

**TOWN OF ARBORFIELD**  
**Waterworks Emergency Response Plan**

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**Date Completed: January 17<sup>th</sup>, 2011    Date Approved By Town Council: January 17<sup>th</sup>, 2011**

**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 in an emergency situation is to ensure the safety of all water system users and emergency response personnel. Water being provided must be safe and clean. Interventions to restore safety in the event of the failure of the distribution system, distribution of contaminated water, release of hazardous materials or collapse of vital structures must be undertaken as soon as is practically possible.

**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**

Notwithstanding safety and fire objectives, in the event of a water emergency, water service will be restored as soon as is reasonably and practically feasible within the economic limitations determined by Council.

## 2. Waterworks Emergency Response Contact List

Telephone contact numbers for parties who may need to be contacted in the case of a waterworks emergency are listed in **Table 1** below.

**Table 1**

*(Community Name)*

### Emergency Response Contacts

February, 2004

Position	Name	Home	Cell	Work
Ambulance, Fire, RCMP				911
Administrator	Allan Frisky	769-4193		769-8533
Waterworks Manager and Water Quality Crisis Co-ordinator	Ryan Thompson	769-4177	276-9149	769-8512
Waterworks Operator	Ryan Thompson	769-4177	276-9149	
Alternate Operator	ATAP	244-8828		244-8828
	Brian Johnson	769-8644		Fax 244-8829
	Dave Edwards	769-8336		769-8383
Mayor Councillors:	Alvin Alyea	769-8687		
	Robert Kapeller	769-8348		
	Bruce Smith	769-8909		
	Mike Wassill	769-4191		862-5900
	Ron Bitzer	769-4155		769-8383
	Dave Edwards	769-8336		
Public Health Inspector	Chelsey Bednarz			862-7238 Fax 862-0763
Medical Health Inspector				
Saskatchewan Environment Environmental Project Officer	Bob Busch	752-4057		752-6129 Fax: 752-6218
Saskatchewan Environment Spill and Waterworks Emergency Number				1-800-667-7525

Saskatchewan Emergency Planning 24-Hour Line				787-9563 Regina 933-6116 Saskatoon
Saskatchewan Laboratory Emergency			535-7388	787-7138
Sask Power Emergency Service				1-888-757-6937
Sask First Call – telephone cable locate				1-866-828-4888
Sask Energy Emergency Number				1-888-700-0427
International Water Supply Pump Maintenance	Kim Hardy	249-1088	222-9704	373-7070
Anderson Pumphouse Sewer & Well Pump Service etc.				937-7741
Clear tech Industries Chlorine Supply				933-0177
Excavator	Lebel Trenching			767-2600
Excavator	John Ofukany	873-5675	873-7506	
Excavator	R.M. of Arborfield #456	769-8920		769-8535
Electrician	GEO Electric			769-4111
Electrician	Chris L'Arrivee	769-8589		
Vac Truck	Septic –Vac Sanitary Services	862-9682		862-5411
Vac Truck	Fehr's Septic Vac			(306) 768-2965
Bottled Water Supplier	Pearl Cafe			769-8642
Bulk Water Hauling	Mike Peoples			769-8725
<b>Priority Contacts:</b>				
Arborfield School				769-8784
Arborfield Health Centre				769-8757
Pearl Cafe				769-8642
Arborfield Bar & Grill				
Stores/Businesses	Beeland Co-op			769-8552
	Arborfield Meats			769-8695
	Sophisticuts			769-8888

	Northstar Fertil.			769-8300
	Perrault Enter.			769-8616
	Can Pro Industry			769-8622
	Pasquia Fertilizer			769-8787
	Insurance Centre			
	Edwards B & B			
	Thunder Rail			769-8383
Plumber	Perry's Plumbing & Htg	768-3662		768-3662
	Weisgerber Plumbing	768-3241	768-8036	
	Rempel Plumbing	768-3603		768-3603
Welder	Mazurek Industries	768-3392		768-2588
Advisor/Tech Help	Earl Stringer	632-4605	426-7303	

### 3. Organizational Responsibilities

The Town of Arborfield has organized a waterworks emergency planning and crisis management team, referred to as the Waterworks Emergency Team, which is charged with developing and maintaining a waterworks emergency plan, and with implementing the plan when engaged by the Water Quality Crisis Co-ordinator. The Water Quality Crisis Co-ordinator is the Waterworks Manager for the Town of Arborfield.

