"):
   - communicate the Plan (have a strategy) and train staff
   - use the Plan when an emergency occurs
   - have a contingency fund to help cover costs

What is an Emergency?

Definition:

An unexpected event (natural-, technological-, or human-caused) that has the potential to disrupt the operation of your water supply system and affect the safety of your community's drinking water.

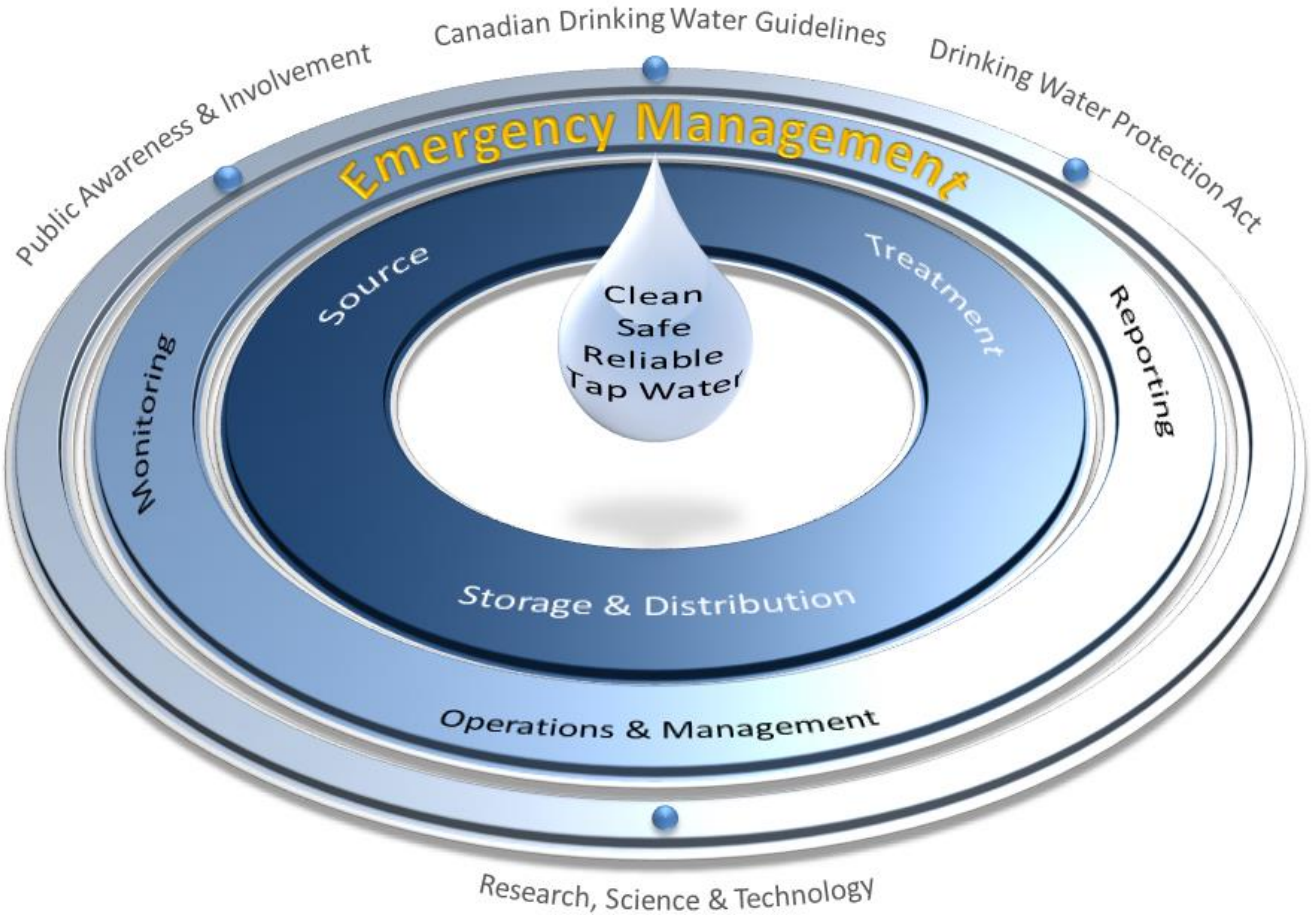
Source: ***Emergency Response and Contingency Planning for Small Water Systems June* 2016,** BC Ministry of Health, Health Protection Branch

http://www2.gov.bc.ca/assets/gov/health/keeping-bc-healthy-safe/healthy-communities/ercp-sws-final-july-14-2016.pdf

Question to Class:

Who has experienced an emergency situation?

