



## **Engineering Report for the Installation of Hauled Recycled Water Fill Stations and Use of Hauled Recycled Water in the San Diego Region**

Final Report: July 8, 2015

Prepared by San Diego County Water Authority

on behalf of Carlsbad Municipal Water District, City of Del Mar, City of Escondido, City of Oceanside, City of Poway, City of San Diego, Fallbrook Public Utility District, Olivenhain Municipal Water District, Leucadia Wastewater District, Otay Water District, San Dieguito Water District, San Elijo Joint Powers Authority, Santa Fe Irrigation District, Padre Dam Municipal Water District, Pendleton Military Reservation, Ramona Municipal Water District, Rincon Del Diablo Municipal Water District, Valley Center Municipal Water District, and Vallecitos Water District



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## Table of Contents

I.	Introduction.....	1
A.	Street Sweeping.....	1
B.	Dust Control, soil compaction and construction.....	1
C.	Sewer flushing and pressure testing .....	1
D.	Use of recycled water for irrigation .....	1
E.	Fire Protection .....	1
II.	Participating Agencies and Recycled Water Resources allowed under this Program.....	2-3
III.	Approved Uses .....	3
A.	Street Sweeping .....	3
B.	Dust Control, Compaction and Construction .....	4
C.	Pipeline Flushing and Pressure Testing and Storm Drain Maintenance.....	4
D.	Commercial and Residential Landscape irrigation and agricultural irrigation.....	5
E.	Fire Protection .....	5
IV.	Fill Station Design .....	6
A.	Access to Recycled Water .....	6
B.	Staffed Residential Fill Stations .....	6
C.	Unstaffed Automated Fill Stations .....	6
D.	Commercial Construction Meters .....	7
E.	Staffed Commercial Fill Stations .....	7
V.	Truck and Container Requirements .....	7
VI.	Training and Agreements .....	8
VII.	Oversight and Records .....	9
A.	Oversight of Customers.....	9
B.	Termination of Service .....	9
C.	Records Maintenance.....	9-10
VIII.	Exhibit A – Example of Staffed Fill Stations	
	Exhibit B – Unstaffed Fill Station	
	Exhibit C – Commercial Recycled Construction Meter	
	Exhibit D – Typical Water Containers	
	Exhibit E – Example Container and Truck Labels	
	Exhibit F – Recycled Water Use Application and Agreement – Residential & Commercial	
	Exhibit G – Recycled Water Tanker Truck Program Guidelines	

# **Engineering Report for the Installation of Hauled Recycled Water Fill Stations and Use of Hauled Recycled Water in the San Diego Region**

**July 8, 2015**

## **I. INTRODUCTION**

This engineering report was prepared in support of a proposal to allow the development, installation and operation of recycled water fill stations for the following recycled water uses:

- A. Street sweeping and cleaning of sidewalks and outdoor work areas
- B. Dust control, soil compaction, and construction
- C. Sewer flushing, pressure testing of newly constructed tertiary recycled water or sewer force main pipelines, and gas pipelines;
- D. Use of recycled water for irrigation of commercial and residential landscapes, crops and nursery stock
- E. Fire protection

These uses are described in more detail later in this document. In response to severe drought conditions and statewide emergency requirements to reduce per capita domestic water use ranging from 12% to 36%, simplifying and expediting local agency's opportunities to use recycled water for the previously listed uses is paramount. Development and use of recycled water fill stations can provide customers the option to use recycled water for outdoor water uses and reduce demand on the domestic water system. Once the investment has been made, the fill stations, and applicable procedures may remain in place after the drought event to continue to provide recycled water to customers.

This report was prepared pursuant to Section 60323 of Title 22 the California Code of Regulations and is intended to provide a framework for approval of the uses listed above, and for recycled water fill stations that can be installed at multiple locations throughout the San Diego region by various recycled water purveyors located within the service area of the San Diego County Water Authority. This report includes participating agencies and sources of recycled water, approved uses, fill station design, truck and container requirements, training and agreements, and oversight and records.

The use of recycled water in dual plumbed/dual source use areas which would include the use of piped recycled water for irrigation or use inside buildings for toilet and urinal flushing is not applicable or addressed in this report, except for sites that are specifically approved as dual plumbed or dual sourced sites by the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW) and/or the County of San Diego Department of Environmental Health (DEH).

## II. PARTICIPATING AGENCIES AND RECYCLED WATER SOURCES ALLOWED UNDER THIS PROGRAM

The intended recycled water beneficial uses listed above are not new to California, and are consistent with applicable regulating requirements. This project includes the use of recycled water for these beneficial purposes, and for the installation of residential and commercial fill stations in the service areas of the recycled agencies operating under existing recycled water permits as indicated in the attached table.

<b>Recycled Water Agency</b>	<b>Recycled Water Treatment Facilities</b>	<b>Existing Discharge/Recycled Water Order Number(s)</b>
Carlsbad Municipal Water District	Carlsbad Water Recycling Facility	2001-352
City of San Diego, City of Poway	North City Water Reclamation Plant	97-03, 97-62
City of San Diego, Otay Water District	South Bay Water Reclamation Plant	R9-2000-203
Olivenhain MWD	4S Ranch Water Reclamation Facility	R9-2003-0007
Olivenhain MWD, Leucadia Wastewater District, Carlsbad MWD	Gafner Water Recycling Facility	R9-2004-223
Santa Fe ID, San Dieguito WD, San Elijo JPA, City of Del Mar, Olivenhain MWD	San Elijo Water Reclamation Facility	R9-2000-0010 as amended, Master Water Reclamation Permit
Olivenhain MWD	Santa Fe Valley Water Reclamation Plant	R9-2002-013
Fallbrook PUD	Fallbrook Water Reclamation Plant	91-39
City of Oceanside	San Luis Rey Water Reclamation Facility	93-07 Waste Discharge Requirements for City of Oceanside San Luis Rey Wastewater Treatment Plant (include reclamation requirements)
Otay WD	Ralph W. Chapman Water Reclamation Facility	R9-2007-0038
Padre Dam MWD	Ray Stoyer Water Recycling Facility	No. 97-049
Pendleton Military Reservation	Southern Regional Tertiary Treatment Plant	R9-2009-0021
Ramona Municipal Water District	Santa Maria Water Reclamation Plant (tertiary water only)	2000-177
Ramona Municipal Water District	San Vicente Water Reclamation	R9-2009-0005
City of Escondido, Rincon Del	Hale Avenue Resource	R9-2010-0032

