

ENVIRONMENTAL HEALTH MANUAL

NEW YORK STATE DEPARTMENT OF HEALTH OFFICE OF PUBLIC HEALTH CENTER FOR ENVIRONMENTAL HEALTH <i>*[Replaces PWS 22 (01/22/03) and PWS 154 (03/26/84)]</i>	ITEM NO: WSP 22* DATE: 04/01/11*
	SUBJECT: Boil Water Orders and Notices Page 1 of 6

PURPOSE

To provide guidance for effective implementation of boil water responses needed to address the presence or possibility of microbiological contamination in drinking water. This applies to all public water suppliers and augments New York State Department of Health (NYSDOH) Environmental Health Manual (EHM) Item - WSP 152, Community Water System Emergencies.

POLICY

Boil water responses are used to protect people when water delivered to the public may contain harmful microorganisms. Waterborne pathogens can pose acute, life threatening risk and some users (e.g. immunocompromised individuals) may be more susceptible to waterborne illness. Public health officials and water suppliers must react swiftly to address potential water quality problems, but must also be conscious of unnecessarily alarming the public, causing undue economic disruption, and eroding public confidence in their water supply. Judgement must be used when deciding to implement a boil water response. When possible, actions such as changing water sources, altering treatment, opening interconnections, isolating water quality problems, or drawing from storage should be used to avoid unnecessary boil water responses.

A Boil Water Order (BWO) is the directive issued by the Local Health Department to a regulated public water supplier that requires appropriate notification to consumers. Once a boil water order is issued, it is mandatory for the regulated public water supplier to implement the order and distribute a boil water notice in compliance with Tier 1 public notification requirements.

A Boil Water Notice (BWN) is the notification distributed by public water suppliers to consumers and is interchangeable with the term boil water advisory. Boil water notices (and advisories) serve as Tier 1 public notification and by law must be distributed no later than 24 hours after the public water supplier learns of the public health hazard.

When the Local Health Department (LHD) believes a boil water response is needed to assure public health protection, the LHD must determine that the underlying conditions pose a public health hazard. This determination requires that the underlying conditions exist or are imminent, and that these conditions have the potential to cause illness, injury or death. In some cases these conditions are clearly defined as a public health hazard in 10 NYCRR 5-1.1. For other situations LHDs must use judgement when deciding if conditions constitute a public health hazard.

Local Health Departments (LHDs) must assure that water suppliers implement BWNs in compliance with regulatory requirements and that effective notification was received by critical water customers and other DOH regulated facilities. LHDs must also provide direction to the water supplier on the acceptability of corrective measures and on when BWNs can be lifted.

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It is the public water supplier's responsibility under 10NYCRR SubPart 5-1 to:

- notify the LHD within 24 hours of learning of the existence or potential existence of a public health hazard;
- notify the public of conditions posing a public health hazard and actions to take (boil water);
- implement measures to correct the cause of the boil water response, and;
- advise the public when the boil water notice is lifted.

Water suppliers may distribute a BWN in advance of, or absent a boil water order, as soon as it determines that conditions warrant a boil water response. At LHD discretion, public notification may be completed or augmented by the LHD.

Boil water responses are intended as temporary measures to mitigate public health hazards until corrective action is completed. Boil water responses may be limited to a defined area of the water system if the water supplier shows that the potential for contamination is physically or hydraulically isolated to a portion of the distribution system and if written approval is provided by the LHD. Because boil water orders are usually issued when time is critical, they can be issued verbally and followed up in writing by the LHD (e-mail distribution of a signed order is acceptable).

IMPLEMENTATION

The standard for boiling is a FULL ROLLING BOIL for at least ONE MINUTE and then COOL BEFORE USE. The term rolling boil facilitates communication and assures that pasteurization temperature is reached. Longer boiling periods have been recommended elsewhere, but this extra time is not necessary to inactivate waterborne pathogens at boiling temperatures (212°F or 100°C) and can cause unnecessary power demand and increased safety concerns.

