

2015 WATER RECYCLING SURVEY GUIDANCE

The guidance provides some specific information about how to enter water recycling related information. Guidance on more general areas such as Levels of Treatment and Disposal versus Recycling may be found below in the section titled **Supplemental Material**. The table below has links to the specific sections of the guidance document.

<u>Survey Box 1</u>	<u>Title 22</u>
<u>Survey Box 2</u>	<u>Disposal versus Recycling</u>
<u>Survey Box 3</u>	<u>Potable versus Non-potable Reuse</u>
<u>Survey Box 4</u>	<u>Supplemental Water</u>
<u>Survey Box 5</u>	<u>Wholesaler vs Retailer</u>
<u>Recycled Water Definition</u>	<u>Internal Reuse</u>

SURVEY BOX 1

1 Total untreated (raw) wastewater received, from the sewer collection system, by a wastewater facility in AFY.

Volume AFY

If you are entering information for a wastewater treatment facility, then enter the total raw wastewater influent in acre feet per year (AFY) in **box 1**.

SURVEY BOX 2

2	Total recycled water received from an upstream facility in AFY that may need additional treatment before reuse. Volume and Quality are required if entering the name of a facility.	
	Facility 1	Facility 2
Name	<input type="text"/>	<input type="text"/>
Volume	<input type="text"/> AFY	<input type="text"/> AFY
Quality	<input type="text"/>	<input type="text"/>

If your wastewater treatment facility receives partially treated wastewater for pass-through or further treatment to meet title 22 requirements then enter the name of the originating or upstream facility, the total annual volume of water, AFY, and the quality for up to two facilities should be entered in **box 2**. If there are more than two originating or upstream facilities sending recycled water to your facility then, using the same Survey ID number, submit additional information on a second survey submittal. Entering additional information will not delete or erase previously submitted water recycling information.

Quality Pull Down Menu: When selecting the level of treatment from the pulldown menu, one of the five treatment categories specified in Title 22 should be used. The specific requirements for each level of treatment are included in Title 22, but are briefly summarized, as follows:

- Secondary, undisinfected (California Code of Regulations, CCR §60301.900) – oxidized wastewater.
- Secondary, Disinfected-23 (CCR §60301.225) - Oxidized and disinfected wastewater.
- Secondary, Disinfected-2.2 (CCR §60301.220) - Oxidized and disinfected to a higher level than Secondary, Disinfected-23.
- Tertiary (CCR §60301.230) – Oxidized, filtered, and disinfected wastewater to achieve both bacterial and virus removal.
- Advanced (CCR §60320.201) - Treatment technologies beyond conventional coagulation, filtration and disinfection, including reverse osmosis, micro- or nanofiltration, ozonation, or advanced oxidation. Refer to the CCR for specific requirements.

Please send any questions to WaterRecyclingSurvey@waterboards.ca.gov

As wastewater volumes may not be metered, it may be necessary to estimate values. Indicate in the comment box whether the values provided are from estimated data otherwise the recycled water volumes will be assumed to be metered.

The quantified data provided for the beneficial uses by the recycled water provider must be for uses authorized by a permit issued by a Regional or State Water Quality Control Board for waste discharge or water recycling.

An “other” category is included in the survey. It is intended that this category only be used if there is no other appropriate category. Notes may be made in the comments box.

Golf Course Irrigation

Irrigation of golf courses, whether publically or privately held. Water used to maintain aesthetic impoundments within golf courses is also included with golf course irrigation.

Landscape Irrigation (excluding Golf Courses)

Irrigation of parks, schools, cemeteries, churches, residential, streetscapes, slope protection, or public facilities. Golf course irrigation is not included. Water to maintain aesthetic impoundments within landscaped areas is included with landscape irrigation. Fill stations primarily used for public use should be classified as landscape irrigation.

Agricultural Irrigation

Irrigation of food, fiber, and fodder crops, and pastureland. This also includes christmas tree production, pasture for farm animals , and wholesale plant nurseries.

Commercial Use

Uses by commercial water users, except landscape irrigation. A commercial water user is a water user that provides or distributes a product or service. Examples of commercial water use are: commercial building use (toilets, HVAC, etc.), car washes, laundries, and retail nurseries. Landscape irrigation of commercial building areas should be classified as landscape irrigation if it is separately metered or if landscape is the dominant use of mixed uses served by a single meter. Fill stations, if they are primarily used for commercial use, should be classified as commercial use. Landscape irrigation on golf courses should be reported as golf course irrigation. Fill stations primarily used for public use should be classified as landscape irrigation.

