

STATE OF COLORADO

John W. Hickenlooper, Governor
Larry Wolk, MD, MSPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S. Laboratory Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver, Colorado 80230-6928
Located in Glendale, Colorado (303) 692-3090
www.colorado.gov/cdphe



Colorado Department
of Public Health
and Environment

DRINKING WATER GUIDANCE **MONITORING REQUIREMENTS FOR NON-REGULATED WATER HAULERS** **DURING EXTREME EMERGENCIES**

Purpose: To protect the public health through water quality monitoring requirements for non-regulated water haulers during extreme emergencies.

Procedures: The Colorado Department of public Health and Environment (CDPHE) regulates water haulers that meet the definition of a public water system. CDPHE is requesting any non-regulated water hauler providing water directly from and to regulated public water systems during an extreme emergency to contact us at 303-692-3556, so that we can ensure public water systems are obtaining safe emergency water supplies.

The water source used by the un-regulated water hauler should be from a regulated public water system that meets the requirements of the Colorado Primary Drinking Water Regulations (CPDWR).

All containers, tanks, hoses, fittings, and other equipment used to store, haul, or transfer potable water should be constructed of approved food grade materials or coated with approved food grade coatings.

Water hauler tanks/trucks that are used to supply water to public water systems shall not contain, haul, or carry any other material or substances other than water from a source approved by CDPHE.

Also, CDPHE highly recommends that all haulers collect a chlorine residual sample from each hauled load. In addition, a log book should be kept identifying the hauler name, the truck or bladder used, the PWSID of the wholesale system providing the water, and the PWSID of the system receiving the water.

To protect public health, all trucks or bladders used for potable water hauling must be sanitized in accordance with AWWA C652 prior to first use. A general rule of thumb is to:

- a. Either, spray down the tank with a chlorine solution of 200 mg/L . A 200 mg/L chlorine solution can be made by adding 1 ½ cups of chlorox bleach (10%) to 50 gallons of water.
- b. Alternatively, the tank can be filled with a high strength chlorine solution and allowed to disinfect for 6 hours. The high strength chlorine solution can be made by mixing ¾ cup of 10% chlorox bleach for each 100 gallons of water used.

All non-regulated water haulers providing water to public water systems are requested to collect a chlorine residual sample from each hauled load. In order to ensure that the mobile water tanks/trucks are free of bacteria, it is also suggested that each tank/truck be sampled once per month for microbiological analysis. Results of all microbiological samples should be submitted to CDPHE for review. All microbiological and chlorine residual samples should be taken at the outlet port of each

water hauler tank/truck. Chlorine residual samples should be measured in the field. All microbiological samples should be analyzed by a laboratory certified for analysis by CDPHE.

All non-regulated water haulers who provide water to public water systems should provide the following information for each water tank/truck, in writing, to the Drinking Water Compliance Assurance Section of CDPHE:

- The name(s) of the public water system(s) used by the water hauler
- The name under which the water hauler does business, business address and phone#.
- The name, address and phone# of the owner of the business.
- The general service area.
- A description of the water hauling equipment and procedures.
- Type of further treatment, if any, of the water by the water hauler.

All non-regulated water haulers should maintain the following records in a logbook:

- When and where each load was picked up.
- When and where each load was delivered.
- A record of all chlorine residual tests and when and where they were collected.
- A record of all microbiological test results and when and where they were collected.
- A record of types and quantities of any chemicals added to each load of each tank/truck. (Sodium hypochlorite, etc.)
- A maintenance record for each tank/truck and equipment showing method and frequency of cleaning.

Please note that this guidance is to be used only when CDPHE has determined that an extreme emergency exists and provision of potable water is essential under emergency conditions.

