

Municipality of Brighton Water Main Leak Emergency

April 17 to May 1, 2015

Situation

On April 17, 2015 at 1:25 PM, Health Unit staff received a phone call from the Ministry of Environment and Climate Change Spills Action Centre alerting that the Municipality of Brighton had reported a major water main leak. The water main leak was detected on the west side of County Road 30, south of County Road 26. The 24 inch water main trunk line was pressurized and leaking at a rate of 15 – 20 l/ sec. Health Unit staff attended the Brighton Emergency Operation Centre (EOC) at 3:00 pm. The Brighton Mayor declared a State of Emergency at 5:45 PM. The reason for the declaration was the planned shut off of the municipal water distribution system to residents in the town at 6:15 pm for the purpose of facilitating repairs. As a result of the emergency, the Health Unit issued a Boil Water Advisory (BWA) for all residents and a Boil Water Order (BWO)/closure to all food premises. The reason for the BWA/BWO was due to the loss of pressure (shutting off water distribution) for the purpose of repairs.

On the same day, a second leak was detected north of County Road 26, approximately 1 km east of County Road 30. This location was more difficult to find and repair due to the dangerous moist soil conditions and depth of the water main. The Brighton Emergency Control Group decided to pressurize the water distribution system until the leak could be found at this location. The second leak at a valve was discovered and repaired on April 26 at 11:40 am, whereas the first leak was repaired on April 18 at 12:00 pm.

Once the second leak was repaired, two water samples were collected 24 hours apart (April 29 and April 30) and sent to an accredited laboratory for bacteriological testing. Once the two water samples showed negative results, the Health Unit lifted the BWA and rescinded the BWOs, and subsequently the State of Emergency was declared to be terminated by the Brighton Mayor on May 1, 2015.

Population and services affected:

- Total Population Affected: 6900
- Long-Term Care Facilities (LTCF): 2 (1 nursing home, 1 retirement home)
- Schools: 3
- Food Premises: 22
- Medical clinics: 2
- Dental offices: 2
- Child Day Care Centers: 2

Haliburton, Kawartha, Pine Ridge District Health Unit Response:

The Health Unit provided health-related supports via the following actions:

- BWA issued to all Brighton residents
- Closure order issued to all food premises
- BWOs issued to all food premises
- Infection prevention control guidance provided to all long-term care facilities
- Ensured long-term care facilities received sufficient portable and non-portable water

- Provided BWA procedures via Health Unit website and Environmental Health staff to take intake calls from the public

Chronology:

April 17, 2015 (EOC attended by C. Beveridge, B. Sine and B. Ivey)

- C. Chan, Emergency Preparedness Coordinator, received call from Victoria Light (Ministry of Environment and Climate Change) and was informed that Catherine Chisholm, Environmental Services Manager of the Municipality of Brighton had reported a major water main break in Brighton.
- C. Beveridge, Director, Environmental Health and B. Ivey, area Public Health Inspector (PHI) for the Health Unit's Brighton office attended Brighton EOC at 2:24 pm.
- B. Sine, area PHI for the Health Unit's Brighton office joined C. Beveridge and B. Ivey at the EOC after 3:00 pm.
- Brighton Mayor declared State of Emergency at 5:45 pm.
- Health Unit issued BWA to Brighton residents and BWA information was provided to the Municipality of Brighton for posting on its website and for home delivery to all residents.
- B. Sine and B. Ivey issued closure orders and BWOs to all food premises. They also informed the two long-term care facilities about the water shut off.

April 18, 2015 (EOC attended by C. Beveridge, R. Ovcharovich, D. Johnston on rotation)

- Environmental Health (EH) Director/Managers (C. Beveridge, R. Ovcharovich and D. Johnston) coordinated duty to attend EOC for the two days over the weekend (April 18 and 19).
- B. Sine checked all food premises to ensure full compliance to the closure order.
- BWA remained in effect for all residents
- Closure orders in effect for all food premises

April 19, 2015 (EOC attended by C. Beveridge and D. Johnston)

- Brighton PHIs rescinded food premises' closure orders.
- BWO remained in effect for all food premises
- C. Tremblay, Manager, Communication Services at the Health Unit, updated Health Unit website at 3:00 pm in response to public complaint regarding lack of BWA information .
- Health Unit website information became part of the Brighton Public Information Officer's (PIO) media release.
- C. Beveridge, EH Director, made a flushing/sampling plan with the Municipality of Brighton Public Works staff to ensure water was safe for drinking.
- Health Unit representative contacted the Kawartha, Pine Ridge District School Board to discuss potential school closures and/or remedial measures if schools were to remain open on April 21, 2015. The three schools received BWAs tailored to school settings.

