

bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

Graywater System. A system designed to collect graywater and transport it out of the structure for distribution in an Irrigation or Disposal Field. A graywater system may include tanks, valves, filters, pumps or other appurtenances along with piping and receiving landscape.

Irrigation Field. An intended destination for graywater in the receiving landscape including but not limited to a drip irrigation system, mulch basin, or other approved method of dispersal for irrigation purposes.

Mulch. Organic waste material including but not limited to leaves, prunings, straw, pulled weeds, and wood chips. Mulch shall be permeable enough to allow rapid infiltration of graywater.

Mulch Basin. A type of irrigation or disposal field filled with mulch or other approved permeable material of sufficient depth, length, and width to prevent ponding or runoff. A mulch basin may include a basin around a tree, a trough along a row of plants, or other shapes necessary for irrigation or disposal.

Receiving Landscape. Includes features such as soil, basins, swales, mulch, and plants.

Simple System. A graywater system serving a one- or two-family dwelling with a discharge of 250 gallons (947 L) per day or less. Simple systems exceed a clothes washer system.

Treated Graywater. Non-potable water collected and treated on-site suitable for direct beneficial use.

1603A.0 Permit.

A written construction permit shall be obtained from the Enforcing Agency prior to the erection, construction, reconstruction, installation, relocation, or alteration of any graywater system that requires a permit.

Exception: A construction permit shall not be required for a clothes washer system which does not require cutting of the existing plumbing piping provided it is in compliance with Section 1603A.1.1.

1603A.1 System Requirements.

1603A.1.1 Clothes Washer System. A clothes washer system in compliance with all of the following is exempt from the construction permit specified in Section 1.8.4.1 and may be installed or altered without a construction permit:

1. If required, notification has been provided to the Enforcing Agency regarding the proposed location and installation of a graywater irrigation or disposal system.

Note: A city, county, or city and county or other local government may, after a public hearing and enactment of an ordinance or resolution, further restrict or prohibit the use of graywater systems. For additional information, see Health and Safety Code Section 18941.7.

2. The design shall allow the user to direct the flow to the irrigation or disposal field or the building

sewer. The direction control of the graywater shall be clearly labeled and readily accessible to the user.

3. The installation, change, alteration, or repair of the system does not include a potable water connection or a pump and does not affect other building, plumbing, electrical, or mechanical components including structural features, egress, fire-life safety, sanitation, potable water supply piping, or accessibility.

Note: The pump in a clothes washer shall not be considered part of the graywater system.

4. The graywater shall be contained on the site where it is generated.
5. Graywater shall be directed to and contained within an irrigation or disposal field.
6. Ponding or runoff is prohibited and shall be considered a nuisance.
7. Graywater may be released above the ground surface provided at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield covers the release point. Other methods which provide equivalent separation are also acceptable.
8. Graywater systems shall be designed to minimize contact with humans and domestic pets.
9. Water used to wash diapers or similarly soiled or infectious garments shall not be used and shall be diverted to the building sewer.
10. Graywater shall not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.
11. Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any graywater system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the Enforcing Agency.
12. An operation and maintenance manual shall be provided. Directions shall indicate the manual is to remain with the building throughout the life of the system and indicate that upon change of ownership or occupancy, the new owner or tenant shall be notified the structure contains a graywater system.

1603A.1.2 Simple System. Simple systems exceed a clothes washer system and shall comply with the following:

1. The discharge capacity of a graywater system shall be determined by Section 1606A.0. Simple systems have a discharge capacity of 250 gallons (947 L) per day or less.
2. Simple systems shall require a construction permit, unless exempted from a construction permit by the Enforcing Agency. The Enforcing Agency shall consult with any public water system (as defined in Health and Safety Code, Section 116275) providing drinking water to the dwelling before allowing an exemption from a construction permit.

3. The design of simple systems shall be acceptable to the Enforcing Agency and shall meet generally accepted graywater system design criteria.

