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Requirements for Operating Regulated Establishment

Drinking Water Supply

Water supplies that serve regulated establishments shall provide safe drinking water. Bacteriological, chemical and radiological contaminants shall be within levels acceptable to the Regulatory authority. Supplies deemed unsafe by DHSS shall not be used as a potable water supply.

1. Treatment Equipment for Private Water Supplies.
 - a. New or existing treatment equipment necessary to provide a safe drinking water supply shall be installed, maintained and operated according to manufacturers specifications and DHSS requirements.
 - b. Existing chlorinators and chlorinators required to be installed to provide safe drinking water shall be a positive feed liquid chlorinator with thirty (30) minute retention time based on pump capacity and must maintain a residual no less than 0.5 and no greater than four (4) parts per million (ppm) free available chlorine.
 - c. Equipment, approved by the regulatory authority, shall be available to test the treatment system.
2. Community and Non-Community Public Water Supplies.
 - a. Shall be in compliance with the current “Missouri Safe Drinking Water Act,” “Safe Drinking Water Commission Rules,” “The Water Well Drillers’ Act,” and the “Missouri Well Construction Rules.”
 - b. Non-community water supplies shall have a valid Missouri DNR permit to dispense water. A current copy of the DNR permit to dispense water must be available for review by the regulatory authority.
3. Private Water Supplies.
 - a. Shall be regulated under the jurisdiction of DHSS and constructed and located according to the “Missouri Well Construction Rules,” 10 CSR 23-3.010–10 CSR 23-3.110 with the following above ground construction components verified by inspection:
 - i. Well casing shall extend a minimum of twelve (12) inches above grade; **and**
 - ii. The top of well casing shall be free of openings, which may allow the entry of contaminants.

- b. That are determined by the Regulatory Authority to potentially be influenced by surface water or shallow groundwater (i.e. springs, bored and dug wells) shall be equipped with a treatment system that includes:
 - i. Microfiltration using a filter with a one (1) micron absolute or smaller pore size; and
 - ii. A chlorinator. that complies with 1b above.
4. Routine Testing for Non-Community Public and Private Water Supplies.
 - a. Non-Community Public Water and Private Water supplies shall be in compliance with all applicable testing mandated by DHSS or DNR.
 - i. During each inspection, but no less than annually, bacteriological water sample shall be collected, by the regulatory authority, and analyzed for the presence of coliform bacteria.
 - ii. A nitrate sample shall be collected when deemed necessary by the administrative authority and at least annually when a chlorinator is present. Wells exceeding nitrate levels of ten (10) ppm shall not be used for drinking water; a permanent alternative water supply must be provided.
 - iii. Any water supply may be sampled by the regulatory authority and be tested for chemical or other contaminants whenever the regulatory authority believes there is a need for such tests.
 5. Private Water supplies with chlorinators installed because of unsafe water samples shall:
 - a. Have a nitrate analysis conducted prior to installing a chlorinator and annually thereafter.
 - b. Provide two consecutive bacteriological sampling results, collected by the administrative authority a minimum of five (5) days apart, that are absent for total coliform and/or E.coli; and
 - c. Be tested by the regulatory authority for appropriate chlorine concentration at the time of each routine inspection.
 - d. Be tested by the owner/operator for appropriate chlorine concentration weekly. Results to be maintained in a log.
 - e. If bacteriological sampling results continue to indicate the presence of total coliform, the well may be deemed unsafe by DHSS.
 6. If two (2) water samples, collected by the regulatory authority within a twelve (12) month period separated by at least thirty (30) days, are E. coli positive, the well shall be deemed unsafe by DHSS, unless immediate corrective actions can be taken to provide safe drinking water. These corrective actions must be approved by the DHSS.

