

RIVERBEND-RIVERBANK

WATER IMPROVEMENT DISTRICT

EMERGENCY RESPONSE PLAN

Revised 12/4/2025

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Who to Call in an Emergency

Emergency Response Team

System Operators

DRC & Certified System Operator

Bob Smethers
bob@smethers.com
971-207-5147

Response Team Officers – Board of Directors

President

John Carnathan
carnathan5353@gmail.com
503-789-9467

Secretary

Lynn Van Zandt
LVZ@astound.net
310-403-9382

Please reach out to other BOD Members through their contacts listed on www.rrwd.org

What is an Emergency?

1. Any event requiring an immediate response by the police or the fire departments that involves the public water systems and may pose a threat to the quality or quantity of drinking water. Examples of events of this kind include a chemical spill near a water source or a fire in a pump house**. In these cases, the person(s) observing the event should call 9-1-1- anytime day or night.** After contacting fire or police, one of the members of the Emergency Response Team should be notified at the phone numbers listed on the previous page.

2. Other events that do not require an immediate response by the fire or police departments could affect public drinking water. Examples of these events are suspected water-borne disease outbreaks or disruptions of water system treatment/supply due to equipment failure. **If there is a known or suspected threat to a public water system, the person(s) observing the event should contact Clackamas County Environmental Health at (503) 655-8386 as soon as possible after contacting any emergency services, whether or not the event requires an immediate response by fire or police departments.**

   After contacting the fire and police and Clackamas County Environmental Health, one of the members of the Emergency Response Team should be notified at the phone numbers listed on the previous page.

If the caller cannot contact any of the members of the Emergency Response Team , they should contact the Oregon Department of Human Services, Drinking Water Section (503) 731-4010 (9:00 a.m. to 5:00 p.m., (Monday through Friday).

To contact the Oregon Department of Human Services – Drinking Water Section after normal business hours, or on weekends and holidays, call the following emergency number:

- ***Oregon Emergency Response System (800) 452-0311***

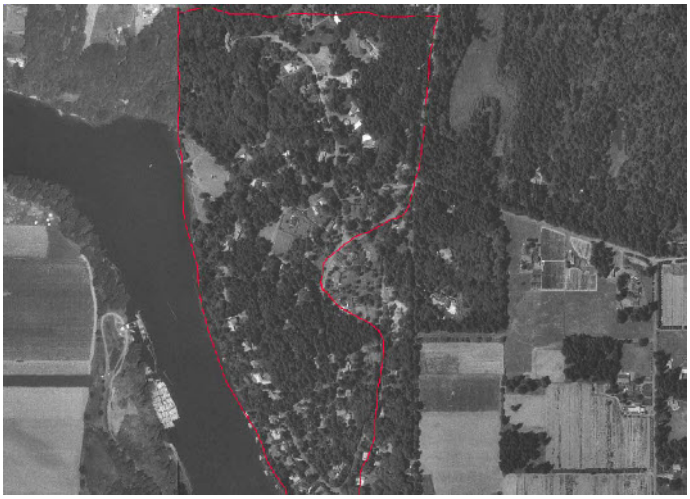
The Emergency Response System staff will contact the appropriate Drinking Water Section personnel.

The person observing the event should be prepared to given the following information when they call

- The name, address, phone number and present location of the person(s) observing the event.
- Type of incident (i.e., toxic spill, radiological incident, ruptured main, interruption of treatment, or other emergency disruption of a public water supply,) substance spilled (if spill), magnitude of incident, and number of injured or contaminated persons.
- The exact location of the incident.
- The time frame between the incident and the point when it was recognized.
- The date of the incident.
- The recognized or perceived threat to the water system and/or user.

Contacting Clackamas County Environmental Health (503) 655-8384, or the State Drinking Water Section as soon as possible is critical because they can provide you with technical assistance to protect your drinking water until the situation is resolved.

The Service area of the district:



System boundary at 30113 Riverwood Drive and we service all of the remainder of Riverwood Drive to the Willamette River. We service all of Riverbend Drive, Riverlane Road, and Hebb Park Road.

Water System Authority & Responsibility

IN THE EVENT OF A REAL OR POTENTIAL CONTAMINATION OF THE WATER SOURCE

SYSTEM SHUTDOWN

If a real or potential emergency is reported:

1. The Primary Certified Systems Operator will decide if the water should be shut off from the source.
2. If the Primary Certified Systems Operator is not available, the Secondary Systems Operator will decide if the water should be shut off from the source.
3. If neither of the Systems Operators are available, any member of the Emergency Response Team have the authority to shut off the water from the source.

RESUMING SYSTEM OPERATION

1. The Primary Certified Systems Operator will decide if the system can resume normal operations.
2. If the Primary Certified Systems Operator is not available, the Secondary Systems Operator will decide if the system can resume normal operation after resolution of the hazard to the water system.
3. If neither of the Systems Operators are available, any member of the **Emergency Response Team** have the authority to resume normal operation after resolution of the hazard to the water system.
4. In the event that no members of the ***Emergency Response Team*** are available any Homeowner of the Riverbend Riverbank Water District has the authority to resume service to normal operation after resolution of the hazard to the water system and permission has been received from Clackamas County Environmental Health Department.

Emergency Contacts

Regulatory Contacts
Clackamas County Environmental Health – (503) 655-8384 or (503) 655-8386
Oregon Department of Human Services – Drinking Water – (503) 731-4010
Oregon Emergency Response System (800) 452-0311

Utility Company Contacts
PGE: (503) 464-7777
Call before you dig: (800) 332-2344
Northwest Natural: (800) 882-3377

Media & Regulatory Spokesperson

In all media or regulatory matters regarding the Water District, the RRWD President is the spokesperson. All questions from the media and regulatory agencies should be directed to the President. (see www.rrwd.org for officer contact list).

