

Frequently Asked Questions: General Order for Recycled Water Use

The proposed water reclamation requirements for Recycled Water Use (General Order) are intended to replace existing General Waste Discharge Requirements for Recycled Water Use ([order WQ 2014-0090-DWQ](#)) adopted by the State Water Resources Control Board (State Water Board) on June 3, 2014. The purpose of order WQ 2014-0090-DWQ is to streamline permitting of recycled water use statewide. The proposed General Order is intended to further encourage recycled water projects by acknowledging recycled water as a resource through water reclamation requirements, and allowing recycled water programs implemented in multiple Regional Water Board boundaries to be permitted by the State Water Board.

The following provides answers to frequently asked questions related to the General Order application process. More information on the use of recycled water is available at the State Water Board¹ or at any of the Regional Water Quality Control Boards.²

General Information

1. What is recycled water?

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. Uniform Statewide Recycling Criteria (California Code of Regulations, Title 22, Division 4, Chapter 3) contains requirements for recycled water quality and wastewater treatment requirements for the various types of allowed uses. For nonpotable reuse applications, there are four types of recycled water based on levels of treatment: non-disinfected secondary, disinfected secondary-23, disinfected secondary 2.2, and disinfected tertiary. The level of treatment used is based on what the recycled water is intended for. Non-disinfected secondary recycled water is water with the lowest level of treatment, suitable for applications that have a very minimal public exposure level, such as irrigation for fodder crops. Disinfected tertiary recycled water goes through higher levels of treatment, sufficient for applications with more public exposure, such as irrigation of parks, decorative fountains, or artificial snowmaking for commercial outdoor use.

A summary table -- courtesy of the East Bay Municipal Utility District -- showing various recycled water uses corresponding with minimum treatment levels is viewable at:

¹ Water recycling information is available at the State Water Board at http://www.waterboards.ca.gov/water_issues/programs/index.shtml#waterrecycling

² Contact information for the Regional Water Boards is available at http://www.waterboards.ca.gov/waterboards_map.shtml

https://www.ebmud.com/files/7614/3173/1139/recycled-water-uses-allowed-in-california-2013_0.pdf. The summary table is intended to be a visual aid, and is not to be relied upon as the State of California's representation of the law. Always refer to the published codes (Health & Safety Code or California Code of Regulations, Title 22) whenever specific citations are required.

2. Can this General Order be used to permit recycled water production facilities?

No. Only distribution and use of recycled water is eligible for coverage under this General Order. Wastewater treatment facilities that intend to produce recycled water for reuse must obtain a separate coverage under a separate Regional Water Board permit. Wastewater treatment plants under 100,000 gallons per day (gpd) proposing to use recycled water can be covered under a statewide general Waste Discharge Requirements for Small Domestic Wastewater Treatment Facilities permit (Order WQ 2014-0153-DWQ).

3. Is the Regional Water Board required to use the General Order?

The General Order is intended to be the primary method for Regional Water Boards to permit recycled water use. However, Regional Water Boards may determine a proposed use is not consistent with the General Order requirements or antidegradation analysis. In those cases, the Regional Water Board may consider permitting a proposed discharge under a site-specific waste discharge requirement order, or other administrative mechanism.

4. Our agency operates a wastewater treatment facility that discharges to surface water and would like to enroll under this permit to use recycled water within our service area. The wastewater treatment facility will produce less discharge volume to surface water as a result. Does our agency need to obtain additional authorization?

Yes. Diversion of recycled water that would otherwise be discharged to a watercourse requires additional consideration to protect downstream and in-stream uses. Water Code section 1211 requires State Water Board approval before changing a surface water point of discharge.

General Order Coverage

1. What can be permitted under the General Order?

Only treated municipal wastewater for nonpotable uses can be permitted with the General Order. The General Order establishes standard conditions for recycled water use and conditionally delegates authority to an administrator to issue Recycled Water Use Permits to recycled water users. Recycled water users are anyone proposing to use recycled water; this can be a public agency (a water system using recycled water for irrigation of local parks) or private users (an individual farmer using recycled water for crop irrigation, a private resident picking up recycled water for landscape irrigation, or a utility company using recycled water for cooling towers).

