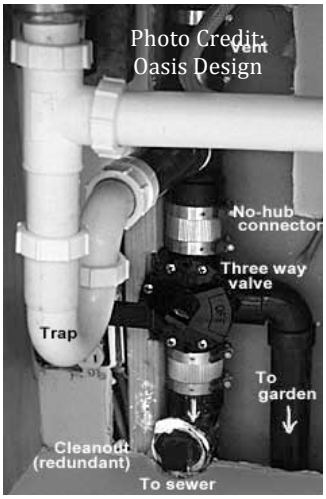
Legal History of Gray Water in Montana

The 2007 Legislature legalized the reuse of gray water in single-family residences and in 2009, the single-family residence component was removed making it legal for all building types including commercial, multifamily, and institutional buildings. Also in 2009, the reuse of gray water for irrigation was made exempt from review under the nondegredation policy, meaning that the system owner does not need to perform calculations and meet state limits on nitrate levels. The idea is that since there will be plant uptake of phosphorus and nitrates, there will be no significant contribution of those substances to the ground water.

Following the enactment of these laws, the Montana Department of Environmental Quality issued rules and regulations for implementation of the law as it pertains to outdoor irrigation. DEQ does not regulate the usage of water inside the house, so no special permit is necessary for reusing gray water for waste transfer (toilet flushing). Local health departments are responsible for issuing permits for the gray water irrigation systems. Basic guidelines set out by DEQ include:

- There must be **subsurface dispersal** of at least 6 inches below the surface to avoid human contact with the gray water.
- All **piping must be marked as gray water**, so future property owners know not to cross-contaminate the pipes with their potable (drinking water) supply.
- The **soil must be tested** for its ability to absorb water (a percolation test), and with estimates of gray water production it can be determined if the soil area will be able to handle that quantity of water. This is also a way to ensure that the gray water won't puddle and come into contact with humans.
- All gray water irrigation systems must be equipped with a **three-way diverter** valve which can direct gray water to the irrigation system in the summer and to the normal wastewater treatment system (sewer or septic) in the winter.
- It is essential to include **backflow prevention** devices that will prevent gray water from overflowing into the potable water supply, or back up into the building.
- Systems including a surge tank should ensure the tank is at least 50 gallons, covered, easily accessible for maintenance, and connected to the wastewater treatment system for overflow.



Each system must be custom designed to suit the building and the property. When all gray water sources are above ground level, a gravity fed system can be installed easily because storage tanks and pumps are not necessary.

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