In the President's absence, the System Operator will be responsible for contacting Regulatory Agencies as needed. If the above are not available, members of the Board of Directors (see the website www.rrwd.org), or any Homeowner in the Riverbend Riverbank Water District available should contact the appropriate Regulatory Agencies.

If none of the members of the Emergency Response Team are available and an emergency exists that requires immediate help due to contamination of the water system or damage to homes caused by broken water mains, please contact any BOD Member.

Repair and Alternate Water Source Contacts

Alternate Source of Water: Water Truck Service (503) 682-2723

Cascade Columbia Distribution Company (Sherwood) – Chemical Supplier
Account #81553 – Phone Number: (503) 625-5293

Ferguson Waterworks (Portland) – Primary Supplier
Account #42665 – Ferguson's phone: (503) 240-6747

Fisher's Supply (Canby) – Water Pump Service & Installation
Phone Number: (503) 263-8557

Steve's Pump Service – Water Pump Service Agency
Phone Number: (503) 658-3051

Call for a locate BEFORE you DIG: (800) 332-2344

Water Testing Lab

Alexin Labs – Water Testing
Phone: 503-639-9311

Legal Counsel, Accounting and Insurance Contacts

Legal Counsel - Schroeder Law Offices
Phone: 503-281-4100

Accounting & Billing

Lisa Curry
Elite Bookkeeping Services
lisa@eliteaccountingteam.com
503-848-9809

Insurance

Knutsen Insurance – SDIS/SDAO
Phone: 503-738-8455

District Property Addresses

Listed below are the property addresses of the Riverbend Riverbank Water Improvement District. The shutoff valve location for each property is shown. The complete roster showing names, phone numbers, and email addresses is provided to RRWD Board Members only.

ADDRESS	SHUTOFF VALVE
445 Hebb Park Rd	204" left of driveway, 72" off street
446 Hebb Park Rd	32" right of last brick fence post on right, 172" off street
448 Hebb Park Rd	31-ft right of driveway, 56" off street
451 Hebb Park Rd	15-ft right of driveway, 19-ft off street, first box
454 Hebb Park Rd	32-ft right of driveway apron, 136" from street
455 Hebb Park Rd	22" left of power pole right of drive, 14-ft from street apron
466 Hebb Park Rd	33-ft right of 454 driveway apron, 136" from street
471 Hebb Park Rd	at back of gravel driveway past buildings to left, 2 valves
473 Hebb Park Rd	left side of house/garage foundation, below gas meter
475 Hebb Park Rd	125-ft right of driveway, 175" from street, left of power pole
476 Hebb Park Rd	25-ft left of 484 driveway, 132" from street
479 Hebb Park Rd	left edge of 479 driveway, 6-ft from street
481 Hebb Park Rd	4-ft left of 479 driveway, 3-ft from street, in drainage ditch
484 Hebb Park Rd	23-ft left of driveway, 138" from street, valve closest to street
420 Riverbend Dr	left of driveway, 6-ft before blowoff - one valve 420 & 428
428 Riverbend Dr	across street, 6-ft before blowoff - one valve 420 & 428
431 Riverbend Dr	41-ft left of driveway, 12-ft from street, also hose bib in box
436 Riverbend Dr	21-ft left of 448 left driveway, 15-ft from street, big vault 2X
448 Riverbend Dr	20-ft left of left driveway, 15-ft from street, big vault 2X valves
454 Riverbend Dr	across street from right driveway, edge of street, 2X valves
466 Riverbend Dr	40-ft left of driveway, acrosss street, edge of street, 2X valves
470 Riverbend Dr	57-ft right of 470 mailbox, at edge of street asphalt
471 Riverbend Dr	rt of driveway, 144" left of blowoff, 100" from street
476 Riverbend Dr	64-ft right pf 470 mailbox, 24" from street asphalt
480 Riverbend Dr	right ppty line - in line w/ pwr pole, 210" from street
482 Riverbend Dr	left ppty line - 27" right of pwr pole, 210" from street
483 Riverbend Dr	behind house, 30940 Riverlane Rd alley, 30" right of blowoff

486	Riverbend Dr	right ppty line - 34" rt of pwr pole, 112" from street (not driveway)
490	Riverbend Dr	24" left of 494 property line, 155" from street - 2X valves
494	Riverbend Dr	24" left of 490 property line, 155" from street - 2X valves
30796	Riverlane Rd	125" rt of rt driveway, 119" from street
30801	Riverlane Rd	across street from 30796 transformer, 12-ft from street
30810	Riverlane Rd	210" left of driveway, 53" from street
30811	Riverlane Rd	33-ft left of right driveway, 128" from street - 2" PVC tube
30830	Riverlane Rd	43-ft right of 3-way main, 15-ft from street
30841	Riverlane Rd	165" left of driveway, 160" from street - closest square box
30880	Riverlane Rd	82" from left of main driveway, 52" from street
30920	Riverlane Rd	54" left of brick mailbox post, 44" from street
30930	Riverlane Rd	(1) 65" So. of 30920 light post (2) center of driveway past asphalt, 56-ft from street
30940	Riverlane Rd	Riverlane Rd alley to rt, 25-ft before blowoff, 12-ft from fence
30946	Riverlane Rd	right side of house below gas meter, not bad valve by driveway
30950	Riverlane Rd	33" left of driveway, 172" from street, behind stone mail post
30951	Riverlane Rd	2 shutoffs - one on the east side of the street, 18" left of the 30920 mailbox post & 44" from
30991	Riverlane Rd	69" right of left driveway, 140" from street, in a low swail
31000	Riverlane Rd	120" right of driveway, 115" from street
31010	Riverlane Rd	127" directly West of isolation valve in street
31030	Riverlane Rd	82-ft left of left driveway, 13-ft from street
31031	Riverlane Rd	130" right of driveway, 163" from street, in grass, round cover
31050	Riverlane Rd	in pit by front of foundation 20-ft from the SW corner of garage
31070	Riverlane Rd	190" right of driveway, 85" from street
31075	Riverlane Rd	30-ft left of driveway, 85" from street
31110	Riverlane Rd	93" left of driveway, 63" behind stone mailbox post
31135	Riverlane Rd	115" right of driveway, 96" from street, 1st box
31138	Riverlane Rd	32-ft left of driveway, 1-ft off street
31160	Riverlane Rd	18-ft left of drive, 85-ft from street - plus inside gar NE corner
31170	Riverlane Rd	18-ft left of drive, 85-ft from street - plus outside BR2 window
31180	Riverlane Rd	18-ft left of drive, 85-ft from street - plus left of kitch window
31190	Riverlane Rd	30" right of right stone pillar, 83" from street
31195	Riverlane Rd	156" left of court fence, 172" from steet - under hedge
31204	Riverlane Rd	big cover center of driveway, at street (not 3-valve cluster)

