

# Example Laundry to Landscape Graywater System Owners Manual

Congratulations on your new graywater system! This manual will help you maintain a well-functioning, water-saving graywater 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 graywater system. A map showing the location of all graywater system components is attached to this owner's manual. Remember to send XX form to the DEQ each year to avoid paying an annual permit fee.

**This system was designed for \_\_\_6 loads or 90 gallons per week, with a daily maximum flow of 30 gallons. If the usage changes significantly the system may need to be altered to accommodate additional flows.**

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

The brass 1" three way valve next to the washing machine controls the **Laundry to Landscape graywater**.

**Handle down = Graywater to sewer**

**Handle to side = Graywater to landscape**

The three way valve must have a clear label permanently posted next to it so that anyone attempting to wash clothes would understand how to operate the valve in order to send graywater either to the garden or to the sewer.

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

- During the rainy season if the ground water table has risen above 4 feet
- When your plants don't require irrigation (during the rainy season)
- 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 graywater 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 graywater system?

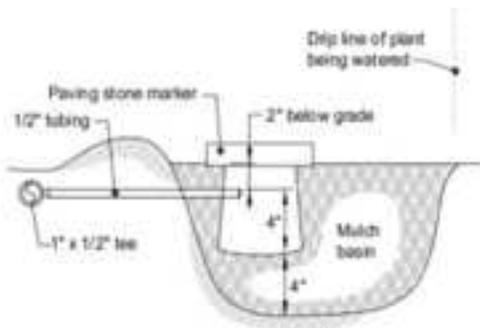
Plant friendly products are key when reusing your graywater in the garden. All products should be biodegradable and non-toxic. In addition, they should be **low in salt (sodium) and free of boron** (borax), two common ingredients that are non-toxic to people but are harmful to plants and/or the soil.

Chlorine bleach is also harmful to plants and should be diverted with any other harmful products to the sewer by switching the 3-way valve. **Hydrogen peroxide bleaches are less harmful and can be used instead of chlorine.**

**Recommended products for the laundry** (they are low salt and boron free, and pH neutral): Oasis, Ecos, Trader Joes Liquid Detergent, Vaska, and Biopac liquid detergents. There are also soap alternatives that are graywater friendly, like soap nuts, and "wonder balls".

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

**Mulch basins:** 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 graywater flows onto) and make sure the graywater 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.



This is where you will do annual maintenance



You should always see an air space underneath the graywater outlet and then wood chips below. The graywater needs to freefall out of the tubing or pipe onto mulch at the bottom of the shield to prevent roots from growing into the pipe. Soil or mulch should not accumulate so that they are in contact with the actual tubing or pipe.

At the beginning of the irrigation season and periodically thereafter, check to ensure that graywater is coming out evenly among the outlets. If you notice uneven distribution of graywater 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.*

This is where you could connect a garden hose (the gray fitting isn't glued into the white PVC elbow and can be pulled out).



**Autovent:** The “auto-vent” or “air admittance valve” (the black piece above the diverter valve) prevents washer refill water from being siphoned out into the garden should be visually inspected for leaks. In the event of failure, the valve can be easily unscrewed and replaced.

**Signage:** Maintain labels next to the diverter valve, and the maintenance manual in an easy to find location.

## 5. Path of System:

Tubing travels along edge of DG path, curves out to reach trees, then hugs edge of play area bender board until it goes to last tree.



There are 6 outlets, one at each fruit tree.

The last outlet is at the avocado tree. Be sure the check this outlet during annual maintenance and ensure the 1" end is open and free of obstructions. This protects the washer from problems (back pressure) in case the smaller outlets clog.

