

# HC WATERWORKS, INC.

May 22, 2020

Commissioner R. Greg Harris, District 5  
Highlands County Board of County Commissioners  
600 South Commerce Ave.  
Sebring, FL 33870

Re: Docket No. 20190166-WU Application for increase in water rates in Highlands County by HC Waterworks, Inc. – *Main Break Emergency Repair & Boil Water*

Dear Commissioner Harris,

HC Waterworks, Inc. (HCWW) is in receipt of your letters to each individual Public Service Commissioner. HCWW submits its response to your letter.

Since you participated in the May 5, 2020 Agenda Conference with the Florida Public Service Commission (FPSC), you are aware there was extensive discussion on the utility and customers' concerns. There was also concern expressed by Commissioners Polson and Brown concerning communication with the utility's customers and the dissemination of information. Commissioner Polson stated there appeared to be a "lack of trust" on the customers' part.

Part of this "perceived" lack of trust begins with you, the Commissioner representing this District. It begins with a direct communication with the utility to obtain the facts prior to "sounding the alarm" that the utility did not "do the right thing." We ask that when one of your constituents contact you, that either you or one of your staff contact us immediately to resolve any concerns. When this is not done then it perpetuates this perceived lack of trust. Not one of your of your staff members contacted either myself or my Utility Manager. As to the events which occurred today, it was directly related to an 8" main break that required an emergency repair. Below is the information concerning this break.

To initiate this direct dialog and to begin to earn back the customers' trust, the President of HCWW and U.S. Water Services Corporation, Mr. Gary Deremer would like to schedule an in-person meeting with you and your staff. Please contact me regarding your availability to set up this meeting at your earliest convenience.

### **Main Break and Emergency Repair**

In the late afternoon of May 19, 2020, HCWW received a telephone call from Ms. Tamra Mathy, a customer who lives next to the Lake Josephine water treatment plant. She stated that there was a water leak and/or line break next to her house. The maintenance technician responded and determined that it was a 8" main break on the main water line leaving the water treatment plant.

The next morning *prior* to making the emergency repair, HCWW contacted each local television news outlet and local paper and delivered the attached boil water notice. In addition, HCWW

HC Waterworks, Inc.  
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contacted the three local radio stations ( 2- FM and 1-AM) and was told that they would run the notice throughout their morning broadcast. This is the fastest and most expedient way of notification to these customers. There are approximately 661 water customers spread over several square miles throughout the service area. In addition, two large unit mobile home and RV parks located on Highway 27 were notified by telephone. The following local media were notified:

Bay news 9  
Sun Herald  
Fox TV  
WFLA News Channel 8  
Sebring Radio  
WSRQ Radio  
WWOJ 99.1  
WWIL 105.7  
WWTK AM730

The Florida Department of Environmental Protection (FDEP) adopted the Department of Health (DOH) Guidelines for boil water notices. For main breaks, the FDEP and DOH leaves it to the discretion of the utility in deciding if a precautionary boil water notice (PBWN) is needed depending on the specific circumstances. (see attached) This varies on the extent of water pressure loss, perceived threat to public health, extent of the break, etc.

Although there is no specific guidelines that dictates the required methodology, there is general guidelines as to more serious Tier 1 health threats. The DOH guidelines state,

All precautionary boil water notices shall be issued and delivered to the general public in a manner consistent with the public notification requirements contained in Chapter 62-560.410(1)(a) 1., Florida Administrative Code (FAC), telephoned, or hand-delivered to all affected residences and businesses as soon as possible, but in *no case later than 24 hours after* the water system learns of the violation, exceedance, situation or failure. (emphasis added)

Tier 1 notices are for circumstances:

- if the water does not meet drinking water standards;
- if the water system fails to test its water;
- if the system has been granted a variance (use of less costly technology); or
- if the system has been granted an exemption (more time to comply with a new regulation).

Pursuant to Rule 62-560.410(1):

(a) Except as provided in paragraph (1)(c) or (1)(d), of this rule, the owner or operator of a public water system shall give notice:

1. For violations, exceedances, situations, or failures, that may pose an acute risk to human health, by furnishing a copy of the Tier 1 notice to the radio and television stations that broadcast in the area served by the public water system as soon as possible but in no case later than 24 hours after the system learns of the violation, exceedance, situation, or failure, unless otherwise directed by the Department to provide such public notice sooner because of the nature of the risk. The system shall also initiate consultation with the Department as soon as possible, but in no case later than 24 hours after the system learns of the violation, exceedance, situation, or failure, as described in subparagraphs a. through g., below, to determine additional public notice requirements that may be necessary to protect public health. The following violations, exceedances, situations, or failures are acute risks to public health:

