

BYLAW NO. 2/2007

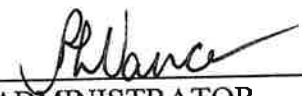
**A BYLAW OF THE VILLAGE OF BETHUNE
IN THE PROVINCE OF SASKATCHEWAN
TO ADOPT AN
EMERGENCY WATERWORKS PLAN**

PURSUANT TO SECTION 8(1)(B) OF *THE MUNICIPALITIES ACT*


The Council of the Village of Bethune hereby enacts as follows:

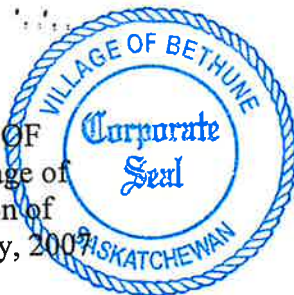
1. This Bylaw shall be known as the Waterworks Emergency Plan.
2. The council has adopted the enclosed plan.
3. Bylaw 2/2003 is hereby repealed.


MAYOR


ADMINISTRATOR

CERTIFIED A TRUE COPY OF
Bylaw No. 2/2007 of the Village of
Bethune adopted by Resolution of
Council this 2nd day of January, 2007


Administrator



Waterworks Emergency

WATERWORKS EMERGENCY PLAN

VILLAGE OF BETHUNE

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Section 1 – Introduction and Policy Statement

The intent of this emergency plan is to ensure the safety of consumers and the protection of life, property and the environment in the most efficient way possible in the event of an unexpected incident. In particular, this plan deals with events that may affect water quality.

The performance goals and acceptable levels of service are outlined below.

Goal 1: Life safety

The primary goal of the water system is to ensure the safety of its users. At all times, safe, clean water should be provided to the public. Examples of conditions that should never occur are the failure of the distribution system; the distribution of contaminated water; the release of hazardous materials and the collapse of structures.

Goal 2: Fire suppression

Water for fire suppression should be made available as soon as possible after a disaster or emergency.

Goal 3: Public health needs

Water is essential to life and health however some needs are more immediate than others. For instance, hospitals, care homes and emergency shelters require a continuous supply of potable water.

Waterworks Emergency Plan

Community Of:

Village of Bethune

Date Completed: __Jan 2, 2007 Date Approved By Waterworks Owner: Jan 2, 2007

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Section 2 - Emergency Response Contact List

Village of Bethune

Waterworks owner: Village of Bethune

Source water: Buffalo Pound Water Treatment Plant

Water treatment plant location: 378 Alexandria Ave

Personnel contact - Telephone / Fax Numbers

Telephone: 638-2261 (Home)

Contact Name Home Cell Fax: Cell: 535-5223

Operator's name: Bob Courtice

Emergency Contact Numbers

Telephone: 306-638-2225 (home)

Contact Name Home Cell Fax: Doug Patience Cell: 638-7742

Public Health Inspector: Fatima Haleem 766-7705

Regina 306-787-9563 Saskatchewan Emergency Planning 24 Hour Line -
7 Days a Week Saskatoon 306-933-6116

Saskatchewan Environment (SE) EcoRegion Office 1-800-667-7525

SE Spill Emergency Number

Outside Province 306-953-2980

Police: 911

Ambulance: 911

Fire department: 911

Pump manufacturer – International Water Supply – 373-7070

Chemical supplier: Chem International

Excavation services: Dilschneider Trenching – 488-2132

Call Before You Dig #: 1-866-828-4888 Locate #829

Water Quality Crisis Cell Members and Waterworks Emergency Planning Task Force Members

Emergency coordinator – Doug Patience

Home – 638-4967

Cell – 638-7742

Advisors:

Brenda Garbutt – 638-2206

Glenn McEachern – 638-4645

Ron Gemmell – 638-4449

Brad Hebert – 638-4557

Priority Contacts

Clive Draycott School – 638-3100
Contact Name:

Bethune Co-op – 638-2244
Contact Name: Ken

The Hair Shoppe – 638-3199
Contact Name: Jacquie Seibel

Creative Designs by Linda – 638-2261
Contact Name: Linda Courtice

Bethune Credit Union – 638-2200

Utility Contact Numbers

Sask Power – 310-2220
Sask Tel - 611
Sask Water - 946-3200
Sask Energy – 1866-828-4888 Locate #829

Section 3 - Organizational Responsibilities

*See Water Quality Crisis Cell Member and Waterworks Emergency Planning Task Force Members (above). The Emergency Co-ordinator will be responsible for notifying his advisors.

