Waterworks Emergency

Response Planning

April 25, 2022

Waterworks Emergency Plan

Community Of Bredenbury

Date Completed: April 25, 2022 Date Approved By Waterworks Owner: April 25, 2022

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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.

Section 2 - Emergency Response Contact List

Community/Waterworks Name	Town of Bredenbury	
Waterworks owner	Town of Bredenbury	
Source water	Ground	
Water treatment plant location	489 Broadway Ave.	

Personnel contact - Telephone / Fax Numbers

Operator's name	Steve Hemauer	306-496-8009
Saltcoats backup coverage	Dennis Hunt	306-744-7885
Churchbridge backup coverage		

Emergency Contact Numbers

Public Health Inspector	Johnathon Thiesen	306-786-0600
Medical Health Officer		
Environmental Project Officer	Derick Hoehn	306-728-7492 or 306-728-7091
Saskatchewan Emergency Planning 24 Hour Line - 7 Days a Week	Regina	306-787-9563
	Saskatoon	306-933-6116
Water Security Agency EPO Office	306-728-7492 or 306-728-7091	
SE Spill Emergency Number		1-800-667-7525 306-953-2980
Police	911	
Ambulance	911	
Fire department	911	
Municipal engineer	n/a	
Pump manufacturer	Goulds IT&T Xylem	1-800-588-7867
Chlorinator manufacturer	Clear Tech	1-800-387-7503
Chemical supplier	Clear Tech	1-800-387-7503
Excavation services	Duncan	306-534-2095
Call Before You Dig #	1-866-828-4888	
Electrician	Big Sky	306-745-6335
Plumbing services	Rant	306-786-7268
Bulk water hauler		
Bottled water supplier	Town & Country	306-898-2012
Spokesperson	Jordan Haas	306-621-3888
Spokesperson	Nic Chartier	306-515-3655
Crew foreperson	Devin Schad	306-896-7106

Priority Contacts

Childcare facilities	Bredenbury Community Daycare	To come.
Senior citizen home	Bredenbury Housing	306-898-2055 or 306-7407325
Bakeries	Round Up	306-898-2255
Restaurants	Ming Wongs	306-898-2127

Breweries	Bredenbury Bar & Grill	306-898-2040

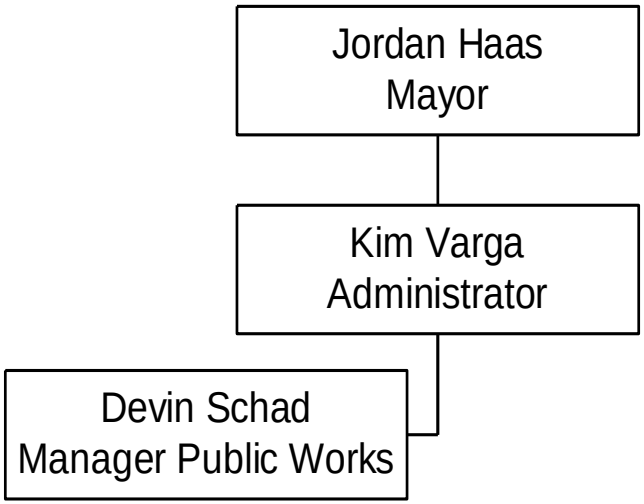
Utility Contact Numbers

Contact Name		
Sask Power		1-888-757-6937
Sask Tel		1-800-727-5835
Sask Water		1-888-230-1111
Sask Energy		1-888-700-0427
CP Railways	Mike LoVecchio	778-772-9636
Can Do	Ryan Yathon	306-740-6182

Section 3 - Organizational Responsibilities

In this section, an organizational chart should be inserted. It should be shown who reports to whom during an emergency. In addition, contact information for the Waterworks Emergency Planning Task Force Members and the Water Quality Crisis Cell members should be included.

Organization Chart



Waterworks Emergency Planning Task Force Members
Mayor – Jordan Haas: 306-621-3888
Waterworks manager – Devin Schad: 306-896-7106
Town administrator – Kim Varga: 306-898-2055 or 306-740-7325
Environmental Project Officer – Derick Hoehn: 306-728-74992 or 306-728-7091
Medical Health Officer – Johnathon Thiesen: 306-786-0600

Water Quality Crisis Management Cell
Water Quality Crisis Coordinator – Kim Varga: 306-898-2055 or 306-740-7325
Public Relations Coordinator (technical)- Kim Varga: 306-898-2055
Public Relations Coordinator – Mayor: Jordan Haas: 306-621-3888
Crew Foreman – Maintenance Manager: Devin Schad: 306-896-7106
Advisors – Water Security Agency: Derrick Hoehn: 306-728-7492 or 306-728-7091

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
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:
Door to door, Facebook Post

Emergency numbers distribution
Newsletter, Door to Door, Poster

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 Town of Bredenbury Facebook page 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 306-898-2055 will be utilized for this purpose.

Media contacts

Radio GX94: 306-783-8622	Television Access: 1-866-363-2225
Newspapers Four Town Journal: 306-399-7762	

Official statements

- Emergency Boil Water Order Has Been Issued
  As presented by Derrick Hoehn
- Emergency Boil Water Order Has Been Rescinded
  As presented by Derrick Hoehn
- Precautionary Drinking Water Advisory Has Been Issued
  As presented by Derrick Hoehn
- Precautionary Drinking Water Advisory Has Been Rescinded
  As presented by Derrick Hoehn

Signs
All example signs (Precautionary Drinking Water Advisory & Emergency Boil Water Order) are available from WSA's document entitled "Bacteriological Follow-up Protocol for Waterworks Regulated by Saskatchewan Environment and the Water Security Agency, November 2012, EPB 505".

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.

The technical action plans included in this document are only examples and may not apply to your water system. TAPs are not typically included in your Municipal/Corporate Emergency Plan and therefore must be contained in the Water Quality Contingency Plan. The TAPs included in this document are only examples and may not apply to your water system

	Actions	**Contact**
1) Flood conditions **Trigger events: widespread flooding occurs.** (Disaster)	• notify WSA – 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, WSA (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 WSA – 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, WSA (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 WSA – 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, WSA (Local EPO), Saskatchewan Emergency Planning and others as necessary.
4) Loss of source **Trigger tvent: Access to source water is lost due to intake problems or natural causes** (Major emergency)	• shut down pump; • notify WSA – EPO; • notify users; • notify priority customers; and • contact government agencies (see below) for advice and assistance.	Owners of water system, WSA (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 WSA – 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, WSA (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 WSA– 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, WSA(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 WSA – 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, WSA (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 Water Security Agency and Saskatchewan Environment EPB 505 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 WSA – EPO; • notify users of interruption of service; and • notify priority customers.	Owners of water system, WSA(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 WSA – 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, WSA (Local EPO)
6) Power failure **Trigger events: power outage.** (Minor emergency)	• notify WSA – 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, WSA (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 WSA – 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, WSA (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.	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.	Owners of the water system, excavation contractor and others as necessary Owners of water system, WSA (Local EPO), excavation contractor and others as necessary.
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.	• temporarily plug hole or other penetration in storage facility wall, if required • notify WSA – 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. (ie. welded patch on a steel reservoir).	Owners of water system, WSA (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