Supplement #1 of this document provides guidance on when to issue a boil water order.

Supplement #2 provides guidance on notification procedures, including content and distribution.

Supplement #3 provides guidance on lifting boil water notices.

The authority to issue and enforce boil water orders is addressed in Public Health Law sections 206, 241, 242, 308, 324 and 1107. EHM item ADM2 provides guidance on enforcement and compliance at regulated facilities.

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ROLES/RESPONSIBILITIES

Preparedness Activities

- | | |
|---|--|
| 1. Local Health Department (LHD) | <ul style="list-style-type: none"> a. Promote preparedness efforts by water suppliers b. Inform water suppliers of boil water procedures and requirements c. Assure pre-defined boil water response actions and public notification material are in water suppliers' emergency plans (if applicable) d. Maintain up to date contact information for LHD regulated facilities in SDWIS and eHIPS, including emergency contacts for water suppliers and critical water customers (see Supplemental Considerations) e. Maintain up to date contact information for emergency response agencies and health agencies |
| 2. Regional Office (RO) | <ul style="list-style-type: none"> a. Promote preparedness efforts by LHDs b. Inform LHD staff of boil water procedures and requirements and facilitate appropriate training c. Maintain up to date contact information for LHD staff responsible for responding to water supply emergencies |
| 3. Bureau of Water Supply Protection (BWSP) | <ul style="list-style-type: none"> a. Promote preparedness efforts by the water sector b. Develop and provide: <ul style="list-style-type: none"> – guidance for water supply emergency plans – guidance for implementing boil water responses – standard notification templates – public information c. Maintain up to date contact information, including emergency contacts for health agencies and other response agencies |

Response Activities

- | | |
|----------------------------------|--|
| 1. Local Health Department (LHD) | <ul style="list-style-type: none"> a. Consult with water supplier and assess water supply conditions to determine if a public health hazard exists and if a boil water response is appropriate b. Inform the water supplier of public health hazard determination and issue a boil water order as soon as possible so that BWNs are distributed within 24 hours of the incident. c. Notify appropriate agencies when a boil water order is issued : <ul style="list-style-type: none"> -- Regional Office (see Supplement #2) -- County Public Health Nurse and Public Health Director -- local Ag&Mkts office if Ag&Mkts facilities in affected areas -- County Emergency Management Office (if warranted) d. When possible, work with water supplier to make sure BWN content, including area covered, is accurate and complete |
|----------------------------------|--|
- LHD (Con't)

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- e. Monitor water supplier to confirm that acceptable notification (see Supplement #2) was completed in affected areas to:
 - the public
 - chief administrative or elected officials of the city, village or town wherein the public water systems is located
 - local law enforcement department having jurisdiction in the area served by the public water system
 - consecutive systems
- f. Contact consecutive systems to confirm notification was received and forwarded to its customers
- g. Work with the Regional Office to notify critical water customers directly, or if the water supplier made these contacts directly, verify notification was received by the critical water customers
- h. Verify that regulated facilities in the affected areas comply with the BWN, the level of confirmation can vary with scope and risk of incident
- i. Work with water supplier to develop immediate, acceptable corrective actions and monitor corrective action progress
- j. Update appropriate agencies at least once per week while the boil water notice is in effect, more frequently for major incidents (e.g. large scale, or critical customers impacted) or if otherwise requested by the Regional Office
- k. Direct water supplier when it is acceptable to lift the BWN
- l. Enter boil water related violations and enforcement actions into SDWIS
- m. Follow up with water supplier to address the underlying cause of the boil water response. Provide written approval for permanent corrective actions, monitor implementation

2. Regional Office

- a. Provide direction to the LHD on boil water response implementation
- b. Provide assistance to the LHD when needed
- c. Work with the LHD to notify critical water customers directly, or if the water supplier made these direct contacts, to verify notification was received by the critical water customers (see Supplemental Considerations section)
- d. Inform BWSP of boil water responses, issue agency notification (Problem Alerts) when appropriate
- e. Initiate water borne outbreak investigation when appropriate