Diablo Municipal Water District	Recovery Facility	
Rincon Del Diablo Municipal Water District	Harmony Grove Water Reclamation Facility	R9-2012-0055
Valley Center Municipal Water District	Lower Moosa Canyon Water Reclamation Facility (only upon conversion to tertiary and permit approval by Regional Water Board and SWRCB-DDW (est. 2016))	No. 95-32
Valley Center Municipal Water District	Woods Valley Ranch Water Reclamation Facility	R9-1998-009
Vallecitos Water District, Olivenhain MWD, city of Carlsbad	Meadowlark Water Reclamation Facility	R9-2007-0018

Recycled water treatment facilities located in San Diego County that are covered under this engineering report produce tertiary treated recycled water that has been filtered and disinfected to meet Title 22 standards. The recycled water treatment plants will continue to treat to tertiary standards, and operate, monitor, and report to all applicable regulatory agencies consistent with existing recycled water permits.

### **III. APPROVED USES**

The following are the proposed uses for the recycled hauled water. No other uses of hauled water other than those described in this report will be allowed.. Specific requirements related to containers and trucks associated with these uses are included in Section V.

#### **A. Street Sweeping, and Cleaning of Sidewalks and Outdoor Work Areas:**

1. Use of recycled water for street sweeping and cleaning of sidewalks and outdoor work areas will be permitted to occur within all hydrologic areas within San Diego County.
2. Street sweeping is a management measure used to reduce the amount of trash, debris, and particulates washed off with urban runoff. Street sweeping vehicles are typically equipped with dust suppression systems which spray small amounts of water on the ground to prevent generation of dust during sweeping. Most of the applied recycled water will be vacuumed by the street sweeping vehicle's vacuum system, while the remaining residual will evaporate from the ground. It is estimated that typical street sweeping vehicles use about 660 gallons per day of recycled water. On average, the sweeping vehicle tank holds 220 gallons of water, and each sweeping vehicle fills on average about 3 times a day.

3. Agencies will ensure that procedures and requirements for the use of recycled water for street sweeping and cleaning of sidewalks and outdoor work areas do not adversely affect human health or water quality.
4. These uses will avoid spray and misting. The recycled water will not enter eating or food areas.
5. Title 22 of the California Code of Regulations provides that recycled water used for cleaning roads, sidewalks and outdoor work areas shall be at least disinfected secondary-23 recycled water. Disinfected secondary-23 recycled water is oxidized wastewater that has been disinfected so that the 7-day median of total coliform bacteria does not exceed 23 Most Probable Number (MPN) per 100 mL. The recycled water used will be of higher quality than this minimum standard.

B. Dust Control, Compaction and Construction:

1. Use of recycled water for construction related activities including dust control, soil compaction, compaction of backfill around potable and non-potable pipes, and concrete mixing will be permitted to occur within all hydrologic areas of San Diego County.
2. Recycled water for construction may be used for soil compaction during grading operations, dust control, and consolidation and compaction of backfill in trenches.
3. Drop tanks may be installed at secured construction and designated fill sites and filled from trucks or recycled water lines for the purpose of storing recycled water for dust control, compaction and construction. No on site piping for distribution of recycled water is allowed.
4. Title 22 allows the uses indicated in this report. Some construction uses allow disinfected secondary-23 water, while others require use of tertiary water. The proposed use of tertiary treated recycled water under this engineering report will meet the minimum requirements in Title 22.

C. Pipeline Flushing and Pressure Testing:

1. Use of recycled water will be used for flushing sanitary sewer systems, and pressure testing of newly constructed tertiary recycled water lines, sewer force mains or gas pipelines within San Diego County.
2. Pressure testing of potable water lines with recycled water is prohibited.
3. Water for flushing sanitary sewers and recycled water lines will not be discharged to the environment. Water from sewer flushing will continue down the sewer to

the wastewater plant. Water from pressure testing recycled water lines will remain in the system.

4. To the extent practical, hydrostatic test water line segments will be transferred to subsequent test segments for reuse via a combination of pipe connectors, above ground temporary storage tanks and/or trucks or reused for beneficial purposes.
  5. Discharges from gas pipelines will follow San Diego Gas and Electric procedures as identified in their Revised Final Engineering Report for Distribution and Use of Recycled Water Pipeline Safety Enhancement Plan dated September 2014.
  6. Recycled water used for these purposes will be tertiary treated water.
- D. Commercial and Residential Landscape irrigation and agricultural irrigation:
1. Recycled water may be hauled to private residences or commercial sites within all hydrologic areas and applied to landscape for irrigation purposes consistent with Title 22 requirements.
  2. Recycled water may be used to irrigate crops and nursery stock consistent with Title 22 requirements.
  3. Recycled water may not be used to fill tanks or ponds where the water may be distributed through a dual piped or dual plumbed system, unless the site has been approved by the SWRCB-DDW or San Diego County Department of Environmental Health for use of recycled water in a dual piped or dual plumbed site.
  4. Irrigation is allowed per Title 22 provided the water quality meet tertiary treated water standards which is water that has been filtered and disinfected such that the 7-day median of total coliform bacteria does not exceed 2.2 MPN per 100 mL. All proposed recycled water under this engineering report is required to and does meet these standards. In addition, tertiary treated water will meet or be of higher quality than the minimum Title 22 requirements for agriculture or nursery crops.

E. Fire Protection

1. Use of recycled water for fire protection, suppression, and training will be permitted to occur within all hydrologic areas within San Diego County.
2. All recycled water used for fire protection will be tertiary treated water.
3. Fire protection uses will include firefighting of structural and nonstructural fires and training exercises.

