

		West Virginia Department of Health and Human Resources			
		MANUAL OF ENVIRONMENTAL HEALTH PROCEDURES			
Section	Drinking Water	Date	June 6, 2009	Procedure #	DW-23
Subject	Boil Water Notices for Public Water Systems			Page	1 of 5

On July 1, 2002, the West Virginia Bureau for Public Health (WV BPH) adopted the federal public notice rule, which significantly alters the public notification procedures that have historically been used. This rule requires "... notice to the public for violations and other situations with significant potential to have serious adverse effects on human health as a result of short-term exposure ..." Many acute violations require a Public Notice (PN) that tells the water consumer to boil water prior to use. Other PNs, however, will suggest that the public purchase bottled water, as boiling will intensify the concentration of some chemical contaminants, such as nitrate.

Under the PN rule, BWNs are considered a type of required PN which must be issued by the water system. This policy will address only BWNs and the related Do Not Use (DNU) water notices. The larger topic of PNs will be covered in a separate, but related policy (DW-37). (Note: It is recognized that many BWNs will be precautionary pending lab results and confirmation.)

The following is a list of acronyms that may be used throughout this document:

WV BPH – West Virginia Bureau for Public Health
 BWN – Boil Water Notice
 DNU – Do Not Use
 DO – Environmental Engineering Division District Office
 LHD – Local Health Department
 MCL – Maximum Contaminant Level
 PN – Public Notice
 PWS – Public Water System
 TCR – Total Coliform Rule

Utility Issued Boil Water Notices

When is a Boil Water Notice issued?

Utility issued BWNs are issued when conditions have the potential to cause adverse effects on public health. BWNs should be issued by the affected PWS **as soon as practical, but no later than 12 hours** after the PWS becomes aware of the conditions warranting a BWN. Examples of conditions which may be the basis for the BWN include, but are not limited to, the following:

- Any loss of service to customers.
- A water system's storage reserve has been depleted to the point customers no longer have service.

- Inadequate chlorine residual in the distribution system and/or at the entry point to the distribution system (less than 0.2 mg/l).
- An unscheduled, major emergency, necessitating system repair and a potential public health threat exists.
- Water pressure is less than 20 psi.
- Cloudy water exists.
- Valid customer complaints about water quality.
- Routine TCR sample found to be total coliform present, with fecal or E. coli present.
- No certified operator.
- Occurrence of a potential or confirmed waterborne illness outbreak.
- Any condition that produces a potential public health threat.

When is a Do Not Use notice issued?

Under certain circumstances, boiling water will not insure that it is safe to drink and may have the opposite effect of concentrating contaminants. In these cases, rather than issuing a BWN, a PN informing consumers not to use the water is required. This DNU notice may be targeted to specific populations or may apply to the entire population served by the PWS, depending on the contaminant of concern. Do Not Use notices should be issued by the affected PWS **as soon as practical, but no later than 12 hours** after the PWS becomes aware of the conditions warranting a DNU. Consultation with the DO is required **as soon as practical, but no later than 12 hours** after any PN, in order to determine any additional required actions. Conditions or situations which require issuance of a DNU notice include, but are not limited to, the following:

- Nitrate/nitrite concentrations exceeding the MCL (greater than 10.0 mg/l and 1.0 mg/l, respectively.)
- Any chemical or hydrocarbon contamination of unknown quantity which may pose an immediate public health risk.
- Any credible threat to the water system.

What information must be included in the BWN/DNU?

The form of the BWN/DNU will be similar to the accompanying example. Because the BWN/DNU is a form of PN required under the PN Rule, it must include the following required elements:

1. A description of the violation or situation causing the PN.
2. When the violation or situation occurred.
3. Potential health effects.
4. Population at risk.
5. Whether alternate water supplies should be used.
6. Actions consumers should take.
7. What is being done to correct the violation or situation.
8. When the system expects to return to compliance.
9. Name, phone number and business address for more information.
10. Standard distribution language.

If a PWS has a significant population (more than 10% of any one nationality of the retail customers) that cannot read or understand English, the PWS will also be required to distribute the PN in the understood language of that nationality.

How is the public to be notified?

The PWS shall contact the DO **as soon as practical, but no later than 12 hours** after deciding to issue a BWN/DNU. Depending on the extent of the BWN/DNU, the public may be notified by a number of methods, including the following:

- Door to door notification of each affected customer.
- Telephone contact with each affected customer.
- Local broadcast media (television and radio).
- Posting of notice in conspicuous locations throughout the affected service area.
- Electronic media notification of customers (e-mail, text messaging, etc.).
- Any other effective means of notifying affected customers.

Who must be notified?

Copies of the BWN/DNU notices will immediately be sent by fax or e-mail to the DO and LHD(s). If the initial notification to the DO is by e-mail, a copy of the notification must also be sent by fax or regular mail service. (Note: Current EPA regulations do not allow official copies of required documents/PNs to be accepted by e-mail. All official documents must be submitted by either facsimile or regular mail.)