3. Bureau of Water Supply Protection (BWSP)

- a. Monitor problem alerts, provide assistance to LHDs, Regional Offices and water suppliers when needed

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SUPPLEMENTAL CONSIDERATIONS

Alternative Water Sources - It may not always be possible or practical to boil water when the need exists. Power outages may leave consumers unable to boil, and boiling may not be practical to meet some water needs. If needs are critical and cannot be discontinued, alternate water sources may be necessary and LHDs may need to advise water suppliers and the public on the acceptability of alternate sources. Generally, water used by consumers for drinking and food preparation should be obtained in the following order of preference, depending on scope of the affected area and incident specific conditions:

1. bottled water (certified for distribution in New York);
2. boiled (and then cooled) tap water;
3. bulk water arranged by a public water utility or emergency agency;
4. containers filled at another, unaffected public water supply; and
5. water that has been disinfected by consumers using ordinary household chemicals. The Department has published guidance on how to do this properly, but this chemical disinfection can be uncertain and other options should be used when available.

Roadside springs are vulnerable to contamination, are not regularly tested, and should not be encouraged or accepted as an alternate water source. Similarly, home water treatment units should not be relied on to assure adequate water quality when a boil water notice is in effect.

Critical Water Customers - Customers that rely on the public water supply and provide critical public services or serve vulnerable subpopulations must be identified and considered when implementing a boil water response. LHDs should routinely work with public water suppliers in advance to identify critical customers served by the utility and maintain up to date contact information. Critical customers may include: hospitals and other emergency medical facilities, residential medical care and assisted living facilities, schools, day care facilities, and incarceration facilities. Manufacturers that rely on adequate water quality to produce ingestible products (food, ice, pharmaceuticals, etc.) may also be considered critical customers.

ACRONYMS

Ag&Mkts -	New York State Department of Agriculture and Markets
BWSP -	Bureau of Water Supply Protection
CT -	Measure of disinfectant Concentration over Time
eHIPS -	Environmental Health Inspection and Permitting System
EHM -	Environmental Health Manual
LHD -	Local Health Department (County Health agencies and State District Offices)
MCL -	Maximum Contaminant Level
NTU -	Nephelometric Turbidity Unit
NYCRR -	New York Code of Rules and Regulations

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NYSDOH - New York State Department of Health
PWS - Public Water Supply, or Public Water Supplier
SDWIS - Safe Drinking Water Information System
State OEM - State Office of Emergency Management (formerly SEMO)
WSP - Water Supply Program

ATTACHMENTS

Boil Water Notice Templates - A series of public notice templates to help LHDs and public water suppliers provide content that meets State and Federal public notification requirements.

Boil Water Order Templates - Two templates that can serve as boil water orders issued to the water suppliers - one for Community Water Systems and one for Non-Community Water Systems.

Fact Sheet for Public Drinking Water Suppliers - A fact sheet with information on how to implement effective boil water notices and response in the form of frequently asked questions.

REFERENCES

New York Code of Rules and Regulations - 10NYCRR 5-1 Public Water Systems.

New York State Department of Health, Center for Environmental Health. Environmental Health Manual Item - ADM2, Enforcement and Sanitary Code Compliance at Regulated Facilities.

New York State Department of Health, Center for Environmental Health. Environmental Health Manual Item - PWS 31, Invalidation of Microbiological Sample Results.

New York State Department of Health, Center for Environmental Health. Environmental Health Manual Item - WSP 46, Public Notice for Turbidity Violations and Exceedances.

New York State Department of Health, Center for Environmental Health. Environmental Health Manual Item - WSP 152, Community Water System Emergencies.

US Environmental Protection Agency. Memorandum from Victor J. Kimm, Subject: Emergency Disinfection of Drinking Water - Boiling. April 17, 1998.

US Environmental Protection Agency. Public Notification Handbook. March 2010. (EPA 816-R-09-013).