31220	Riverlane Rd	undeveloped, water connection completed, no billing
30155	Riverwood Dr	in woods behind 30155, 12" past blowoff valve, square box
30207	Riverwood Dr	on 30221 ppty fence, 12" from blowoff valve under blue rock
30221	Riverwood Dr	176" left of back corner of shop - may be other shutoffs
30233	Riverwood Dr	in woods behind 471 Hebb Pk, 18" toward 30233 from blowoff
30475	Riverwood Dr	in woods behind 471 Hebb Pk, 24" toward 471 from blowoff
30505	Riverwood Dr	40-ft behind left corner of house, plus next to 455 Hebb valve
30625	Riverwood Dr	14-ft right of transformer & phone boxes, 10-ft from street
30710	Riverwood Dr	16-ft right of driveway apron, 77" off street
30801	Riverwood Dr	53-ft North of Riverlane Rd stop sign, 105" from street
30920	Riverwood Dr	32-ft right of driveway/mailbox, 12-ft off street, wood cover
30925	Riverwood Dr	8-ft right of 31015 driveway apron, 21-ft from street up hill
31015	Riverwood Dr	70-ft right of left driveway, 18-ft from street, on hillside, box
31050	Riverwood Dr	17-ft lift of driveway/mailbox, 30" from street
31150	Riverwood Dr	* cannot locate at street - shutoff in garage near water softner
31160	Riverwood Dr	10-ft left of driveway, 18" west of main shutoff
31178	Riverwood Dr	* cannot find shutoff on Madrona - below hose bib at corner of house
31190	Riverwood Dr	undeveloped, water connection completed, no billing
31200	Riverwood Dr	50-ft North of paved Madrona Ln, 10-ft East of pathway
31262	Riverwood Dr	at SW back corner, adjoining 31282
31282	Riverwood Dr	at SE back corner, adjoining 31262

ANNUAL SYSTEM SECURITY ASSESSMENT

Riverbend Riverbank Water Improvement District
PWS #41-00458

Well-Spring/Intake Protective Structures	**Yes-No-Comments**
Pump Houses & Treatment Plants	**Yes**
Locks on all Doors	**Yes**
All Windows Secured	**N/A No Windows**
Adequate Alarms	**Yes**
Video Cameras	**No**
Adequate Security Lighting	**Yes**
Entry restricted to authorized personnel	**Yes**
"Employee Only" signs posted	**Yes**
Reservoirs	
Fenced area around reservoir	**Yes**
Locked gate	**Yes**
Ladder guard locked	**Yes**
Access hatches locked	**Yes**
Adequate security lighting	**Yes**
"Employee Only" signs posted	**Yes**
Distribution System	
Hydrants & other access points	**Yes**
Procedures	
All facilities locked and alarms set during prescribed times	**Yes**
Access restricted to authorized persons	**Yes**
Visitors and contractors checking in and out	**Yes**
Keys never stored in equipment or vehicles	**Yes**
Employees training	**Yes**
Cross Connection Program in place	**Yes**