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7. Private water supplies not meeting satisfactory bacteriological water results, (total coliform or fecal coliform,) shall be placed under a Boil Water Order or Boil Water Notice/Advisory. Private water supplies not meeting satisfactory chemical or radiological water results shall be placed under a Limit Use Order.
8. The OWNER/OPERATOR of an establishment using a private water supply testing positive for total coliform bacteria shall:
 - a. Follow Department of Health and Senior Services guidelines to disinfect the well and plumbing system.
 - b. Contact the regulatory authority to sample the system, once the chlorine is no longer present in the system.
 - c. The regulatory authority will sample the system.
 - d. If the sampling results in two(2) safe samples taken at least five (5) days apart the boil order will be removed.
 - e. If after two attempts at disinfecting the well and distribution system subsequent sample results continue to be positive for coliform bacteria, or if a pattern of sample results are positive for coliform bacteria is established, the OWNER/OPERATOR shall:
 - f. Follow the procedures specified in 4.1.b. to install a chlorinator.
9. Non-Community Public Water supplies testing positive as a result of testing by the regulatory authority shall be placed on a boil order.
 - a. The designate DNR regional staff will be notified of the positive test.
 - b. DNR regional staff will notify the regulatory authority when the owner/operator of the facility has meet DNR requirements related to safe water.
 - c. The regulatory authority will sample the system and will notify DNR of the results, and will remove the boil order if sampling results in a safe supply.

Boil Orders

- A. Boil Orders may be issued by DNR and/or DHSS for the following reasons:
 1. Microbiological contamination - the imminent threat of or the presence of fecal coliform in a water supply as indicated by unsatisfactory bacteriological analyses and/or epidemiologic association of the water with human illness.
 2. Low water pressure - pressure below 20 psi in any part of the system signals the existence of conditions that could allow contamination of the water supply through backflow.
 3. Turbidity - in excess of 5 turbidity units in any one confirmed unit interferes with the disinfection process.
 4. Other physical findings - which indicate imminent potential for bacteriological contamination of the water system.

- B. Water purveyors may issue a Boil Water Advisory. These advisories shall be considered to be the same as a boil order issued by DNR/DHSS and the same procedures shall be followed. BERL will be available for consultation and technical advice, if necessary.
- C. Under DNR's internal policy, the affected DNR regional office will contact the appropriate DHSS regional staff and Local Public Health Agency Staff, whenever a boil order or limit use order is issued or lifted.
- D. Upon notification from the DNR regional office, the DHSS central office will notify the regional staff and the LPHA.
- E. LPHA should contact all water purveyors in their jurisdiction to assure they are contacted when advisories are issued.
- F. The LPHA should contact the water purveyors that issued the boil order/boil advisory or limited use order to determine if all regulated facilities have been notified.
- G. LPHA should develop a process to advise regulated facilities and others, of the options available or limited use order. Spot checks should be conducted to insure compliance. to operate under a boil order or limited use order. This can be done before or during a boil order

Procedures For Treating Water During A Boil Order

- A. When a boil order is issued, water may be used for potable uses after treatment by boiling or disinfection.
 - 1. Boiling - boil water vigorously for three (3) minutes prior to use for cooking and drinking.
 - 2. Water that has been chlorinated, retained for thirty (30) minutes and tested to assure a residual of one half (0.5) to four (4) parts per million free available chlorine.
- B. End of line chlorinators are prohibited from use to address water disinfection, unless specifically approved by DHSS on a case-by-case basis..

Boil Order Procedures for Lodging Establishments

- A. During a Boil Water Order (including precautionary boil water notice/advisories) or a Limit Use Order, issued on a public and/or private water supply, the operator shall comply with the following intermediate process(s) until permanent corrections have been made to the water supply:
 - 1. Notify lodging establishment guests, verbally and again, by written notice prominently placed in each rented guest room, that the plumbed water is not potable and only potable water should be used for drinking and/or brushing of teeth. Additional restrictions for water use may be required by the DHSS;

2. Discard ice that may have been made from or exposed to contaminated water; and
3. Obtain a temporary, alternate supply of potable water using one of the following practices:
 - a. Individual containers of commercially bottled water shall be placed in each rented guest room and additional bottled water shall be available upon request by guests;
 - b. Bulk water containers acceptable to the DHSS and which are filled from a source acceptable to the DHSS or DNR may be used. Such water shall be treated with an appropriate concentration of residual disinfectant to effectively counteract potential contamination that may be introduced between the filling of the container(s) and the dispensing of the water. This water shall be transported and handled in a safe and sanitary manner, which prevents contamination; or
 - c. Other methods approved by the DHSS or DNR.

