## Disinfection of trucked water

All trucked water must maintain a free chlorine residual of at least 0.5 ppm. To accomplish this, the hauler must add 5 to 6 tablespoons (2.5 to 3 ounces) of common household bleach to each 1,000 gallons of water that does not have a free chlorine residual. The bleach must be 5.25 to 6 percent strength, unscented and without additives. Add the bleach in proportion to the quantity of water at the beginning of each haul during filling to ensure uniform distribution.

## For more information

If you have questions, call our nearest regional office:

**Eastern Region:** Spokane Valley
(509) 329-2100

**Northwest Region:** Kent
(253) 395-6750

**Southwest Region:** Tumwater
(360) 236-3030

Office of Drinking Water publications are online at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

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# Truck Transportation

## Emergency water supply for public use

**October 2012**
DOH 331-063
Revised

Washington State Department of Health
Environmental Public Health Division
Office of Drinking Water

Public water systems that truck or receive potable water for the public during

emergencies must follow drinking water standards (WAC 246-290-451(2)).

The Washington State Department of Health doesn't allow trucked water as a long-term source of drinking water. We do recognize that it may be the only option as a temporary source in some emergencies.

Before a water system can truck or receive potable water for the public during an emergency, it must get the current requirements and approval from one of the following:

- Our nearest regional office
- The local health department
- The state emergency management agency
- The local emergency management agency

To protect public health, water systems thinking about receiving trucked water must consider the following:

- The source and quality of the water
- Personnel
- Documentation
- Recordkeeping
- The truck container, including disinfection and condition
- The receiving container



## Source and quality of water

Trucked emergency water must come from an approved public water system. If there is no other option, *and* there is a formal written agreement between the receiving water system and the state or local health department, hauled water may be from an unapproved source.

The water system must prove to the health agency that the intended unapproved source is safe to use when treated to the minimal levels described in "Disinfection of trucked water," on page 7.

The water system must confirm that the:

- Truck hauler is familiar with proper handling procedures at the supply source and during transport.
- Delivered trucked water contains a free chlorine residual of at least 0.5 ppm.

The water system must reject the water if it believes the hauler failed to take the steps necessary to ensure the water remains potable.

## Personnel

The water system must have the certified operator coordinate the receiving process, collect documentation, and keep records. These procedures must be in the water system's emergency response program (WAC 246-290-415(2)(d)).

## Documentation

The water system must document and keep proper records of the trucked water operation. This includes:

- The hauler's name and contact information.
- The amount of water delivered per trip.
- The name of the approved water source or water system.
- Date and time of delivery.

## Recordkeeping

The water system must keep the following records for at least one year after the emergency water hauling operation ends.

- Documents to show proper disinfection of the water for each trip.
- Confirmation of initial tanker disinfection method and follow-up coliform monitoring results.
- The free chlorine residual in the container at the start of the haul.
- The free chlorine residual of the water at point of delivery.
- Any conditions observed about the receiving tank.

Records must be available on request for review by health agencies, haulers, or the supplying water system.

## Containers designed and used only for potable water service

Properly designed and maintained truck containers dedicated to hauling only potable water may be used without initial tanker cleaning, disinfection, and testing for bacteria.

The truck container must be contaminant-free and maintained to prevent potential water contamination.



The hauler must fill and empty all truck containers through an air gap or other approved method. All containers must be completely enclosed and tightly sealed with lockable lids or hatches. Containers open to the atmosphere during hauling cannot be used.

**Bulk water hauling may be acceptable as a *temporary* solution to a water shortage.**

**It is not an acceptable *long-term* solution for system infrastructure deficiencies such as inadequate water supply sources.**

## Truck container

**Truck containers used for hauling petroleum products, surfactants, or other non-food grade products may not be used for hauling potable water.**

Trucks used for hauling food-grade products other than potable water must be evaluated on an individual basis. At minimum, a truck container used to haul a food-grade product other than potable water must be disinfected as directed in "Initial tanker disinfection," below.

Initial testing must show absence of coliform bacteria before using the truck to haul water. We may require additional water quality analysis depending on a truck's prior use.

After emergency hauling begins and safety measures are in place to prevent contamination, any health authority can require repeat testing at any time. An extended water-hauling emergency warrants additional water quality monitoring, including chlorine residuals.

## Initial tanker disinfection

Truck containers used to transport food-grade products other than potable water must be cleaned and disinfected before potable water hauling operations begin.



*1* Rinse and flush all water-hauling containers, hoses, truck-mounted pumps, and other equipment until they are free of rust, sediment, and other matter.

*2* Use water with chlorine levels of at least 50 to 60 parts per million (ppm) to completely fill the tank, pumps, hoses, and other hauling equipment that will contact potable water. About one gallon of liquid bleach is required in every 1,000 gallons of water to produce 50 to 60 ppm. Bleach must be 5.25 to 6 percent hypochlorite with no scent, cleaning enhancer, or other additives. Add the bleach to the water while filling the tank to ensure uniform distribution.

***All surfaces that will contact potable water must be disinfected with the chlorine solution for at least 4 hours.***

All equipment used to collect, transport, and deliver drinking water must be designed to handle potable water and endure disinfection.

*3* After 4 hours, flush the chlorine solution from the tank and all pieces of equipment. *Do not discharge directly into a stream because the chlorine in the water can kill fish and plants*. To dechlorinate the water, treat it with citric acid or thiosulfate before discharging it.



*4* When the tank, hoses, pipes, and pumps are empty, refill them with potable water and test for coliform bacteria. If coliform are present, repeat the disinfection steps. If coliform is still present after a second attempt to disinfect, the tanker cannot be used to haul potable water.

## Handling

All hoses and other handling equipment used in the operation must always be stored off the ground. Hoses must be capped at each end when not in use.

All surfaces that contact potable water, including fill-point equipment, containers, caps, valves, filters, fittings, and other plumbing attachments, must be inspected regularly and disinfected or replaced as needed.

## Receiving container

Inspect the water system's receiving tanks to confirm water quality during filling and later distribution to consumers. Clean and disinfect receiving tanks using the disinfection steps in "Initial tanker disinfection," at left.

Secure and protect the receiving tanks from contamination throughout the emergency response process. Keep written records of any comments about the receiving tanks.

The water system must inspect each water delivery for appearance or odor problems, check the chlorine residual, and fill water through an air gap or other approved method.