(c) In lieu of the method of delivery requirements of paragraphs (1)(a) and (1)(b), the owner or operator of a community or non-transient non-community water system may, unless otherwise directed by the Department in writing based on its assessment of the violation or situation and the potential for adverse effects on public health and welfare, give notice by hand delivery and by continuous posting in conspicuous places within the area served by the system. Notice by hand delivery and posting shall begin as soon as possible, but no later than 24 hours after the system learns of the violation, exceedance, situation, or failure for acute violations, or as soon as possible, but no later than 30 days after the system learns of the violation, situation, or failure for any other violation, situation, or failure. Posting shall continue for as long as the violation, exceedance, situation, or failure exists, but in no case for less than 7 days even if the violation, exceedance, situation, or failure is resolved. Notice by hand delivery shall be repeated at least every three months for as long as the violation, exceedance, situation, or failure exists. (emphasis added)

Again, water main breaks are not considered an immediate health threat and do not rise to the level of a Tier 1 notification. PBWN are left to the discretion of the utility's professional judgment. Regardless, in this situation, due to the entire system having to go offline, HCWW followed the DOH guidelines and notified the local radio and television stations prior to making the emergency repair.

In addition to the local media outlets, HCWW also notified the FDEP, the FPSC staff, and the Office of Public Counsel prior to shutting down the system to make the emergency repair.

HCWW received the required sample clearance results the afternoon of May 22, 2020. The FDEP requires that the subsequent rescind notices be delivered in the same manner in which the PBWN are delivered. Therefore, the rescind notices will be delivered utilizing the same methodology.

HC Waterworks, Inc.  
Commissioner Harris  
May 22, 2020

Respectfully Submitted,



Troy Rendell  
Vice President  
Investor Owned Utilities  
*// for HC Waterworks, Inc.*

Cc: Florida Public Service Commission – Commission Clerk

May 19, 2020

## **PRECAUTIONARY BOIL WATER NOTICE**

### **Highland County**

Lake Josephine/Sebring Lakes Subdivisions  
PWS I.D. # 628-0162

Due to a water line repair which will be performed on **Wednesday Morning May 20, 2020**, water service will be interrupted to the Lake Josephine / Sebring Lake Communities from **8:00 am (May 20, 2020) until approximately 5:00 pm.**

Upon completion of the repair and water service is returned, as a precaution until tests can be completed, we advise that all water used for drinking, cooking, making ice, washing dishes, or brushing teeth be boiled. A rolling boil of one minute is sufficient. As an alternative, **BOTTLED WATER MAY BE USED.**

In the event there is a loss of power and you cannot boil water, tap water can be disinfected by adding 8 drops (or about 1/8<sup>th</sup> teaspoon) of unscented household bleach (4-6% active ingredients) to each gallon of water, then mixing the water and allowing it to stand for a minimum of 30 minutes. If the water is cloudy, use 16 drops of bleach and a 30-minute contact time.

This "Precautionary Boil Water Notice" will remain in effect until a bacterio-logical survey shows that the water is safe to drink, at which point the boil water notice will be rescinded.

If you have any questions about the testing for bacteria, please contact U.S. Water Services at **866-753-8292 ext 411**. Testing normally takes 2-3 days from the time water pressure is restored or the emergency condition is corrected to complete.

## **Troy Rendell**

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**From:** Melisa Rotteveel [mrotteveel@uswatercorp.net] on behalf of Melisa Rotteveel  
**Sent:** Wednesday, May 20, 2020 7:03 AM  
**To:** Oncall@aqtas.com; Andrew Borremans; Dennis Coates; Evelyn Alicea; Kelly Turbett; Lina Quintero; Mike Shuba; Nadine Ward; Sharon Purviance; Tina Rivera; Troy Rendell; Lexi Schmitt; Bobby Romeo  
**Subject:** Lake Josephine Sebring Lakes

The following boil water notice will be issued to Lake Josephine Sebring Lakes for work scheduled this morning.

May 19, 2020

### **PRECAUTIONARY BOIL WATER NOTICE**

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Water and Wastewater Utility Operations, Maintenance, Engineering, Management

May 22, 2020

## **RESCISSION OF PRECAUTIONARY BOIL WATER NOTICE**

To: Lake Josephine/Sebring Lakes Subdivision Water Users  
PWS ID# 628-0162

The May 20, 2020 "Precautionary Boil Water Notice" is hereby rescinded. The satisfactory completion of a bacteriological survey shows that the water is safe to drink.

If you have any questions, please contact U.S. Water Services at (727) 848-8292.