Multi-Barrier Approach & ERCPs



Action not Reaction

- An ERCP is proactive not reactive:
- It has well thought out procedures to follow in the event of an emergency
- It must be readily available to staff
  - walkthroughs/mock exercises are recommended
- It must also be provided to your EHO and, a summary should be provided to water users

Why do you need an Emergency Response and Contingency Plan?

➢ To Protect the Health of Your Water Users

- An ERCP can help save lives and prevent gastrointestinal illness/outbreaks
  - Diarrhea and/or vomiting
  - Abdominal cramps
  - Nausea
  - Fever
  - Dehydration
- An ERCP can also prevent exposure to harmful chemicals

➢ To Reduce Liability

- An ERCP:
- Enhances water system security
- Minimizes property damage (and repair costs)
- Potentially reduces insurance premiums
- Reduces outstanding non-compliance with the Drinking Water Protection Act and Regulation
- Is part of an operator's due diligence

➢ It is a Legislative Requirement

Under Section 10 of the
Drinking Water Protection Act:

- A water supplier must have a written emergency response and contingency plan in accordance with the regulation
- A Drinking Water Officer (DWO) may order a water supplier to review and update their Plan

➢ It is a Legislative Requirement

Under Section 13 of the
Drinking Water Protection Regulation

- The ERCP must include:
  - People to be contacted in the event of an emergency
  - Steps to follow in the event of an emergency
  - Protocols to follow respecting public notice
- A water supplier must make their emergency plan accessible to staff, and provide a copy to their DWO
- A summary must be available to water users

Types of Drinking Water Emergencies

Learning Objective: Identify types of emergencies that can impact a Drinking Water System

Examples: the Good and the Bad

Types of Water System Emergencies

Drinking water emergencies usually involve one or more of the following:

i. the source (example: well, lake, creek, etc.)

ii. the treatment/pump house and/or

iii. the distribution system (mains, reservoir, etc.)

To help you evaluate the risks to your system, the Ministry of Health has produced tools to complete a "source to tap assessment":

- Drinking Water Source to Tap Screening Tool (2004)
- Water System Assessment User's Guide (2012)

Types of Water System Emergencies

The most common emergencies include:

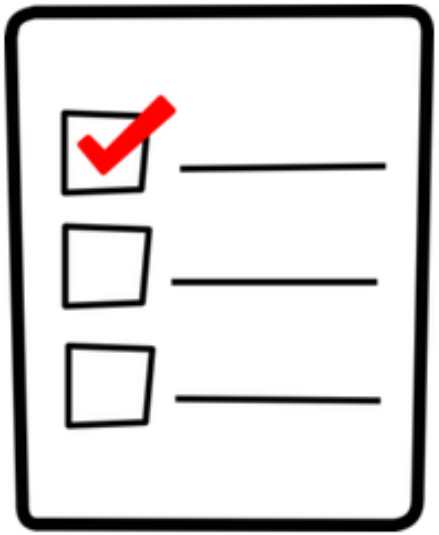
1. Loss of source/interruption of supply
2. Damage/malfunction of water system components (water main break, etc.)
3. Contamination of water (either or both):
   - Microbiological
     - Unsatisfactory samples indicate the possible presence of pathogens
     - High turbidity in systems with unfiltered surface water
   - Chemical

Events that may lead to Water System Emergencies

TECHNOLOGICAL:	NATURAL:	HUMAN:
Power outage	High Turbidity	Human Error/Mistake
Pump failure	Landslide	Spill-Train Derailment
Main break/leak	Wildfire	Spill-Transport Truck
Pipeline leak/spill	Earthquake	Fires-Wild/Structural
Backflow	Flood/Drought	Vandalism/Terrorism