ANNUAL SYSTEM HAZARD REVIEW

Riverbend Riverbank Water Improvement District
PWS #41-00458

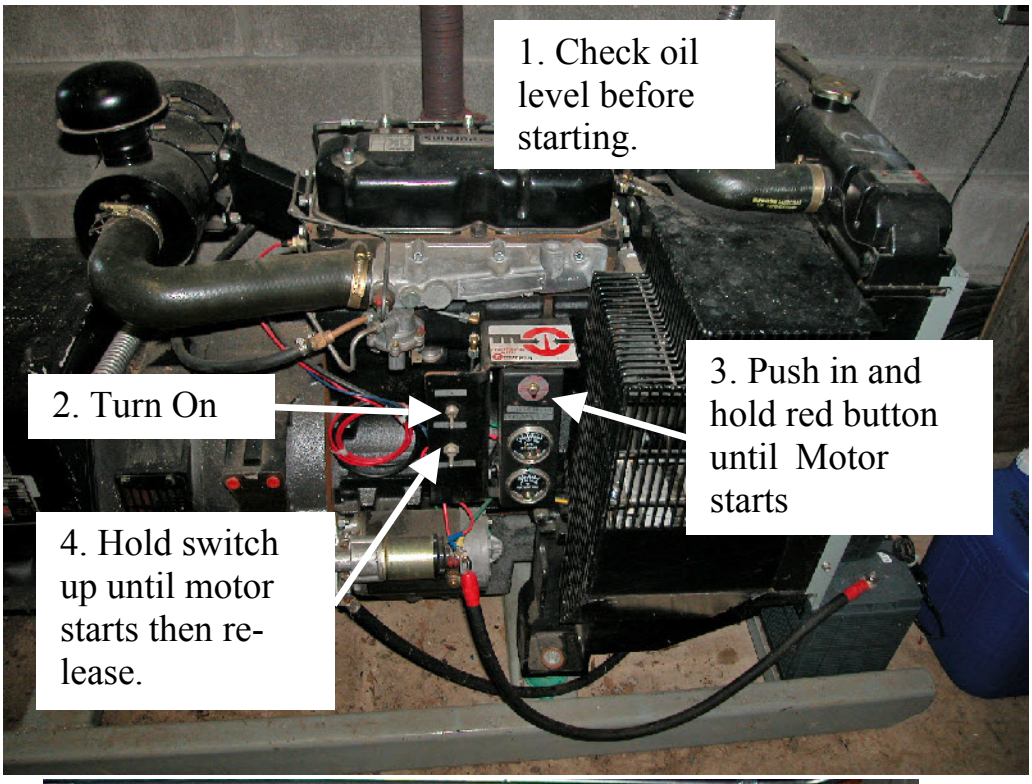
Source	Yes-No-Comments
Uncorrected sanitary survey deficiencies	No
Minimum 100 ft. control Zone	Yes
Chemical storage within 100 ft	No
Pesticide application within 100 ft.	No
Sewage system within 100 ft.	No
Fuel tanks within 100 ft.	No
Animal grazing/housing	No
Risk of flooding	No
Roads/Driveways	Yes
Solid waste storage/disposal	No
Earthquake vulnerability	No
Reservoir (water storage tank)	
Uncorrected sanitary survey deficiencies	No
Zone of control around reservoir	No (do not own property around storage tank)
Earthquake vulnerability	No
Distribution System	
Uncorrected sanitary survey deficiencies	No
Adequate valving provided	Yes
Valves exercised annually	Yes
Blow offs/hydrants provided	Yes
Blow offs/hydrants exercised	Yes
Cross-Connection Program current	Yes

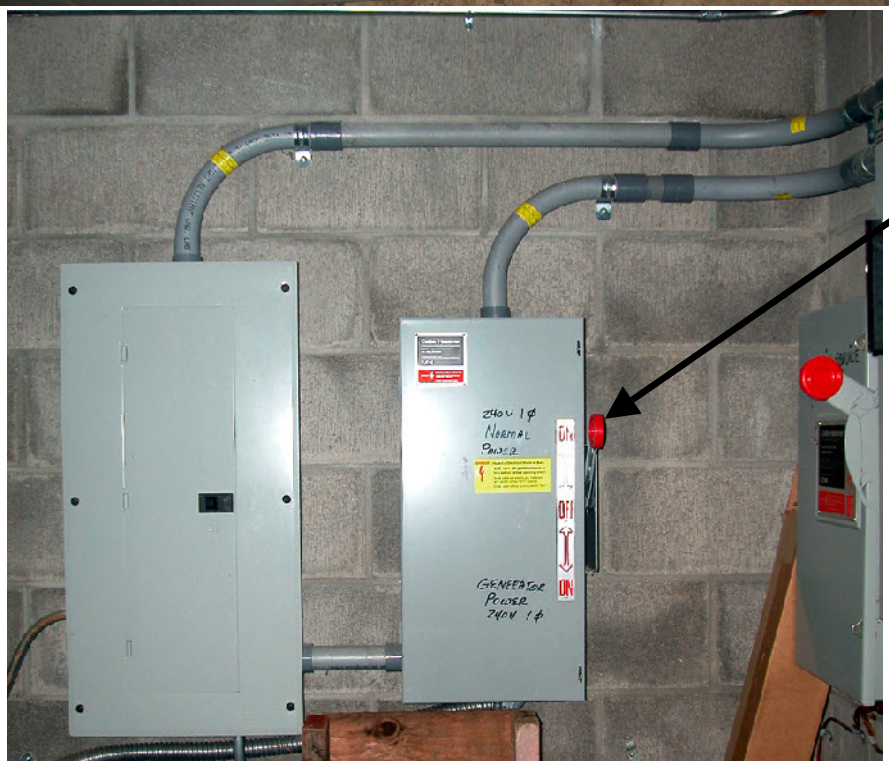
EMERGENCY EQUIPMENT & WATER SUPPLIES

EMERGENCY POWER

TO MAINTAIN SYSTEM PRESSURE IN CASE OF LOSS OF POWER

Generator located in Pump House – To switch to emergency power the following procedures should be followed:





RRWD - ALARM CONDITIONS
11-20-17 (rev)

The Remote Terminal Unit has inputs for eight alarm or notification conditions, and two analog inputs, and a pulse meter counter. These are the conditions:

1. **WELL PUMP CYCLE –** controlled by reservoir level transducer.
   The well control circuit is on – used to log pump times at MC.

2. **SYSTEM PUMP 3 – PUMP STARTS –** This tabulates the number of starts per day for the backup system pump – controlled by system pressure.

3. **WELL ON – NO WATER FLOW**
   The well control circuit is on but there is no water flow into the reservoir.

4. **WELL OFF – WATER STILL FLOWING**
   The well control circuit is off but water flow continues into the reservoir.

5. **PRESSURE BELOW 15 PSI**
   Low distribution system pressure – pump failure or major system leak.

6. **SECURITY – HATCH OPEN**
   The reservoir hatch has been opened with the security system active.

7. **SECURITY – DOOR OPEN**
   The pump house door has been opened with the security system active.