The General Order provides regulatory coverage for certain uses of recycled water that are consistent with requirements of California Code of Regulations, Title 22. Some of the common uses of recycled water include irrigation of landscaping, athletic fields, crops, and certain industrial uses. Other uses not listed in California Code of

Regulations, Title 22 may be considered. Requirements for these uses will be set by the State Water Board and Regional Water Boards for protection of public health.

2. What recycled water uses are not eligible for coverage under the General Order?

Use of recycled water for potable use, activities to replenish groundwater resources and activities to simply dispose of treated wastewater are not eligible for enrollment in the General Order.

3. Our agency has a master reclamation permit that covers our recycled water production facility and several large industrial recycled water users. We would like to expand the extent of our recycled water program to cover landscape irrigation. Do we need to amend or rescind our existing master reclamation permit coverage?

It may be unnecessary to amend or rescind the existing master reclamation permit coverage. This General Order may be used to streamline the addition of new uses not currently covered under an existing recycled water permit. It is not intended to create duplicative requirements for use of recycled water under this order. Agencies with existing Regional Water Board permit coverage for recycled water use are highly encouraged to consult with their Regional Water Board contacts early in the process to make sure that the permit coverages do not overlap.

4. Our agency has a linear utility construction project that spans multiple Regional Water Board boundaries. Can we submit a single application package?

Yes. A single application package can be submitted to the State Water Board Division of Drinking Water. State Water Board staff will coordinate the review and processing of the project with each Regional Water Board to make sure that the proposed application meets the requirements of the General Order, including compliance with each Regional Water Board's Water Quality Control Plan. The State Water Board will process and issue the Notice of Applicability. Monitoring reports prepared by the administrator for compliance with the General Order can also be submitted to the State Water Board Division of Drinking Water. The administrator is the party legally responsible for compliance with the General Order. See "Administrator's Role" described below for more information.

Application Process

1. Who can apply for coverage under the General Order?

The General Order may be issued to recycled water producers, distributors, or a legal entity (such as a joint powers authority). A single user of recycled water can be permitted with the General Order (the user would fill the role of administrator). The application process is described in General Order Attachment A. Administrators may elect to issue Recycled Water Use Permits to users (as described below).

2. How can I get coverage under the General Order?

There are two ways to get coverage under the General Order, and how you apply depends upon your status. If you will be an administrator (or the sole user), you would apply to the Regional Water Board. If you are a user and an administrator has been established, you apply to the administrator's program. If you are uncertain whether an administrator has been established, contact the wastewater treatment system operator for information on the

availability of recycled water. Administrators that are not wastewater treatment operators must coordinate with the wastewater treatment facility before submitting a Notice of Intent (NOI) to the Regional Water Board.

Administrator Application Process

An applicant submits an NOI (see directions in General Order Attachment A) to the Regional Water Board, and a Title 22 Engineering Report for the use of recycled water to the State Water Board Division of Drinking Water (DDW) field office.³ Note that the Title 22 Engineering Report must be approved before the Regional Water Board can process the NOI. Allow approximately 90 days for Regional Water Board processing once the NOI is complete. The Regional Water Board will issue a Notice of Applicability (NOA) to the administrator to authorize the recycled water use and distribution program.

User Application Process

An administrator authorized to distribute recycled water will issue recycled water use permits to users. In this case, the administrator is the permitting agency rather than the Regional Water Board. If you are a user, submit your application to the administrator in accordance with their requirements.