4. Hauled recycled water will not be used to fill fire hydrants loops or fire sprinklers within buildings.
5. Title 22 allows structural firefighting with tertiary treated water and nonstructural firefighting with disinfected secondary-23 water. The water quality will meet the minimum required for firefighting.

#### **IV. FILL STATION DESIGN AND APPROVAL**

Recycled water suppliers will notify SWRCB-DDW, the San Diego Water Board and San Diego County DEH of their intent to install a fill station. The supplier will provide a map of the location and indicate the type of fill station that will be installed. For residential fill stations, the supplier will provide a plan showing the layout of the fill station facilities and access controls to the facilities. For complex fill stations, the supplier will provide plans and specifications. The recycled water supplier will contact San Diego County DEH to schedule an inspection of the fill station prior to start-up.

##### **A. Access to Recycled Water**

Recycled water access will be provided through staffed and unstaffed fill stations or through commercial construction meters as described below:

##### **B. Staffed Residential Fill Stations**

Staffed residential stations will consist of a hose bib with a shut-off valve that is connected to a recycled water line. The end of each hose will also have a gate valve to facilitate the filling process and prevent spilling. The filling station site will have handwashing stations or hand sanitizers on site to allow customers to clean their hands. Staff at the site will check customers in and out and will verify that the containers being used are appropriate and that each customer has been trained in the proper and acceptable use of recycled water. Each trained customer will be provided with an identification card that must be presented prior to the filling of any container. Proof of identity must also be provided through a photo identification card. Each staffed site will have identified hours of operation and will be secured when the fill station is closed. An example of a staffed station is shown in Exhibit A. Assigned agency technical staff working routinely in recycled water, will provide oversight of the residential fill station. Staff working at the fill station will be trained on treatment and use of recycled water, procedures for tracking recycled water use, customer agreements, safety procedures at the fill station site and good customer service.

##### **C. Unstaffed Automated Fill Stations**

Unstaffed stations will consist of automated fill stations requiring a card reader or pin number for access and may be accessed only by commercial customers as



determined by each recycled water supplier. Residential customers (i.e. less than 300 gallon container) may not use automated fill stations. Each trained customer will be provided with an access card or a pin number. Automated fill stations will have identified hours of operation and must be secured when the station is not in operation. The recycled purveyor will inspect each unstaffed station at least once per week to verify that it is functional and has not been vandalized. An example of an unstaffed station design is shown in Exhibit B.

#### D. Commercial Construction Meters

Commercial customers using recycled may apply for a dedicated recycled water construction meter. The construction meter will be equipped with a camlock fitting and lockable camlock cap. The water supplier will connect the meter to the fill station site. The dedicated user will install a lock on the camlock cap to ensure their sole use of the site. Camlock fittings are designed to ensure that they cannot be used on a potable fire hydrant. Exhibit C includes an example specification and photo of this type of installation. For trucks equipped with meters, the connection point to the recycled system shall be equipped with a lockable device to restrict access by unauthorized users.

#### E. Staffed Commercial Fill Stations

Staffed commercial stations will consist of either an overhead discharge pipe for discharging to tanker trucks or a hose with camlock fitting, with a shut-off valve that is connected to a recycled water line. Staff at the site will check customers in and out and will verify that each customer has been trained in the proper and acceptable use of recycled water. Each trained customer will be provided with an identification card that must be presented prior to the filling of any container. Proof of identity through a photo identification card will also be required. Each staffed site will have identified hours of operation and will be secured when the fill station is closed.

### V. TRUCK AND CONTAINER REQUIREMENTS

Containers used by residential customers will not exceed 300 gallons. Typical containers under 300 gallons in capacity are shown in Exhibit D. Commercial fill stations will be used to fill containers in sizes ranging from 300 gallons to 5000 gallons. Residential customers requiring transport of recycled water greater than 300 gallons will be considered to be the same as commercial customers. Trained recycled water supplier staff will spot check all trucks and containers, to ensure that the vehicles and containers are capable of using recycled water without leaks or excessive spray, and to ensure that they are not discharging to the ground.

Participating agencies must comply with the following requirements, unless the SWRCB-DDW determines that alternative criteria are necessary for the protection of public health and the environment

Signage will be placed on each vehicle or container identifying it as carrying nonpotable/ recycled water and incorporate the wording "RECYCLED WATER – DO NOT DRINK". Agencies will provide stickers to residential customers for their use and placement on their recycled water hauling containers Example labels are shown in Exhibit E.

State regulations require the separation of potable and all non-potable systems. Containers and hoses associated with hauling recycled water will not be used for potable water. In order to comply with this regulation, Commercial hauling trucks such as street sweeping trucks and sewer flushing trucks may be also be filled with potable water (for non-potable purposes). In this case, the truck must have two separate filling systems, one dedicated to potable water and one dedicated to recycled water. Each system will be identified as such. Both filling systems will deliver water into the top of the tanks on the vehicles through approved air-gaps to ensure backflow protection

All vehicles, tanks and containers used to transport recycled water will have watertight valves and fittings be sealed to avoid spillage of water during transport. All commercial vehicles will carry hand sanitizers for use when filling truck with recycled water or after applying recycled water at a site.

Owners of commercial hauling trucks must show valid registration, proof of vehicle liability insurance and worker's compensation insurance in order to obtain approval for hauling water.

## **VI. TRAINING AND AGREEMENTS**

Each residential and commercial customer will be trained on the use of recycled water for landscape irrigation. The training will include an overview on the approved use and application of recycled water, including recommendations on how to apply water to landscapes, and limitations on the use of recycled water. Commercial customers will also be trained on the use of recycled water for additional commercial uses of recycled water including street sweeping; dust control, compaction and construction; pipeline flushing and pressure testing; and fire protection. Water haulers will normally not be required to attend site supervisor training because much of the content of that training does not apply to hauled water uses. However, at an agency's discretion, commercial haulers may be required to attend a site supervisor training class under the existing site supervisor training program.

Upon completion of the training program, the customer will complete an application to use recycled water and will indicate their understanding of the requirements to use recycled water in that application. Commercial haulers will also indicate their intended

use and delivery point for recycled water. The residential customer application and commercial customer application are included in Exhibit F. Guidelines for commercial customers are included in the Recycled Water Tanker Truck Program Guidelines - Exhibit G.