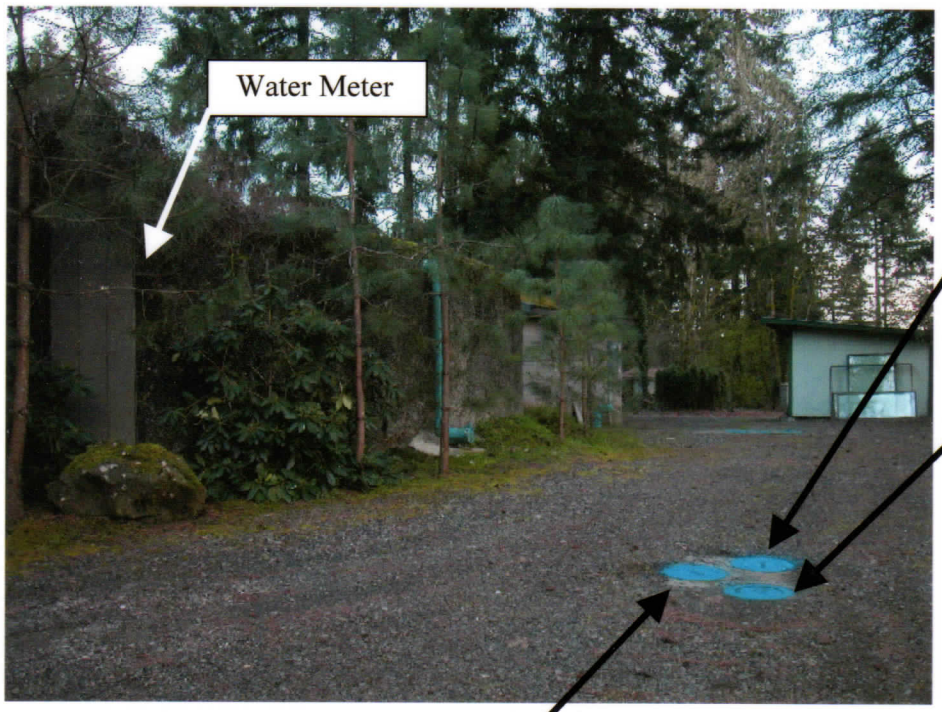
8. **CONTROL POWER OFF**
   Power to the control panel is off – need to start the power generator.

ANALOG 1. WATER LEVEL IN RESERVOIR
Sends water level analog reading to MC – used for online reservoir level.

ANALOG 2. CHLORINE CONTENT MEASURED BY ANALYZER
Sends chlorine PPM level to MC – as read by DC1 chlorine analyzer.

FLOW METER. PULSE BOARD TO MC
Sends pulse signal to MC to log water flow to the distribution system.

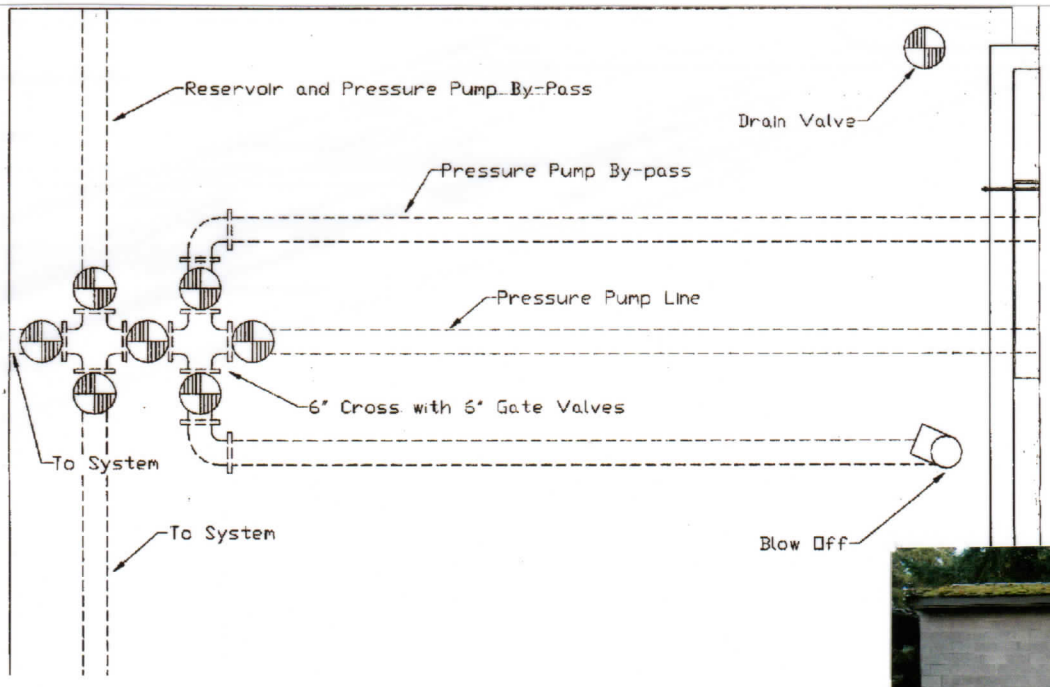
When the various switches and relays in and around the pumphouse detect any alarm conditions, the Remote Terminal Unit sends the appropriate digital signal by way of a wireless connection to an automatic monitoring system at “Mission Communications” in Atlanta. These signals convert to the various messages we have set up, and are sent to our sequence of phone numbers, e-mails, and posted on the website. The notification sequence continues until one of the recipients keys in an acceptance.



This valve normally closed. When open, it allows water from the wellheads to go straight to the system. No chlorination of water takes place if this valve is open.

