



Mitchell E. Daniels, Jr.
Governor

Judith A. Monroe, M.D.
State Health Commissioner

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DATE: July 12, 2007
TO: All Local Health Departments and other Interested Parties
FROM: A. Scott Gilliam, MBA, CFSP
Manager, Food Protection Program
SUBJECT: Guidance for Boil Water Orders, Advisories or Notices

The purpose of this document is to assist operators of retail food establishments to provide a safe water supply for use when a boil water order, advisory or notice has been issued by the local water utility, hereafter public water supply (PWS). **The terms, boil water order, boil water advisory or boil water notice**, are examples of public notification (hereafter, PN), required to be issued under Indiana Department of Environmental Management (IDEM), Drinking Water Branch, Public Water Supply Rule 327 IAC 8-2.1-7. The terms are used interchangeably by PWS, but they all mean the same thing. Therefore, it is important to understand what 327 IAC 8-2.1-7 requires.

BACKGROUND

327 IAC 8-2.1-7 "Public notification of drinking water violations" requires PN (TV, radio, newspaper, posting (depending on the size of the user base) etc....) by the PWS to all its affected customers for all violations of drinking water regulations. There are three (3) tiers of requirements based on the severity of the violation. Tier 1 is the tier to which this document applies. Tier 1 PN is based on:

- 1.** A violation of the maximum contaminant level (MCL) for total coliform when fecal coliform or E. coli are present;
2. Failure to test for fecal coliform or E. coli when any repeat sample tests positive for coliform;
3. A violation of MCL for nitrate;
4. A violation of maximum allowable turbidity limit;
5. An occurrence of a waterborne disease outbreak; or
6. Other violation or situation with significant potential to have adverse effects on human health as a result of short term exposure, such as water pressure drop or confirmed total coliform.

The PWS has 24 hours to notify all customers of all Tier 1 PN.

**If a PWS has a fecal coliform or E. coli violation, then the customers should be advised not to utilize the water for any purposes. An alternative water supply should be made available. It is not the responsibility of the PWS to provide for the continued operation of the business.

All of the above listed situations require a PN. The PWS(s) may not differentiate between the PN terms (Boil Water Advisory, Boil Water Notice or a Boil Water Order). A PWS **generally** issues an advisory if a drop in pressure is experienced due to a main break, power outage, or other distribution failure. A boil order is **generally** issued by the

Epidemiology Resource Center
2525 N. Shadeland Ave. Suite E3, Indianapolis, IN 46219
317.356.7190 ext. 253

Laboratories
550 West 16th Street, Suite B, Indianapolis, IN 46202
317.921.5500

Weights & Measures
2525 N. Shadeland Ave. Suite D3, Indianapolis, IN 46219
317.356.7078 ext. 221



2 North Meridian Street • Indianapolis, IN 46204 • 317.233.1325 • TDD 317.233.5577 • www.statehealth.in.gov

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PWS if they have a confirmed total coliform MCL. Whether it is an Advisory, Notice or Order, it is issued by the PWS, not by the Local Health Dept. (LHD).

NOTE: In case of a *chemical* contamination, fecal coliform or E. coli violation of the drinking water standards by the municipal water supply for a retail food establishment, the establishment shall immediately cease use of the water supply and contact the local health department. The water supply must be analyzed, treated and sampled for bacteriological and chemical safety prior to re-use by all customers. **The safety of water cannot be judged by color, odor or taste.**

DISCUSSION

To continue operating under a PN and comply with 410 IAC 7-24-320, retail food establishments must secure and use potable water from an approved source. The following points of use should be considered:

- ✓ All water used in beverages, such as coffee, tea, or fountain drink dispensers
- ✓ All water used as an ingredient in any food products (i.e.: condiments, sauces, dressings, desserts, etc.)
- ✓ All water used to make consumable ice
- ✓ All water used for handwashing
- ✓ All water used for washing and sanitizing of food contact surfaces
- ✓ All water used for washing of produce
- ✓ All water used for sanitizing solution for wiping cloths
- ✓ All water used in 3-compartment sinks (unless sanitized with heat booster or chemical)

The following equipment is plumbed directly into the municipal water supply; therefore, it must not be used:

- ✓ Carbonated fountain drink machines
- ✓ Produce misters
- ✓ Beverage "gun" dispensers
- ✓ Machines that manufacture ice
- ✓ Low-temperature/chemical sanitizing dishmachines
- ✓ Self-serve bulk water dispensers

Depending on why the PN is issued, it may be possible to use one of the following methods for disinfecting small quantities of water in batches:

- ✓ **Chlorination:** Add six (6) drops of liquid chlorine household bleach to one gallon of water and mix. Chlorine bleaches are inexpensive and can be secured from most grocery, discount, or drug stores. However, check the label to ensure that the active ingredient, sodium hypochlorite, is 5.25 percent and there are no additives for scent.
 1. Wait thirty (30) minutes after adding chlorine before using the water for drinking or cooking purposes.
 2. If this treatment does not give the water a taste of chlorine, the above instructions should be repeated. Continue adding chlorine until a slight taste of chlorine is present and use this amount for future treatments.
 3. The taste of chlorine is not particularly unpleasant and it will be evidence that the water is safe to drink.
- ✓ **Boiling:** The water may also be purified by boiling. In this method, bring the water to a full boil for at least five (5) minutes, as per IDEM's recommendation. Cool and aerate the boiled water by pouring it through the air from one clean container to another, or mixing rapidly with a clean utensil. Aeration will reduce the flat taste caused by boiling.

NOTE: Water filtering or treatment units may not remove all of the contaminants that the advisory or notice is targeting. Do not use an in-place unit unless it has first been approved by the local health department or the Indiana State Department of Health.

Acceptable Equipment/Alternatives to use:

- ✓ Hot water sanitizing dishmachines can be used once checked to ensure 180 degrees F minimum final rinse temperature and adequate water pressure is available.

- ✓ Directly plumbed coffee makers are allowable, once checked to ensure brewing temperatures of 180 degrees F or above are produced.
- ✓ Instead of using low-temperature/chemical dishmachines, use a 3-bay sink with a heat booster set at 170 degrees or a chemical sanitizer at 100 ppm of chlorine.

Retail food establishments may consider the following alternative procedures to minimize water usage:

- ✓ Commercially packaged ice may be substituted for ice made on-site.
- ✓ Single-serve items or disposable utensils may be substituted for reusable dishes and utensils.
- ✓ Prepared foods from approved sources may be used in place of foods requiring complex preparation.
- ✓ Restrict menu choices or hours of operation.
- ✓ Portable toilets may be utilized for sanitary purposes (units should include handsinks with their own water source).

Monitor news reports to determine the status of the water supply and to determine if the PN has been lifted.

Once the notice is rescinded, these precautionary measures *must* be followed:

- ✓ Flush the building water lines and clean faucet screens, water line strainers on mechanical dishwashing machines and similar equipment.
- ✓ Flush and sanitize all water-using fixtures and appliances of standing water, such as ice machines, beverage dispensers, hot water heaters, etc.
- ✓ Run ice machines through one cycle of ice production and discard the ice and clean the bin.
- ✓ Clean and sanitize all fixtures, sinks, and equipment connected to water lines.

CONCLUSION

A health department representative does not have to be present at the establishment for these guidelines to be implemented. It is management's responsibility to ensure the establishment is operating in a safe manner so as to protect the health of the public.

Should there be any questions during water emergency orders regarding appropriate operations at a retail food establishment, contact your local health department or the Indiana State Department of Health Food Program at (317) 233-7360.