

PRACTICE 98-09 BULK WATER AS AN EMERGENCY SOURCE

Operating Parameters for Public Water Systems:

When a Public Water System experiences an emergency water shortage and/or is completely out of water because of a source deficiency, distribution deficiency or any other incident causing a loss of water; the "Water Supplier" (a person who owns or operates a Public Water System) may supplement the water system source with Bulk Water. When Bulk Water is used for resupply, the Bulk Water operation shall comply with the requirements of this Practice. Bulk Water is defined as drinking water delivered to consumers by means other than pipeline or bottled water. It is typically delivered by tanker truck or trailer. See Subchapter 21-11.2 for General Requirements for Bulk Water Hauling.

1. **Bulk Water Hauling Operations:** When a Water Supplier determines that a water shortage exists and that a supply by Bulk Water is necessary, the Water Supplier shall notify the Vermont Water Supply Division (800-823-6500) immediately. Water Systems that have normal water pressure, have a disinfection unit, and maintain a measurable disinfectant residual to the ends for the distribution system do not need to go on Boil Water Notice (please see below for additional instructions). Water Systems that do not have disinfection units and/or run completely out of water must issue a Boil Water Notice immediately. The boil water notice shall remain in effect until 1 coliform sample is taken from the distribution over two consecutive days and test results report coliform absent.
 - a. **Hauling Requirements:** The truck or trailer (including water hose) use to supply Bulk Water shall be dedicated to the sole task of hauling potable drinking water. The Water Supplier must use only potable drinking water from a regulated Public Community water system in compliance with the Vermont Water Supply Rule. Chlorine residual must be measured prior to the water being introduced to the Water System. Water must be hauled from a Public Community Water System or Bulk Water System permitted by the Secretary, or as otherwise approved by the division in writing.
2. **Disinfection Unit:** Water Systems which use chlorine as a disinfectant must measure chlorine residuals daily and mark disinfection levels on the Field Report/Chain-of-Custody when taking total coliform samples. Water Systems may be required to disinfect to 4.0 log virus inactivation during this period at the discretion of the VT WSD. Disinfection should continue for 60 days after the hauling operation has ended. Systems which have an U.V. Disinfection unit and are unable to maintain a measureable residual in the distribution may be requested to take an increased number of total coliform samples from within the distribution system, or issue a boil water order (if 4.0 log virus inactivation is unavailable).
3. **Water Sampling for Disinfecting Water Systems:** Water Systems must take one Total Coliform Sample from distribution immediately after the Bulk Water Hauling Operations and measure Chlorine residual when taking the sample. The chlorine residual result must be reported on the Field Report/Chain-of-Custody form and reported to the WSD on the final coliform analysis report. Please note that a Boil Water Notice will be required of all Water Systems that stop continuously chlorinating during Bulk Water Hauling Operations and Water Systems will have to comply with Section 1 of this Guidance Document.
4. **Hauling from an unapproved source or using a non-potable water tanker:** A Do-Not-Drink Public Notice will be required for all water systems using a non-potable water tanker or hauling from an unapproved source not meeting Bulk Water Requirements specified by Subchapter 21-11, WSR (ie: non-regulated source, non-potable fire tanker truck). Water Systems wanting to come off a Do-Not-Drink must first sample for the following contaminants from Table 6-1 of the VT Water Supply Rule: Total Coliform bacteria, Inorganic Chemicals, Nitrate, and Volatile Organic Chemicals. Additional sampling may be required.
5. **Lifting Boil Water Public Notice:** Once the Bulk Water Hauling event has ended the water system can start the process of lifting the Boil Water Public Notice. Water Systems must take one Total Coliform sample each day for two

consecutive days. Water Systems must report deficiencies causing the Bulk Water Hauling event and send in any Public Notice and Public Notice Certifications required by the WSD. When all of the above information has been received by the WSD a file review will be completed to determine if the Boil Water Public Notice can be removed. The Boil Water Notice shall remain in effect until lifted by the WSD.

6. **Bulk Water Re-Supply:** Water Systems that need more than one Bulk Water Hauling event must continue to meet all of the standards requested above. This includes maintaining disinfection levels, public noticing and reporting to the WSD. Please note that water systems hauling water are using an unpermitted source for the water system. The VT Water Supply Rule requires that a water system has 90 days to discontinue using an unpermitted source. If Water Systems must continue to haul water beyond 90 days they will be required to meet the following requirements:
 - a. **Hire a professional:** Hire a professional to inspect the Water System and identify any deficiencies,
 - b. **Plan:** Create a plan to correct the deficiencies, and
 - c. **Report:** Report to the WSD the results of the inspection and the progress of the corrections.
7. **Water Buffalo Operations:** When Water Buffalos (US Army Water Tanker Trailers) are provided by the Vermont Dept of Public Safety (Emergency Management) or Vermont National Guard for emergency water supply to water system customers, the tanker must be filled from a Public Water System source meeting the requirements and standards of the Vermont Water Supply Rule. Water Suppliers are reminded that Vermont Municipal Governments are the official entity authorized by Vermont law to requisition US Army Water Buffalos. Once delivered, the Water Buffalo is under the direct control of the Municipality. This control is usually coordinated by the Local (Town or City) Health Officer. A Water Supplier may choose to offer their assistance to Local Health Officers to help ensure that the Water Buffalo provides adequately (chlorine residual between 1.0 and 4.0 ppm) chlorinated water for their users and is properly secured against unauthorized tanker access.

Applicable Vermont Water Supply Rule References:

Chapter 21, 11.2 Bulk Water: No person shall distribute or provide bulk water for human consumption unless that water complies with state drinking water standards established in Sub-Chapter 21-6 of this rule. Filling stations for finished water shall comply with Appendix A, subpart 8.11.

Appendix A, Subpart 8.11, Water Loading Stations: Water loading stations present special problems since the fill line may be used for filling both potable water vessels and other tanks or contaminated vessels. To prevent contamination of both the public supply and potable water vessels being filled, the following principles shall be met in the design of water loading stations:

- a. there shall be no backflow to the Public Water Supply;
- b. The piping arrangement shall prevent contamination being transferred from a hauling vessel to other subsequently using the station; and
- c. hoses shall not be contaminated by contact with the ground.

This practice is effective as of June 9, 2011.

Approved: Jean M. Nicolau 6/9/2011
Gajy Schultz, Director Date

This guidance sheet and related environmental information are available electronically via the internet. For information visit us through the Vermont Homepage at <http://www.vermont.gov> or visit VT WSD directly at <http://www.vermontdrinkingwater.org>

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