

Guidelines for the Use of Alternative Water Supplies to Irrigate Gardens

Introduction and Purpose

These guidelines have been developed to detail the requirements for the use alternative water supplies for the irrigation of gardens at schools, restaurants, institutions, homes and community gardens. Alternative water supplies that may be available for use includes recycled water, graywater and rainwater and their use for irrigation as the sole water supply or as a supplement to the potable water supply can be considered or allowed under certain conditions. Since these alternative water supplies each have different health risks associated with the type of water, the use of each will have varying requirements which will be detailed below.



Recycled Water

Recycled water is highly treated wastewater from a sewage treatment plant that can be used in areas with potential public contact but is neither potable nor safe for human consumption. Recycled water has the potential to contain pathogens so it must be used in a way to limit public exposure. The regulations for recycled water can be found in the California Code of Regulations Title 22 and Title 17 at <http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Recharge/Purplebookupdate6-01.PDF>. The regulations for the use of recycled water vary depending on the use of the site and individual homes generally have the strictest requirements due to being classified as dual plumbed sites since there is a greater opportunity and therefore risk for the improper use of recycled water.

The use of recycled water as an irrigation source for gardens at schools, restaurants, institutions, homes and community gardens may be possible if recycled water is available in your area. Check with your local water district to determine if it can be obtained. Please note that most water districts will not sell recycled water to individual residences but may sell water to homeowner associations for use in common areas. If recycled water is available for use, the following conditions must be met.

1. Each water district has a recycled water discharge permit with the Regional Water Quality Control Board. Under this permit, each water district has strict rules and regulations to follow, such as times of the day for irrigation and cross-connection testing requirements. It is recommended you check with your water district to see if these rules and regulations will conflict with your needs.
2. Each person proposing to use recycled water will have to submit irrigation plans and possibly a Title 22 Engineering Report to the Department of Environmental Health and/or the California Department of Public Health for review and approval. This plan and/or report will dictate specific requirements for the site.
3. Each site where recycled water is proposed to be used must have a trained and designated recycled water site supervisor who will be responsible to assure the safe use of recycled water. More information can be obtained in the County of San Diego Recycled Water Plan Check and Inspection Manual at http://www.sdcounty.ca.gov/deh/water/docs/lu_recycled_water_designmanual_2000.pdf

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4. In addition to the above, the following additional requirements must be met for the use of recycled water in community gardens.
 - a. Users of the community garden shall be adequately educated in the safe and effective use of recycled water and will be required to sign an agreement acknowledging their understanding of the requirements.
 - b. The community garden site must have restricted access to prevent the improper use of the recycled water.
 - c. The site will include a convenient source of potable water at sinks for the washing of hands and produce along with a drinking fountain.

For additional information regarding the use of recycled water, please visit our website at http://www.sdcountry.ca.gov/deh/water/lu_recycled_water.html.

Graywater

Graywater is untreated wastewater from bathroom sinks, bathtubs, showers, clothes washers and laundry tubs that has not been contaminated by toilet water. Graywater does not include wastewater from kitchen sinks or dishwashers. Due to the potential for high levels of bacteria in graywater, care must be taken with the use of graywater to eliminate any potential human contact. The regulations for the use of graywater can be found in Chapter 16A of the California Plumbing Code (CPC) which can be found at

http://www.sdcountry.ca.gov/deh/water/docs/lu_graywater_Chapter16A_CPC_Graywater_Regulations_1-27-10.pdf.



The use of graywater as an irrigation source for gardens at schools, restaurants, institutions and homes can be allowed with the following requirements and recommendations.

1. Construction permits are required for the installation of all graywater systems except gravity flow systems that collect graywater from a single residential clothes washer where no modification to the house plumbing is required. Permits are obtained from the local agency with authority for the oversight of graywater systems. The Department of Environmental Health regulates graywater systems only in the unincorporated area of the County.
2. The graywater system must meet the minimum design requirements found in the CPC including those systems that do not require a construction permit.
3. The graywater system shall not be connected to any potable water system without an air gap or other physical device which prevents backflow and shall meet the requirements of the local water purveyor.
4. Graywater use for irrigation is only allowed through the use of subsurface irrigation systems such as mulch basins, subsurface drip dispersal systems or mini-trenches. Graywater shall not be used in spray irrigation, allowed to pond or runoff and shall not be discharged directly into or reach any storm sewer system or any surface body of water.
5. The use of graywater is only allowed on the same property as the structure generating the graywater.
6. Since graywater is untreated wastewater, it should not be used in vegetable gardens where the food is a root crop or touches the ground surface however, its use for fruit trees or non edible plants is allowed.

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7. Persons doing gardening in soil that is irrigated by graywater should thoroughly clean equipment, clothes or themselves upon completion of work due to the contact with potentially contaminated soils.

Due to the fact that graywater must be used on the same site as the structure discharging the graywater and because its use is limited to a fixed subsurface system only, the use of graywater for community gardens may not be practical. In many cases, community gardens are on sites with little or no development that would generate graywater. In addition, the individual garden plots generally use hose bibs to allow for the surface application of water which are prohibited to be used with graywater.

For additional information regarding the use of graywater, please visit our website at http://www.sdcountry.ca.gov/deh/water/lu_graywater_systems.html.

Rainwater

Rainwater is water collected during rain events from appropriate surfaces such as roof tops, patio covers or parking areas. There are no regulations for the use of rainwater but there are recommendations for its use, collection and storage.

1. Since rainwater has the potential to contain contaminants and cannot be considered to be potable, the rainwater system cannot be inter-connected with any other source of water on the site without appropriate backflow prevention protection.
2. Rainwater generally accumulates and is stored for future use during a time when the use of the water is not needed for irrigation. Because of this, potential problems resulting from rainwater storage must be taken into consideration. The collection and storage of rainwater must be accomplished in a manner that eliminates any potential health and safety hazards or nuisance issues including, but not limited to: drowning hazards and potential mosquito breeding areas.
3. Any food crops irrigated with rainwater should be thoroughly washed prior to consumption.