For more information contact CDPHE for:

Compliance Assurance, sampling requirements:	303-692-3556
Field Services, suspected contamination:	303-692-3603
Engineering, design criteria:	303-692-3278
Acute Team, boil/bottle water advisories:	303-692-3258
Local Assistance, COWARN:	303-692-3619

Quick Guide

Water Hauler Public Water System



WATER QUALITY CONTROL DIVISION

Purpose

To protect public health and safety by established requirements for installation and use of appropriate equipment & materials, water quality monitoring & record keeping for Water Haulers.

Water Haulers

Water Haulers as *public water systems* as defined under the Safe Drinking Water Act are subject to the Colorado Primary Drinking Water Regulations (Regulations), Department Policies, and industry related *best management practices*.

How to Become a Water Hauler

1. Contact the Department's Compliance Assurance (CA) section to obtain a Public Water System Identification number (PWSID): Provide CA with information as directed and per Drinking Water Policy (#DWT-8): 303-692-3556
2. Contact the Department's Engineering Review Section and submit plans and specifications as directed: 303-692-3278
3. Obtain a Certified Water Operator or contact the Department's Operator Certification Program to become operator certified: 303-692-3510
4. Visit the Department's website for Department certified laboratories and contract for microbiological sampling analysis.
<http://www.colorado.gov/cdphe/wqcd>
5. Obtain an EPA drinking water approved chlorine residual analyzer.



Monitoring and Record Keeping Requirements

A Water Hauler must provide in writing to the Department the following information as outlined in the *Drinking Water Hauler Monitoring Plan*;

- Source water suppliers and type of source water
- Water Hauler owner, business name, address, phone, and email address, if applicable
- Operator name, business name, address, phone, email address and water operator certification information
- General service area
- Description of the hauling equipment and required procedures
- Type of treatment provided. If the source water is untreated water, the Water Hauler must obtain *design approval* to provide water treatment

A Water Hauler must maintain and be capable of making available the following records for 5 years including who performed each task;

- Water load; date, time, location, and amount for each pick up and delivery
- Chlorine residual and bacteriological (Total Coliform/E. Coli) test results; date, time, sample or measurement collection location
- Chemical addition; type and quantity of chemicals added to each load for each tank/truck. Any chemical introduced to the potable water must be *ANSI/NSF Standard 60* certified and must be compatible with the water source
- Maintenance records for each tank/truck, pump and equipment, method and frequency of cleaning, air vent screen checks, tank inspections etc.
- Records of disinfection practices; the Department recommends that the Water Hauler disinfect tanks in accordance with *AWWA Standard C-652* for storage tanks and hoses in accordance with *AWWA Standard C-651*

Common Sanitary Surveys Deficiencies & Violations

- Unapproved tanks/trucks that are in service
- Non *ANSI/NSF Standard 61* certified or approved food grade hoses, tanks and other materials used to store, haul, or transfer water, and Non *ANSI/NSF Standard 60 certified* chemical additives
- Unapproved water source(s)
- Insufficient chlorine residual and bacteriological monitoring and record keeping or understanding of appropriate sampling methods
- Insufficient recordkeeping for water load pick up and delivery locations
- Inadequate hose material/storage, tank hatches, or 24-mesh non-corrodible screened tank vents
- Ensure Water Hauler does not create potential cross connections

Questions?

Colorado Dept. of Public Health & Environment
Water Quality Control Division
Field Services Section
4300 Cherry Creek Dr. South
Denver, CO 80246-1530
Phone: (303) 692-3596



Classification

A Water Hauler qualifies as a *public water system* if it has fifteen service connections or serves twenty five individuals daily where water may be accessed at least 60 days per year and/or water delivery is to another public water system. Water delivery may be for residential or commercial use such as private residences, small communities, schools, offices, work camps, oil rigs, restaurants, motels, campgrounds, and more.

