




DEP Notification, Precautionary Boil Water Notices and Incident Reporting




References

- Florida Administrative Code (FAC) 62-555.350(10)
<http://www.dep.state.fl.us/water/drinkingwater/rules.htm>
 - American Water Works Association (AWWA)
Standard C651 (*Disinfection of Water Mains*)
 - Department of Health's (DOH) "Guidelines for the Issuance of Precautionary Boil Water Notices" (*Guidelines*) as adopted in Rule 62-555.335 FAC.
<http://www.doh.state.fl.us/environment/water/manual/boil.htm>
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Presentation Outline

- When to contact regulatory agencies
 - When to issue a precautionary boil water notice (PBWN) - *summary of DOH's Guidelines*
 - What bacteriological samples to collect
 - How notices should be issued and rescinded
 - Questions
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Why is this Presentation Being Given?

- The recent hurricane season brought boil water notices to the forefront. Aside from these natural disasters, what other situations require the issuance of precautionary boil water notices?
 - Purpose is to provide regulation clarification and outline proper procedures for boil water notices.
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When to Notify the DEP

FAC 62-555.350 (10)

- The occurrence of any abnormal color, odor, or taste in a public water system's raw or finished water,
 - Failure to meet disinfection requirements,
 - The breakdown of any water treatment or pumping facilities, or water main break expected to adversely affect finished-water quality, interrupt water service \geq 150 service connections, or \geq 350 people, or any one service connection for $>$ 8 hours, **or**
 - The issuance of a PBWN in accordance with the "Guidelines" (*The environmental health section of your county health department (CHD) must also be notified if a PBWN is issued.*)
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Summary of DOH's Guidelines

1. Microbiological
2. Zero or Negative Pressure
3. Low Water Pressure
4. Water Main Breaks/Interruptions
5. Flooding of Wells



1. Microbiological



- Confirmatory samples indicate the presence of fecal, *E. coli* or other waterborne pathogens.
- Boil Water Notice must be issued as soon as possible, but no later than 24 hours after the system learns of the result.
- DEP must be contacted no later than the end of the day the system learns of result (62-550.518(10),FAC).
- To lift the notice, repeat samples (original, upstream and downstream) must all be clear of total coliform, fecal and *E.coli* bacteria, and an adequate chlorine residual ($\geq 0.2\text{mg/L}$) must be maintained.



2. Zero or Negative Pressure

- Total pressure loss (power outage, emptying of storage tanks, pump failure, etc.) should always result in a PBWN.
 - Contact the DEP and CHD when notice is issued. May also contact the State Warning Point (SWP) if the entire system has been affected or if after hours assistance is needed. (though SWP was designed primarily for security concerns).
- One set of bacteriological samples, representative of the affected areas, must be collected before the notice is lifted.
- In case of *system-wide* loss of pressure, all routine compliance samples must be collected. These samples should be marked as “other” and ***will not double*** as routine compliance requirements.



3. Low Water Pressure

- Pressures <20 psi (but greater than zero) may not always require a PBWN.
- Use professional judgment (what types of facilities were affected, for how long, and what's the possibility of cross-connection?).
- Even if PBWN is not issued, bacteriological samples should be collected (representative of the area affected) and adequate pressure should be restored as soon as possible (*Guidelines*).



4. Water Main Breaks

(FAC 62-555.340 and DOH "Guidelines")

- PBWN should be issued unless system can demonstrate that an outflow of water was maintained at all times (i.e. water mains repaired with clamping devices while remaining full of pressurized water).
- Valving off the break to make repairs results in areas of zero pressure: PBWN should be issued for those customers in the affected area.



After Main Break Repairs:

- Main shall be disinfected in accordance with AWWA standards (C651).
- Obtain adequate disinfectant residual (0.2mg/L - 4.0mg/L).
- Collect bacteriological samples upstream and downstream at locations representative of the area affected.



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

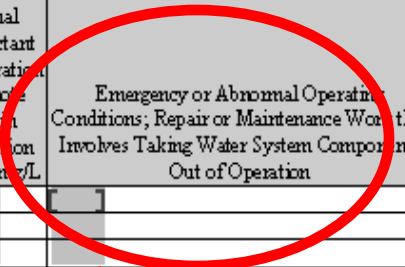
PWS Identification Number: _____ Plant Name: _____

III. Daily Data for the Month/Year of:

Means of Achieving Four-Log Virus Inactivation/Removal: * Free Chlorine Chlorine Dioxide Ozone Combined Chlorine (Chloramines)
 Ultraviolet Radiation Other (Describe): [_____]

Type of Disinfectant Residual Maintained in Distribution System: Free Chlorine Combined Chlorine (Chloramines) Chlorine Dioxide


Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*										Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose					
				Peak Flow Rate, gpd	Lowest Residual Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	Lowest CT Provided Before or at First Customer During Peak Flow, mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²			
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Planned Interruptions in Service

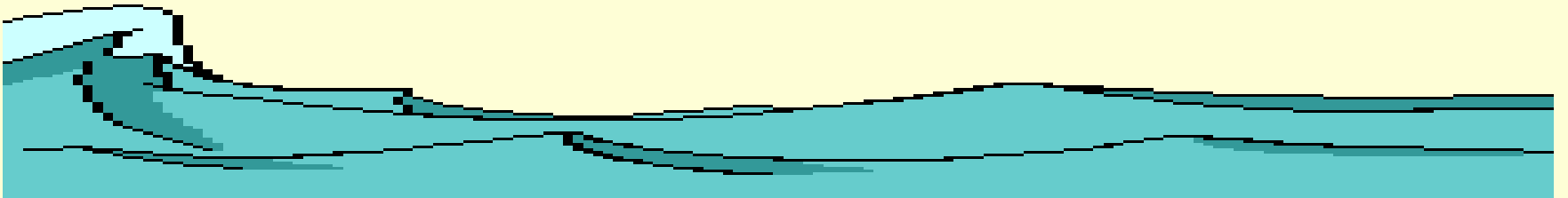
FAC 62-555.350(10)(d)

- Notify customers of water outages/repairs no later than the business day before the work is scheduled.
 - Contact the DEP before taking public water system (PWS) components out of operation for planned repairs or maintenance if finished-water quality may be affected, or if water service will be interrupted to ≥ 150 service connections, or ≥ 350 people, or any one service connection for > 8 hours, or when issuing a PBWN.
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5. Flooding of Wells


- PBWN should be issued in all cases where a water supply well has been inundated with surface water.






Required Bacteriological Sampling


(summary)

- *E.coli* or fecal maximum contaminant level (MCL) = normal repeat samples must be collected as soon as possible (original, upstream, downstream)
 - Loss of pressure = 2 day of samples representative of the area affected
 - Main Breaks = 2 days of samples representative of the area affected.
 - Well flooding = After disinfection, a 20-sample bacteriological well survey must be completed. The PBWN may be lifted after two consecutive days of good samples (2 each day for a total of 4 samples), but the survey must still be completed.
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Issuing the Notice

- Contact the media (TV, radio, newspaper) and/or issue door hangers or flyers if a small residential area is affected.
 - The notice should be distributed by whatever means are necessary and sufficient to reach those affected by the incident.
 - Example notices are included in the PBWN *Guidelines*.
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Precautionary Boil Water Notice (attachment A)
[http://www.dep.state.fl.us/central/Home/DrinkingWater/Reporting/
Boil/BoilWater.htm](http://www.dep.state.fl.us/central/Home/DrinkingWater/Reporting/Boil/BoilWater.htm)

Boil Water Notice
2007 Focus on Change

(DATE)

PRECAUTIONARY BOIL WATER NOTICE

TO: RESIDENTS OF (NAME OF CITY, TOWN, TRAILER PARK, SUBDIVISION OR COUNTY) LIVING IN THE AREA BOUNDED BY (STREET, AVENUE, CANAL OR OTHER DESCRIPTIVE BOUNDARY)

(BRIEF DESCRIPTION OF EVENT SUCH AS: BACTERIOLOGICAL ANALYSES OF SAMPLES OBTAINED FROM YOUR WATER DISTRIBUTION SYSTEM HAVE SHOWN POSSIBLE CONTAMINATION OF THE WATER, OR A WATER MAIN BREAK HAS OCCURRED AT _____, OR A LOSS OF WATER PRESSURE HAS BEEN EXPERIENCED DUE TO _____)


THEREFORE, AS A PRECAUTION, WE ADVISE THAT ALL WATER USED FOR DRINKING, COOKING, MAKING ICE, BRUSHING TEETH, OR WASHING DISHES BE BOILED. A ROLLING BOIL OF ONE MINUTE IS SUFFICIENT. AS AN ALTERNATIVE BOTTLED WATER MAY BE USED.

(* WHERE THERE IS A LOSS OF POWER, DRINKING WATER UTILITIES SHOULD INCLUDE LANGUAGE OUTLINED IN PARAGRAPH IV D. OF THESE GUIDELINES DESCRIBING THE CHEMICAL DISINFECTION OF DRINKING WATER.)

THIS "PRECAUTIONARY BOIL WATER NOTICE" WILL REMAIN IN EFFECT UNTIL THE PROBLEM HAS BEEN CORRECTED AND A BACTERIOLOGICAL SURVEY SHOWS THAT THE WATER IS SAFE TO DRINK.