Components of an Emergency Response and Contingency Plan

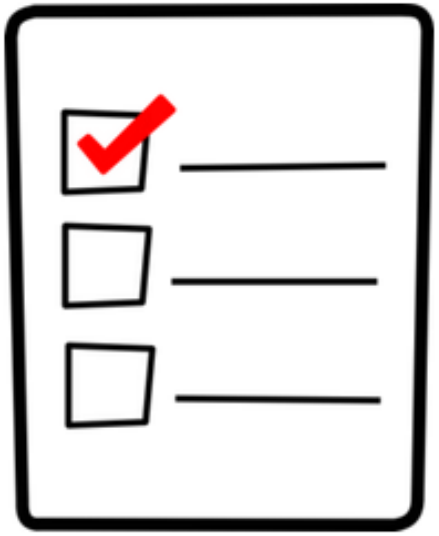
Learning Objective: Identify the components of an Emergency Response and Contingency Plan



Seven Components

1. Checklist
2. Contact List
3. Maps of the Water System
4. Inventory of Possible Emergencies
5. List of Actions to be Taken
6. Public Notification/Communications Strategy
7. Resource/Reference List

Checklist



- Ensures all components of an ERCP are accounted for

Contact List

- Must include all people and agencies that need to be contacted for:
  - Notification
  - Servicing
  - Assistance