4939 Cross Bayou Blvd., New Port Richey, Florida 34652

Ph: 727-848-8292 Fax: 727-849-4219 Toll Free: 866-753-8292

**DRINKING WATER MICROBIAL SAMPLE COLLECTION & LABORATORY REPORTING FORMAT**

- 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354 • E82574
- 4965 SW 41st Blvd • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639 • E82001
- 10200 USA Today Way • Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281 • E82535
- 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327 • E84589
- 380 Northlake Blvd., Suite 1048 • Altamonte Springs, FL 32701 • 407.937.1594 • E53076
- 2639 N. Monroe St., Suite D, Tallahassee, FL 32303 • 850.219.6274 • Fax 850.219.6275 • E811095
- 13100 Westlinks Terrace, Unit 10, Fort Myers, FL 33913 • 239-674-8130 • Fax 239-674-8128 • E84492



\* F 2002105 \*



**Advanced Environmental Laboratories, Inc.**

Lab Receipt Date & Time: 5/21/2020 1500  
 Analysis Date & Time: 5/21/2020 1557  
 Sample Acceptance Criteria:  
 Sample Preservation:  On Ice  Not On Ice 4.60  
 Disinfectant Check:  Not Detected   
 This Sample does not meet the following NELAC requirements:

Report Number: \_\_\_\_\_ Sub-Contract Lab ID: E84492

**Analysis Requested: (check all that apply)**

Total Coliform/*E. coli*  Total Coliform/Fecal  Enterococci  Coliphage  HPC  Other: \_\_\_\_\_ Limited Use System \_\_\_\_\_

Public Water System (PWS) Name: Lake Josephine Sebring PWS I.D.: 628-0162

PWS Address: 1949 Canary Way City: Sebring

PWS or PWS Owner's Phone #: 727-848-8292 Fax #: 727-849-4219

Collector: Andrew Borremans Collector's Phone #: 863-581-3590

**Type of Supply: (check only one)**

Community Water System  Non-Transient Non-community Water System  Transient Non-community Water System  
 Limited Use System  Bottled Water  Private Well  Swimming Pool  Other: \_\_\_\_\_

**Reason for Sampling: (check all that apply)**

Distribution Routine  Distribution Repeat  Raw (triggered or assessment)  Raw (triggered or assessment) additional  Well Survey  
 Clearance  Replacement (also check type of sample being replaced)  Boil Water Notice  Other: \_\_\_\_\_

Sample Collection Date: 5/20 - 5/21

DCN#: AD-D045

Effective 01/95, Printable Revision 4/11/17

To be completed by collector of sample

To be completed by lab

Sample #	Sample Point (Location or Specific Address)	Sample Collection Time (24 hr clock)	Sample Type	Disinfectant Residual (mg/L)	pH	Analysis Method(s) <sup>2</sup>			SM9223B Data Qualifier <sup>4</sup>	Lab Sample #
						Non-Coliform	Total Coliform	Fecal <i>E. coli</i> / Enterococci <sup>3</sup> / Coliphage <sup>3</sup>		
5/20	1939 Canary Way	1600	T/D	2.9	8.2		A	A		001
	5216 Felicity Ave	1620	T/D	2.6	8.1		A	A		002
5/21	1939 Canary Way	0800	T/D	2.7	8.0		A	A		003
	5216 Felicity Ave	0820	T/D	2.6	8.1		A	A		004

Average of disinfectant residuals for distribution routine & repeat samples.<sup>3</sup>  Free chlorine or  Total chlorine (check one).

**Disinfectant Residual Analysis Method:**

DPD Colorimetric  Other: \_\_\_\_\_

**Person performing disinfectant analysis is (Check one of below):**

- A certified operator (# 022604)
- Supervised by certified operator (# \_\_\_\_\_)
- Employed by a certified lab  Employed by DEP or DOH
- Authorized representative of supplier of water

Unless otherwise noted, all tests are performed in accordance with NELAC standards, and the results relate only to the samples.

Date and time PWS notified by lab of positive results: \_\_\_\_\_

Date and time DEP/DOH notified by lab of positive results: \_\_\_\_\_

Lab Signature: [Signature]

Title: Analyst

Date & Time Report Issued: 5/21/2020 1155

- Satisfactory DEP/DOH USE ONLY
- Incomplete Collection Information
- Repeat Samples Required
- Replacement Samples Required
- Date Reviewed by DEP/DOH: \_\_\_\_\_
- DEP/DOH Reviewing Official: \_\_\_\_\_



SEL Client 578 Lk Jos Sebring  
 Project Boil Water

Send to DEP/DOH? (Init): Yes \_\_\_\_\_ No \_\_\_\_\_

Paid \_\_\_\_\_ Amt \_\_\_\_\_ How: \_\_\_\_\_

1. Indicate the sample type for each sample collected. Sample type codes are: D = Distribution (routine compliance), C = Repeat/Check, R = Raw, N = Entry Point to Distribution, P = Plant Tap, S = Special (clearance, etc.).  
 2. Lab certification number for the listed method is included at top with the laboratory address.  
 3. Please circle appropriate selection.  
 4. Defined in Florida Administrative Code Rule 62-160, Table 1.  
 5. Complete for community & non-transient non-community systems serving populations up to and including 4,900. Do not include raw or plant samples in the average.  
 Results Key: A = Coliforms are absent; P = Coliforms are present; C = confluent growth; TNTC = too numerous to count (62-550.730 Reporting Format).

Relinquish By: [Signature]  
 Date: 5/21/2020 Time: 1025  
 Received By: [Signature]  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: [Signature]  
 Date: 5-21-20 Time: 1300  
[Signature] 5/21/2020 1500





It's a New Day in Public Health.

The Florida Department of Health works to protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.

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## Boil Water Notice Guidelines

### [./environmental-health/drinking-water/documents/june2017-triagencyfood-industry-bulletin-boilwaternoticeguidelines.pdf](#) GUIDELINES FOR THE ISSUANCE OF PRECAUTIONARY BOIL WATER NOTICES

This webpage has pdfs, get the [free Adobe reader - opens in a new window \(http://get.adobe.com/reader/\)](http://get.adobe.com/reader/).

(All pdfs documents open in a new window)

Issue Date: 9/22/97  
Revise Date: 8/26/99  
Revise Date: 12/11/06  
DEPARTMENT OF HEALTH

#### DRINKING WATER PROGRAM

- I. Authority and Intent
- II. Implementation and Interdepartmental Coordination
- III. Types of Incidents
- IV. Disaster Related Events
- V. Content of Precautionary Boil Water Notices
- VI. Rescission of Boil Water Notices
- [Attachment A, Precautionary Boil Water Notice \(pdf <1mb\) \(attach.pdf\)](#)
- [Attachment A, Precautionary Boil Water Notice \(Docx <1mb\) \(.documents/sampleprecautionaryboilwaternotice.docx\)](#)
- [Attachment B, Rescission of Precautionary Boil Water Notice \(pdf <1mb\) \(attachb.pdf\)](#)
- [Attachment B, Rescission of Precautionary Boil Water Notice \(Doc<1mb\) \(.documents/sampleboilwaternoticescission.docx\)](#)
- [Attachment C, Best Management Practices for Water Main Breaks and Repairs \(Clicking here opens a pdf document <1mb\) \(attachc.pdf\)](#)

#### I. AUTHORITY AND INTENT

Pursuant to section 381.006, Florida Statutes (F.S.), the Florida Department of Health (DOH) is responsible for conducting an environmental health program consistent with the state's public health mission of preventing illness within our community. An integral component within this function is the conductance of human health risk assessments of exposure to contaminants in food, air and water.

Of major importance are risk assessments involving microbiological contaminants of waterborne origin. Through natural and manmade means, Florida's population and visitors may be subjected to microbiological contaminants in their drinking water supply. Large outbreaks involving bacteria, viruses, and protozoa have been documented throughout the country, thus arousing a high degree of awareness to these hazards. Additionally, per subsection 381.006(3)(c), F.S., the DOH is further responsible for providing guidance and technical assistance to the Florida Department of Environmental Protection (DEP) and other governmental agencies regarding actions necessary to prevent exposure to drinking water contaminants that present an imminent and substantial threat to the public's health.

As required by the Florida Legislature and as provided within s. 381.006(3), F.S., this instrument will serve as guidelines regarding the authorization of, and applicability for, the issuance of precautionary boil water notices during instances of imminent or substantial threat of microbiological contamination. The DOH's State Health Office and its units, the county health departments, in coordination with DEP, will have the final authority in ensuring that precautionary boil water notices are issued and rescinded when appropriate, and in a manner consistent with the degree of hazard encountered. In counties where DEP has regulatory authority over all public drinking water systems, the DEP district office shall have the full authority to issue and rescind all precautionary boil water notices, and when doing so shall coordinate with the applicable county health departments. Additionally, this document serves to outline particular instances when precautionary boil water notices shall be issued, the verbiage and content of such notices, and the

Contact the Water Programs

☎ 850-245-4240 (tel:850-245-4240)

✉ AskEH@flhealth.gov (mailto:AskEH@flhealth.gov)

☎ Fax 850-487-0864

📍 **Mailing Address**  
Bureau of Environmental Health, Water Programs  
4052 Bald Cypress Way, Bin A-05  
Tallahassee, FL 32399-1710

monitoring and clearance activities, which must be conducted prior to rescinding such notices.

These notices should be issued in a prudent manner and only when there is sufficient justification for this emergency action. Inordinate issuance of the notices will cause needless alarm and may result in the public paying less attention to future notices.

