

4.13 Grey Water System

Revision: September 16, 2004

Installer registration permit: Property owner or standard and basic (complex if pressurized)

Licensed professional engineer required: No (yes if pressurized)

4.13.1 Description

Grey water is untreated household wastewater that has not come into contact with toilet waste. Grey water includes used water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines and laundry tubs. It shall not include wastewater from kitchen sinks, water softeners, dishwashers, or laundry water from soiled diapers. A grey water system consists of a separate plumbing system from the blackwaste and kitchen plumbing, a surge tank to temporarily hold large drain flows, a filter to remove particles that could clog the irrigation system, a pump to move the grey water from the surge tank to the irrigation field, and an irrigation system to distribute the grey water.

4.13.2 Approval Conditions

1. Grey water treatment and disposal systems must meet all the separation distance setback criteria and soil application rate criteria as found in the rules (IDAPA 58.01.03).
2. Specialized plumbing designs will need to be approved by the Idaho Division of Building Safety, Plumbing Bureau.
3. Grey water surge tanks must be watertight and noncorrosive.
4. Operations and maintenance manuals must be provided to the property owner.
5. Grey water may not be used to irrigate vegetable gardens.
6. Capacity of the septic tank and size of the blackwaste drainfield and replacement area shall not be reduced by the existence or proposed installation of a grey water system servicing the dwelling.
7. Grey water shall not be applied on the land surface or be allowed to reach the land surface.

4.13.3 Design Requirements

1. Grey water flows are determined by calculating the maximum number of occupants in the dwelling, based on the first bedroom with two occupants and each bedroom thereafter with one occupant. Estimated daily grey water flows for each occupant are:
 - a. Showers, bathtubs, and wash basins (total): 25 GPD per occupant
 - b. Clothes washer: 15 GPD per occupant

Multiply the number of occupants by the estimated grey water flow.

For example: A three-bedroom house is designed for four people. The house has a washing machine connection, thus each occupant is assumed to produce 40 GPD of grey water, resulting in a total of 160 GPD.

2. The formula shown in Equation 4-11 is used to estimate the square footage of landscape to be irrigated: