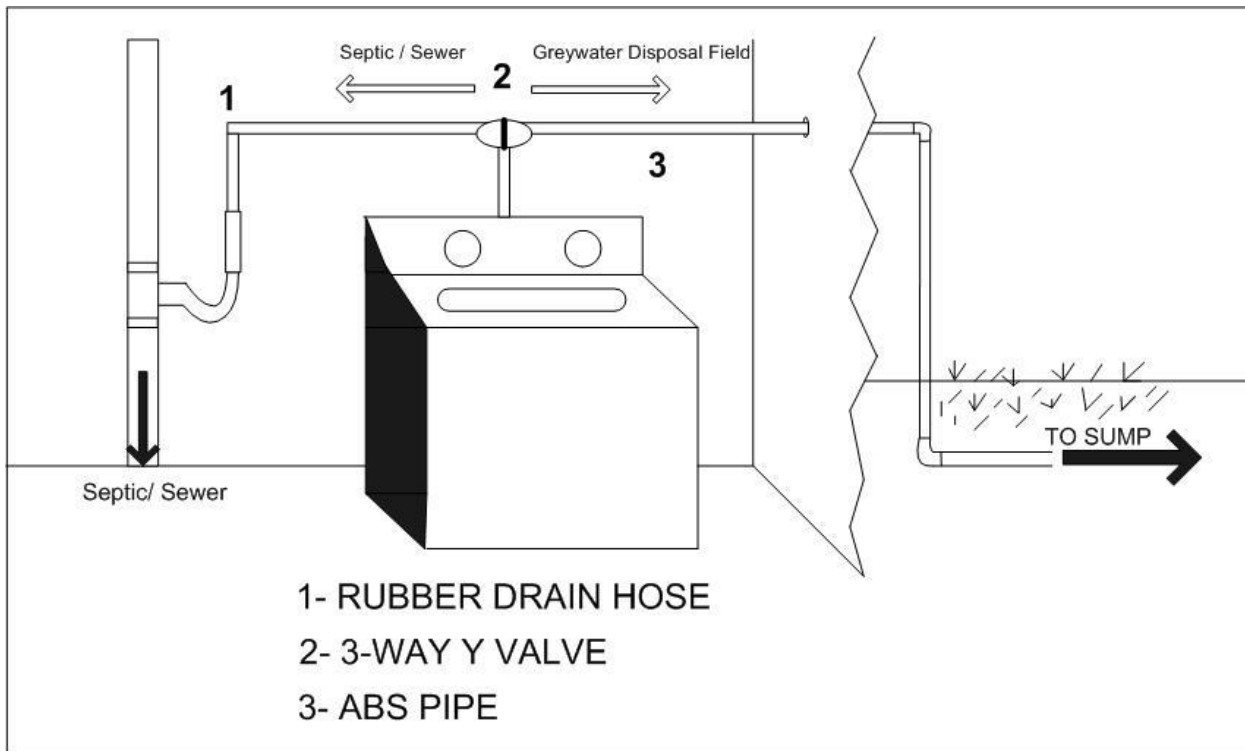


The following guide is provided for developing a simple greywater disposal system to dispose of washing machine effluent only.

What is Greywater?

Greywater is defined as used water (effluent) from clothes washers, bathing tubs, showers, and bathroom sinks. Although greywater does not contain toilet waste, it does contain viruses and bacteria and must be properly disposed underground to prevent health hazards.

GREYwater SHALL NOT INCLUDE LAUNDRY EFFLUENT FROM SOILED DIAPERS OR EFFLUENT FROM THE WASHING OF CLOTHES OF SICK OR INFECTED PERSONS. The washing machine must be equipped with a three-way valve that allows the effluent to be disposed of in the sewer or septic system if either of the above is being washed, see figure below.

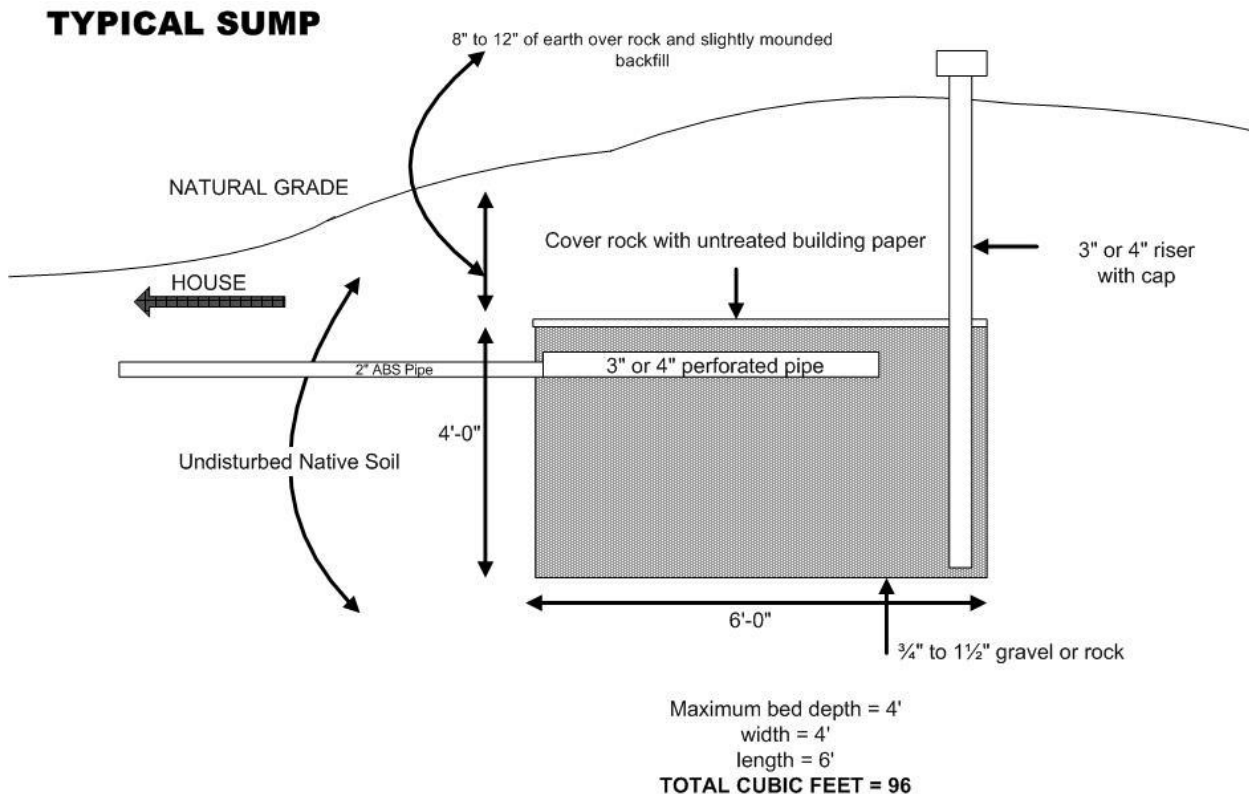


Washing Machine Greywater Sump

Greywater Sumps

A greywater sump is a rock filled trench that collects and disposes of effluent from the washing machine only. A greywater sump can be used to reduce the loading on a septic system, and can help re-use water for landscaping.

The diagram below shows a typical sump sized for two wash loads a day and is the minimum size for a greywater sump (96 cubic feet)—see figure below. These dimensions can be altered as needed as long as the total trench depth below the ground surface shall not exceed 5 feet. Shallow narrow trenches are preferred and trenches may be constructed to meander through the landscape.



Washing Machine Greywater Sump

Three Steps to a Greywater Sump

There are three steps to properly completing a greywater sump:

1. Determine the location and size.
2. Apply for and obtain an approved permit from our office.
3. Install the sump and obtain a final inspection by our office.

1. *Location and Sizing the Sump*

The size of the sump depends on the amount of effluent and the ability of the soil to absorb water. County wastewater standards require that a sump have (for washing machine effluent only) a minimum volume of 96 cubic feet. (If doing more than two loads a day in average draining soils, allow one cubic foot of sump rock for every 1 gallon of effluent.)

When determining the proper location for the sump, the following minimum setbacks and standards must be met:

Distance from:

- Septic tank: 5 feet
- Leach field: 10 feet
- Property line: 5 feet
- Building foundation: 8 feet

- Water line: 10 feet
- Well: 100 feet
- Embankment: 25 feet to daylight
- Water courses, streams, creeks, or lakes: 100 feet
- Groundwater: 3 feet

Minimum cover over sump: 1 foot

Maximum depth of sump: 5 feet

Do not place a greywater sump in an area where it may contribute to geologic instability.

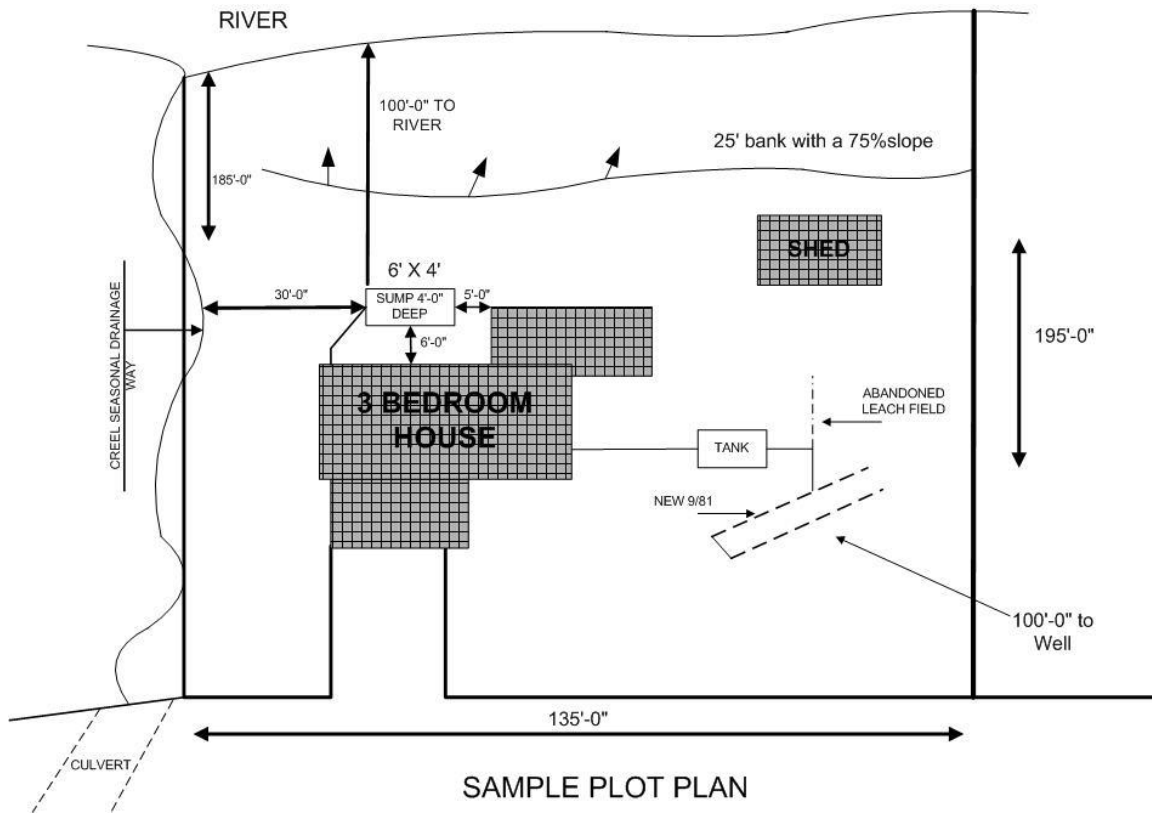
2. *Submitting an Application and Obtaining a Permit*

Submit a construction permit application. This application must include a site plan and applicable fees.

The following information shall be included on the site plan. See figure below:

- Assessor's Parcel Number, street address, and name of the property owner
- Property lines and adjacent streets, footprint of the house, garage, and all structures,
- Existing septic system
- Large trees, rocks, fences, etc.
- Indicate all setback distances as described above on the plot plan.

Washing Machine Greywater Sump



3. Installation and Approval

Once the application has been approved and the permit issued, work may begin on the sump. When the sump has been installed, and prior to cover, call for inspection. Inspections must be scheduled one working day in advance.

Washing Machine Greywater Sump

A Word About Greywater and Landscapes

Sodium, potassium, and calcium are alkaline chemicals that are present in laundry detergent. Because of this, greywater tends to raise the alkalinity of the soil. Slightly alkaline soils will support many garden plants. Even most acid loving plants will be happy with slightly alkaline soils that are generously amended with organic matter. The pH of an acid soil is 6.9 or lower while that of an alkaline soil is 7.1 or higher. If a simple pH test of the soil indicates a pH reading over 8.0, the pH should be reduced. This can be accomplished by adding agricultural sulfur or an acidifying fertilizer such as ammonium sulfate.

Shade and acid loving plants do not like greywater. Their native habitats are forested areas where acid soils predominate. Here is a list of plants that are not suitable for the alkaline conditions often associated with greywater irrigation

Rhododendrons	Begonias	Bleeding Hearts	Ferns
Foxgloves	Hydrangeas	Oxalis (wood Sorrel)	Gardenias
Azaleas	Violets	Philodendrons	Camellias
Impatiens	Primroses	Crape Myrtle	Holly
Redwoods	Star Jasmine	Deodar Cedar	

The following list of plants, typically do well with greywater irrigation

Oleander	Bougainvillea	Italian Stone Pine	Oaks
Palms	Arizona Cypress	Purple Hopseed Bush	Olive
Rose	Rosemary	Australian Tea Tree	Juniper
Ice Plant	Bermuda Grass	Many Native Plants	Agapanthus
Cottonwood	Honeysuckle		

If you have any questions about greywater systems, please call Barry Tolle at 805-781-5628 or email at btolle@co.slo.ca.us.