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SUPPLEMENT #1

WHEN TO ISSUE BOIL WATER ORDERS

A Boil Water Order (BWO) is:

- NOT appropriate for water that is highly contaminated with pollution or sewage. A do not drink or do not use order and notification should be issued instead with instructions for obtaining alternate water supplies;
- NOT appropriate to address chemical contamination. This may increase exposure to chemicals such as nitrate and solvents by concentration in the boiled water or volatilization into the breathing zone;
- NOT a substitute for using the best quality water source available and providing appropriate treatment and continuous disinfection prior to distribution; and
- NOT appropriate as a long term public health protection measure.

Many but not all of the public health hazards defined in 10NYCRR 5-1.1 can be mitigated by a BWO. Situations that pose a public health hazard and may warrant a BWO include:

1. When an *Escherichia coli* (*E. coli*) MCL violation occurs, or failure to test for *E. coli* after any repeat sample tests positive for coliform, a boil water order must be issued. Factors that may affect when to issue a BWO for *E. coli* include;
 - a. If the only positive total coliform repeat sample is at the same tap as the initial positive sample, the LHD may investigate to determine if it is appropriate to invalidate the positive sample resulting from a domestic or other non-distribution system plumbing problem such as a contaminated single service connection. EHM Item PWS 31 provides direction on invalidating microbiological samples.
 - b. If the LHD or NYSDOH determines, for small community water systems and non-community water systems, that other information (e.g. sampling procedure, chlorine residuals, CT, water quality data, sanitary surveys, knowledge of the system, etc.) indicates that water delivered to the public is or may be of unsanitary quality, a BWO may be issued after a single positive *E. coli* sample without waiting for repeat samples.
2. When turbidity violations or exceedances specified in 10NYCRR 5-1.30(d) or 10NYCRR 5-1.78(d)(3) occur and it is determined that the quality of water delivered to the public presents an existing or imminent condition which could cause illness, injury or death and for which immediate corrective action is required. These turbidity conditions include ^A:

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- a. single raw water turbidity exceedance at filtration avoidance system (>5 NTU).
- b. violation of two day average maximum turbidity at entry point (>5 NTU).
- c. treatment technique violation from a single exceedance of maximum filter effluent turbidity (composite filter effluent >1 or >5 NTU depending on filtration type).

Note A: When these conditions occur water suppliers are required to consult with LHDs to determine if a BWN should be distributed (i.e. Tier 1 notification) or if Tier 2 notification is appropriate instead (i.e. no public health hazard and no boil water response needed). If consultation does not occur within 24 hrs, the water supplier must distribute Tier 1 public notification. WSP 46 provides additional direction when Tier 1 public notification should be used to address turbidity exceedances.

3. When an unapproved water supply source is used, or when a contaminated water supply source is used that is not properly treated.
4. When disinfection is inadequate to destroy or inactivate harmful microorganisms or to maintain a specified disinfectant residual.
5. When water service is disrupted for four hours or more and determined to present an existing or imminent condition which can be responsible for or cause illness, injury or death and for which immediate corrective action is required.^B

Note B: 10 NYCRR 5-1.23(b) requires water suppliers to report water supply interruptions to LHDs as emergencies if they last 4 hours or more and impact at least 15 service connections (or 1% of service connections) or 25 people (or 1% of people served). However, 10 NYCRR 5-1.77 requires that any existing or potential public health hazard be reported to the LHD within 24 hours. If a water supply disruption lasts less than 4 hours, or impacts less than 1% of a population served, under conditions that create a public health hazard, then the water supplier remains obligated to notify the LHD under 10 NYCRR 5-1.77 and the public under 10 NYCRR 5-1.78(c).