Boil Order Procedures for Food Establishments

- A. Voluntary ceasing of operations until the water has been declared acceptable by DNR or DHSS.
- B. Obtaining an alternate supply of potable water and/or ice (as described in 3.b. above,) plus satisfactory methods for handwashing, food preparation, equipment cleaning, and sanitation.
 - a. Handwashing (Food handlers and/or public)
 - i. a germicidal soap or hand cleanser shall be used or the hands shall be dipped in a 50 ppm chlorine solution for one minute, followed by drying with paper toweling or approved air drying devices.
 - ii. use potable water from an alternate approved source.
- C. Food Preparation
 - a. Produce
 - i. use pre-washed packaged produce
 - ii. use produce washed prior to boil or limit use order
 - iii. use frozen/canned produce
 - iv. wash fresh product with potable water from an alternate approved source
 - b. Preparation and cooking requiring water, including and reconstitution of liquid concentrates and dried foods
 - i. use only food that was prepared prior to the boil or limit use order
 - ii. discontinue sale of prepared foods requiring water
 - iii. obtain prepared foods from alternate source (i.e. local deli or caterer)
 - iv. use potable water from alternate approved source

- c. Carbonated and other beverages
 - i. substitute with bottled or canned beverages and turn off water lines to beverage dispensers. Such dispensers shall be completely flushed and sanitized before being returned to service after the boil or limit use order has been lifted.
 - ii. use potable water from alternate approved source.
 - d. Utensils and food contact equipment
 - i. a properly operated manual dishwashing arrangement or properly
 - ii. operating and maintained mechanical temperature or chemical
 - iii. dishwashing machine should be satisfactory for sanitizing utensils.
 - iv. use only single-service tableware and kitchenware
 - v. take items to commissary for cleaning
 - vi. use water from alternate approved source
 - vii. use waterless cleaning or non-potable water for floors and other
 - viii. non-food contact surfaces
 - ix. store food dispensing utensils in the food products
 - e. garbage grinders - no change
 - f. toilets - no change, if water pressure is available
 - i. if no water pressure is available, use adjacent facilities if possible or provide chemical toilets (e.g. porta-johns)
- D. If the owner or manager refuses or fails to follow either option, notification with detailed information shall be made to the DHSS regional staff, which in turn will notify the central office of BERL. DHSS regional staff will process a closing order.

Lifting of Boil Order for Food Establishment

For a Boil Water Order to be lifted, on private water supplies, the operator shall comply with one of the following permanent corrections:

- a. Provide a chlorinator and comply with DHSS requirements.
- b. Provide an alternate connection to an adjacent plumbing source of water acceptable to the DHSS and/or DNR, which is protected from contamination and capable of supplying a sufficient quantity of water; or
- c. Other permanent disinfection process(s) or permanent corrective measure(s) as authorized by the DHSS.

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After a Boil Order has been Lifted for a Food Establishment

- A. Flush the building water lines and clean faucet screens, water line strainers on mechanical dishwashing machines etc.
- B. Purge all water using fixtures and appliances, such as ice machines, beverage makers, produce and seafood misting devices, hot water heaters etc. Clean and sanitize all fixtures, sinks and equipment connected to waterlines.
- C. Follow the manufacturer’s recommended procedures for:
 - 1. Disinfecting water softeners, prior to putting back on line;
 - 2. Disinfecting filters or replacing media in small filters on ice machines, water treatment systems, beverage vending machines; and
 - 3. Replacing carbon filters or carbon media in filters.

Limit Use Orders

Limit Use Orders may be issued by the DNR and/or DHSS for the following reasons:

- 1. Chemical or radiological contamination - exceeding or the expectation of exceeding the maximum contamination level (MCL) of any constituent as identified in DNR rule 10 CSR 60-4.010 that may pose an acute risk to human health and/or epidemiologic association of the water with human illness.
- 2. Other physical findings - which indicate imminent potential for chemical and/or radiological contamination of the water system.

Procedures For Treating Water During A Limit Use Order

Because of different characteristics of the various potential contaminants, direction will need to be obtained from DNR or DHSS-BERL.

Lifting of Limit Use Order

For public and/or private water supplies, the operator shall comply with one of the following permanent corrections:

- 1. Provide an alternate connection to an adjacent plumbing source of water acceptable to the DHSS and/or DNR, which is protected from contamination and capable of supplying a sufficient quantity of water; or
- 2. Other permanent corrective measures that provide a safe water supply, as approved by the DHSS.