## **VII. OVERSIGHT AND RECORDS**

Due to the serious nature of the drought, recycled water agencies may allow use of their fill station for customers within their service area, for customers served by another water supplier within the San Diego County Water Authority service area, or customers outside the Water Authority service area, but within San Diego County. This will be at the discretion of the agency that owns and operates the fill station.

### **A. Oversight of Customers**

1. Within the recycled water agency service area, the agency will conduct random field checks of their hauled recycled water customers to ensure conformance with the user agreement using existing staff including cross-connection control inspectors, distribution system operators, meter readers, customer service representatives and water conservation staff in the normal course of business.
2. Prior to delivery to customers from outside the recycled water agency service area, but within the Water Authority service area, the recycled water agency will notify the agency normally supplying potable water of any customers that are planning to use recycled water from the fill station. The recycled water agency will provide a list of the names and addresses of the customers. The two agencies will agree on oversight of the customers prior to granting the customer permission to receive recycled water or granting the hauler permission to deliver outside the recycled agency service area.
3. For delivery of recycled water outside the Water Authority Service area, but within San Diego County, the recycled water purveyor will take responsibility for oversight of those customers, or will require the customer to adopt a third party inspection program acceptable to the SWRCB-DDW and/or San Diego County DEH. Examples of customers with approved third party inspection programs include San Diego Gas and Electric or other large users of hauled recycled water which obtain approval from SWRCB-DDW.

### **B. Termination of Service**

Use of recycled water from fill stations is a privilege. If an agency determines that a user is violating the terms of the user agreement, the agency may revoke permission to use recycled hauled water. Customers that are repeat or gross violators will have permission revoked.

C. Records Maintenance

Recycled water agencies will maintain records of fill station operations and oversight and have those records available for review upon request by SWRCB-DDW:

1. Documentation of the locations of all recycled water fill stations
2. Copies of all recycled water user applications/agreements
3. Copies of insurance documents for commercial haulers
4. A list of approved residential and commercial haulers
5. A list of end users outside the recycled agency service area
6. Records pertaining to the volume of recycled water disbursed at each of the fill stations within their purview (a minimum of 12 months of use data will be retained)
7. Records of any site visits, enforcement, or revocation of permission to use recycled water for customers not following the criteria for use of recycled hauled water

## **EXHIBIT A**

### **EXAMPLE OF STAFFED FILL STATIONS**

## EXHIBIT A – EXAMPLE OF STAFFED FILL STATIONS







**EXHIBIT B**

**UNSTAFFED FILL STATION**



# aquaLoader™

## BULK WATER TRUCKFILL SYSTEM

### TFS-3-C-M3

Single Outlet SMART CARD Commercial Bulk Water Station  
Cage Type Design for Seasonal Use or "Non-Freeze" locations

Skid-Mounted Fully Assembled/Wired Package

External Dimensions (Less Electrical Panels)

1650 mm L x 1070 mm W x 1360 mm H  
(65" x 42" x 53.5")

- ◆ Inlet connection 80mm (3") or smaller or Fire Hydrant thread
- ◆ Outlet size - One (1) x 80 mm (3") connection
- ◆ Outlet Rated for up to 1100 L/m (300 usgpm)
- ◆ Inlet Water Pressures up to 1200 kPa (175 psi)
- ◆ Integral Adjustable Flow Control
- ◆ Integral Adjustable Pressure Reducing Valve
- ◆ Power Supply requirements - 110 VAC / 1 Phase / 60Hz
- ◆ Solar Powered unit also available (TFS-3-CSV-M3)

Also Available: "DIY" packages, Dual Outlet Stations, Coin and/or Key Operated Stations, Residential Stations, Overhead Fill Arms, Manually Operated Hydrant Stations and Septage Dump Stations.



## Provide Security and Convenience for your Bulk Water Customers

- ◆ Year Round Operation 24/7
- ◆ Eliminates Hydrant Meters
- ◆ Uses SMART CARD Technology
- ◆ Controls Access To Your Water System
- ◆ Unmanned Point Of Sale (UPOS) Technology
- ◆ Eliminates Billing and Delinquent Accounts
- ◆ NSF61 Listed Meter and Control Valves
- ◆ Other sizes also available
- ◆ Meter Complies with AWWA C701-Class 11 (Accuracy +/- 1.5%)
- ◆ Integral High Hazard RP Type Backflow Preventer
- ◆ All Outlet Piping Fully Drains at End of Fill Cycle
- ◆ Epoxy coated steel frame and cage with removable aluminum roof panel
- ◆ For Seasonal Use or locations where freezing conditions will not be experienced
- ◆ Ideal for Permanent or Semi-Permanent Installation
- ◆ Shipped Fully Assembled and Ready to Install