6. Any cross-connection incident posing a threat to the sanitary quality of finished water that is of sufficient hazard to adversely affect public health.
7. Groundwater systems that do not provide 4-log virus treatment and approved process monitoring may encounter conditions that can trigger a BWO^C. These include:
 - a. when a source water sample taken in follow-up to a positive total coliform result from routine distribution or entry point sampling is found to have fecal contamination, indicated by a positive result for *E. coli*, enterococci or bacteriophage, the LHD may issue a BWO to protect public health:
 - immediately upon the finding of fecal contamination in the source water^D; or
 - after five (5) additional raw source water samples are taken^E and one or more are positive for fecal contamination. In most cases a BWO should be initiated immediately and corrective measures implemented if any of these additional samples are positive. If none of these additional source samples are positive a BWO is not necessary.

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Note C: BWO due to *E. coli* MCL violation in distribution or at entry point is covered separately, above.

Note D: Fecal contamination in initial "triggered" raw water samples at groundwater systems that do not provide 4-log virus treatment and process monitoring requires Tier 1 notification, even absent a boil water response.

Note E: Supplier may take additional 5 source samples only at LHD discretion and approval.

8. Any other condition determined to be a public health hazard. This may include, but is not limited to:
 - a. waterborne disease outbreak;
 - b. waterline break or other disruption of water supply or distribution system pressure, less than four hours in duration or impacting less than 1% of population served^B, that poses a specific identifiable risk, such as;
 - disrupts service to critical water customers, or
 - occurs at a location or in a manner that can reasonably be thought to allow harmful microbiological contamination to enter finished water.
 - c. ongoing or widespread total coliform violations determined to require elevation from Tier 2 to Tier 1 public notification. Conditions that may lead to this determination include;
 - percentage of samples testing positive is significantly higher than the MCL
 - positive samples are widespread or present in multiple areas of distribution system
 - positive samples are linked to a break in distribution system integrity.
 - d. ongoing occurrence of low levels of pathogens, including *Cryptosporidium* oocysts, that may create an adverse health impact to vulnerable populations.
 - e. uncorrected significant deficiencies that create risk of microbiological contamination.
 - f. any treatment or distribution failure that results in the distribution of water of unsafe sanitary quality.

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SUPPLEMENT #2

NOTIFICATION PROCEDURES

Public Notice Content and Procedures - LHDs must make sure BWNs are effective and meet 10NYCRR 5-1.78 requirements for Tier 1 public notification. Tier 1 notification must contain certain content and be made no later than 24 hours after the system learns of the public health hazard. Within 10 days of completing public notification, water suppliers are required to provide copy of the public notice(s) distributed and certify to the LHD that it has fully complied with the Tier 1 requirements. Additional, detailed guidance for water suppliers is available in USEPA's, Revised Public Notification Handbook, March 2010.

Boil water notices must include the following content ^F:

- description of the situation, including contaminant or water quality concern and area(s) affected ^G;
- date and time when the situation occurred;
- potential adverse health effects from drinking water during the incident ^H;
- the population at risk and for which the BWN is targeted, e.g. general population, vulnerable subpopulations, etc;
- directions for boiling water and obtaining an alternate water supply;
- what is being done to correct the problem;
- when the incident is expected to be resolved ^I;
- a phone number where the public can get additional information from the water supplier;
- a phone number for the LHD that has jurisdiction over the water supplier; and
- a statement encouraging recipients to redistribute the notice to other people served.

Note F: Non-community systems may limit posting full content to locations where the public enters, if appropriate controls or signage are implemented at all locations where the public and employees can obtain water.

Note G: BWNs with poorly defined affected area(s) create public confusion and increase implementation effort. BWNs need to very clearly describe the area(s) subject to the BWN, including area(s) served by consecutive systems.

Note H: Boil water notices triggered by MCL violations, treatment technique violations, or violation of conditions of a variance or exemption must contain mandatory health effects language.

Note I: Care is needed not to mislead the public with unrealistic estimates of when the boil water notice is expected to be lifted.