Waterworks Emergency Planning Task Force Members

Mayor – Doug Patience – 638-4967, Cell 638-7742
Waterworks manager – Bob Courtice – 638-2261, Cell 535-5223
Town administrator – Patti Vance – 638-4967
Medical Health Officer – Dr. Narinda Maree, 734-2233

Water Quality Crisis Management Cell)

Water Quality Crisis Coordinator – Patti Vance – 638-4967
Public Relations Coordinator – Mayor Doug Patience – 638-4967
Crew Foreman – Maintenance Manager – Bob Courtice – 638-2261
Advisors – Saskatchewan Environment – Ben Lichtnwald – 787-1016
Advisors – local Health District – Fatima Haleem – 766-7705
Advisor – Emergency Measures Coordinator – Doug Patience – 638-4967

General emergency procedures

In general, a waterworks incident should follow these steps:

1. the waterworks owner/operator(s) monitor the distribution system and treatment plant for trigger events. The local Health District monitors the public for a public health trigger;
2. all incidents are reported to the Water Quality Crisis Coordinator;
3. the Water Quality Crisis Coordinator evaluates the event, determines if a trigger has been met and classifies all events, even those without a Technical Action Plan (TAP);
4. the Water Quality Crisis Coordinator activates the Water Quality Crisis Management Center (CMC), if called for;
5. the CMC directs the implementation of the TAP and recommends further actions, if required. This may require the notification of the Emergency Measures Organization for the municipality or corporation;
6. the CMC utilizes the Communication Plan to advise the public;
7. when the emergency is over, CMC is deactivated; and the Emergency Co-ordinator notifies his advisors
8. the Water Quality Crisis Coordinator prepares a report on the incident and presents it to the Waterworks Emergency Planning Task Force for evaluation.

Section 4 - Notification and Communication

Emergency notification to customer

The system notifies all system users via the following manner in case of an emergency (Check all that apply):

___ Telephone calls (phone list location – all Water Quality Crisis Cell Members and Waterworks Emergency Planning Task Force Members are in possession of the phone list)

Media communications

In any crisis situation, the media will receive information only from the designated spokesperson(s). The spokesperson(s) will call a media conference, give information over the phone or release a written statement.

The website (www.geocities.com/villageofbethune) will be updated as information becomes available. In the case of a major emergency or disaster, the emergency hotline will be manned 24 hours a day until the CMC determines that the crisis has ended. The phone at the office (638-3188) will be utilized for this purpose.

Official statements

- Emergency Boil Water Order Has Been Issued
(Insert standard press release here)
- Emergency Boil Water Order Has Been Rescinded
(Insert standard press release here)
- Precautionary Drinking Water Advisory Has Been Issued

(Insert standard press release here)

- Precautionary Drinking Water Advisory Has Been Rescinded

(Insert standard press release here)

- Water Contamination Scare

(Insert standard press release here)

Signs

All example signs (Precautionary Drinking Water Advisory & Emergency Boil Water Order) are available from Saskatchewan Environment's document entitled "Bacteriological Follow-up Protocol for Waterworks Regulated by Saskatchewan Environment, November 2002, EPB 205".

Section 5 - Technical Action Plans

Many emergency situations can lead to water quality degradation, for example, a main break, a power outage, pumping equipment failure or a natural disaster. Other emergency situations are a direct result of a water quality problem such as a waterborne disease outbreak, bacterial contamination of the distribution system or contamination of the source of supply. Water service can be disrupted by these events and water quality can be threatened if not degraded.

Actions Contact

1) Flood conditions

Trigger events: widespread flooding occurs. (Disaster)

- notify SE – Environmental Project Officer (EPO);
- notify users of 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 at least one minute;
- notify priority customers;
- contact local media for public service announcement (where all customers can not be notified by phone); and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE (Local EPO), Saskatchewan Emergency Planning and others as necessary.

2) Outbreak of a waterborne disease

Trigger events: local Health District notifies the water system of a confirmed outbreak. (Major emergency to disaster)

- notify SE – EPO;
- notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one minute;
- notify priority customers;
- contact local media for public service announcement (where all customers can not be notified by phone); and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE (Local EPO), Saskatchewan Emergency Planning and others as necessary

3) Contamination of source

Trigger event: gross deterioration of source water due to a spill, vehicle accident or natural causes. (Major emergency)

- shut down pump;
- notify SE – Environmental Project Officer;
- notify users;
- notify priority customers;
- contact government agencies (see below) for advice and assistance; and
- contact local media for public service announcement (where all customers can not be notified by phone).

Owners of water system, SE (Local EPO), Saskatchewan Emergency Planning and others as necessary.

4) Loss of source

Trigger event: Access to source water is lost due to intake problems or natural causes (Major emergency)

- shut down pump;
- notify SE – EPO;
- notify users;
- notify priority customers; and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE (Local Environmental Project Officer) and others as necessary.

