

# Laundry to Landscape Greywater System Owners Manual

Congratulations on your new greywater system! This manual will help you maintain a well-functioning, water-saving greywater irrigation system.

This manual is to remain with the building throughout the life of the system. Upon change of ownership or occupancy, the new owner or tenant must be notified that the structure contains a greywater system. A map showing the location of all greywater system components is attached to this owner's manual.

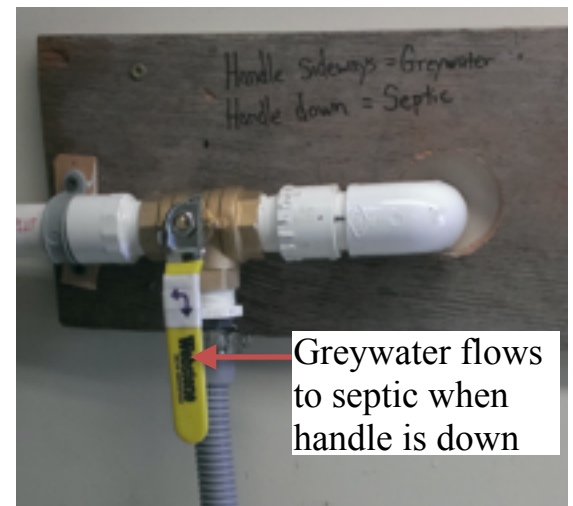
**This system was designed for \_\_\_105\_\_ gallons per week (7 loads), with a daily max of 3 loads.** If a future owner produces more or less water the system may need to be altered.

## 1. How do I turn my greywater system off?

If you ever need to turn your greywater system off, go to the three-way valve and turn the handle to direct the water towards the sewer or septic system. The first few times you do this check and make sure the system is turning off when you want and your 3-way valve is labeled correctly.

These are common times you'll need to turn off your system.

- During the rainy season if the ground water table has risen above 3 feet
- When washing dirty diapers
- When washing anything with chemicals, such as oily rags
- Anytime you notice that the water isn't draining well and you see pooling or runoff in the landscape
- If you think your plants are receiving too much water
- Anytime you may use products that are harmful to plants (like bleach or harsh cleaners)
- If you haven't turned off the greywater to the sewer connection for a long time and you notice sewer smells coming from the sewer connection. (This could indicate the water in the trap has dried out and water needs to be added). You could also manually add a few cups of water into the sewer connection to refill the trap.



## 2. What products can I use in my greywater system?

Plant friendly products are key when reusing your greywater. All products should be biodegradable and non-toxic. In addition, they should be free or low in salt (sodium) and free of boron (borax), two common ingredients that are non-toxic to people but are harmful to plants and/or the soil. Chlorine bleach is also harmful to plants and should be diverted with any other harmful products to the sewer or septic by switching the 3-way valve. Hydrogen peroxide bleaches are less harmful and can be used instead of chlorine. Another consideration with cleaning and beauty products is their affect on the pH of the water. While many soaps do not change the pH, some do. In general, liquid soaps do not change the pH, while bar soaps make the water very alkaline (opposite of acidic). Certain acid loving plants may not be happy with this kind of water. If you're uncertain if the pH is being affected choose plants

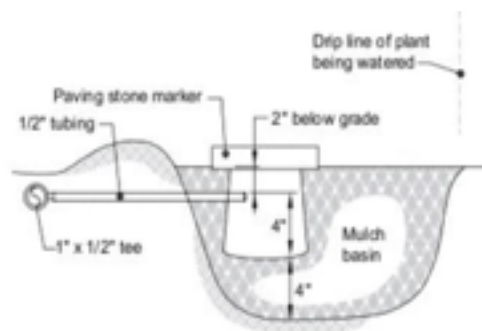
that are not acid loving to irrigate. Acid loving plants include ferns, azaleas, camilias, rhododendrons, and blueberries.

**Products we recommend:** (they are low salt and boron free, and pH neutral)

**Laundry:** Oasis, Ecos, FIT, Vaska, Puretergent, and Biopac liquid detergent. There are also soap alternatives that are greywater friendly, like soap nuts, and "wonder balls".

### 3. How do I maintain my greywater system?

The main thing you'll need to do to in order to maintain the system is to periodically check on the mulch basins (the mulch layer the greywater flows onto) and make sure the greywater is draining properly and there is no pooling or runoff. If you notice any pooling or runoff you should dig out the mulch area and replace it with new mulch (wood chips or bark). This typically needs to be done once every one or two years.



At the beginning of the irrigation season and periodically thereafter, check to ensure that greywater is coming out evenly among the outlets. If you notice uneven distribution of greywater you should check the outlets for clogs and manually remove the debris causing the obstruction.

**To “flush” the system and remove multiple clogs:**

Open any partially closed ball valves, and make sure the end of each line is open. Attach a garden hose to the clean out point and blast system with water to flush any particles in the system. *Any time you attach a garden hose to temporarily flush the system, make sure you have an anti-siphon valve or vacuum breaker on your garden hose-bib, this is a code requirement.*



Pull gray fitting out of PVC 90 here to flush the system

### 4. What are the minimum requirements that I need to follow for my greywater system to comply with the law?

Under the new California greywater code, CPC Title 24, Part 5, Chapter 15, washing machines do not require a permit as long as the installer follows the following minimum requirements outlined in the code.

1. If required, notification has been provided to the Enforcing Agency regarding the proposed location and installation of a greywater 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 greywater systems.*

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 greywater 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.
4. The greywater shall be contained on the site where it is generated.
5. Greywater 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. Greywater 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. Greywater 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. Greywater 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.
10. Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any greywater system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the Enforcing Agency.
11. 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 greywater system.

**5. Path of System:** This system has 5 outlets. The last outlet, #5, is the end-of-the-line and located under the magnolia tree. This 1” open tubing must be unrestricted and kept free of obstructions.