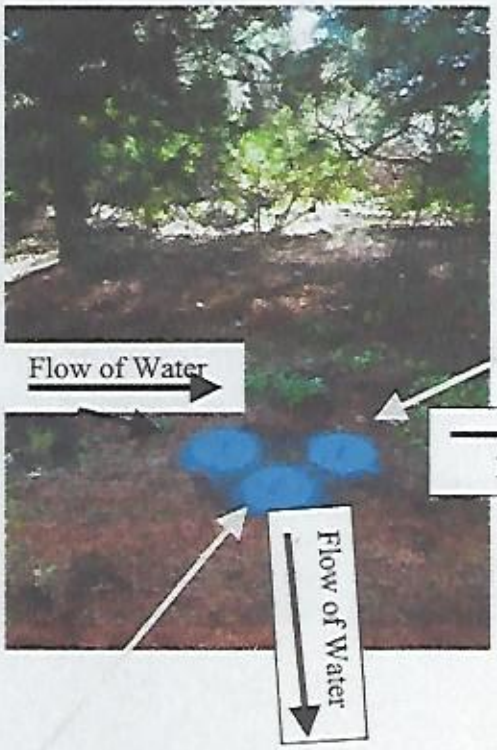
This valve is normally open. This valve controls water flow to the wellheads.

This valve is normally open.
Controls water flow to the storage tank. You must close this valve if your want to bypass the storage tank.





Valve Group at Riverlane Road Loop Intersection

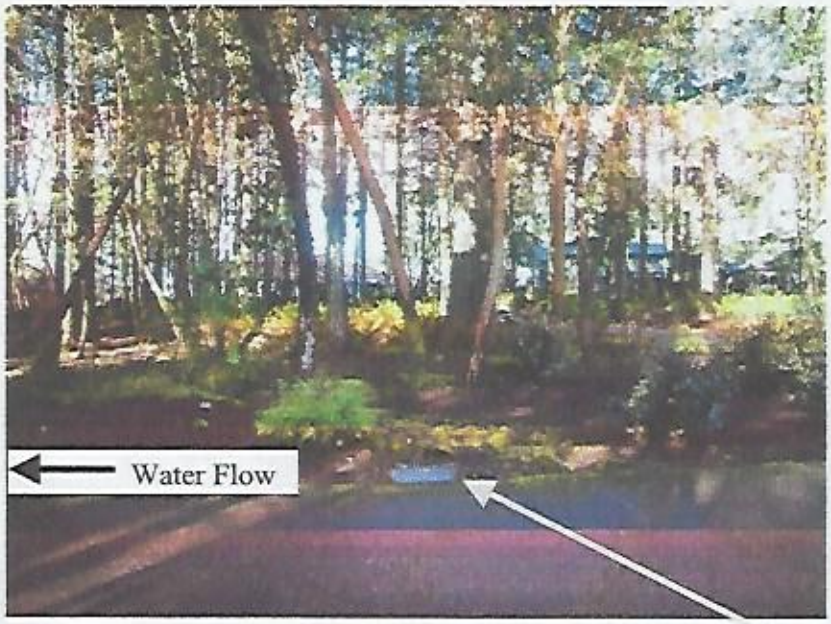


Isolates pipe servicing 30830 Riverlane Road to 30930 Riverlane Road.

Blow-off for this line is left of driveway at property line - 30940 Riverlane Rd

Controls water on Riverlane Rd toward tennis court and Riverbend Dr

These valves are normally open



This valve is normally Open.

Located in front of 31138 Riverlane Road.



This valve is located at 31010 Riverlane Road.

This valve is normally open.

Valve Group in side yard of 30946 Riverlane Road



This valve is normally open.

Controls water going to or coming from Riverbend Drive

This valve is normally closed.

Controls flow to blow-off.

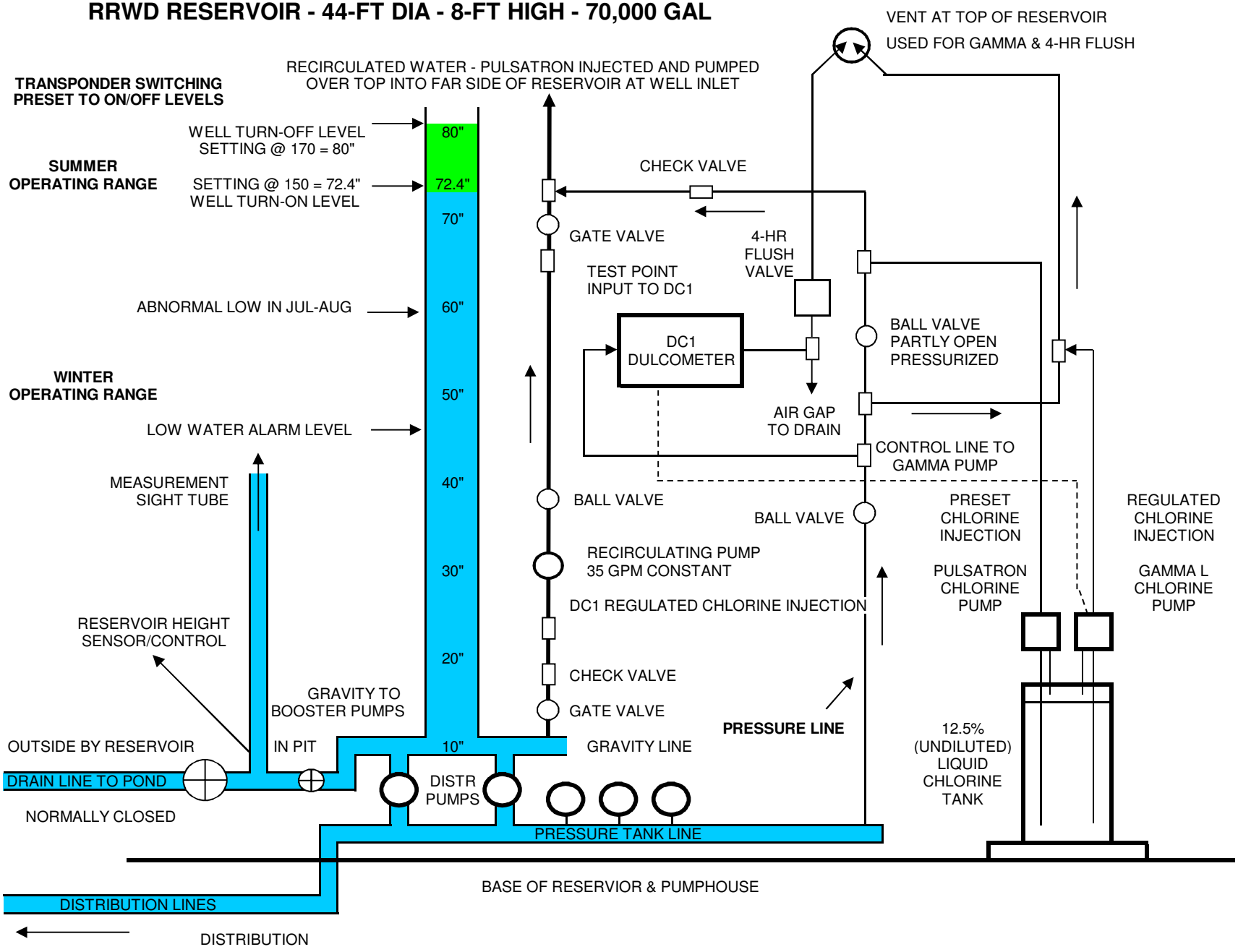
This valve isolates water coming from or going to Riverlane Road.