5) Treatment process failure

a) Loss of chlorine residual leaving plant

Trigger events: chlorine level leaving the plant is less than 0.1 mg/l free chlorine. (Minor emergency)

- notify SE – EPO;
- notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one minute;
- notify priority customers; and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE (Local EPO), Chlorinator and chlorine suppliers

b) Loss of chlorine residual in distribution system

Trigger events: chlorine levels at any place in the distribution system is less than 0.1mg/l free chlorine or 0.5 mg/L total chlorine. (Major emergency)

- notify SE – EPO;
- notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one minute;
- notify priority customers; and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE (Local Environmental Project Officer), Chlorinator and chlorine suppliers

c) Increased turbidity in filter effluent

Trigger event: the effluent turbidity of a filter is greater than 0.3

N.T.U. (Minor emergency)

Sudden increases generally indicate a system disturbance or treatment failure

- notify SE – EPO;
- notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one minute;
- notify priority customers; and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE (Local EPO)

d) Microbial contamination detected

Trigger event: a positive microbial test result is received for the treated water. (Routine incident to major emergency)

Follow Saskatchewan's Bacteriological Protocol for Waterworks

Regulated by Saskatchewan Environment EPB 205 procedures document

As per Saskatchewan's Bacteriological Follow-up procedures document.

e) Pump system failure

Trigger events: all pumps fail and unable to supply water or distribution system pressure drops (Minor Emergency)

- notify SE – EPO;
- notify users of interruption of service; and
- notify priority customers. Owners of water system, SE (Local EPO), Pump supplier

f) Other treatment process failure

Trigger events: loss of coagulation, or other significant process failures. (Routine incident to major emergency)

- notify SE – EPO;
- notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one minute;
- notify priority customers; and
- contact government agencies (see below) for advice and assistance.

Owners of water system, SE
(Local EPO)

6) Power failure

Trigger events: power outage.

(Minor emergency)

- notify SE – EPO;
- start backup generator, if possible;
- notify users of interruption of service if backup pump not capable of maintaining supply;
- notify priority customers; and
- call SaskPower.

Owners of water system, SE (Local EPO)

7) Distribution system problems

a) Backflow or back siphonage/ significant loss of pressure in the system

Trigger events: backflow or contamination is widespread throughout the distribution system

(Major emergency)

- notify SE – EPO;
- notify users of to boil their water for at least one minute or take other disinfection procedures or as instructed by SE ;
- notify priority customers; and
- purge and disinfect lines as directed.

Owners of water system, SE (Local EPO)

b) Water breaks - sanitary repair procedures

Trigger event: main line breaks (Major emergency)

Repairing a main break is the most common type of emergency maintenance in a distribution system.

Depending on site-specific conditions, a main break may be a source of contamination. For example, if the damaged pipe is below the water table or in contact with a sewage or storm water main, contamination may occur. As noted, maintenance procedures differ for main breaks between those breaks likely and unlikely to cause contamination. Contact your local EPO if you are unsure about whether contamination is expected for a particular break.

Trigger event: storage facility break

(Major emergency)

Emergency repair of finished water storage facilities is warranted by conditions such as:

- penetration due to localized corrosion;
- penetration or splits due to extensive metal loss;
- high turbidity and/or bacteria from excessive sediment; or
- animal contamination due to screen failure.

Generally, emergency maintenance on steel or concrete storage facilities involves temporarily plugging a hole or other penetration in the facility wall. Ultimately, however, the temporary repair should be replaced with a welded patch.

If contamination is not expected:

- call excavation contractor;
- treat the replacement pipe and fittings with a chlorine solution; and
- notify downstream users of interruption of water service, if required.

If the existing main is partially or wholly dewatered, some of the following steps may be necessary to repair the main: Actions (AWWA C651-99):

- control water loss by completely or partially shutting down the main.
- flushing may be used to minimize flow toward the damaged main, thus reducing the extent of possible contamination;
- water should be reduced to a level below the break as quickly as possible. Groundwater may be treated with hypochlorite while repairs are underway. If the water appears to be clear, a 25 to 50 ppm dose may be sufficient. If sewage is present, a dose greater than 100 ppm is suggested;
- customers at higher elevations than the break should be notified to shut off the inlet valve at their meter to prevent siphoning of hot-water tanks or water softeners;
- extensive flushing may be used to purge possible contaminants and to bring clear water to the point of damage;
- chlorine residuals should be checked hourly to evaluate the effectiveness of pumping and flushing procedures;
- mains which have been repaired after a break or leak need to be cleaned, disinfected and monitored before being returned to service; and
- monitoring that follows a main disinfection or the addition of a new facility usually entails a check for microbial activity, pH, turbidity, color, disinfectant residual, odor and an analysis for volatile organic compounds that may be associated with the application of coatings.
- temporarily plug hole or other penetration in storage facility wall, if required
- notify SE – EPO;
- flush the water from the storage facility;
- notify users if an interruption in service is expected;
- contact government agencies (see below) for advice and assistance; and
- contact contractor to permanently repair puncture. (i.e. welded patch on a steel reservoir). Owners of the water system, excavation contractor and others as necessary
Owners of water system, SE (Local EPO), excavation contractor and others as necessary.
Owners of water system, SE (Local EPO), Saskatchewan Emergency Planning and others as necessary

8) Customer complaints

Trigger event: consumer complaint (Routine incident)

Water quality complaints should be logged in a retrievable format for tracking and reporting purposes. Tracking the complaints can help identify problem areas of the system.

Temporary fixes (such as flushing) should not be used to address chronic water quality problems (such as excessive chlorine demand, turbidity, sediment, corrosive water, etc.).

- log the water quality complaint;
- investigate the water quality complaint;

None