

1992 REQUIREMENTS FOR INSPECTION AND OPERATION

OF POTABLE WATER HAULING VEHICLES (7500)

(California Retail Water Products Law:
Health and Safety Code, '26591-26594.5)

(Revised 1996)

A. VEHICLE LICENSE USE CATEGORIES

1. Water Hauling Vehicle Category B

Water Sources: Licensed private water source; licensed bottling plant; private bulk water processing plant; regulated municipal water supply.

Users: Licensed water bottling plant; licensed retail water facility; licensed vending machines; food processing plant; industrial potable bulk water users; military installations.

Equipment: Compliance with all equipment standards; intake or discharge pumps need not be present on vehicle. Water may be transferred at source and destination by external hoses and pumps.

Exemptions: Category B vehicles are exempted from labeling and microbiological testing requirements. (Water user is responsible for microbiological water quality testing.)

2. Water Hauling Vehicle Category X

Water Sources: Licensed private source; regulated municipal water supply.

NOTE: Non-community water supplies may not be used unless such sources are also licensed as private water sources.

Users: Fire camps; retail bulk water distribution; emergency uses; miscellaneous uses for direct human contact or consumption (e.g., shower, baths).

Equipment: Compliance with all equipment standards.

Exemptions: None. All labeling requirements apply.

B. DEFINITION OF WATER HAULING VEHICLE

Self propelled, or towed vehicle having an attached water tank, with or without pumps, hoses, and accessory equipment for filling or distribution of water. Tank must exceed 250 gallons capacity and must comply with all standards listed in this guideline.

Use of convertible trucks, dump trucks, or flat bed trucks with detachable tanks is allowed if the tanks are securely attached. No detached tank or vehicle without a tank will be inspected or licensed.

C. PRODUCTS ALLOWED FOR TRANSPORT

Category B: Potable Water; any food product including wine, syrup, fruit concentrates, soft drink concentrates. No non-food products may be hauled under this license category.

Category X: Potable Water. No other material may be hauled.

D. EQUIPMENT REQUIREMENTS

1. General Requirements

(Reference: Code of Federal Regulations, Title 21, Part 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.

2. Tank Material

Acceptable: Stainless steel; food grade plastics; food grade epoxy coatings; glass and glass coatings; aluminum (smooth finished); copper; ceramic. The prior use of a tank must be known. If it was used for non-food purposes, the Department will require testing by an approved laboratory to assure safety. The required testing is covered below.

Unacceptable: Non-coated steel or galvanized steel; rusted or cracked surfaces; tar, bituminous, or asbestos coating; coating undocumented as food grade. Existing equipment with galvanized steel will not be allowed after 1/1/93, unless a food grade coating has been applied to all water contact surfaces, and required curing procedures have been followed.

Testing: Because of concerns for possible organic chemical contamination resulting from prior non-food use of tanks, or improper selection, application, or use of coatings for tanks, testing will be required to demonstrate that organic chemicals leaching from the tank surface will not exceed State action levels.

To verify the concentration of any organic chemical contaminant, the following actions shall be required:

- a. The water hauling tank shall be filled with potable water, and held for five days. The water shall be sampled and analyzed for organic chemicals by a laboratory certified by the California Department of Health Services, EPA, or other laboratory acceptable to the Department for the presence of any volatile organics.
- b. A written report of the test results is to be provided to the Department.
- c. If any volatile organic exceeds the State action level, the tank will require corrective action until resampling indicates volatile levels are below action levels.

Since it is difficult to correct coating problems after they are discovered, considerable care should be exercised in the selection and application of coating materials.

3. Tank Construction

Openings: Hatches and other openings, except fittings for water entry or discharge, shall be completely covered and sealed with tight fitting coverings, permanently mounted food grade gaskets, screw or clamp fastenings, and except for category B vehicles, 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.

Tank Vents: 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 discharged. This opening shall be protected by an adequately supported fabric, paper, or metal filter material capable of removing fine dust particles from the air.

