



Technical Information Alternative Containers Guide

on recycled water use. The RWQCB may issue a Master Reclamation Permits (MRP) in lieu of individual WRRs for projects involving multiple users. These MRPs are issued to a producer or distributor, or both, of recycled water and combine the WDRs and WRRs (2). The process for obtaining approval is summarized below:

1. Determine if your agency's WDRs/WRRs or MRP allows the use of recycled water for the proposed purpose. If so, skip to Step 3. If not, the agency will need to seek an amendment to the WDRs/WRRs or MRP by submitting a report describing the nature of the proposed additional use (3). If the agency is not willing to amend their permit, the customer may obtain individual WDRs from the RWQCB.
2. Anyone who proposes to use recycled water must file a report, called a Report of Waste Discharge (RWD), with the RWQCB. The requirement for this RWD is waived if the customer is supplied with recycled water from a purveyor that is operating under a MRP (4). If the purveyor is not operating under a MRP, the customer must submit a RWD to the RWQCB. Many purveyors in San Diego County are operating under a MRP.
3. Each purveyor that is issued a MRP is required to establish and enforce rules or regulations governing the use of recycled water and the design and construction of recycled water facilities (2). These rules and regulations may vary slightly between purveyors. If your agency is operating under a MRP, the customer should follow the approval and permitting procedures of the agency, which may include the submission of an Engineering Report. The purpose of the Engineering Report is to describe the manner by which the recycled water use will comply with the requirements of Title 22. Additional information concerning Engineering Reports is presented on the next page.

CUSTOMERS REQUIREMENTS

Customers should contact the recycled water purveyor in the area where recycled water is to be used. Typically, the proposed use may only occur within the recycled water purveyor's service area, so those customers that may receive recycled water from more than one purveyor or propose to use recycled water in more than one service area will need to coordinate with each supplier. The recycled water customer should ensure that the following requirements are met (5), (6):

1. Each customer must assign a Recycled Water Site Supervisor that will receive training prior to receiving a permit. The Recycled Water Site Supervisor will be responsible for ensuring that all employees working with recycled water are trained on its proper use and that adequate signage is maintained to make employees aware that recycled water is being used.
2. Records of training should be maintained by the recycled water purveyor.
3. Each recycled water user must apply a recycled water notification sign on each vehicle, tank, or container holding recycled water. An example sign is shown on Page 4 of this guide.
4. All vehicles, tanks, and containers must be filled through an air gap to ensure backflow protection. Overhead filling should be 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. A diagram detailing approved air gap protection is shown on Page 4 of this guide.
5. Vehicles, tanks, and containers used in transporting recycled water must have water-tight valves and fittings, and must not leak. All vehicles, tanks, and containers must be completely enclosed and tightly sealed, and must be covered so water won't spill out during transport. Water-containing vessels that are open to the atmosphere during hauling are not acceptable for use.
6. Hoses used for the application of recycled water shall be removable and shall be stored in a disconnected condition during transport. Hoses should be inspected daily to ensure that they are in serviceable condition and free from leaks.
7. The customer must notify workers and/or the public when recycled water is used at a site and tell them they are not to drink recycled water or use it for food preparation.
8. Truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected, and bandaged.
9. Recycled water must not be introduced into any potable water piping system and no connection shall be made between the vehicle or container and any part of a potable water system.
10. Recycled water must be obtained from an approved recycled water filling station.

11. Recycled water shall not be applied where it could spray on external drinking water fountains, passing vehicles, buildings, or areas where food is handled or eaten.
12. Recycled water users should wash their hands with soap and potable water or apply hand sanitizer after working with recycled water, especially before eating or smoking.
13. Precautions should be taken to avoid food coming in contact with recycled water while the use site is wet.
14. Once a vehicle, tank, or container is used for recycled water, it shall not be used to carry water for potable purposes unless permitted by CDPH, Food and Drug Branch.
15. The recycled water user shall comply with the appropriate municipality's storm water ordinance. Typical compliance measures include preventing overspray, ponding, or runoff of recycled water from the use area. Incidental runoff, which includes small amounts of runoff from the intended use area and overspray from sprinklers that drifts out of the use area, should not trigger the need for an individual National Pollutant Discharge Elimination System (NPDES) permit.