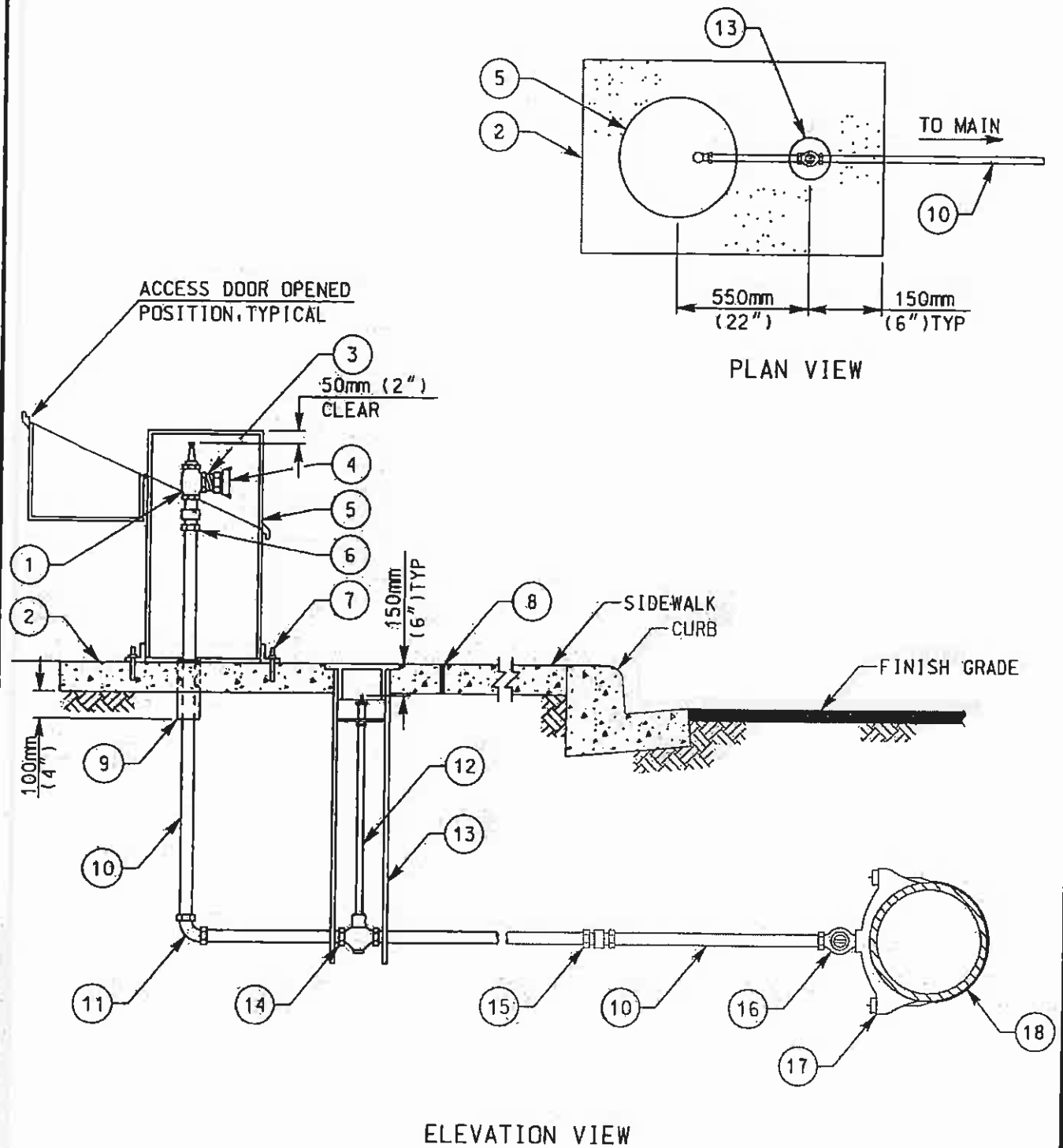
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PROTECT YOUR WATER SYSTEM - Use SMART CARD Bulk Water Truckfill Stations  
Fully Automated - No billing required - All money collected in advance  
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## **EXHIBIT C**

### **COMMERCIAL RECYCLED CONSTRUCTION METER**

# EXHIBIT C - COMMERCIAL RECYCLED CONSTRUCTION METER



FOR MATERIAL DESCRIPTIONS AND NOTES SEE DRAWING 6 (2 OF 2)

LEGEND ON PLANS

RECYCLED WATER SUPPLY  
FILLING STATION INSTALLATION

PADRE DAM MUNICIPAL  
WATER DISTRICT

ENGINEER APPROVAL: 08/01/2011

DRAWING NUMBER: 6 (1 OF 2)

FOR DRAWING OF THE FILLING STATION INSTALLATION SEE DRAWING 6 (1 OF 2)

NOTES:

- 1) REFER TO SECTION 15057 OF THE SPECIFICATIONS
- 2) INSTALL CORPORATION STOP WITH KEY IN THE SIDE POSITION
- 3) LOCATE ENCLOSURE AS SHOWN ON WM-02 WITH ACCESS DOOR OPENING AWAY FROM THE CURB OR STREET
- 4) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- 5) RECYCLED WATER SUPPLY STATIONS SHALL BE IDENTIFIED AS DESCRIBED IN SECTION 15151 OF THE SPECIFICATIONS
- 6) NOTCH BASE OF GATE WELL TO CENTER OVER VALVE. SET LID FLUSH WITH SLAB
- 7) CONNECTIONS TO STEEL MAINS SHALL BE IN ACCORDANCE WITH SECTION 15061
- 8) MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	75mm (2 1/2") MIP INTLET x FIP OUTLET BRONZE ANGLE FIRE PLUG VALVE	9	25mm x 13mm (1" x 1/2") BLACK FOAM SLEEVE
2	1000mm x 600mm x 150mm THICK (40" x 24" x 6" THICK) CONCRETE SLAB	10	50mm (2") x REQUIRED LENGTH COPPER PIPE TYPE "K", SOFT
3	75mm x 50mm (2 1/2" x 2") REDUCING BUSHING	11	50mm (2") 90° BRONZE COMPRESSION ELL
4	50mm (2") CAM & GROOVE FITTING ADAPTER x MIPT WITH LOCKING DUST CAP	12	VALVE STEM EXTENSION REQ'D. SEE WV-05
5	WATER TEST STATION ENCLOSURE	13	100mm (4") SDR-35 SEWER PIPE GATE WELL WITH LID, SEE NOTE 6
6	75mm x 50mm (2 1/2" x 2") FIPT x COMPRESSION ADAPTER	14	50mm (2") COMP BALL VALVE W/ TEE HEAD
7	13mm x 89mm (1/2" x 3 1/2") 304 STAINLESS STEEL SLEEVE EXPANSION ANCHOR WITH SS NUT & WASHER (3 EA @ 120° APART)	15	50mm (2") BRONZE COMPRESSION COUPLING COPPER TO COPPER (IF REQUIRED)
8	COLD JOINT STRIP	16	25mm (1") BRONZE MIPT x COMPRESSION CORPORATION STOP, SEE NOTE 2
		17	MAIN SIZE x 50mm (2") SERVICE SADDLE
		18	WATER MAIN

RECYCLED WATER SUPPLY  
FILLING STATION INSTALLATION

PADRE DAM MUNICIPAL  
WATER DISTRICT

ENGINEER APPROVAL: 08/01/2011

DRAWING NUMBER: 6 (2 OF 2)

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**EXHIBIT D**

**TYPICAL WATER CONTAINERS**

## EXHIBIT D - TYPICAL WATER CONTAINERS

The containers listed below provide some examples of acceptable containers for hauling recycled water. However, the acceptable containers are not limited to those described here.