This valve is normally open.

This valve is normally open.

Controls water pipes servicing
30940 Riverlane Rd
30946 Riverlane Rd
483 Riverbend Dr

RRWD RESERVOIR - 44-FT DIA - 8-FT HIGH - 70,000 GAL



DISINFECTION PROCEDURE

Disinfection is a procedure that uses chlorine to eliminate microorganisms that may have entered the water system. A chlorine solution is introduced into the well and throughout the entire distribution system. This solution stands in the system for at least 12 hours; it is then removed by thoroughly flushing. The disinfection procedure is considered successful when a representative sample of the water tests "absent" for coliform bacteria. The water system should not be used as a source of potable until it has an "absent" coliform test result. The disinfection procedure consists of the following steps:

1. Notify all customers that you will be disinfecting the water system. They should use an alternate water source until you notify them that the system has resolved the microbiological contamination problem.
2. Determine the amount of chlorine needed:

You need to know the depth and diameter of your well:

Well 1	*Well 2*
Depth: 221 feet	Depth: 250 feet
Casing: 10 inch	Casing 8 inch

Well Diameter	*Factor*
8 inch	1.5
10 inch	1.0

Use the following formula to determine the amount of chlorine solution to add to the well:

Depth of well = _____ feet divided by (factor) = _____ ounces of chlorine solution to use.

For example, an 8 inch, 250 foot deep well needs 250/1.5 = 167 oz of bleach. If the well is 10 inches, 221 feet, it would need 221 oz of chlorine solution (bleach) to disinfect.

3. Dilute the chlorine in 5 gallons of water and pour the bleach mixture into the well.
4. Circulate this mixture through the well and pressure tanks until thoroughly mixed. To do this attach food-grade hose to a hose bib just downstream from the pressure tanks, place the hose end in the well casing and re-circulate the water for at least 30 minutes. Be sure to wash down the wall of the casing.

5. Open all faucets in the distribution system until you can smell the chlorinated water. Be sure the entire distribution system including any dead end lines have been chlorinated. Use your chlorine test kit to ensure that the water in the pipes has a minimum chlorine residual of 25 ppm.

6. Turn off the faucets and let the water sit undisturbed in the distribution system for 12 hours.

7. Open all faucets (including any blow-offs for dead end lines) and flush all the chlorinated water out of the system. Let the water flow until you have flushed all of the chlorinated water out of the distribution system. You can check this with your chlorine test kit.

8. Wait 3-5 days, and then collect a representative water sample in the distribution system and test for coliform bacteria.

9. The water system is considered free of bacterial contamination when the water sample test indicates that the no coliform bacteria was found. Notify your water users that the bacterial contamination problem has been resolved.

Appendix A

Template on Reverse (next page)

Since exceeding the fecal coliform or *E. coli* maximum contaminant level is a Tier 1 violation, you must provide public notice to persons served as soon as practical but within 24 hours after you learn of the violation (141.202(b)). During this time, you must also contact your primacy agency. You should also coordinate with your local health department. You may also have to modify the template if you also have high nitrate levels or other coliform MCL violations. You must use one or more of the following methods to deliver the notice to consumers (141.202(c)):

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served.

The notice on the reverse is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice. If you do, you must still include all required elements and leave the health effects language in italics unchanged. This language is mandatory (141.205(d)). See Chapter 8 for a notice designed for posting. If you post or hand deliver, print your notice on letterhead, if you have it.

Population Served

Make sure it is clear who is served by your water system--you may need to list the areas you serve.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with fecal coliform or *E. coli* violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are chlorinating and flushing the water system.
- We are switching to an alternate drinking water source.
- We are increasing sampling for coliform bacteria to determine the source of the contamination.
- We are repairing the wellhead seal.
- We are repairing the storage tank.
- We are restricting water intake from the river/lake/reservoir to prevent additional bacteria from entering the water system and restricting water use to emergencies.

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met all the public notice requirements to your primacy agency within ten days from the time you issue the notice (141.31(d)). It is recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, health professionals, including dentists, use tap water during their procedures and need to know of

contamination so they can use bottled water. It is a good idea to issue a 'problem corrected' notice when the violation is resolved.

DRINKING WATER WARNING

[Date]
[System] water is contaminated with [fecal coliform] or [*E. coli*]

BOIL YOUR WATER BEFORE USING

Fecal coliform [or *E. coli*] bacteria were found in the water supply on [date]. These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.

- *Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.*

- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?

Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains). It can also happen due to a break in the distribution system (pipes) or a failure in the water treatment process.

[Describe corrective action.] We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

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

This notice is being sent to you by [system]. State Water System ID#: _____

Appendix B

Template on Reverse (next Page)

If your primacy agency has designated this turbidity single exceedance as a Tier 1 violation (141.202(a)), you must provide public notice to persons served within 24 hours after it has been designated Tier 1 (141.202(b)). Turbidity violations are Tier 2 by default, but may frequently be elevated to Tier 1 by your primacy agency. In addition, violations are automatically elevated if you are unable to consult with your primacy agency within 24 hours. **In such cases, you must issue a notice within the next 24 hours.** You may elevate the violation to Tier 1 yourself as well. You should also coordinate with your local health department. One or both agencies should tell you whether to instruct consumers to boil water. You must use one or more of the following methods to deliver the notice to consumers (141.202(c)):

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served. If you post or hand deliver, print your notice on letterhead, if you have it.

The notice on the reverse is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice or posting. If you modify the notice, you must leave the health effects language in italics unchanged. This language is mandatory (141.205(d)).

Population Served

Make sure it is clear who is served by your water system--you may need to list the areas you serve.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with turbidity single exceedance. Use one or more of the following actions, if appropriate, or develop your own:

- We are adding chemicals that reduce turbidity.
- We are sampling both untreated and treated water for the presence of coliform bacteria.
- We are monitoring chlorine levels and will adjust them as needed to compensate for filtration problems.
- We are inspecting and cleaning the filters.

Source of the Problem

If you know why the turbidity is high, explain it in your notice. For instance, unusual conditions, such as heavy rains and flooding, can overburden the water plant, and treated water may therefore not meet the standards. In addition, run-off from parts of the watershed could contain increased concentrations of sediment and animal waste.

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met public notice requirements to your primacy agency within ten days after you issue the notice (141.31(d)). It is a good idea to issue a "problem corrected" notice when the violation is resolved. It recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, health professionals, including dentists, use tap water during their procedures and need to know of potential microbiological contamination so they can use bottled water.

DRINKING WATER WARNING

[system] has high turbidity levels

BOIL YOUR WATER BEFORE USING

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. A water sample taken [date] showed turbidity levels of [number] turbidity units. This is above the standard of [standard] turbidity units. Because of these high levels of turbidity, there is an increased chance that the water may contain disease-causing organisms.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice.
- *Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.* People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

[Describe reason for the high turbidity, corrective action, and when the system expects to return to compliance.]

We will inform you when turbidity returns to appropriate levels and when you no longer need to boil your water.

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

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

This notice is being sent to you by [system]. State Water System ID#: _____
Date distributed: _____

Appendix C

Template on Reverse (next page)

Since a waterborne disease outbreak is a Tier 1 situation, you must provide public notice to persons served as soon as practical but within 24 hours after you learn of the situation (141.202(b)). You must also contact your primacy agency during this time. You should coordinate with your local health department as well. **You must issue a public notice if you are experiencing a waterborne emergency other than a waterborne disease outbreak, such as one caused by flooding or treatment failure. In such cases, you may be able to modify this template to apply to your situation.** Check with your primacy agency for more direction. More information on waterborne disease outbreaks and emergencies is available from the Centers for Disease Control and Prevention (www.cdc.gov/health/diseases.htm 1 (800) 311-3435). For a waterborne disease outbreak or other emergency, you must use one or more of the following methods to deliver the notice to consumers (141.202(c)):

- ☐ Radio
- ☐ Television
- ☐ Hand or direct delivery
- ☐ Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served. If you post or hand deliver, print your notice on letterhead, if available. The notice on the reverse is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio, TV notice, or posting

Describing the Outbreak

If known, list any organisms detected, the number of affected people, any water treatment problems contributing to the waterborne disease outbreak, and any sources of contamination, such as flooding.

Potential Health Effects

No mandatory health effects language exists for waterborne disease outbreaks. You may wish to use the sentence below, if appropriate, or contact your primacy agency or health department. These symptoms are common to many diseases caused by microscopic organisms:

- ☐ Symptoms may include nausea, cramps, diarrhea, jaundice, and associated headaches and fatigue.

Population at Risk

Some people who contract waterborne diseases can be affected more severely than others, as described on the reverse page. The specific language on the reverse is not mandatory, but you must provide information on the population at risk. In addition, make sure it is clear who is served by your water system--you may need to list the areas you serve.

Corrective Action

In your notice, describe the corrective actions you are taking. Listed below are some steps commonly taken by water systems with waterborne disease outbreaks. Use one or more of the following actions, if appropriate, or develop your own:

- ☐ We are repairing our filtration system.
- ☐ We are increasing sampling for disease-causing organisms

Make sure to send a copy of each type of notice and a statement certifying that you've met all public notification requirements to your primacy agency within ten days after issuing the notice (141.31(d)). It is a good idea to issue a 'problem corrected' notice when the waterborne disease outbreak is under control.

It is recommended that you notify health professionals in the area of the outbreak. People may call their doctors with questions about how the situation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, health professionals, including dentists, use tap water during their procedures and need to know of contamination so they can use bottled water.

DRINKING WATER WARNING

BOIL YOUR WATER BEFORE USING

Disease-causing organisms have entered [system's] water supply.

These organisms are causing illness in people served by [system]. We learned of a waterborne disease outbreak from [agency] on [date].

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.

- [Describe symptoms of the waterborne disease.] If you experience one or more of these symptoms and they persist, contact your doctor. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

What happened? What is being done?

[Describe the outbreak, corrective action, and when the outbreak might end.]

We will inform you when you no longer need to boil your water.

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

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

This notice is being sent to you by [system]. State Water System ID#: _____

Date distributed: _____