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

4. Vehicle Tank Filling Mechanisms

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

- a. Approved double check valves on the direct filling connection to the tank.
- b. 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 which is possible when the tank is filled. If an overhead filler pipe is mounted on the vehicle, when not being used for filling, this pipe shall be capped at each end with threaded or clamped caps, and tethered to the fittings at the ends of the filler pipe.

5. Pumps

Only water transfer pumps which can be readily disassembled to demonstrate the condition of the impeller and impeller chamber shall be used.

Acceptable: Food grade pumps, constructed from stainless steel, plastic, brass, smooth-finish aluminum or other food grade materials.

Water contact surfaces, including seals, bearing, 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.

Unacceptable: Any pump using non-food grade lubricant seals or bearings; porous, pitted, corroded or coated impellers or impeller chamber surfaces; cast iron pumps; petroleum lubricated pumps; pumps installed within the water tank. Filling must be accomplished using acceptable source water under pressure. Drafting of surface waters is not allowed under any circumstances. Power take-off pumps will be allowed if they are properly sealed and isolated from the vehicle transmission.

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.

6. Hoses

The ends of all hoses shall be provided 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.

Acceptable: Hoses shall have approved food grade water contact surfaces prepared from plastic, synthetic rubber metal, or other smooth non-porous material. Such hoses must be documented as suitable if questions are raised regarding acceptability.

Unacceptable: Rubber hoses, garden hoses, canvas fire hoses, radiator or engine cooling system hoses; surface water drafting hoses.

7. Other Equipment Accepted on Vehicle

Piping: Food grade plastic or acceptable metal (brass, aluminum, stainless steel, copper). No corroded steel, galvanized steel, black pipe.

Canteen Filling Equipment: Must have effective backflow prevention (check valves), and dispensing spouts or hose bibs.

Miscellaneous Equipment: Potable water heaters, pressure tanks, and other equipment for operation of shower and kitchen units are allowed.

Unacceptable: Spray bars, fire hoses and nozzles, surface water drafting equipment.

E. LABELING REQUIREMENTS

1. The following statements must be fully visible and legible at all times, permanently attached to or painted on the vehicle:
 - a. Name and address of license, on both sides of the tank or on both truck cab doors; letters of at least 2 inches in height.
 - b. The words "domestic water," "drinking water," or "potable water" on both sides of the tank in letters of at least 4 inches in height.
 - c. The gallonage capacity of the tank on both sides of the tank or on both cab doors in letters of at least 2 inches in height.
2. A seal or sticker provided by the Department shall be affixed to the upper left quarter of the rear of the tank, and shall be visible at all times. This shall

indicate that the vehicle has been inspected and found to be in compliance with these requirements.

F. OPERATIONAL REQUIREMENTS

1. All equipment surfaces intended for potable water contact, including source fillpoint equipment, containers, caps, tanks, hoses, valves, filters, and fittings shall be inspected, washed, rinsed, sanitized, and replaced as often as necessary to effect and maintain sanitation of such surfaces. Procedures to be used are listed in Title 21, Code of Federal Regulations, Part 129.80.
2. Adequate cleaning and sanitizing procedures as described in part 1 above, shall be used on hauling vehicle and associated equipment at the following times:
 - a. When the equipment is placed into service, or when it has been unused and stored in a sealed condition for a period of 4 weeks or more.
 - b. When 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, including contact with 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 coliform bacteria above MPN 2.2.
3. **Bacteria Testing:** Hauled water samples shall be submitted to an approved water laboratory by the hauler for coliform bacteria testing at the following times:
 - a. The first water load following any of the required sanitation procedures described in part 2 above.
 - b. At least one sample per 30 days of hauled water during months when water hauling is performed.
 - c. Whenever such analysis is requested by state or local health authorities.
4. Water shall not be stored in the vehicle for a period of greater than one week.
5. The hauler shall keep a log of activities on board the vehicle including:

- a. Dates of cleaning and sanitation procedures; description of processes used (cleaning agents, contact time and concentration of sanitizing agent).
- b. Water sources used, dates, gallonage, name of person who authorized/directed use of source.
- c. Delivery points; dates.
- d. Copies of agreements, contracts, licenses, etc.
- e. Test results of bacterial analyses.

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