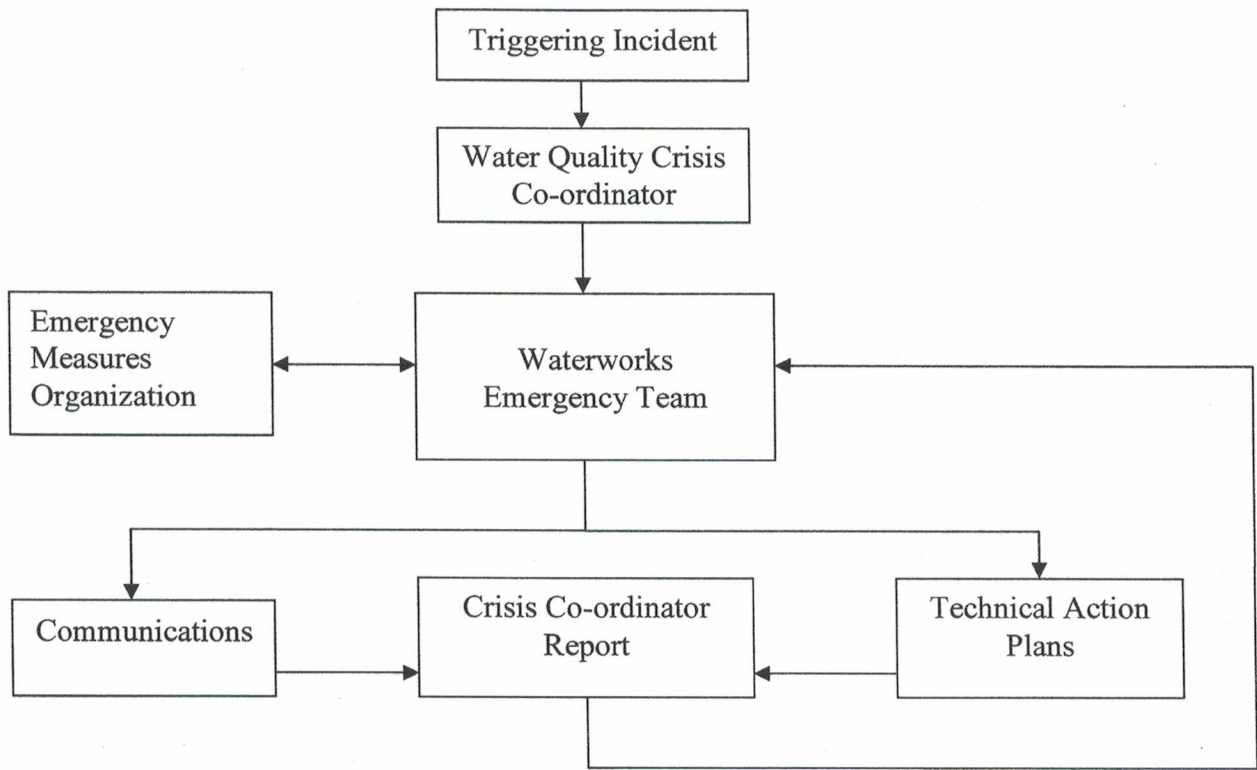
Invited members of the Waterworks Emergency Team include the Town of Arborfield Administrator, Mayor & Council, Waterworks Manager, Waterworks Operator, Environmental Project Officer, Saskatchewan Health Advisor, and the Emergency Measures Co-ordinator for the Town of Arborfield. Public safety concerns arising from monitoring of the treatment plant and/or water distribution system and/or public health concerns raised by the local Health District shall trigger the following procedures for waterworks emergencies:

1. All incidents will be reported to the Water Quality Crisis Co-ordinator;
2. The Water Quality Crisis Coordinator will evaluate the incident, determine if a trigger has been met and classify all incidents even those without a Technical Action Plan– see section 5;
3. The Water Quality Crisis Coordinator will activate the Waterworks Emergency Team, if called for;
4. The Waterworks Emergency Team directs implementation of the Technical Action Plan and recommends further actions, if required. This may require the notification of the Emergency Measures Organization for the municipality or corporation;

5. The Waterworks Emergency Team utilizes the Communication Plan to advise the public;
6. When the emergency is over, the is deactivated; and
7. The Water Quality Crisis Coordinator prepares a report on the incident and presents it to the Waterworks Emergency Team for evaluation.