**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 flatbed 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. Bladder tanks should be specifically designed for the purpose of transporting water. A water bed is not a bladder tank.

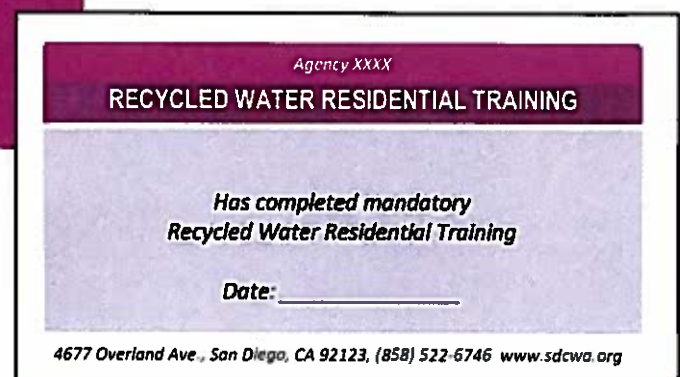




## **EXHIBIT E**

### **EXAMPLE CONTAINER AND TRUCK LABELS**

**EXHIBIT E - EXAMPLE CONTAINER AND TRUCK LABELS**



## **EXHIBIT F**

### **RECYCLED WATER TANKER TRUCK PROGRAM GUIDELINES**

## EXHIBIT F – COMMERICAL

### Recycled Water Tanker Truck Program RECYCLED WATER USE PERMIT

#### 1. Customer Information

User's Name: \_\_\_\_\_

Name of Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City/State/ZIP Code: \_\_\_\_\_

Office Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Primary Contact: \_\_\_\_\_ Title: \_\_\_\_\_

Cell Phone or Other Phone #: \_\_\_\_\_

#### 2. Truck Information

Provide the following information for the truck(s) for which a permit is requested. The **Insert Agency Name** Program inspector must inspect each truck to determine that it is equipped with the necessary air gap and stationary hard pipe fill line, before decal issuance.

Site Supervisor	Truck Trailer # (if applicable)	License Plate Number	Capacity of Tank or Storage Containers	City Use Only Decal Number

*Tanker trucks must be equipped with an air gap on the fill line to participate in this program.*

#### 3. Recycled Water Use Information (Check all that apply)

Use of Recycled Water: ☐ Compaction ☐ Dust Control ☐ Sewer Flushing ☐ Irrigation

☐ Other: \_\_\_\_\_

Application method is limited to Tanker Truck only.

Where you expect to apply recycled water within the San Diego County Region (must be located within the San Diego County Water Authority service area):

Address	Planned Uses

(Attach separate sheet if necessary)

#### 4. Recycled Water Use Information

User agrees to install, maintain, and keep in place while using recycled water three magnetic signs (on both sides and the rear of each truck) identifying that recycled water is in use. **Insert Agency Name** will provide the first set of signs at no charge; replacement signs to be paid for at cost by user. *User must initial here to acknowledge these requirements:* \_\_\_\_\_ (initials)

In cases where **Insert Agency Name** issues a hydrant meter or gate access key, the customer must pay the Agency \$50 to replace any lost key. *User must initial here to acknowledge this requirement:* \_\_\_\_\_ (initials)

Customer must identify the person responsible (Site Supervisor) for implementing worker/public protection at each site (i.e., that humans are not to drink recycled water or use it for preparing food).

Name of Site Supervisor: \_\_\_\_\_

#### 5. Vehicle Registration and Insurance Requirements

Permit holder must provide and attach copies of current vehicle registration (for each truck) and the following insurance requirements: 1) Vehicle Liability; and 2) Workers' Compensation.

#### AUTHORIZATION, CERTIFICATION & INDEMNIFICATION

Customer is authorized to use recycled water from **Insert Agency Name** Recycled Water Truck Program in accordance with Recycled Water Truck Program Guidelines and Regional Water Quality Control Board Order **enter order number**.

I certify that I am an authorized agent for the company cited in this application and that I have authority to bind the company to the requirements of this permit and program. I hereby certify under penalty of perjury that the information provided in this permit application and in any

attachment is true and accurate to the best of my knowledge. I also certify that I have read the applicable rules and regulations of the Regional Water Quality Control Board Order **enter order number** and **Insert Agency Name** Recycled Water Truck Program Guidelines and agree to abide by them.

My company agrees to defend, indemnify, and hold harmless **Insert Agency Name** and its Directors, officers, agents and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from Permit Holder's, its associates', employees', subconsultants', or other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or performance under this Recycled Water Use Permit.

Authorized Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Agency Use Only

Permit Approved ☐

Permit Denied – Reason: \_\_\_\_\_

Inspector's Signature: \_\_\_\_\_

Permit No. RWTT: \_\_\_\_\_

## EXHIBIT F - RESIDENTIAL

### Residential Recycled Water Use Application and Agreement (Please write legibly)

Customer Name \_\_\_\_\_ Your Water Agency \_\_\_\_\_

Service Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email Address \_\_\_\_\_

License Plate #s of vehicles used to collect recycled water: \_\_\_\_\_

Location(s) where Recycled water will be used: \_\_\_\_\_

---

#### Recycled water will be used for:

☐ Irrigation of trees, landscaping, garden

☐ Washing of paths and hardscape

☐ Other \_\_\_\_\_

What type and size of container (must be secured with a lid) will you use to collect the recycled water?

---

Things to know about the use of recycled water:

1. *What is tertiary-treated recycled water and is it safe?*

Tertiary-treated recycled water is wastewater that has been sent through a 3-step treatment process to ensure its quality. It must meet strict standards according to the State Water Resources Control Board Division of Drinking Water.