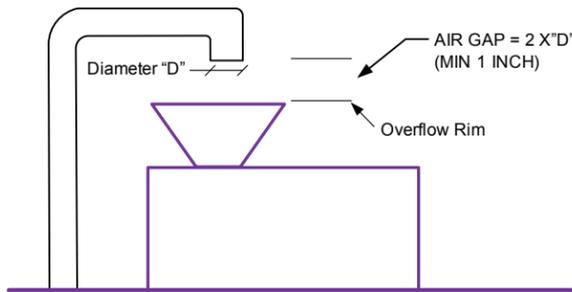
The recycled water user must also keep a log book for each vehicle, tank, or container used to transport recycled water. The log book should include the following information:

- ◆ Date of delivery/use
- ◆ Volume of water delivered/used
- ◆ Intended use of water
- ◆ Name and address of the recipient/customer

PURVEYOR'S ENGINEERING REPORT

The purpose of an Engineering Report is to describe the manner by which a recycled water use will comply with Title 22. The California Department of Public Health's guidance document, titled "Preparation of an Engineering Report for the Production, Distribution, and Use of Recycled Water," details the information required for approval of recycled water projects. The report should contain sufficient information to assure the regulatory agencies that the degree and reliability of treatment is commensurate with the requirements for the proposed use, and that the use of the recycled water will not create a health hazard or nuisance. The Engineering Report should be prepared by a properly qualified engineer registered in California and experienced in the field of wastewater treatment and should be submitted as early as possible in the design process to allow for comment and revision before detailed plans are complete (9). Typical components of the Engineering Report when alternative containers are being considered include, but are not limited to:

- ◆ Identification of all agencies involved in the treatment, distribution, and use of the recycled water.
- ◆ Procedures, restrictions, and other requirements that will be imposed by the distributor and/or user, such as construction criteria, operational requirements, and inspection and testing requirements.
- ◆ Description and location of the proposed use.
- ◆ Identification of the party(s) responsible for the use.
- ◆ Details of the vehicle, tank, or container type, size, and use.
- ◆ Proposed method of distribution, such as direct spray from vehicle or manual hose attachment.
- ◆ Filling station locations and details.
- ◆ Description of the backflow prevention procedures to protect the potable water system as required by Title 17 of the California Code of Regulations, which can be found at <http://www.cdph.ca.gov/HealthInfo/environhealth/water>
- ◆ Location and wording of public warning signs, an example of which is shown on page 4.
- ◆ Description of the inspection and monitoring program, including frequency of visual inspections, public notification procedures, systems identification, and Recycled Water Site Supervisors. Provide description of record keeping procedures for report deficiencies and corrective actions.
- ◆ Description of the employee training program to educate personnel on the handling and filling of vehicles, tanks, or containers, and the use of recycled water during the proposed activities. The training program must be conducted by a Recycled Water Site Supervisor.



Air Gap Protection Detail



Recycled Water Example Sign

INTRODUCTION

Many water agencies in San Diego County are providing recycled water for a variety of uses as allowed in Title 22 of the California Code of Regulations (Title 22), including irrigation, industrial cooling processes, flushing of toilets and urinals, and construction purposes, such as dust suppression, soil compaction, mixing concrete, and cleaning outdoor work areas. Recycled water used for general irrigation, agricultural, and construction purposes is sometimes transported in vehicles, tanks, and containers other than typical water tanker trucks. There are a variety of these alternative portable water tanks and containers used, including bladder tanks, horizontal and elliptical leg tanks, square and rectangular tanks, and tanks designed to fit in the back of pick-up trucks.

PURPOSE OF THIS GUIDE

The San Diego County Water Authority (SDCWA) has published this document to assist customers who are interested in transporting recycled water. The purpose of this guide is to provide information tailored specifically for companies, agencies, or municipalities planning to transport recycled water in vehicles, tanks, and containers, other than water tanker trucks, for general irrigation, agricultural, and construction purposes. The California Department of Public Health (CDPH) has reviewed this guide.