3. Is there a fee? How much?

Yes. An annual fee is required; the first-year fee is paid with the NOI application package. The fee amount is based on the threat to water quality. In some circumstances, water recycling entities that are currently paying fees for coverage under an existing master reclamation permit proposing coverage under this General Order for a simple addition of a new use type (for example: adding only construction water program) may not need to pay additional fees. Contact your Regional Water Board representative to determine your fee amount. The water quality fee schedule is posted at

http://www.waterboards.ca.gov/resources/fees/water_quality/

Division of Drinking Water fees are billed at an hourly rate directly to the water recycling entity. The Division of Drinking Water fee schedule is posted at

http://www.waterboards.ca.gov/resources/fees/drinking_water/

4. Our agency recently submitted an updated Title 22 Engineering Report for our recycled water production facility. The same Title 22 Engineering Report for our production facility is being requested as a part of our submittal of our Water Recycling Program technical report. Do we need to resubmit a duplicate copy?

Contact your Regional Water Board representative to determine the scope of your Notice of Intent (NOI) submittal to enroll under the General Order. Regional Water Board staff has the discretion to require or waive some of the information in the NOI Water Recycling Program technical report, particularly if the Regional Water Board already received an identical submittal for another permitting activity.

³ State Water Board Division of Drinking Water field offices are available at:

http://www.waterboards.ca.gov/drinking_water/programs/documents/ddwem/DDWdistrictofficesmap.pdf

Administrator's Role

1. What does an administrator do?

The administrator establishes and enforces rules for recycled water use and issues recycled water use permits to users. All recycled water use permits must be consistent with an approved Title 22 Engineering Report, the General Order, and the NOA. The administrator is responsible for paying the annual fee to the State Water Board, ensuring recycled water use is consistent with the requirements and that monitoring and reporting is completed on time. Water recycling administration requirements are described in the General Order.

2. What if an administrator is also a sole user in the Recycled Water Program?

The administrator is then responsible to implement water recycling administration requirements applicable to users and administrators. An example of this responsibility can be as simple as instead of inspecting user sites subject to recycled water use permits, the administrator performs inspections of its own recycled water use areas.

Monitoring and Reporting

1. Is monitoring of recycled water use required?

Yes. Monitoring and reporting to the Regional Water Board is required to demonstrate compliance with the General Order, the Title 22 Engineering Report and the NOA. The Regional Water Board will prepare a site-specific monitoring and reporting program based on site conditions.

2. What other types of monitoring and reporting would be required?

The General Order includes a template Monitoring and Reporting Program (MRP) that can be modified by a Regional Water Board's executive officer or a State Water Board's executive director (or designee) pursuant to Water Code section 13267. These modified MRPs can be more or less than what is provided in the template MRP depending on the complexity of the proposed Recycled Water Program and any necessary compliance with the Regional Water Board's Water Quality Control Plan.

Applicable Plans, Policies and Regulations

1. Where can I find recycled water-related statutes and regulations?

Title 17 and Title 22 regulations related to recycled water are posted at http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Lawbook.shtml

2. Where can I find the Regional Water Boards' water quality control plans (basin plans)?

Each Regional Water Board posts its water quality control plans on its website. To locate each Regional Water Board of jurisdiction, enter a project address or click on a Regional Water Board location at http://www.waterboards.ca.gov/waterboards_map.shtml, and search for "Basin Plan."

3. Where can I find the State Water Board's Recycled Water Policy?

The State Water Board's Recycled Water Policy is posted at http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/index.shtml

Constituents Associated with Recycled Water

1. What constituents are associated with recycled water?

Constituents associated with recycled water that have the potential to degrade groundwater include salinity, nutrients, pathogens (represented by coliform bacteria), disinfection byproducts, and endocrine disruptors. The General Order addresses how recycled water use, if done in accordance with the requirements of the General Order, will not unreasonably affect beneficial uses or impair water quality.

2. How are constituents of emerging concern (CECs) being addressed in the General Order?

The General Order acknowledges the presence of constituents of emerging concern in recycled water consistent with the State Water Board's Recycled Water Policy, which relies on the recommendations of a Science Advisory Panel. One of the Science Advisory Panel's charges is to provide recommendations on monitoring CECs for three reuse practices in which CECs may represent a potential threat to human health, including groundwater replenishment by surface application (surface spreading); groundwater replenishment by subsurface application (subsurface injection); and urban landscape irrigation.