2. *What can I use recycled water for?*

Based on Title 22 requirements, tertiary-treated recycled water can be used to:

- ✓ Water your trees, gardens, vegetables, and lawns; and
- ✓ Wash hard surfaces (paths, walls, windows, etc.)

3. *What is this recycled water **NOT** suitable for?*

- |                                  |                               |
|----------------------------------|-------------------------------|
| • Drinking                       | • Piped water for irrigation  |
| • Filling swimming pools or spas | • Children's water toys       |
| • Cooking or use in the kitchen  | • Use in a pressurized washer |

- Bathing or showering
- Plumbing to household domestic plumbing system.

4. *Why is recycled water not safe to drink? What happens if I drink it?*

Tertiary-treated recycled water is not approved for drinking. If you accidentally drink recycled water, there is no need to panic. Should you experience any adverse symptoms or feel unwell, consult your doctor.

5. *Can I water my plants with recycled water?*

Yes, all plants can be watered with recycled water. This includes edible plants such as fruit trees, vegetables and herbs. Just remember to wash all fruits, vegetables, and herbs with drinking water prior to consumption.

Recycled water tends to have a higher salt content than drinking water. We advise you to direct the recycled water to the soil surrounding the plants and not the foliage. This will protect them from potential leaf burn.

6. *Do drought restrictions (conservation) apply to recycled water?*

No. Water use (drought) restrictions do not apply to recycled water. However, recycled water is a valuable resource and should not be wasted.

7. *Who develops the health standards for recycled water?*

Recycled water is strictly monitored to ensure it meets water quality standards set by the State Water Resources Control Board Division of Drinking Water.

8. *How much will recycled water cost me?*

**Insert the cost.**

9. *How much recycled water can I pick up at a time?*

Minimum size per container is 1 gallon and maximum per truck and/or trailer load is 300 gallons.

Keep in mind the size of your vehicle when selecting transport containers. Water weighs 8.345 pounds and two 55-gallon drums of recycled water will weigh a total of 917.95 pounds. Ensure your vehicle can handle the amount of recycled water you collect and transport. **Insert agency name is not liable for any damages to you or your vehicle(s) due to your participation in the residential recycled water fill station program.**

10. *What are the rules and regulations for residential use of recycled water?*

- Fill out an application and sign the Recycled Water Use Agreement. Obtain **Insert agency name** approval.
- Collection and storage containers shall have [Insert agency name] Recycled Water Notice stickers attached to ensure awareness that containers contain recycled water and water is not suitable for human consumption. The stickers are available at the wastewater treatment plant.
- Recycled water must not be pumped into the plumbed landscape irrigation system. Recycled water may only be used for hand-watering.**



- d) Recycled water shall not be discharged to the street gutter or storm drain system.  
If you have leftover recycled water and want to dispose of it, either discharge it to a landscaped area or to the sanitary sewer system via a Sanitary Dump Station.
- e) After working with recycled water, remember to apply hand sanitizer or wash hands with soap and domestic drinking water, especially before eating or smoking.
- f) **Do not DRINK** recycled water or use it for food preparation.
- g) Take precautions to avoid contact with food while using recycled water.
- h) Wash vegetables with domestic water prior to eating or cooking.
- i) No one shall play with recycled water.
- j) Recycled water shall be used and/or applied promptly. **No storage of recycled water onsite at the residential property.**
- k) The District or your water purveyor may conduct site visits to ensure your proper use of recycled water and to ensure the health and safety of your family and the public.

#### Procedures to Obtain Recycled Water

- a) Complete this use agreement form and bring it to [insert address/website](#).
- b) The on-duty attendant will provide required training in the proper use of recycled water and procedures for collection, issue you a wallet card, and answer any questions you may have.
- c) During training you will be provided with Recycled Water Notice stickers that need to be placed on all containers used to transport and store recycled water.
- d) After training is complete and stickers have been installed on the containers, you will be able to pick up recycled water during the designated residential fill station “open” hours, posted at the following web address [insert website](#).
- e) You will be required to show the attendant the wallet card you received at the time of training. Do not share your wallet card with others. All users must receive training to ensure they are informed of the use requirements.
- f) You will be required to enter your name, date, service address, and amount collected on the recycled water residential fill station log at the time of pickup.

### Certification Statement/Signature Section

- ☐ By checking this box, I understand all the conditions of this agreement and agree to comply with these conditions and to conform to the **Insert agency name** requirements for recycled water use at my residential property. Failure to comply with the conditions of this agreement may lead the [Insert agency name] to revoke permission for me to use recycled water at my residential property

I hereby certify under penalty of perjury that the information provided in this permit application and in any attachment is true and accurate to the best of my knowledge. I also certify that I have read the applicable rules and regulations of the Regional Water Quality Control Board Order 97-003 or 2001-203 and **insert Agency Name** Recycled Water Truck Program Guidelines and agree to abide by them.

I further agree to defend, indemnify, and hold harmless **insert Agency Name** and its Directors, officers, agents and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from Permit Holder's, its associates', employees', subconsultants', or other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or performance under this Recycled Water Use Permit.

\_\_\_\_\_  
First Name (Print)

\_\_\_\_\_  
Last Name (Print)

\_\_\_\_\_  
Residential Property Address

\_\_\_\_\_  
City

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## **EXHIBIT G**

### **RECYCLED WATER TANKER TRUCK PROGRAM GUIDELINES**

## EXHIBIT G

### Recycled Water Tanker Truck Program Guidelines

#### Recycled Water Quality

The San Diego region's recycled water suppliers provide clean, safe, tertiary-treated recycled water supplies that met the rigorous and protective standards set by the California Department of Public Health that qualify for unrestricted uses under Title 22 of the California Code of Regulations.