## II. IMPLEMENTATION AND INTERDEPARTMENTAL COORDINATION

Under emergency conditions that require the issuance of a precautionary boil water notice, or following confirmation of the presence of microbiological pathogens within a public water supply, the public water system, as required within s. 403.857, F.S. shall notify the local county health department, the DEP, and the affected public as soon as possible, but not later than 24 hours after the occurrence. In response, the DOH will coordinate with DEP, other state and local governmental agencies, and the public water system, immediate actions which are to be taken (including the issuance of a precautionary boil water notice) to minimize danger to the public. Adequate communication between DEP, the DOH, and the public water system is essential to ensure that all agencies are fully informed prior to the issuance of a precautionary boil water notice. Whichever department issues the notice will also be responsible for rescinding it. The DEP district offices and local county health departments shall coordinate these activities.

The public water system can issue its own precautionary boil water notice using these guidelines if it determines it is necessary. However, the DOH shall be notified as soon as possible in such a case, and a copy of the notice submitted to the DOH. Within those counties that the DEP has full regulatory authority over all public water systems, the public water system shall also notify the DEP district office as soon as possible. Public water systems that issue their own precautionary boil water notices shall also be responsible for rescinding them; however concurrence by the DEP district office or applicable county health department is required prior to rescission of such.

All precautionary boil water notices shall be issued and delivered to the general public in a manner consistent with the public notification requirements contained in Chapter 62-560.410(1)(a) 1., Florida Administrative Code (FAC), telephoned, or hand-delivered to all affected residences and businesses as soon as possible, but in no case later than 24 hours after the water system learns of the violation, exceedance, situation or failure.

Additionally, the DOH shall take the lead role in cooperating with other governmental agencies and all contacts with the media regarding emergency notices involving any and all imminent threats to public health involving private and public water supply systems.

## III. TYPES OF INCIDENTS

### A. Microbiological Contamination.

1. A precautionary boil water notice shall always be issued in cases where confirmatory water samples indicate the presence of fecal coliform bacteria, E. coli, or other waterborne pathogens. The presence of such indicates an acute threat to the public's health and warrants immediate action by the public water system and public health officials to alert consumers..

2. The rules contained in 62-550.817, F.A.C., 'Requirements for Subpart H Surface Water Systems were developed to ensure the removal or inactivation of Cryptosporidium, Giardia and viruses. Finished water turbidity levels exceeding 1.0 NTU in conjunction with the failure of a public water system to maintain adequate disinfection to achieve the required removal/inactivation of Cryptosporidium, Giardia, and viruses would warrant the issuance of a precautionary boil water notice.

3. With the continuing threat of drinking water contamination via emerging microbial contaminants such as Cryptosporidium, all water utilities utilizing surface water and/or groundwater under the direct influence of surface water as their source for drinking water, should also carefully monitor certain critical water process parameters. Abrupt changes in process parameters such as turbidity, particle counts, and disinfectant residuals may indicate a compromise in the water treatment process and a potential of increased microbial risk for consumers. Abrupt changes in the quality of the source water which cannot be accommodated by the existing treatment processes, a disruption in filtration processes, and the presence of pathogenic microbes in finished water are factors which should be considered in determining action by the public water system. Such action should be made upon the evaluation of all available water quality data (i.e. raw and finished water turbidity, the presence of fecal coliform or E. coli, particle counts, turbidity measurements on individual filters, treatment plant effluent and epidemiological information which confirms increases in gastrointestinal disease in the target community) by a task force comprised of local public health officials, public water system personnel, and health care professionals.

### B. Zero or Negative Pressure.

A precautionary boil water notice shall be issued in cases where pressure in any part of the water distribution system has been reduced to zero, or a negative pressure, unless the zero pressure is due to an isolated water main break and the public water system can demonstrate that the integrity of the water system has been maintained as specified in III.D below. Special attention must be given where there are multi-story buildings, or critical use facilities such as: schools, child day care establishments, assisted living facilities, nursing homes, dialysis centers, hospitals or other health care centers, or food establishments.

#### C. Low Water Pressures.

A drop in water pressure in a water distribution system is a signal of the existence of conditions which could allow contamination to enter the public water system through backflow by back-pressure or back-siphonage. Water pressure falling below the regulated service level of 20 psi does not, in the absence of other aggravating factors, necessarily constitute an imminent health hazard, unless determined by the DOH or DEP district office. Aggravating factors include the presence of multi-story buildings not adequately protected against backflow where the static head exceeds the residual main pressure, a historical record of inadequate disinfectant maintenance in the water distribution system, analytical records indicate recurring microbiological or turbidity problems, or the water system lacks an approved cross-connection control program. The decision to issue the precautionary boil water notice would be made on a case by case basis and based upon professional judgment of the entity issuing the boil water notice, and upon the review of all available data that may indicate the extent of the problem such as type of facilities affected, duration of the low pressure condition, and possibility of infiltration into the potable water system. If however, the water pressure falls below 20 psi and affects critical use facilities such as: schools, child day care establishments, assisted living facilities, nursing homes, dialysis centers, hospitals or other health care centers, or food establishments, a boil water notice is required. Microbiological samples shall be collected immediately within the area affected at several locations, and measures shall be taken expeditiously to restore the integrity of the water system.