1603A.1.3 Complex System. Any graywater system that is not a clothes washer system or simple system shall comply with the following:

1. The discharge capacity of a graywater system shall be determined by Section 1606A.0. Complex systems have a discharge capacity over 250 gallons (947 L) per day.
2. Complex systems shall require a construction permit, unless exempted from a construction permit by the Enforcing Agency. The Enforcing Agency shall consult with any public water system (as defined in Health and Safety Code, Section 116275) providing drinking water to the dwelling before allowing an exemption from a construction permit.
3. A complex system shall be designed by a person who can demonstrate competence to the satisfaction of the Enforcing Agency.

**TABLE 1603A.1.4
CONSTRUCTION PERMIT REQUIREMENTS**

TYPE OF SYSTEM	PERMIT REQUIREMENTS
Clothes Washer System	No construction permit required if conditions in Section 1603A.1.1 are met.
Simple System	Permit and plans required unless exempted by Enforcing Agency.
Complex System	Permit and plans required unless exempted by Enforcing Agency.
Treated Graywater	Permit and plans required unless exempted by Enforcing Agency.

1604A.0 Drawings and Specifications.

Graywater systems for which a construction permit is required may be subject to submittal of plans and details of the proposed graywater system necessary to ensure compliance with the requirements of this chapter. Identification of the groundwater level and soil absorption qualities at the site shall be included in the plans or provided to the Enforcing Agency.

Exception: The Enforcing Agency may waive the requirement for identification of groundwater level and/or soil absorption qualities based on knowledge of local conditions.

1604A.1 Groundwater Depth. Verification of ground water levels which exceed three (3) vertical feet (915 mm) from the deepest irrigation or disposal point of the proposed graywater system shall not be required.

Note: The absence of groundwater in a test hole three (3) vertical feet (915 mm) below the deepest irrigation or disposal point shall be sufficient to satisfy this section unless seasonal high groundwater levels have been documented to rise to within this area.

1605A.0 Inspection and Testing.

(A) Inspection. A graywater system for which a construction permit is required shall be subject to inspection by the

Enforcing Agency and such construction or work shall remain accessible and exposed for inspection purposes until approved.

At the time of final inspection, an operation and maintenance manual shall be provided. Directions shall indicate the manual is to remain with the building throughout the life of the system and upon change of ownership, the new owner shall be notified the structure contains a graywater system.

(B) Testing.

- (1) Tanks shall be filled with water to the overflow line prior to and during inspection. Seams and joints shall be left exposed, and the tank shall remain watertight.
- (2) A flow test shall be performed through the system to the point of graywater irrigation or disposal. Lines and components shall be watertight.

1606A.0 Procedure for Estimating Graywater Discharge.

(A) Single Family Dwellings and Multi-Family Dwellings.

The graywater discharge for single family and multi-family dwellings shall be calculated by estimates of graywater use based on water use records, calculations of local daily per person interior water use, or the following procedure:

1. The number of occupants of each dwelling unit shall be calculated as follows:

First Bedroom	2 occupants
Each additional bedroom	1 occupant

2. The estimated graywater flows of each occupant shall be calculated as follows:

Showers, bathtubs and wash basins	25 GPD (95 LPD)/occupant
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Laundry	15 GPD (57 LPD)/occupant
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3. The total number of occupants shall be multiplied by the applicable estimated graywater discharge as provided above and the type of fixtures connected to the graywater system.

(B) Daily Discharge. Graywater systems using tanks shall be designed to minimize the amount of time graywater is held in the tank and shall be sized to distribute the total amount of estimated graywater on a daily basis.

Exception: Treated graywater systems when approved by the Enforcing Agency.

1607A.0 Required Area of Irrigation or Disposal Fields.

Irrigation or disposal fields may have one or more valved zones. Each zone must be of adequate size to receive the graywater anticipated in that zone. No irrigation or disposal field shall extend within three (3) vertical feet (915 mm) of the highest known seasonal groundwater, or to a depth where graywater contaminates the groundwater, ocean water or surface water. The applicant shall supply evidence of groundwater depth to the satisfaction of the Enforcing Agency.