The form and manner of notification used by water suppliers must be designed to reach residential, non-transient, and transient consumers of the water supply ^F. Water suppliers are required to notify (by phone) the chief administrative or elected official of any city, village or town where the water supplier is located that a BWN is being distributed to address a public health hazard. Water suppliers are required to notify consecutive water systems. Consecutive systems are responsible to provide notification to the customers it serves. To reach all persons served, water suppliers must use one or more of the following systems to deliver BWNs:

- appropriate broadcast media such as radio, television and reverse 911;
- posting the BWN in conspicuous locations throughout the area served;
- hand delivering the BWN to persons served by the water supplier; or
- another delivery method approved in writing by the LHD or State (internet postings can effectively augment broadcasts, deliveries and postings, but are not acceptable as a sole delivery method).

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LHD Notifications to Regional Offices - LHDs must notify the Regional Office of BWOs issued to community water systems. Notifications to Regional Offices for BWOs issued to non-community water systems are not required unless the system serves a vulnerable subpopulation (e.g. schools, children's camp), a regulated health care facility (e.g. hospital, long term care facility), or if a waterborne disease outbreak is suspected or occurs.

Notification to the Regional Office should be made by e-mail or phone as soon as possible and no later than 24 hours after the incident occurs^J. Notification made verbally must be followed by an e-mail or fax by the end of the next business day unless otherwise directed by the Region. E-mail notification should be sent to the Regional Environmental Health Director and water supply Field Coordinator and include the following:

- PWS name;
- time and date of incident;
- expected duration of incident;
- description of incident leading to need for boil water response;
- source of drinking water for system and treatment;
- when BWO was issued and when BWN was, or is scheduled to be, distributed);
- description of affected area(s) and number of people impacted;
- description of critical customers and other affected, regulated facilities;
- actions by PWS to correct the problem;
- actions by PWS to complete public notification;
- actions by LHD to confirm notice reached sensitive populations and permitted facilities; and
- actions by LHD to notify other interested agencies.

Note J. If the Regional Office cannot be reached, notification should be made during working hours to the Bureau of Water Supply Protection at (518) 402-7650, and during non-working hours to the NYSDOH Duty Officer at (866) 881-2809.

Regional Notifications to BWSP - Regional Offices should notify BWSP as soon as possible of any boil water responses that may involve assistance from BWSP or BWSP coordinated resources (e.g. Wadsworth laboratory assistance, Rural Water circuit rider, emergency stockpile equipment from the State OEM). Notifications to BWSP should be sent by e-mail to the BWSP Director, Assistant Director, and the Operations Section Chief.

Agency Notifications - Regional or designated District Office staff should initiate formal agency notification (i.e. Problem Alert) when needed. BWSP can be consulted when deciding if a Problem Alert is appropriate. In general Problem Alerts for boil water responses should be issued when there is a significant public health impact such as a waterborne outbreak, impact to a critical care facility, *E. coli* violation, or direct exposure to a particularly sensitive population. Problem Alerts may also be appropriate when there is a special public concern or substantial publicity. Appropriate county officials should be included in Problem Alert distribution. Additional guidance on drinking water incidents that warrant formal agency notification is found in EHM Item WSP 152, Community Water System Emergencies.

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SUPPLEMENT #3

LIFTING BOIL WATER NOTICES

Boil water notices (BWNs) may NOT be lifted by the water supplier without approval from the LHD. Before approving the lifting of a BWN, LHDs must consult with the water supplier to be sure that conditions leading to the boil water response have been corrected and that the threat of contaminated water has been eliminated. When a BWN is lifted, the water supplier should make public notification as soon as possible to the same recipients using the same distribution methods used to distribute the BWN to the public.

BWNs should not be left in effect longer than necessary, but must also not be lifted until the LHD can determine that finished water is again acceptable to drink. In most cases this requires that the water supplier demonstrate compliance with microbiological standards by completing coliform testing at sites representative of the distribution area covered by the BWN. Coliform testing to determine when to lift a BWN should not begin until corrective measures to address the underlying causes have been completed. A BWN may be lifted after results from two consecutive rounds of samples taken 24 hours apart demonstrate the absence of coliform bacteria. LHDs may also consider other conditions that demonstrate adequate water quality as the basis to lift a BWN:

- if the BWN was triggered by an MCL exceedance for total coliform, or a large round of total coliform samples is used to determine when to lift a BWN (i.e. 40 or more samples), the BWN can be lifted when the water supplier demonstrates by two consecutive rounds of samples that they are in full compliance with the Total Coliform Rule, that associated *E. coli* analyses are all negative, and that the coliform sampling is representative of the area covered by the boil water notice. Sample rounds taken in conformance with the total coliform rule may result in a small number of positive total coliform samples at isolated locations. The BWN may be lifted once repeat samples for these locations show no positives, or the positive test result is invalidated or determined to be the result of a single service connection. The LHD must approve sample invalidation in writing (see EHM item PWS 31).
- consecutive rounds of coliform samples may be taken as close together as 8 hours apart and on the same day, if the water supplier makes an acceptable case that these sampling rounds will adequately represent the water impacted by the condition leading to the boil water response. When a round of total coliform samples is taken before results are available from the preceding round, the following round must provide at least the same number of samples and cover the same locations as the preceding round.
- reduced total coliform sampling if the LHD can determine that: all of the water in service has been flushed and replaced with water of acceptable quality; all corrective measures have

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been implemented; and all necessary treatment processes are operating properly. Lifting a boil water notice on reduced total coliform sampling may only be approved for non-community and very small community water systems (no more than 1 building served), and may not be used to lift a boil water notice involving known microbiological contamination, a distribution system break or depressurization of the water system. For systems that disinfect by chlorination and demonstrate that measurable chlorine residual has been restored to the entire system, the LHD may at its discretion allow lifting with no total coliform sampling. For systems without chemical disinfection the LHD may allow lifting after one round of negative total coliform sampling.

There are specific conditions for initiating and ending BWNs based on raw water conditions at ground water systems that do not provide 4-log virus treatment and approved process control monitoring. The BWN can be lifted when conditions in the distribution system meet the lifting requirements set out above, and:

- if the BWN was distributed based on positive results for a fecal indicator (*E. coli*, enterococci, or bacteriophage) from an initial "triggered" raw source water sample, when all results from the first round of 5 additional raw source water sampling are negative for fecal indicators, or;
- if the BWN was distributed based on positive results for a fecal indicator from raw source water samples taken as a round of additional sampling, after one of the following corrective action and monitoring activities are completed;
 - ... contamination source is removed, followed by two consecutive days of negative fecal indicator results for raw water;
 - ... new approved water source is used, followed by two consecutive days of negative fecal indicator results for raw water; or
 - ... 4-log virus treatment is installed, and process control monitoring shows it to be providing adequate performance.

BOIL WATER NOTICE

Coliform exceedance in Village of Menands water

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____

(describe area or attach map)

What Happened?

Regular monitoring showed a violation for total coliform bacteria in your drinking water. During _____ (month) _____ (year), _____ (number or percentage) of the samples taken tested positive, including _____ repeat sample(s) taken on _____ (date).

Coliform bacteria are naturally present in the environment and are used as an indicator that potentially harmful microbes may be present.

Harmful microbes in drinking water can cause diarrhea, cramps, nausea, headaches, or other symptoms and may pose a special health risk for infants, some elderly, and people with severely compromised immune systems. But these symptoms are not just caused by microbes in drinking water. If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

BOIL WATER NOTICE

E. coli bacteria found in Village of Menands water

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____
(describe area or attach map)

What Happened?

E. coli bacteria were found in the drinking water on _____ (date).
The New York State Department of Health considers any confirmed *E. coli* positive sample as a public health hazard and a violation of drinking water standards.

The presence of Escherichia coli (E. coli) bacteria indicates that the water may be contaminated with human or animal wastes. Harmful microbes in these wastes, including E. coli, can cause diarrhea, cramps, nausea, headaches, or other symptoms. These may pose a special health risk for infants, some elderly, and people with severely compromised immune systems. But these symptoms are not just caused by harmful microbes in drinking water. If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

BOIL WATER NOTICE

Elevated coliform found in Village of Menands water
(name of Public Water System)

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____
(describe area or attach map)

What Happened ?