COMMON TYPES OF CONTAINERS

Pickup Truck Tanks – These tanks are specifically designed to fit within a standard bed pickup truck and feature unique cut-outs to allow the tank to fit neatly between and above the wheel wells. The capacity of these tanks can range between 150 and 450 gallons, depending on the size and payload rating of the pickup truck.

Leg Tanks – These tanks typically have circular or elliptical cross sections and feature stability legs that provide a flat surface for mounting to a pickup or flat bed truck. The legs also act as anti-sloshing baffles on the inside of the tank which improves the stability during transport. These tanks are available in a wide variety of sizes typically between 30 and 5,000 gallons.

Square and Rectangular Tanks – Square and rectangular tanks come in a wide variety of shapes and sizes. One of the most popular varieties of these tanks is the Intermediate Bulk Container (IBC), which is also called a cage tank. IBCs are square tanks usually between 275 and 330 gallons and are enclosed in a cage that typically made of metal. Most IBCs have a pallet bottom, which make them extremely convenient for handling with a forklift.

Bladder Tanks – Bladder tanks, or pillow tanks, are flexible storage tanks that are collapsible, foldable, and storable when not in use. They can be used for the storage of liquids on a temporary or long term basis and are often used for bulk liquid transport. Bladder tanks typically have a capacity between 100 and 10,000 gallons, but can be manufactured up to 100,000 gallons or more.



WATER AGENCY CONTACT INFORMATION

Carlsbad Municipal Water District..... (760) 438-2722	Poway, City of (858) 668-4720
Del Mar, City of..... (760) 753-6203	Ramona M. W. D..... (760) 789-1330
Escondido, City of..... (760) 839-4668	Rincon Del Diablo M. W. D. (760) 745-5522
Fallbrook P.U.D..... (760) 728-1125	San Diego, City of (619) 515-3500
Oceanside, City of..... (760) 435-5800	San Dieguito Water District (760) 633-2650
Olivenhain M. W. D..... (760) 753-6466	San Elijo Joint Powers Authority..... (760) 753-6203
Otay W. D..... (619) 670-2222	Santa Fe Irrigation District (858) 756-2424
Padre Dam M. W. D. (619) 448-3111	Valley Center M. W. D..... (760) 749-1600

REGULATORY CONTACT INFORMATION

California Department of Public Health Southern California Field Operations Branch, District 14 – San Diego 1350 Front Street, Room 2050 San Diego, CA 92101 (619) 525-4195	San Diego County Department of Environmental Health 5201 Ruffin Road, Suite C San Diego, CA 92123 (858) 694-2121
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WORKS CITED

1. *Memorandum of Agreement Between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water.* 1996.
2. *California Water Code.* Division 7, Chapter 7, Section 13523.1.
3. **Los Angeles Regional Water Quality Control Board.** *Order No. R4-2002-0173 Amending Water Recycling Requirements in Order No. 01-043 for West Basin Municipal Water District.* 2002.
4. *California Water Code.* Division 7, Chapter 7, Section 13522.5.
5. **East Bay Municipal Water District.** *Recycled Water Truck Program Guidelines.* July 2009.
6. **California Department of Public Health.** *Procedure for Obtaining a Water Hauler License.* 2007, Revised 2010.
7. **Celeste Cantu, Executive Officer, California State Water Resources Control Board.** *"Incidental Runoff of Recycled Water"* Memorandum to Regional Board Executive Officers. February 24, 2004.
8. **Massachusetts Department of Environmental Protection.** *Procedures for Emergency Tank Truck Bulk Water Hauling.*
9. **California Department of Public Health.** *Preparation of an Engineering Report for the Production, Distribution, and Use of Recycled Water.* March 2001.

APPROVAL PROCESS FOR PURVEYORS

Permits and approvals must be obtained in order to start using recycled water. The San Diego Regional Water Quality Control Board (RWQCB) is assigned with the protection, coordination, and control of water quality in the San Diego region and, therefore, is responsible for the issuance and enforcement of requirements given to producers and users of recycled water (1). The RWQCB issues Waste Discharge Requirements (WDRs) for activities which can affect ground water quality, including recycled water discharges. In addition, Water Reclamation Requirements (WRRs) are also issued to place conditions