IF YOU HAVE ANY QUESTIONS YOU MAY CONTACT (NAME OF PERSON, AGENCY) AT (PHONE NUMBER).


(_____ SIGNATURE _____)
(NAME, TITLE AND AGENCY OF
OFFICIAL ISSUING THE NOTICE)





Rescinding the Notice

- Notices can be lifted after two consecutive days of satisfactory bacteriological samples are obtained, and DEP and CHD have been notified.
 - Whoever issues the PBWN shall also be responsible for the rescission notice.
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Precautionary Boil Water Notice (attachment B)
<http://www.dep.state.fl.us/central/Home/DrinkingWater/Reporting/BoilWater.htm>

ATTACHMENT B

(DATE)


RESCISSION OF PRECAUTIONARY BOIL WATER NOTICE

TO: RESIDENTS OF (NAME OF CITY, TOWN, TRAILER PARK, SUBDIVISION OR COUNTY) LIVING IN THE AREA BOUNDED BY (STREET, AVENUE, CANAL OR OTHER DESCRIPTIVE BOUNDARY)

THE (DATE) "PRECAUTIONARY BOIL WATER NOTICE" IS HEREBY RESCINDED FOLLOWING THE (ACTION TAKEN TO CORRECT THE PROBLEM) AND THE SATISFACTORY COMPLETION OF THE BACTERIOLOGICAL SURVEY SHOWING THAT THE WATER IS SAFE TO DRINK.


IF YOU HAVE ANY QUESTIONS, PLEASE CALL (NAME, AGENCY) AT (PHONE NUMBER).

(_____ SIGNATURE _____)
(NAME, TITLE AND AGENCY OF
OFFICIAL RESCINDING THE NOTICE)






How to Notify DEP/CHD

- Both the DEP and your CHD must be made aware of the issuance of PBWNs by no later than noon the following business day (these agencies are likely to receive phone calls from the public and should be kept current on water system status).
 - Phone, email, fax or e-fax to notify agencies.
 - “Incident Reports” may be used to facilitate reporting of boil water notices.
 - Bacteriological test results as well as rescission notice must follow within the week.
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“Incident Report”

- Recommended, but not required.
 - Electronic version (Word document) available (<http://www.dep.state.fl.us/central/Home/DrinkingWater/Reporting/IncidentReporting/IncidentReporting.htm>)
 - Fax, E-Fax or email this to the DEP and your CHD.
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DEPARTMENT OF ENVIRONMENTAL PROTECTION

C e n t r a l D i s t r i c t

Drinking Water Program

MALFUNCTION OR **INCIDENT REPORT**

407/893-3318 OR 3988; 894-7555, EXT. 2243

FAX: 407/893-4418; E-FAX: 850/412-0740

Date: (1) Time: (2) Received By: (3)

Reported By: (4) Business Name: (5)

Name of Plant/System: (6) PWS ID Number: (7)

Address: (8)

System Phone: (9)

County: (10)

Owner: (11)

Contact Person: (12) Phone #: (13)

Failure (14) Planned Outage Date: (14a) Time: (14b)

Expected to be (or was) back in service: (15) Date: (15a) Time: (15b)

Location of Trouble (address): (16)

Statement of Trouble (check as many as necessary to explain incident): (17)

- Water main breaks
- Pressure greater than 20-psi
- pressure drop below 20 psi.
- Outage (no water to customers)
- Service line break
- tie in (no pressure drop)
- valve repair, replace or shut off
- Treatment Facilities
- Pumping Facilities
- Storage Facilities
- Well failure
- Plant equip. break down
- Planned main clearance (explain below)
- Other: (18) Explain: (19)

Was integrity of water system maintained Yes No If yes, explain (20)

Number of Customers Affected: (21) _____ Connections Individuals

Corrective Action:

Prior to placing back into service, was line/ Equipment: (22)

Flushed: Yes No

Superchlorinated/Disinfected Yes No

Bacteriologicals Requested? Yes No Sample Location: _____

Was heavily chlorinated water released to environment Yes No; to distribution Yes No

Explain: (23) _____

Was a Precautionary Boil Water Notice Issued per DOH Guidelines dated 8/26/1999: Yes No
(24)

If a Precautionary Boil Water Notice was issued, please attach or submit together with this report. Bacteriological reports (2 days) as well as a rescission notice must follow.


Valve #	Size	Num. of valves closed	Location of Valve
(25)	(26)	(27)	(28)

Remarks: (29)



Concluding Remarks

Purpose of presentation was to:

- Outline the issuance and rescission of boil water notices as required by DEP regulations and DOH *Guidelines*.
 - Emphasize the importance of communications between FDEP, CHD, water systems and the public.
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Contacts

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Questions/Comments?



Thank you!