



# WATER HAULER

## INSPECTION PROCEDURE AND OPERATING REQUIREMENTS



California Health and Safety Code (H&SC) Section 111120 requires water haulers operating in California to obtain a Water Hauler's License issued by the Department of Public Health, Food and Drug Branch (FDB). A Water hauler is defined as any person who hauls water in bulk (250 gallons or more) by any means of transportation if the water is to be used for drinking, culinary, or other purposes involving a likelihood of the water being ingested by humans. The Water Hauler's License must be renewed annually.

Once licensed, periodic water hauler inspections are conducted to assess compliance with applicable State and Federal laws and regulations. Inspections will include a review of required water testing results and records, an inspection to determine equipment suitability, equipment maintenance, and an evaluation of operating and sanitation procedures.

### **General Requirements**

Pursuant to 21 CFR 129.40, all water contact equipment shall be suitable for its intended use, including tanks, surfaces, hoses, pumps, valves, fittings and lubricants. All such equipment shall be constructed of non-toxic, non-absorbent material which can be adequately cleaned and sanitized. All equipment shall be constructed so as to allow inspection and adequate sanitation of water contact surfaces.

The following Guidelines regarding equipment will assist you to ensure compliance with CFR Part 129.40.

#### 1. Water hauler tank

##### (i) Tank materials

a) The prior use of a tank must be known. If the tank was used for non-food purposes, FDB will require testing by an approved laboratory to ensure safety.

##### b) Examples of Acceptable Tank Materials

- stainless steel;
- food grade plastics;
- food grade epoxy coated tanks;
- glass and glass coated tanks;
- aluminum (smooth finished);
- copper;
- ceramic.

##### c) Examples of Unacceptable Tank Materials:

- non-coated steel or galvanized steel;

- rusted or cracked surfaces;
  - tar, bituminous, or asbestos coatings;
  - coatings that are not documented as food grade
- d) Existing equipment with galvanized steel will not be allowed unless a food grade coating has been properly applied to all water contact surfaces.

(ii) Tank construction

a) Openings:

- Hatches and other openings, except fittings for water entry or discharge, shall be completely covered and sealed with tightly fitted coverings, permanently mounted food grade gaskets, or screw or clamp fastenings. The only exception is for Category B haulers which are equipped with security locks.
- Water fittings shall be equipped with clamp or screw-type caps, tethered to the fittings with chain or cable. These caps shall be in position on the fittings whenever they are not used for water transfer.

b) Vents:

- The tank shall be vented by a downward facing, or otherwise protected vent opening of a sufficient size to allow air to replace water as it is discarded.
- The opening shall be protected by an adequately supported air filter material capable of removing fine dust particles from the air.

c) Drain:

- A bottom drain shall be provided to facilitate complete discharge of water during sanitation procedures.

(iii) Tank Filling Mechanisms:

a) Tanks shall be filled using a system that prevents backflow of water from the vehicle tank to the source. Either of the following methods may be used:

- Acceptable double check valves on the direct filling connection to the tank. Two consecutively connected single check valves may be used in place of a double check valve.
- Overhead filling through a hatch opening at the top of the tank. The filling spout must not be allowed to intrude into the tank further than two diameters of the filling pipe above the highest water level that is possible when the tank is filled. If an overhead filler pipe is mounted on a vehicle, this pipe shall be capped at each end with threaded or clamped caps when the filler pipe is not in use. The caps need to be tethered to the fittings at the ends of the filler pipe.

b) Filling must be accomplished using acceptable source water under pressure.

- c) Drafting of surface waters is not allowed under any circumstances.
- d) Power take-off pumps will be allowed if they are properly sealed and isolated from the vehicle transmission.

## 2. Water pump

- (i) Only water transfer pumps which can be readily disassembled to demonstrate the condition of the impeller and impeller chamber shall be used.
- (ii) Acceptable Pumps:
  - a) food grade pumps constructed from stainless steel, plastic, smooth-finish aluminum or other food grade materials.
  - b) All water contact surfaces, including seals, bearings and lubricants must be constructed from food grade materials and must be smooth, non-porous and corrosion resistant. Acceptable food grade lubricants are usually white or pastel colored.
- (iii) Unacceptable Pumps:
  - a) Any pump using non-food grade lubricant, seals, or bearings; porous, pitted or corroded impellers or impeller chamber surfaces; cast iron pumps; petroleum lubricated pumps; and pumps installed within the water tank.
- (iv) When discharge or transfer pumps are used, an effective check valve shall be provided on the pump or tank discharge line, as near to the pump or tank as possible. No connections shall be located between the tank and the check valve. The check valve may be in-line or within the pump itself.

## 3. Hoses

- (i) The ends of all hoses shall be fitted with threaded or clamped caps. Such caps shall be in place when hoses are not in use. A tight, clean storage compartment can substitute for hose caps if the hoses are stored within the compartment at all times except during use for transfer of water.
- (ii) Acceptable:
  - a) Hoses shall have approved food grade water contact surfaces prepared from plastic, synthetic rubber, metal or other smooth non-porous material.
- (iii) Unacceptable:
  - a) Rubber hoses, garden hoses, canvas fire hoses, radiator or engine cooling system hoses, surface water drafting hoses.

## 4. Other equipment

- (i) Piping:
  - a) Food grade plastic or acceptable metal (brass, aluminum, stainless steel, copper) may be used. No corroded steel, galvanized steel or black pipe.
- (ii) Canteen filling equipment
  - a) Must have effective backflow prevention (check valves) and dispensing spouts or hose bibs.

- (iii) Miscellaneous Equipment:
  - a) Potable water heaters, pressure tanks and other equipment for operation of shower and kitchen units are allowed.
- (iv) Spray Bays
  - a) Are **not allowed unless** equipped with an acceptable backflow prevention device.
- (v) Fire hoses/nozzles and surface water drafting equipment
  - a) Are **not allowed**.