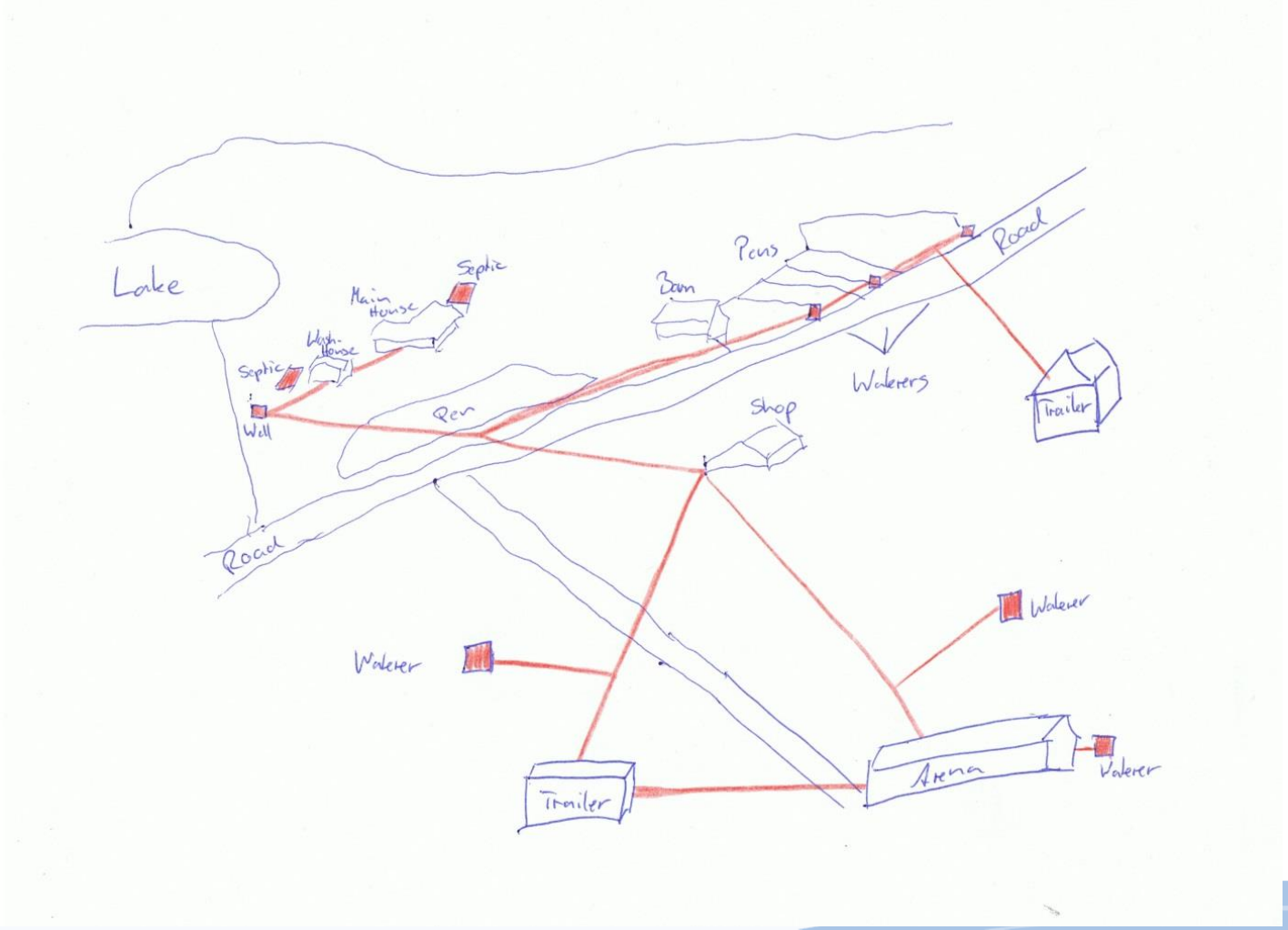
Contact List

- Include in your contact list:
  - Your water users
  - Water system management personnel
  - Repair personnel
  - Alternative water suppliers
  - Interior Health
    - Your Environmental Health Officer
    - The Medical Health Officer
    - Public Health Engineer
  - Other Government agencies
  - Media/Communications representatives