Routine monitoring for coliform bacteria showed an unexpected number of positive coliform tests on _____ (date). While the coliform standard has not been violated, these results and other water system factors indicate a condition exists that can potentially cause illness.

Coliform bacteria are naturally present in the environment and are used as an indicator that potentially harmful microbes may be present.

Harmful microbes in drinking water can cause diarrhea, cramps, nausea, headaches, or other symptoms and may pose a special health risk for infants, some elderly, and people with severely compromised immune systems. But these symptoms are not just caused by microbes in drinking water. If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

BOIL WATER NOTICE

Elevated levels of Giardia or Cryptosporidium have been found in water from the Village of Menands.

(name of Public Water System)

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____.
(describe area or attach map)

What Happened ?

Routine monitoring on _____ (date) showed an unexpected number of these protozoan microbes in your drinking water. There is no drinking water standard for this harmful microbe, but the results indicate a condition exists that can potentially cause illness and the Department of Health considers this to be a public health hazard.

These protozoans are common in natural waters in our State. Ingesting them in a large enough dose can cause diarrhea, cramps, nausea, headaches, or other symptoms. This may pose a special health risk for infants, some elderly, and people with severely compromised immune systems.

But these symptoms are not just caused by microbes in drinking water.

If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

BOIL WATER NOTICE

High turbidity levels found Village of Mcnands water

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____
(describe area or attach map)

What Happened ?

Your water is routinely monitored for turbidity (cloudiness) to determine if it is being properly filtered. Water samples taken on _____ (date) had turbidity levels of _____ turbidity units. This is above the allowable standard of _____ turbidity units. Because of the elevated turbidity, there is an increased chance that your drinking water may contain harmful microbes.

Turbidity alone has no health effects. But it can interfere with disinfection, allow harmful microbes to grow, and may indicate the presence of harmful microbes, including bacteria, viruses, and parasites. These can cause diarrhea, cramps, nausea, headaches, or other symptoms and may pose a special health risk for infants, some elderly, and people with severely compromised immune systems.

But these symptoms are not just caused by microbes in drinking water.

If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

State Water System ID#: _____ Date distributed: _____

BOIL WATER NOTICE

Inadequate disinfection for Village of Menands water

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____
(describe area or attach map)

What Happened ?

Routine monitoring on _____ (date) showed inadequate disinfection for your drinking water. Disinfection is used to destroy harmful microbes that can be in drinking water.

Harmful microbes in drinking water can cause diarrhea, cramps, nausea, headaches, or other symptoms and may pose a special health risk for infants, some elderly, and people with severely compromised immune systems. But these symptoms are not just caused by microbes in drinking water. If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

BOIL WATER NOTICE

A problem is present in Village of Menands water

BOIL YOUR WATER BEFORE USING

Bring tap water to a rolling boil, boil for one minute, and cool before using. Or use bottled water certified for sale by the New York State Department of Health. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice.

This Boil Water Notice applies to _____
(describe area or attach map)

What Happened ?

Starting on _____ the water system had the following problem:
(date, and time if known)

(explain cause of problem)

This problem indicates that harmful microbes may be present in your drinking water. Harmful microbes in drinking water can cause diarrhea, cramps, nausea, headaches, or other symptoms and may pose a special health risk for infants, some elderly, and people with severely compromised immune systems. But these symptoms are not just caused by microbes in drinking water. If you experience any of these symptoms and they persist, you should seek medical advice.

What is being done ?

(describe corrective actions)

It is likely that you will need to boil water for the next _____ days _____ hours until the problem is fixed. You will be informed when tests show that you no longer need to boil your water.

For more information, please contact:

_____ of the _____ at _____
(name of person) (name of Public Water System) (phone number)

or the _____ at _____
(County/District Office) (phone number)

Please share this information with other people who drink this water, especially anyone who may not get 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.

State Water System ID#: _____ Date distributed: _____