#### D. Water Main Breaks/Interruptions.

Precautionary boil water notices must be issued in cases of water main breaks, or planned distribution system interruptions, which are deemed an imminent public health threat by the DOH state health office, local county health department or DEP district office, or will affect the bacteriological quality of the drinking water unless the public water system can demonstrate, by sound engineering judgment that the integrity of the water system has been maintained. Assurance from the public water system that a positive pressure has resulted in a continuous outflow of water prior to the repair, that applicable best management practices have been used during the repair as outlined in Attachment C, and that no non-potable water, soil or other potentially contaminated material has entered, or may enter the broken water main during the repair, will serve to demonstrate that the integrity of the water system has been maintained. Water mains repaired with a clamping device while remaining full of pressurized water as required per Rule 62-555.340(1)(d), F.A.C., would not require the issuance of a precautionary boil water notice. (See Attachment C for Best Management Practices for Water Main Breaks and Repairs.) Even in cases where the public water system can demonstrate that the integrity of the water system has been maintained, the affected water main should be repaired, flushed, disinfected, sampled, and monitored for chlorine residual according to ANSI/AWWA Standard C651, as soon as possible.

#### E. Flooding of Wells.

Precautionary boil water notices shall be issued in all cases where surface water inundation of a water supply well has occurred. The presence of disinfectant resistant strains of protozoa such as Giardia or Cryptosporidium warrant special precautions to be taken until the microbiological integrity of the water system is verified or restored. Seasonal and storm related flooding warrant special attention from public water utilities as well as private well owners.

### IV. DISASTER RELATED EVENTS:

Responding to natural and man-made disasters offers unique challenges in addressing potential microbiological contamination of public drinking water supplies. Public water systems may experience a total loss of water pressure, increases in turbidity, or there may be evidence of isolated water main breaks or areas where there is a loss of pressure from detached service connections.

During a hurricane most community public water systems are able to utilize an auxiliary power source to maintain water pressure when significant power interruptions occur. However, when auxiliary power is not available or cannot be maintained, a total loss of water pressure may occur, thus resulting in the potential for contaminants to enter the water distribution system.

#### A. Addressing A System-wide Loss of Pressure or Increase in Turbidity:

A system-wide pressure loss or increase in turbidity exceeding the

maximum contaminant level requires a degree of assurance that the water system is microbiologically safe once water pressure is restored. For all events of this nature, the respective public water system shall take the following measures:

1. Alert the affected public to only consume water that has been boiled or disinfected according to paragraph D below. Note: Increases in water turbidity at Surface Water source or UDI water plants, or flooded wells could introduce contamination by protozoa such as *Cryptosporidium*. In these cases, only boiling water or the utilization of bottled water should be advised to the affected population. Chlorination requires an inordinate amount of chemical concentration and time to adequately kill *Cryptosporidium* oocysts.
2. Elevate the disinfection residual within the entire water distribution system to no less than 1.0 mg/L free chlorine, or 3.0 mg/L total chlorine.
3. Adequately flush the water distribution system. With the most concentration at dead-ends, or areas where there is limited water flow.
4. Restore water pressure to the system, such that all service connections possess a minimum pressure of 20 psi.
5. Conduct microbiological monitoring at various sample points within the water distribution system according to the water system's approved microbiological sampling plan.

#### B. Addressing Isolated Water Main Breaks and Areas of Low Water Pressure:

During a hurricane or other disaster, public water systems may only lose pressure to isolated portions of their water distribution system. In response to such events, public water systems should address each water main break or isolated area as a separate point of attention, to prevent potential microbiological contamination. In responding to each water main break or area of pressure loss, the specific boundaries of the area(s) affected must first be determined.

Once the boundaries of the isolated area(s) are established, the water system shall implement the appropriate provisions described within section III above, and immediately alert the affected public via a precautionary boil water notice.

#### C. Non-community (NC) Public Water Systems:

A prolonged loss of electrical power at establishments served by NC public water systems can have a negative consequence on the water systems' ability to maintain the microbiological integrity of its finished water. During these events, the disinfection capacity is generally lost, and there is also an inability to maintain water pressure within the water distribution system.

Following the restoration of power, the system's water shall not be consumed until necessary repairs are completed, the water system has been properly flushed, water pressure has been restored to 20 psi or more, there is a minimum chlorine residual of 1.0 mg/L free chlorine within all portions of the water distribution system, and the water has been analyzed and determined to be free of microbiological contamination.