#### General Program Requirements

Recycled water is available to non-potable water tanker truck customers requesting to use this water for construction purposes (dust suppression or soil compaction), street cleaning, irrigation, and other approved uses. Customers interested in participating in this program must complete a Recycled Water Tanker Truck Program Recycled Water Use Permit. The application may be obtained as follows:

- Download the application from the **insert agency name** website:
  - Call **insert agency contact name**, the contact for the Recycled Water Program at **insert applicable** number and request an application form by mail or electronic file.
1. Application forms must be completed and returned with copies of required documents attached (photocopies, PDFs, scanned documents are acceptable) to **insert agency name** Recycled Water Program. Options for submitting completed applications and materials include:
    - By mail:  
**insert agency name, mailing address, contact**
    - By e-mail:  
**insert agency contact name and e-mail address**  
(In the subject line of the email, please type "Recycled Water Program".)
  3. The following documents **must be attached to the permit application**:
    - Proof of vehicle liability insurance for each truck
    - Proof of worker's compensation insurance
    - Proof of valid vehicle registration for each truck
  4. **MANDATORY TRAINING.** Before trucks can be filled for the first time, all truck drivers and owner representatives are required to attend a brief on-site orientation/training in order to learn about using the filling station and the proper handling and safe use of recycled water. **insert agency name** Recycled Water Program schedules on-site orientation/training and informs customers of the date, time, and location.

5. Once the customer completes the on-site orientation/training and a **insert agency name** Recycled Water Program inspector verifies the tanker truck meets the recycled water use requirements, they will receive the following:

- A signed Recycled Water Use Permit
- Three magnetic recycled water signs to affix to the customer's truck (both sides and rear)
- A permit decal that must be affixed to the driver's side rear bumper
- An access code to the filling station gate padlock.

Note: The Recycled Water Program provides the first set of signs and decal at no charge; the customer will be charged (at cost) for any replacement signs or decal.

6. The recycled water user/user's agent must carry at least two copies of the Recycled Water Use Permit in the truck; it must be available for inspection at all times.

## 7. **DO NOT OVERFILL TRUCKS.**

### **Requirements to Access Recycled Water Filling Stations**

1. Recycled water is presently available at: **insert agency filling station locations here.**
2. Trucks must have an affixed AGENCY-issued decal and appropriately placed recycled water signage.
3. In order to access the recycled water filling station, the truck driver must present a copy of the Recycled Water Use Permit to attendant for each water pickup and have completed the **insert agency name** mandatory water truck training.
4. Depending on the location of the filling station, **insert agency name** may issue either a hydrant meter access/gate padlock key or a gate code following the completion of site orientation/training and the issuance of a permit. Tanker truck customers who lose or misplace their key will be charged a (amount) replacement fee.
5. **NO IDLING.** Please turn off your truck engine while filling or waiting at the filling station.
6. **NO SMOKING** is permitted in the plant at any time. Smoking is a safety hazard as there are flammable gases, oxygen, and methane present.
7. Do **not** leave any trash or debris in the filling station area.
8. Please do not block any turnaround areas or nearby driveway entrances/exits when waiting or filling at any filling station.

9. ***For Meter Filling Station(s): PLEASE SHUTOFF THE METER BEFORE DISCONNECTING THE FILL LINE AND MAKE SURE NO WATER IS LEAKING FROM THE METER.***
10. In the event of an emergency concerning the recycled water meter, fill pipe or hose (spillage, leaks, etc.), the truck driver should call the emergency contact number listed on the filling station sign for further instructions.

### **Recycled Water Handling and Use Requirements/Precautions**

1. All recycled water use sites must be noted on the permit application **and** inspected by **insert agency name** Recycled Water Program Inspector before recycled water is delivered to the site.
2. **DO NOT OVERFILL TRUCKS.**
3. Do **not** drink recycled water or use it for food preparation. Additionally, the truck driver must notify workers and/or the public when recycled water is used at a site and inform them not to drink recycled water or use it for food preparation.
4. Use areas will be maintained to prevent recycled water use from contributing to the breeding of flies, mosquitos or other vectors.
5. Trucks or tanks that have contained material from a septic tanks or cesspool shall not be used to contain or distribute recycled water.
6. Recycled water users should apply hand sanitizer or wash their hands with soap and potable water after working with recycled water and especially before eating or smoking.
7. Measures should be taken to minimize contact of users/workers with recycled water including avoiding recycled water spray.
8. Precautions should be taken to avoid food coming in contact with recycled water while the use site is wet.
9. Truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected, and bandaged.
10. Recycled water shall not be allowed to spray on external drinking water fountains, barbeques, picnic tables or eating areas.
11. Recycled water shall not be applied where it could contact or enter passing vehicles, and buildings or areas where food is handled or eaten.

12. Recycled water users shall take adequate measures to prevent overspray, ponding, or run off of recycled water from the authorized recycled water use area unless it is specifically allowed by the Regional Water Quality Control Board or by an attachment to the Recycled Water Use Permit issued by **insert agency name** Recycled Water Program.
13. No irrigation or impoundment of recycled water is allowed within a minimum of 50 feet of any domestic (drinking water) well.
14. Vehicles used for transportation and distribution of recycled water must be inspected by drivers before each use to ensure valves and fittings are water-tight, are not leaking, and tanks are cleaned of contaminants.
15. Recycled water must not be introduced into any permanent piping system and no connection shall be made between the tank and any part of a potable (drinking) water system.
16. All tanks and any piping and any construction areas accessible by the public shall be labeled in English and Spanish “NON\_POTABLE RECYCLED WATER DO NOT DRINK”
17. Tanker trucks used to transport recycled water shall never be used to carry water for potable purposes, regardless of the source water. When the truck is filled from a potable water source, there must be a reduced pressure principal backflow device (RP) protecting the potable system. The truck fill line must be equipped with an approved sized air gap.
18. The permitted hauler shall notify **insert agency name** prior to any change/addition of use receiving recycled water. The **insert agency name**, Regional Water Quality Control Board, State Water Resources Control Board and San Diego County Department of Environmental Health will have the right to enter any recycled water site during reasonable hours to ensure that the user is complying with these terms and the **insert agency name** s rules and regulations.

***Failure to follow program requirements and/or adhere to applicable State, County or local codes will result in suspension of the tank truck permit and can result in criminal and/or civil penalties per INSERT CODE***

I certify that I have read, understand, and agree to abide by the above guidelines.

User Signature \_\_\_\_\_ Date \_\_\_\_\_

Print Name \_\_\_\_\_

Company \_\_\_\_\_

California Driver License Number: \_\_\_\_\_