Industrial Use

Uses by industrial water users, except landscape irrigation and geothermal energy production. An industrial user is a water user that is primarily a manufacturer or processor of materials. Examples of industrial water uses are cooling towers, oil refining, process water, and mining. Landscape irrigation of industrial building areas should be classified as landscape irrigation if it is separately metered or if landscape is the dominant use of mixed uses served by a single meter.

Geothermal and Other Energy Production

Water used to augment geothermal zones or used in the energy industry, excluding refineries. Refinery use is classified as industrial.

Seawater Intrusion Barrier

Injected water in coastline setting designed to reduce seawater intrusion into a coastal aquifer with a seawater interface.

Groundwater Recharge (IPR)

Addition of recycled water to augment groundwater aquifers for future use. Only groundwater recharge projects that are permitted by the state or regional board for the purpose of groundwater recharge is accounted for in this category. A water agency cannot claim as planned groundwater recharge treated wastewater incidentally recharging groundwater as a result of leakage from evaporation/percolation ponds.

Recreational Impoundment

Addition of water to maintain water levels in a lake for recreation or other non-potable uses. Lakes for wildlife habitat are included in the natural systems/restoration category. Small impoundments that are features in parks or golf courses are included as part of landscape irrigation or golf course irrigation.

Natural Systems/Restoration

Any water provided to a designated wildlife area, that is not the permitted waste water treatment part of a wastewater facilities. The area must be designated as a wetland or wildlife area and so does NOT include water that a wastewater facility must discharge to maintain habitat in the creek to which it is discharging. This category also includes recycled water used at wetlands, wildlife habitats and refuges, and duck clubs.

Other

If a recycled water use cannot be classified into one of the categories identified above, then this category may be used. However, you should describe the beneficial reuse in the comment box below. Sewer system flushing and firefighting are two possible uses that could be classified as 'other'. Fill stations should not be classified as 'other'. If the fill station was primarily used by commercial users for dust control or other purposes, fill station use should be classified as 'commercial'. If the majority was used by landscapers or residential customers, then the use should be classified as 'landscape irrigation'.

SURVEY BOX 5

5 Wholesale recycled water	
List the deliveries of recycled water from this treatment facility to another treatment facility for additional treatment before delivery to end users.	
Name of Agency Receiving RW	<input type="text"/>
Name of Facility Receiving RW	<input type="text"/>
RW Flow (volume AFY)	<input type="text"/>
Quality	<input type="text"/>
Name of Agency Receiving RW	<input type="text"/>
Name of Facility Receiving RW	<input type="text"/>
RW Flow (volume AFY)	<input type="text"/>
Quality	<input type="text"/>
Name of Agency Receiving RW	<input type="text"/>
Name of Facility Receiving RW	<input type="text"/>
RW Flow (volume AFY)	<input type="text"/>
Quality	<input type="text"/>
Name of Agency Receiving RW	<input type="text"/>
Name of Facility Receiving RW	<input type="text"/>
RW Flow (volume AFY)	<input type="text"/>
Quality	<input type="text"/>

Enter the name of any facility immediately downstream that is a wholesale facility and receives any treated or untreated wastewater that will be sent to either a retail recycled water facility or another wholesale facility. In either case please enter the name of the receiving facility in the comment box.

QUESTIONS? Please send any questions to WaterRecyclingSurvey@waterboards.ca.gov

Supplemental Information

Coordination of Urban Water Management Plan (UWMP) and the 2015 Recycled Water Survey

The State Water Resources Control Board (SWRCB) and Department of Water Resources (DWR) are conducting a statewide survey of all publicly owned recycled water beneficial use for the 2015 calendar year, with the intent that data from the survey will be coordinated with that provided in the UWMPs. This will enable a subsequent, interagency, comprehensive analysis of statewide recycling of municipal wastewater. This coordinated collection of data for dual purposes should streamline the survey process, support consistent data reporting, and facilitate water supply planning.