## 5. Labeling Requirements

- (i) The following statements must be permanently attached to or painted onto the vehicle and must be fully visible and legible at all times:
  - a) The name and address of the licensee must appear on both sides of the tank or on both truck cab doors in letters at least 2 inches in height. If the tank is covered or located inside a vehicle, this information must be on each truck cab door or on each side of the container.
  - b) The words “drinking water” or “potable water” must appear on both sides of the tank in letters of at least 4 inches in height. If the tank is covered or located inside the vehicle, this information must be on each truck cab door or on each side of the container.
  - c) The capacity (gallonage) of the tank must appear on both sides of the tank or on both cab doors in letters of at least 2 inches in height. If the tank is covered or located inside the vehicle, this information must be on each truck cab door or on each side of the container.
  - d) A sticker provided by FDB shall be affixed to the upper left quarter of the rear of the tank and shall be visible at all times. If the tank is covered or located inside the vehicle, the sticker must be affixed to the upper left quarter of the rear of the VEHICLE. The sticker indicates that the vehicle has been inspected and found to be in compliance with applicable requirements.

## 6. Inspection and Sanitizing

- (i) All equipment surfaces intended for potable water contact, including source fill point equipment, containers, caps, tanks, hoses, valves, filters and fittings shall be inspected, washed, rinsed, sanitized and replaced as often as necessary to maintain sanitation of such surfaces. Procedures to be used are contained in 21 CFR Part 129.80.
- (ii) If household chlorine bleach (containing 5% chlorine) is to be used as a sanitizer, use one gallon of chlorine bleach in 1,000 gallons of water. Agitate the chlorine solution thoroughly and allow contact with tank hoses for at least 30 minutes. Run chlorine solution to waste through delivery hoses. The tank must then be thoroughly rinsed with potable water before filling. Do not use scented chlorine bleach for this process.

- (iii) Adequate cleaning and sanitizing procedures as described in subsection (a) above shall be used on hauling vehicles and associated equipment at the following times:
  - a) When equipment is first placed into service; when it has been unused and stored in a sealed condition for a period of 4 weeks or more; or when it was used to haul any food products other than potable water.  
For Category B Vehicles: When any food product has been hauled, the tank, hoses and other equipment must be thoroughly cleaned, sanitized and rinsed. **Water samples must be collected for coliform analysis.** Licensees may haul water only if the test data shows that the water contains coliform bacteria at less than 2.2 MPM/100 ml (or “absence” if the presence/absence test is used).
  - b) Whenever the filled or empty tank has been exposed by open or unsealed cover caps or fittings to any condition of possible contamination of the tank or contents. This includes potential contamination from dust, smoke, rain, or chemical substances.
  - c) When any fault or defect becomes apparent in the seals, vents, hatch doors, welds, valves, pipes, pumps, hoses, or other equipment which may allow the water to become contaminated.
  - d) When bacterial analysis of the water indicates presence of *E. coli*.

#### 7. Bacteriological testing

- (i) Hauled water samples shall be submitted to an approved water laboratory for coliform testing at the following times:
  - a) The first water load following any of the required sanitation procedures described in (6) above.
  - b) At least one sample of hauled water every 30 days during months when water hauling is performed.
  - c) Whenever such analysis is requested by state or local health authorities.
- (ii) All testing must be conducted by a laboratory certified by the California Environmental Laboratory Accreditation Program (ELAP) or the United States Environmental Protection Agency (USEPA). For a list of ELAP-certified drinking water laboratories, please visit the agency website links below:

State Water Resources Control Board, Division of Drinking Water/ELAP

[http://www.waterboards.ca.gov/drinking\\_water/certlic/labs/index.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml)

ELAP certified drinking water labs, List

[http://www.waterboards.ca.gov/drinking\\_water/certlic/labs/documents/elap\\_certified\\_drinking%20water\\_labs.pdf](http://www.waterboards.ca.gov/drinking_water/certlic/labs/documents/elap_certified_drinking%20water_labs.pdf)

- (iii) Take four samples and send all four samples to the testing laboratory. The laboratory will randomly select one of the four samples to test for coliforms.

- (iv) The laboratory may use the presence/absence (P&A) test for the coliform analysis. Only negative (absence) test data are acceptable. **If a sample tests positive (presence) for coliforms, you must further test the water for *E. coli*. If *E. coli* is detected, you must immediately stop distributing the water; notify the FDB Licensing Desk; investigate the cause of the problem; take corrective actions and resample/test the water. You must not resume the distribution of water until the test shows no *E. coli* in the water.**
  - (v) Pursuant to H&SC Section 111155, FDB may ask you to test for other contaminants if FDB suspects other substances may be present in the water.
8. Storage of water in the water hauler tank
- (i) Water shall NOT be stored in the water hauler for a period of greater than one week.
9. Logs
- (i) The hauler shall keep a log of the following activities **on board the vehicle**;
    - a) Dates of cleaning and sanitizing procedures. This log is to include descriptions of processes used for cleaning/sanitizing. For example: cleaning agents, contact time, concentration of sanitizing agent.
    - b) Water sources used. This log is to include: dates, gallonage and the name of the person who authorized/directed use of the source.
    - c) Delivery points, including dates and volumes delivered.
    - d) Copies of agreements, contracts, licenses
    - e) Test results of bacterial (coliform and *E. coli*) testing
10. Record Retention
- (i) Pursuant to 21 CFR Part 129.80(h) all testing, suitability, and performance records must be maintained for at least 2 years.
11. Design or Construction Changes
- (i) You must inform FDB when any changes are made in the design or construction of your water hauler.