The Water Hauler will be scheduled for periodic Sanitary Surveys (Inspections) and will be classified as one of the following:

- Community
- Non-Transient Non-Community (NTNC)
- Transient Non-Community (TNC)

Guidance Documents

- Colorado Primary Drinking Water Regulations
- State of Colorado Design Criteria for Potable Water Systems
- Drinking Water Policy (Policy # DWT-8) Monitoring Requirements for Potable Water Haulers
- Colorado Department of Public Health and Environment Water and Wastewater Facility Operators Certification Requirements, Regulation 100, 5 CCR 1003-2
- CDPHE Low Risk Discharge Guidance: Discharges of Potable Water, Revised August 2009
- AWWA Standard for Disinfection of Water Storage Facilities ANSI-AWWA C652 and AWWA Standard for Disinfection of Mains ANSI-AWWA C651
- Drinking Water Hauler Monitoring Plan
- Department website: <http://www.colorado.gov/cdphe/wqcd>

Requirements for Potable Water Haulers

- Submit the necessary paperwork to Colorado Department of Public Health and Environment, (Department) to obtain a Public Water System Identification Number (PWSID) and submit the *Drinking Water Hauler Monitoring Plan*.
- Obtain *design approval* for each active tank/truck with associated appurtenances. Contact the Department before adding or subtracting tanks and before modifying treatment of the water system. Each active tank/truck and appurtenances must receive *design approval* and be inventoried with the Department.
- Provide an approved water source that meets the requirements of the Regulations. The potable water hauled must be provided by an active public water system.
- Ensure that all containers, pumps, tanks, hoses, fittings, baffles and equipment used to store, haul, or transfer potable water are constructed of materials that are *ANSI/NSF Standard 61*, AWWA certified, suitable for potable water use, or approved food grade materials. Certain equipment and materials must be constructed in accordance with the *State of Colorado Design Criteria for Potable Water Systems*.
- Sample for monthly bacteriological analyses at the outlet port of each Water Hauler tank/truck in operation. The minimum number of routine microbiological samples required per month is the number of water trucks/tanks used to haul water that month. Analysis of all microbiological samples must be performed by a certified laboratory and results must be submitted to the Department.
- Perform and record chlorine residual analysis of water dispensed from the distribution port of the water tank/truck, at least once for each load of water hauled for each tank/truck in operation. A measureable chlorine residual is required at all times. The Department encourages chlorine residual monitoring at pick up and delivery as a *best management practice*.
- Maintain records in accordance with the Regulations, and Policy #DWT-8.
- Develop and implement standard operating procedures for the disinfection of equipment, tanks and hoses.
- Ensure that each Water Hauler trucks/tanks used to haul potable water shall not contain, haul or carry any materials other than potable water.
- Contact 1.877.518.5608 if unsanitary water may have been served to the public or unauthorized discharges have been made to storm drains, ditches or other water courses.

Tank/Truck ID #12

Sample Recordkeeping Spreadsheet

Date and Time	Driver Initials	Location of Pick up or Delivery	Load Pickup Gallons	Load Delivery Gallons	Chlorine Residual mg/L (required once per load)	Comments: Maintenance Activity i.e Cleaning, Flushing, Sampling for Microbiological Test, Other
12/8/12 7:30 am	JAD	Town of Bulk Water Station 2	6000		1.0 mg/L	Collected Bacteriological Sample
12/8/12 9:00 am	JAD	Harry's Restaurant		4500	0.15 mg/L	
12/8/12 11:00 am	JAD	John Smith 124 County Road 6		1500	0.00 mg/L .90mg/L	Boosted chlorine with 4 oz. Regular Clorox
12/9/12 6:30 am	CL	PWSID # CO0xxxxxx Well Source Water	6000		0.98 mg/L	
12/9/12 9:30 am	CL	PWSID/ Elk Grove Camp-ground		6000	0.51 mg/L	
12/9/12 1:00 pm	CL	City of Water Fill Station 1	6000			
12/9/12 2:00 pm	CL	MH Church Mesa		6000	0.46 mg/L	Tank, hoses, quick connects disinfected with 200mg/l spray for 30 minutes AWWA 651, 652