April 21, 2015 (EOC attended by C. Beveridge)

- BWA/BWO in effect
- Brighton PHI B. Sine checked on Community Care Access Centre (CCAA) home care clients.

April 23, 2015 (No EOC)

- C. Beveridge met with the Municipality of Brighton Environmental Services Manager to discuss scenarios for repairing the second leak. Scenarios included:
 1. Leak at valve on County Road 26, would take 12 hours to repair and replace valve, water would be shut off for 6 hours.
 2. Leak at bolts at joint, need only to tighten bolts. There would be no water shut off.
 3. Multiple problems identified, water would be shut off once problems were identified. It would take 12 – 24 hours to repair.

April 24, 2015 (EOC attended by D. Johnston)

- BWA still in effect
- BWO for all food premises still in effect
- Brighton PHIs continued to monitor long-term care facilities for water needs and capacity to cope.
- D. Johnston discussed a vulnerable person with immediate medical needs with the representatives from the Municipality of Brighton Fire Department and Public Works. For medical reasons, the person had requested to have a supply of distilled water in a container suitable for dispensing to be delivered to the residence. Arrangements were made for the water delivery.

April 26, 2015 (EOC attended by C. Beveridge)

- BWA still in effect
- BWO for all food premises still in effect
- 12 cases of bottled water were delivered to Apple Fest Retirement Home upon request.
- All food premises were ordered closed in anticipation of the water shut-off.
- C. Beveridge attended a press conference with the Mayor, Fire Chief, and Environmental Services Manager.
- C. Beveridge worked with municipal staff to plan flushing and bacteriological sampling.

May 01, 2015 (EOC attended by C. Beveridge)

- Two water samples collected on April 29 and April 30 showed negative results. The results were confirmed by an accredited laboratory.
- BWA lifted
- BWO rescinded for all food premises
- C. Beveridge attended press conference with Mayor

- Mayor rescinded state of emergency

Recommendations:

Communication (Internal):

1. Send out internal Management notification via Black Berry Messaging instead of by email.
2. Create Distribution List (including all members of the Executive group, Manager, Human Resources and Manager of Communication Services) for all emergency incident notification purpose.
3. Ensure Family Health Department is notified about any BWA issued to ensure awareness for staff who work in the Healthy Babies Healthy Children Program, and also to provide safe drinking water information to the families who may be away from the affected area due to recent child birth.

Communication (External):

4. Update Health Unit phone messaging system to ensure easy access to Health Unit staff response; need to explore if Health Unit messaging can be edited offsite during afterhours for emergency purposes.
5. Update Health Unit website information related to emergency incidents to provide timely health advice to the public. Health Unit should not rely solely on centralized communication from the municipal EOC to provide health-related information.
6. Use media coverage to convey health-related messages.
7. Improve relationship with South East Local Health Integration Network (SELHIN) to facilitate CCAC notification to vulnerable populations.
8. Contact CCAC directly as needed; cannot just rely on SELHIN.
9. Formulate template/Frequently Asked Questions (FAQ) for incident specific emergencies in advance.

Operations - Municipal EOC

10. Formulate a Health Unit EOC form/template for note taking in municipal EOC.
11. Create space/time for Health Unit staff debrief/scrum/discussion in municipal EOC.
12. Rotating Health Unit staff attending the municipal EOC should ensure all loops are closed for the subsequent staff attending the EOC. If this cannot be done, at least, a communication log should be completed.
13. Develop easy to access emergency management resources to support staff attending the municipal EOC (create FILR-Novell secure file sharing).

Operations – Health Unit EOC

14. Activate Health Unit EOC for all emergency incidents to facilitate communication among Executive Committee members to ensure awareness and participation.

15. Establish debrief process as part of business cycle.

Operation - Others

16. Identify back up Environmental Health staff for pager duty, PHI who responds to an emergency should not be on pager duty at the same time.

17. Arrange extra administrative staff for back-up purposes in emergency incidents.

Training

18. Mandatory training on BEM/IMS 100 for all Management staff

Financial Impact Estimate:

Costs in kind support to the Brighton emergency include time spent (salary) and mileage. Total of 170 hours of combined staff time was spent to support the emergency. Cost summary:

Time Spent (salary and overtime)	\$10,388
Mileage	\$ 1,068
Total	\$10,456