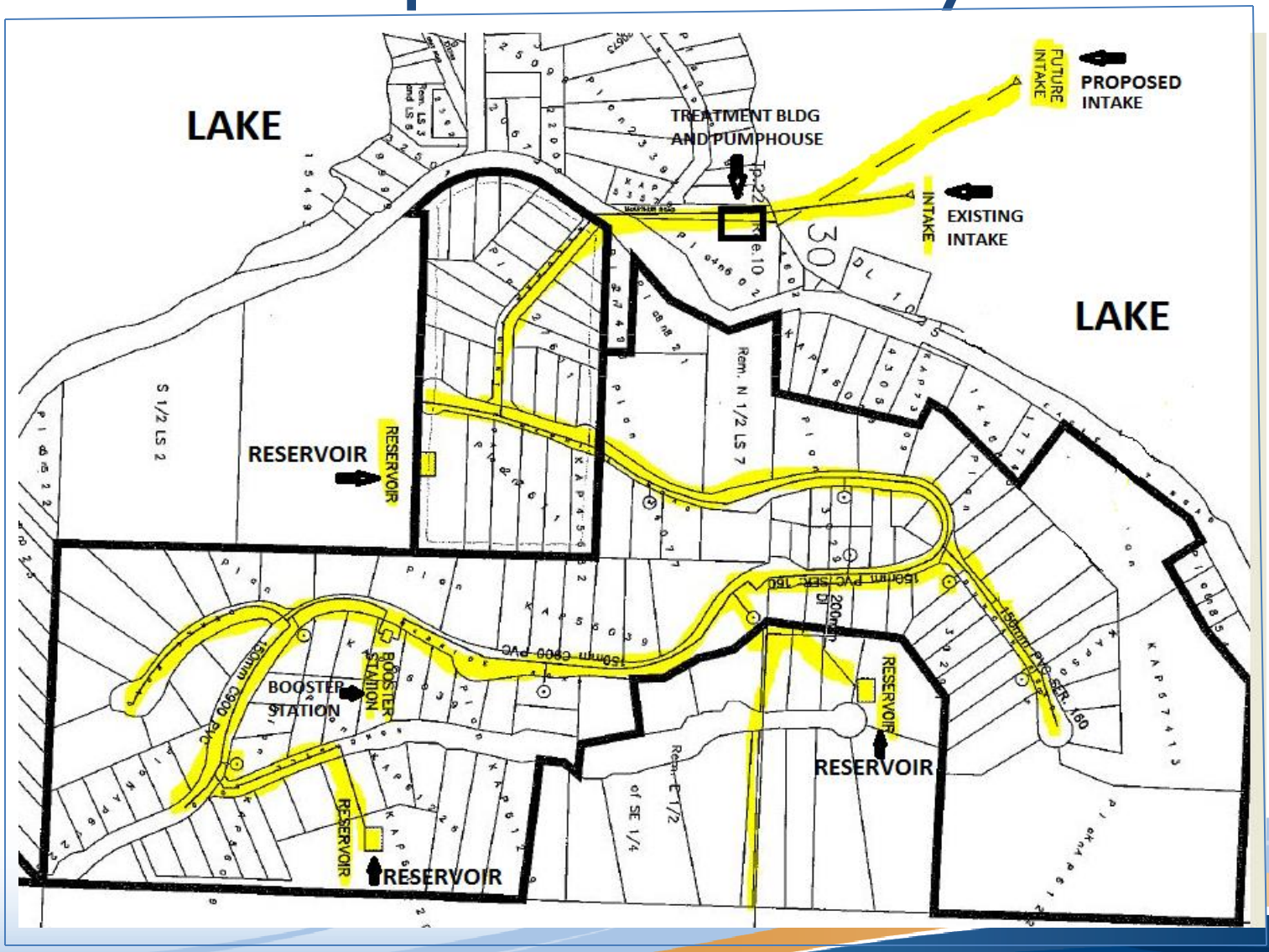
Maps of Water System

- Include the location of critical components:
  - Well head/surface water intake
  - Pump house
  - Treatment equipment
  - Reservoirs
  - Water mains
  - Water system shut off valves
  - Spare parts, tools, maintenance equipment
  - Electrical schematic

Maps of Water System



Maps of Water System



Inventory of Emergencies and Actions List

- **Inventory of Emergencies**
  - Identify the types of emergencies that could occur with your water system (refer to your Source to Tap Assessment done previously)
- **Actions List**
  - Develop actions for each emergency event
  - Include (in Actions List) specific persons, roles, and responsibilities and their contact information
  - Have a step by step layout that is easy to follow

Resource/Reference List

Information that may be valuable in the event of an emergency situation:

- Instruction manuals for equipment
- Standard operating procedures following BCWWA or AWWA standards:
  - How to clean and disinfect a reservoir
  - How to disinfect a section of water main
- Ministry of Health /Health Authority documents

  example: *Emergency Response and Contingency Planning for Small Water Systems*

Networking Break

Public Notification and Advisories

Learning Objective: Review the different types of public notification and understand how they are part of the emergency response process.

Drinking Water Advisories/Notices

- *Drinking Water Protection Act* - Section 14
  - A water supplier must give public notification regarding threats to drinking water
- Type of notice/advisory is dependant on a health risk assessment
  - Assessment should be done in consultation with your Environmental Health Officer

Who Should be Contacted?

- It is very important the information be shared with **ALL** water users
- Don't forget:
  - Owners and renters of private residences
  - Campers/guests
  - Food premises operators
- Your EHO should be one of the first persons notified in the event of an emergency

How to Distribute the Message?

- Phone Trees
- Mail and E-mail (only for low level/non-urgent communication)
- Door to door notification
- Posted signage in public places
  - By all accessible drinking water taps
  - Sandwich boards/notice boards
- Media/Social Media

Drinking Water Advisories/Notices

- Water Quality Advisories
- Boil Water Notices
- Do Not Consume Notice
- Do Not Use Notice

WATER QUALITY ADVISORY

Water System

has issued this advisory effective _____ due to:

Until notified, users:

with weakened immune systems, &/or wishing additional protection

Should take precautions when drinking, washing fruits & vegetables, making beverages or ice, or when brushing teeth

Boil water rapidly for a least 1 minute, or use an alternate, safe source of water

For more information contact at

BOIL WATER NOTICE

Water System

has issued this advisory effective _____ due to:

Boil water before using it for drinking, making ice, cooking, washing food, or brushing teeth. Use a hand sanitizer after washing hands.

***Until notified* all users are advised to:**

1. Bring water to a rolling boil for a least 1 minute, or
2. Use an alternate, safe source of water

For more information contact _____ at _____

DO NOT CONSUME WATER NOTICE

Water System

has issued this advisory effective _____ due to:

Due to the above-mentioned recent events in the area and 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, and food preparation until further notice. Boiling the water will not make it safe!

****It is okay to use this water for bathing and flushing toilets but please conserve water as best you can.**

If alternate water sources are used, the water must be from Interior Health approved sources only. The water in your hot water tank may also be unsafe. Please consult a qualified plumber before draining your hot water tank.

For more information contact _____

at _____

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, care facilities, schools, preschools, churches, and businesses). You can do this by phone calls, posting this notice in a public place or distributing copies by hand. Email and postal mail should only be used to supplement methods of direct communication.