The General Order permits only nonpotable uses of recycled water (such as urban landscape irrigation) and does not require any CECs monitoring. The Science Advisory Panel concluded that, while human exposure to CECs can occur through incidental contact with and accidental consumption of recycled water from sprinkler heads, faucets, or hydrants, it does not warrant a monitoring program for CECs to protect public health.

Recommendations of the Science Advisory Panel on monitoring strategies for CECs in recycled water is posted at:

http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/cec_monitoring_rpt.pdf

3. Is it safe to eat fruits or vegetables from crops irrigated with recycled water? How is this addressed in the General Order?

Use of recycled water for agricultural irrigation, including food crops, is addressed in the Uniform Statewide Recycling Criteria. In 2012, the California Department of Public Health convened an expert panel to consider whether recycled water produced under California's Uniform Statewide Recycling Criteria sufficiently protects public health for agricultural food crop irrigation. The report specifically addressed the risk of exposure and infection from waterborne pathogens, such as *Cryptosporidium* and *E. coli*, due to the irrigation of a wide variety of food crops using recycled water. The panel concluded that "current agricultural practices that are consistent with the (Water Recycling Criteria) do not measurably increase public health risk, and that modifying the standards to make them more restrictive will not measurably improve public health."

The potential presence of human pathogens in recycled water and their uptake into plant tissue via the root system, leaf stoma, etc., were addressed as potential concerns. The Independent Advisory Panel finds there is evidence that plant uptake may occur under laboratory conditions with exposure to a high concentration of pathogens. However, it is

more likely that the pathogens attach to plant surfaces in such a way that processing sanitization or other intervention becomes less effective. This latter scenario is the probable mechanism of contamination associated with foodborne outbreaks referenced in the Independent Advisory Panel's report, none of which were associated with use of recycled water for irrigation.

The General Order requires use of recycled water for irrigation, including those for food crops, to meet the requirements of the Uniform Statewide Recycling Criteria. Recycled water, if used for agricultural irrigation, typically supplements other water supply sources such as surface water and groundwater, which results in plant exposures far lower than those tested under laboratory conditions.

Recommendations from the National Water Research Institute (NWRI) Independent Advisory Panel's report, titled "Review of California's Water Recycling Criteria for Agricultural Irrigation" is posted at: <http://nwri-usa.org/cdph.ag.htm>

- 4. Endocrine disruptors such as perchlorate may be present in disinfected recycled water, absorbed by fruit-producing trees, and concentrated on the fruits. Does this General Order contain any requirements to address perchlorate in recycled water?**
- Recycled water uses proposed by an administrator's Recycled Water Program must meet the Uniform Statewide Recycling Criteria and any other standards set by the State or Regional Water Boards for protection of public health. The Uniform Statewide Recycling Criteria was reviewed by an expert panel to determine whether it is sufficiently protective of public health for agricultural food crop irrigation. Based on literature and monitoring data reviewed, recycled water is a relatively insignificant source of perchlorate based on type and volume of recycled water used for agricultural irrigation, and levels of perchlorate monitored in facilities that discharge to surface water.

While there is no specific requirement addressing perchlorate in the General Order, it was considered in preparation of the General Order as documented in a staff memorandum addressing perchlorate occurrence in sources of agricultural water supplies. This memorandum is posted at:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/requirements.shtml

Based on literature and monitoring data reviewed, recycled water is a relatively insignificant source of perchlorate based on (1) type and volume of recycled water used for agricultural irrigation and (2) levels of perchlorate monitored in facilities that discharge to surface water (17 NPDES facilities out of 214 facilities, 12 out of 17 facilities are recycled water production facilities).

For more information on the General Order for Recycled Water, contact the [Division of Drinking Water](#).

(This fact sheet was last updated January 22, 2016.)