**Table 2** displays the flow of events from the occurrence of a triggering incident to the delivery of feedback to the Waterworks Emergency Team.

**Table 2**  
**Town of Arborfield Emergency Incident Management and Planning Procedure**



#### 4. Notifications and Communication

##### Emergency Notification to Customers

The *Town* administrator will notify all water users via the following manner in case of an emergency (Check all that apply):

- ✓ Media release

##### Media Communications

In any crisis situation, the media will receive information only from the designated spokesperson, who will be either the village administrator or mayor. The spokesperson will call a media conference, give information over the phone or release a written statement.

##### Media Contacts

Local media coverage is provided by the businesses listed in **Table 3** below.

**Table 3**  
**Town of Arborfield Waterworks**  
**Media Contacts for Disseminating Information to Users**

Radio	CJVR	Phone: 1 (800) 668-2587 Fax : (306) 752-5932
Radio	CJNE	Phone 862-9478

##### Official Statements

- Emergency Boil Water Order Has Been Issued;
- Emergency Boil Water Order Has Been Rescinded;
- Precautionary Drinking Water Advisory Has Been Issued;

- Precautionary Drinking Water Advisory Has Been Rescinded; and
- Refute a False Water Contamination Report.

## 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. Action plans for dealing with these incidents are listed in **Table 4** below.

**NOTE: The Emergency Measures Coordinator should be advised of every situation where more than the waterworks could be affected or human health is at risk.**

**Table 4**

*(Community Name)*

### Waterworks Emergency Incident Technical Action Plans

<b>Incident</b>	<b>Actions</b>	<b>Contact</b>
<p><b>1) Flood conditions</b>            Trigger events: widespread flooding  <b>(Disaster)</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – Environmental Project Officer (EPO);</li> <li>• 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;</li> <li>• Notify priority customers;</li> <li>• Contact local media for public service announcement (where all customers can not be notified by phone);</li> <li>• Contact government agencies for advice and Assistance.</li> </ul>	SE (Local EPO), Saskatchewan Emergency Planning And others as necessary.
<p><b>2) Outbreak of a waterborne disease</b>            Trigger events: local Health District notifies the Village of a confirmed</p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO;</li> <li>• Notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one</li> </ul>	SE (Local EPO), Saskatchewan Emergency Planning

<p>outbreak. <b>(Major emergency to disaster)</b></p>	<p>minute;</p> <ul style="list-style-type: none"> <li>• Notify priority customers;</li> <li>• Contact local media for public service announcement (Where all customers can not be notified by phone; and</li> <li>• Contact government agencies for advice And assistance.</li> </ul>	<p>And others as Necessary</p>
<p><b>3) Contamination of source</b> Trigger event: gross deterioration of source water due to a spill, vehicle accident or natural causes. <b>(Major emergency)</b></p>	<ul style="list-style-type: none"> <li>• Shut down pump;</li> <li>• Notify SE – Environmental Project Officer;</li> <li>• Notify users;</li> <li>• Notify priority customers;</li> <li>• Contact government agencies for advice and assistance; and</li> <li>• Contact local media for public service announcement (Where all customers cannot be notified by phone).</li> </ul>	<p>SE (Local EPO), Saskatchewan Emergency Planning And others as Necessary.</p>
<p><b>4) Loss of source</b> Trigger event: Access to source water is lost due to intake problems or natural causes <b>(Major emergency)</b></p>	<ul style="list-style-type: none"> <li>• Shut down pump;</li> <li>• Notify SE – EPO;</li> <li>• Notify users;</li> <li>• Notify priority customers; and</li> <li>• Contact government agencies for advice And assistance.</li> </ul>	<p>SE (Local EPO) and others as necessary.</p>
<p><b>5) Treatment process failure</b> <b>a) Loss of chlorine residual leaving plant</b> Trigger events: chlorine level leaving the plant is less than 0.1 mg/l free chlorine. <b>(Minor emergency)</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO</li> </ul>	<p>SE (Local EPO)</p>
<p><b>b) Loss of chlorine residual in distribution system</b> 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. <b>Major emergency</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO;</li> <li>• Notify users of the potential for water contamination. Users should be advised to boil any suspect water for at least one minute;</li> <li>• Notify priority customers; and</li> </ul>	<p>SE (Local EPO)</p>
<p><b>c) Increased turbidity in filter effluent</b> Trigger event: the effluent turbidity of a filter is greater than 3.0 N.T.U. Sudden increases generally indicate a system disturbance or treatment failure. <b>(Minor emergency)</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO</li> </ul>	<p>SE (Local EPO)</p>