The two agencies are working closely together and have developed uniform definitions and data collection approaches to facilitate this data collection effort. In this ‘two-pronged’ effort, the SWRCB’s survey will focus on the wastewater producers, with DWR’s UWMPs focusing on the potable water suppliers. Beneficial use classifications and definitions (see above) are consistent between the two efforts.

Recycled water information provided in the UWMPs will provide more information on specific uses and system background information than the volumes provided by the wastewater producers. Pairing of the efforts by the two agencies is hoped to benefit the recycled water users and producers, as well as the state agencies responsible for overseeing recycled water use in the state.

Recycled Water Definition

Municipal recycled water is wastewater that has been treated to a specified quality to enable it to be used again. As defined in Water Code Section 13050(n), recycled water means *water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource*. Although the legal definition does not specify the source of water, in common use “recycled water” refers to water originating as municipal wastewater.

There are two requirements treated municipal water must meet to be classified as recycled water for this survey. It must be reused:

- Beneficially, in a manner consistent with recycled water criteria in Title 22 of the California Code of Regulations;
- In accordance with a Regional Water Quality Control Board (RWQCB) permit, such as National Pollutant Discharge Elimination System (NPDES), waste discharge requirements (WDR), or water recycling requirements (WRR).

Title 22

Title 22 (California Code of Regulations, Division 4, Chapter 3, §60301 et seq.) is the regulation overseeing reuse or “recycling” of municipal wastewater to protect public health. Title 22 identifies uses

for a range of wastewater treatment levels, from undisinfected secondary treatment through water that has undergone advanced treatment. Title 22 regulations also specify monitoring and reporting requirements and onsite use area requirements.

Disposal versus Recycling

There are three situations where there may be misconceptions about the distinction between wastewater disposal and recycled water:

- Release of treated municipal wastewater into a receiving water body such as a river or irrigation channel;
- Land application of treated municipal wastewater onto a field for the primary purpose of disposal;
- Treated wastewater percolation ponds;

Title 22 compliant recycled water discharged into a receiving water body such as a river or irrigation channel loses its recycled water designation and any subsequent use cannot be considered as recycled water use.

Land application of treated wastewater that meets title 22 may be considered either eligible water recycling or waste water disposal. If the water is used for irrigation of a planned pastureland or crop cultivation, then it may be considered an eligible recycled water use. Otherwise, land application of treated wastewater is considered disposal and not an eligible recycled water use. Land application of a treated wastewater meeting title 22 may not be considered groundwater recharge unless, specifically permitted.

Percolation disposal ponds may be adding water to a usable aquifer, but that incidental recharge is not a planned purpose of such ponds and these ponds are not regulated as a water supply source. Thus, percolation from disposal ponds is not counted as groundwater recharge or recycled water use.

Potable Versus Non-potable Reuse

Non-potable recycling includes any application not involving drinking water for human consumption, such as landscape or agricultural irrigation, commercial applications like car washes or dual-plumbed office buildings, or industrial process such as oil refineries or cooling towers. Examples of nonpotable uses are given in the Beneficial Uses section above.

Supplemental Water

Supplemental water is water added to a recycled water system when the supply of recycled water cannot meet peak demands. Supplemental water may also be added to recycled water systems during interruptions in the recycled water supply or to a groundwater recharge project as a required blend with tertiary-treated water.

Supplemental water can be potable or non-potable. Supplemental water may not be used to meet title 22 water quality requirements.

Wholesaler vs Retailer

A recycled water wholesaler is an organization that distributes recycled water to another organization that is not an end user. A wholesaler obtains the recycled water fully-treated from another agency, may provide additional treatment to partially-treated wastewater, or may provide all treatment of wastewater. A recycled water retailer distributes recycled water to end users. An agency may also be both a wholesaler and a retailer if it has direct customers which use recycled water and provides recycled water to another organization that distributes it to end users in that service area.

Internal Reuse

Wastewater facilities frequently internally reuse partially- or fully-treated, non-potable water within their facilities for equipment cleaning or minor landscaping. This is a similar practice to industrial internal reuse. Internal wastewater treatment reuse is not considered water recycling for beneficial reuse.

Where wastewater plant uses treated effluent for onsite landscape irrigation at a treatment plant where public access is not restricted, that volume may be considered as landscape irrigation. Treated wastewater used offsite for sewer system maintenance, such as sewer line flushing may be considered as beneficial reuse under the “Other” category.