#### D. Chemical Disinfection of Drinking Water During Power Outages:

During natural or man-made disasters the boiling of water may not be possible due to the lack of power within water system's service area. If there is no power, residents and businesses should be instructed to disinfect their drinking water as follows:

Tap water can be disinfected by adding 8 drops of unscented household bleach (4 ' 6 % active ingredients) to each gallon of water, then mixing the water and allowing it to stand for a minimum period of 30 minutes. Note: Cloudy water requires 16 drops of bleach and a 30 minute contact time. Also, other approved chemical disinfectants are available at stores that sell camping and hiking supplies.

#### V. CONTENT AND DELIVERY OF PRECAUTIONARY BOIL WATER NOTICES

The content of precautionary boil water notices shall include the following information: name of the public water system, geographical area affected, statement of the problem, date of occurrence, consumer corrective measures to be taken, and action being taken by the public water system to correct the problem. A statement indicating that consumers will be officially notified when the boil water notice is lifted following receipt of satisfactory microbiological sample results, and a telephone number directing consumer questions to an appropriate party shall also be included.

Note: The Centers for Disease Control (CDC) and the EPA have indicated that a rolling boil for a period of one minute is sufficient to render drinking water microbiologically safe, free of bacteria, viruses, and protozoa.

All precautionary boil water notices shall be issued and delivered to the general public in a manner consistent with the public notification requirements contained in Chapter 62-560.410(1)(a) 1., Florida Administrative Code (FAC), telephoned (such as reverse 911 calling for large scale incidents), or hand-delivered to all affected residences and businesses as soon as possible, but in no case later than 24 hours after the water system learns of the violation, exceedance, situation or failure.

[\(See Attachment A - pdf <1mb - for a sample boil water notice\)](#)  
[\(attacha.pdf\)](#)[\(See Attachment A - Doc <1mb - for a sample boil water notice\)](#)  
[\( documents/sampleprecautionaryboilwaternotice.docx\)](#)

#### VI. RESCISSION OF BOIL WATER NOTICES

It shall be the responsibility of the entity issuing the precautionary boil water notice to also rescind it, following receipt of a minimum one day of representative bacteriological sample results (for water main breaks, a minimum of two representative samples shall be collected; one sample upstream and one sample downstream of the break), supplemented by appropriate disinfection residual levels and other water quality parameters indicating that the water is safe to drink and with the concurrence of the DOH, or jurisdictional DEP district office. However, even if a precautionary boil water notice is rescinded after one day of satisfactory bacteriological sample results, a second day of bacteriological samples still must be collected in accordance with Rule 62-555.340, F.A.C., following water main repairs. If unsatisfactory bacteriological levels are detected during the one day initial sampling event, the water system shall provide two consecutive days of satisfactory bacteriological sample results prior to rescission of the precautionary boil water notice. If unsatisfactory bacteriological levels are detected during the second day of sampling following water main repairs, the precautionary boil water notice shall be reissued if it was rescinded after the initial one day sampling event, and the water system shall provide two consecutive days of satisfactory bacteriological sample results prior to rescission of the precautionary boil water notice. As is required during the issuance of such, all parties involved, including DEP, other governmental agencies, the public water system, and the media, must be adequately informed of the rescission of the precautionary boil water notice.

[\(See Attachment B - pdf <1mb - for a sample rescission notice\)](#)  
[\(attachb.pdf\)](#)  
[\(See Attachment B - doc <1mb - for a sample rescission notice\)](#)  
[\( documents/sampleboilwaternoticerescission.docx\)](#)

All inquiries regarding this policy should be directed to Edward A. Bettinger, R.S., M.S., Environmental Health Program Consultant in the Bureau of Water Programs, 4052 Bald Cypress Way, Bin # C22, Tallahassee, Florida 32399-1742, Suncom 205-4240 or (850) 245-4240.

#### Best Management Practices For Water Main Breaks and Repairs (ATTACHMENT C)

[\(Click here for a pdf version of Attachment C - pdf <1mb\)](#)  
[\(attachc.pdf\)](#)

##### 1. Interruption of Service

Whenever possible, repair work shall be performed without interruption of service. If an interruption is necessary, the repair plan shall include considerations to minimize the length of time for the outage. These considerations include measures to assure all equipment and supplies to effectuate the repair are available at the site to expedite the repair once service is interrupted.

##### 2. Pipe Conditions

If pipe cannot be repaired under pressure by use of a repair clamp, the pipe should not be completely depressurized until the pipe is exposed and the pit meets the conditions described in 8 below. After the pipe is unpressurized, a continuous outflow of water from the pipe on each side of the repair should be maintained during the repair process to eliminate the potential for the introduction of contaminants, and to facilitate ongoing flushing action. Precautionary boil water notices shall be issued when these conditions cannot be maintained.