<p><b>d) Microbial contamination detected</b></p> <p>Trigger event: a positive microbial test result is received for the treated water.</p> <p><b>Routine incident to major emergency</b></p>	<p>Follow Saskatchewan's Bacteriological Protocol for Waterworks Regulated by Saskatchewan Environment EPB 205 procedures document.</p>	<p>As per SE bacteriological follow-up procedures document.</p>
<p><b>e) Pump system failure</b></p> <p>Trigger events: all pumps fail and unable to supply water or distribution system pressure drops</p> <p><b>(Minor Emergency)</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO;</li> <li>• Notify users of interruption of service; and</li> <li>• Notify priority customers.</li> </ul>	<p>SE (Local EPO), Pump supplier</p>
<p><b>6) Power failure</b></p> <p>Trigger events: power outage.</p> <p><b>(Minor emergency)</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO;</li> <li>• Start backup generator, if possible;</li> <li>• Notify priority customers; and</li> <li>• Call Sask Power.</li> </ul>	<p>SE (Local EPO)</p>
<p><b>7) Distribution system problems</b></p> <p><b>a) Backflow or back siphonage/ significant loss of pressure in the system</b></p> <p>Trigger events: backflow or contamination is widespread throughout the distribution system</p> <p><b>(Major emergency)</b></p>	<ul style="list-style-type: none"> <li>• Notify SE – EPO;</li> <li>• Notify users to boil their water for at least one minute or take other disinfection procedures or as instructed by SE;</li> <li>• Notify priority customers; and</li> <li>• Purge and disinfect lines as directed.</li> </ul>	<p>SE (Local EPO)</p>
<p><b>b) Water breaks - sanitary repair procedures</b></p> <p>Trigger event: main line breaks</p> <p><b>(Major emergency)</b></p> <p>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,</p>	<p><b>i) If contamination is not expected:</b></p> <ul style="list-style-type: none"> <li>• Call excavation contractor;</li> <li>• Treat the replacement pipe and fittings with a chlorine solution; and</li> <li>• Notify downstream users of interruption of water service, if required.</li> </ul> <p><b>ii) If the existing main is partially or wholly dewatered, some of the following steps may be necessary to repair the main (AWWA C651-99):</b></p> <ul style="list-style-type: none"> <li>• Control water loss by completely or partially shutting Down the main.</li> <li>• Flushing may be used to minimize flow toward the Damaged main, thus reducing the extent of possible Contamination;</li> <li>• Water should be reduced to a level below the break as quickly</li> </ul>	<p>Excavation Contractor and others As necessary</p> <p>Excavation Contractor and others as necessary</p>

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 concrete failure;
- High turbidity and/or bacteria from Excessive sediment; or
- Animal contamination.

Generally, emergency maintenance on 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 permanent repair.

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, colour, disinfectant Residual, odour and an analysis for volatile organic Compounds that may be associated with the application of coatings.

**iii) If clearwell is leaking:**

- 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. (ie. Waterproof grout in concrete crack).

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