INTERIOR HEALTH
DISTRICT OF SICAMOUS

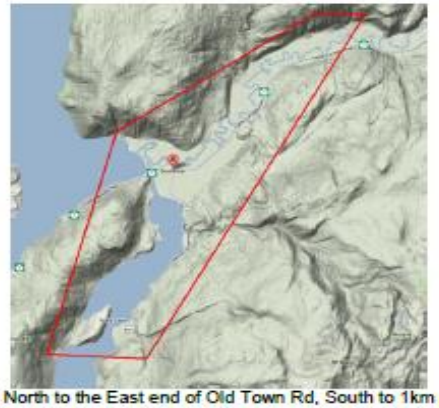
MANDATORY DO NOT CONSUME NOTICE

ALL WATER SYSTEMS
(Sicamous AND Swansea Point)

Due to the recent flooding events in the area and 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, and food preparation until further notice. *Boiling the water will not make it safe!*

****It is okay to use this water for bathing and flushing toilets but please conserve water as best you can.**

If alternate water sources are used, the water must be from Interior Health approved sources only. The water in your hot water tank may also be unsafe. Please consult a qualified plumber before draining your hot water tank.



Areas affected are: North to the East end of Old Town Rd, South to 1km past Swansea point, East to the Cambie Solsqua Rd, West to Sephamore point

EFFECTIVE JUNE 25TH, 2012 UNTIL FURTHER NOTICE.

Thank you for your patience and cooperation.

ENQUIRIES? Please call the District of Sicamous Municipal Office at: 250-836-2477

District of Sicamous Public Works at: 250-836-4105

Interior Health – Public Health Inspector at: 250-833-4100

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, churches, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Example: An Actual **Do Not Consume Notice**

DO NOT USE WATER NOTICE

Water System

has issued this advisory effective _____ due to:

All water users are advised 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 an Interior Health approved sources only. The water in your hot water tank may also be unsafe. Please consult a qualified plumber before draining your hot water tank.**

For more information contact _____

at _____

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, care facilities, schools, preschools, churches, and businesses). You can do this by phone calls, posting this notice in a public place or distributing copies by hand. Email and postal mail should only be used to supplement methods of direct communication.

Responding to Emergency Events

Learning Objective: Apply emergency response actions to water system emergency scenarios

1. What is the risk?
2. Who should be contacted?
3. What actions should be taken?
4. What public notification should be issued?

Scenarios – Group Discussion

Discuss with your group:

- What is the risk?
- Who did you contact?
- What actions did you take?
- Did you issue an advisory? If so, how was it communicated?

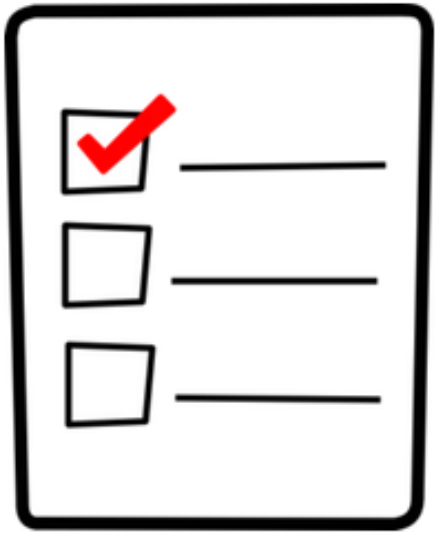
Summary of actions/response:

A representative from each group to:

1. *Provide a summary of actions/responses for their water system*
2. *Describe any differences, points of interest, questions or concerns that arose from the group discussion.*

Reviewing and Updating your Emergency Response and Contingency Plan

Learning Objective: Understand that an Emergency Response Plan is a living document that must be reviewed and updated periodically.



Reviewing your Plan

- An ERCP is a living document
  - Requires regular review and revision
- Should be reviewed at least annually
- Review is to ensure all information is correct and accurate
- Consider debriefing after an emergency event, and updating your ERCP accordingly

Reviewing your Plan

- Are there any new types of emergencies or threats that may impact my water system?
- Have there been alterations or improvements to the system? If so, will I need to update the water system's Maps/Site Plans?
- If alterations/changes were made to the system, will I need to revise any procedures in the ERCP?

Reviewing your Plan

- **Do I need to revise my Contact List due to changes in:**
  - Equipment suppliers
  - Your staff
  - Your EHO and Interior Health contacts
  - Federal and Provincial staff
  - Bulk water hauler
  - Repair/service technicians