In addition to notifying the affected customers, the DO, and the LHD(s), the PWS should consider directly notifying the following entities (as applicable):

- The local Office(s) of Emergency Services.
- The local Board(s) of Education.
- Private schools.
- Child and adult day care centers.
- Colleges or universities.
- Any health care facilities within the affected service area, including: hospitals, medical clinics, dialysis facilities, residential care facilities, dental offices, etc.
- Housing authorities.
- The West Virginia Office of Health Facility Licensure and Certification (304-558-0050).

What actions/conditions are required for lifting the BWN/DNU notice?

Logic dictates that the condition or situation which created the need to issue the BWN/DNU must be remedied or corrected prior to the BWN/DNU being lifted. The DO must be consulted and grant approval prior to public notification that the BWN/DNU has been lifted. There may be certain conditions or circumstances which make consultation with the DO especially critical when lifting a BWN/DNU. In addition to any remedial action that has been taken, water quality samples must be collected and analyzed, with appropriate results reported from the certified laboratory, prior to lifting the BWN/DNU. The type and number of water quality samples are to be determined in consultation with the DO. The following table

provides the minimum number of samples to be collected and analyzed prior to the BWN/DNU being lifted for cases not involving an acute TCR violation. The DO may require additional samples depending on the circumstances necessitating the BWN/DNU.

MINIMUM NUMBER OF SAMPLES TO BE COLLECTED TO LIFT A BWN/DNU	
Population Affected	Minimum Number of Samples
1 – 1,000	1
1,001 – 2,000	2
2,001 – 3,000	3
3,001 – 4,000	4
4,001 – 5,000	5
5,001 – 7,500	6
7,501 – 10,000	7
10,001 – 25,000	8
25,001 – 50,000	9
>50,000	10

When a BWN is issued due to an acute TCR violation and the PWS wishes to lift the BWN during the same month, the system must collect at least five special purpose samples, with absent results. The five special purpose samples may be collected on the same day but at different locations in the distribution system, as long as at least one is from the same location of the previous fecal/E. coli present sample. If at least five special purpose samples are not collected after the problem is identified and corrected, then the system must take at least five routine compliance samples the following month, with absent results, in order to lift the BWN.

Note: It is clearly the responsibility of the PWS to insure all actions needed to lift the BWN/DNU are completed and assure that safe drinking water is offered to the consuming public; however, there may be times or situations in which the water system may request or be offered assistance in collecting the special purpose samples required for lifting a BWN/DNU. Appropriately trained individuals employed by both the LHD (i.e. Sanitarians) and the WV BPH (i.e. Engineers and/or Sanitarians) are considered authorized collectors, but due to the nature of their employment cannot be certified as water operators. All special purpose samples collected by employees of the LHD or WV BPH must be appropriately identified on the sample history form and may not be submitted to the laboratory as “RC” or regulatory check samples. The water system is responsible for all laboratory and other charges associated with the special purpose samples required for lifting the BWN/DNU.

How is the public to be notified that the BWN/DNU has been lifted?

While notifying the public that a BWN/DNU has been issued is extremely important, of equal importance is notifying the consuming public that the water system has returned to normal operations and the water is now safe to use without additional treatment. To this end, the public is to be notified that the BWN/DNU has been lifted in the same manner as it was originally notified of the BWN/DNU. Additionally, the DO, LHD and all other entities that were directly notified that a BWN/DNU was issued shall be directly notified that the BWN/DNU has been lifted.

Health Department Issued Boil Water Notices

The DO or the LHD may issue a BWN/DNU when existing conditions produce the potential for a public health threat and it is known that the PWS has not issued a BWN/DNU or PN. It is especially likely that the LHD may issue a BWN/DNU notice during emergency or disaster situations. Generally, the LHD will consult with the DO regarding the need to issue a BWN/DNU. The PWS will be issued a PN violation for failure to perform the PN.

When the DO or LHD issues a BWN/DNU, every effort will be made to provide as much information as possible; however, due to incomplete information, all ten elements of a PN may not be included. Local broadcast media is the most likely method to be employed by the DO or LHD when notifying the public of both the issuing and lifting of the BWN/DNU. The DO or LHD will also attempt to directly notify the local emergency services and boards of education as well as other local critical customers/entities. Conditions for lifting the BWN/DNU will be the same as if the water system issued the BWN/DNU.

<u>References</u>	WV 64 CSR 3, Public Water Systems 40 CFR Part 141, Subpart Q, The Public Notification Rule DW-18, Guidance for Public Facilities Affected by Boil Water Notices DW-37, Public Notices
<u>History</u>	Replaces DW-23 dated July 8, 1998
<u>Attachments</u>	10 Required Elements of a Public Notice Sample Utility Issued Boil Water Notice Sample Health Department Issued Boil Water Notice Sample Utility Issued Do Not Use Water Notice Sample "Do Not Use" Notice for Nitrate Sample "Do Not Use" Notice for Chemical Spill Sample BWN/DNU Lifted Notice