##### 3. Magnitude of Area Impacted

Consideration shall be given to the relative size of the area impacted not only with regard to geographic size but also to the number of customers affected. A broken water main encompassing a small area, and a limited number of customers still could have negative consequences on the health of those affected. It is thus important that precautionary measures are undertaken by the water utility.

##### 4. Potential Hazards

A survey of potential hazards in the vicinity of the work area shall be completed. Potential sources of contamination such as septic systems or underground storage tanks may be cause to issue a precautionary boil water notice regardless of safeguards implemented at the work site. Due consideration should be given

to this potential on a case-by-case basis.

Service connections within the area of consideration should also be surveyed. Any connection without the proper type of backflow prevention device, and, or the presence of multi-story buildings shall be factored into the decision-making relative to potential for contamination.

#### 5. Flushing

Whenever possible, unidirectional or bi-directional flushing towards the work site should be done before, during, and subsequent to a water main break or repair activity.

As a measure of flushing effectiveness, chlorine residuals shall be evaluated in the immediate and surrounding areas around the repair site. Flushing should be continued until system residuals are resumed and stabilized within the water distribution system, to achieve the minimum required disinfectant residual throughout the system.

#### 6. Isolation of Area

In an effort to localize drops in service pressure, minimize impacts to service, and reduce opportunities for contamination, valves should be closed or throttled as needed to isolate the repair area as much as possible. The length of pipe(s) with a reduction in pressure or less than full pipe conditions should be minimized.

#### 7. Service Connections

Consideration to backflow and the presence of multi-story buildings should be given in order to reduce the potential for the water main to have contaminants introduced, thus it may be prudent to valve off applicable service connections in the area impacted.

#### 8. Pit Considerations

Standing surface, ground, or potable water in the pit of a water main break should not be allowed to remain during periods of unpressurized pipe conditions, less than full pipe flow, or whenever flow is not being maintained. Portable dewatering pumps shall be utilized to keep the hole dewatered below the pipe inverts during all repair activities. Additionally, soil should be excavated to a minimum depth of 12 inches below the pipe inverts. Precautionary boil water notices shall be issued when these conditions cannot be maintained.

#### 9. Disinfection and Bacteriological Testing

All repair items, piping, and appurtenances shall be properly disinfected or swabbed in accordance with Rule 62-555.340, F.A.C., and AWWA Standard C651.

As a record of procedural BMP effectiveness, a minimum of one bacteriological sample should be collected on either side of the repair area for two consecutive days. In the case of precautionary boil water notices, they may be lifted after receipt of one day of satisfactory analytical results. However, if the analytical results are positive, two consecutive days of satisfactory water quality analyses are required prior to rescinding the boil water notice. The utility shall coordinate this activity with the local FDEP and/or DOH representatives.

#### 10. Type of Event

Unplanned repair or outages have an inherently higher risk of potentially impacting public health than planned or 'controlled' events. Hence, this should be duly weighted into decisions regarding issuance of precautionary boil water notices. As such, coordination between the DEP or DOH/CHD office and the affected utility is important to determine the necessity for the issuance of a precautionary boil water notice. It is important that the actions of the affected utility comply with Rule 62-555.340, F.A.C.

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(<http://www.flhealth.gov/FloridaDepartmentofHealth/About/ConnectWithDOH.aspx>)

#### FEATURED PROGRAMS

  
(<http://www.healthiestweightflorida.com/>)

  
(<http://www.tobaccofreeflorida.com/>)

#### Florida Health Across the State

State Surgeon General (</about/ssg/index.html>)  
State Leadership (</about/ssg/leadership/index.html>)  
Health Department Leadership (</about/ssg/chd-leadership/index.html>)

Boards, Councils & Committees (</provider-and-partner-resources/advisory-councils-stakeholder-groups/index.html>)

About Florida Health (</about/index1.html>)

Accreditation (</about/accreditation/index.html>)  
Careers (</about/careers/index.html>)  
Public Meeting Notices (</about/sunshine-info/public-meeting-notices/index.html>)  
Public Notices (</about/sunshine-info/public-notices/index.html>)  
Public Records Requests (</about/sunshine-info/public-records-requests/index.html>)  
State Health Improvement Plan ([/about/state-and-community-health-assessment/ship-process/index.html?utm\\_source=flhealth.gov%26utm\\_medium=text\\_linkdirect%26utm\\_campaign=ship\\_sha%26](/about/state-and-community-health-assessment/ship-process/index.html?utm_source=flhealth.gov%26utm_medium=text_linkdirect%26utm_campaign=ship_sha%26))  
Annual Regulatory Plans—Florida Department of

# **Best Management Practices For Water Main Breaks and Repairs**

**ATTACHMENT C**

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