



DEPARTMENT OF NATURAL RESOURCES

## DIVISION OF WATER RESOURCES

John W. Hickenlooper  
Governor

Mike King  
Executive Director

Dick Wolfe, P.E.  
Director

### **Administrative Position for Graywater Reuse**

September 7, 2011

This statement applies to the Division of Water Resources' administrative position regarding the reuse of gray water. For the purposes of this statement, gray water is the water that has been used one or more times by a water user and does not include black water, that is, water from toilet use. Typically, the discussion of gray water addresses water whose first use was for dishwashing, clothes washing, showering, or other indoor uses. However, for the purposes of describing the Division of Water Resources' administrative position, gray water may also include water used for other purposes in a commercial or industrial application. This statement clarifies the Division of Water Resources' administrative position, but the allowances in the administrative position do not grant a water right nor offer protection from a claim of material injury by a water user. Further, all reuse of gray water is subject to the approval of the water provider and is also subject to all local, state, or federal water quality requirements.

Gray water reuse may occur using water obtained directly from a well, exempt or non-exempt, or from a municipal provider. The discussion of gray water reuse includes consideration of uses similar to the first use, that have limited or no consumption, as well as more consumptive uses, like irrigation, which may or may not be allowed uses for the water.

For the purposes of water administration, there are two possibilities for gray water reuse:

- Gray water is used for a non-consumptive use. Gray water (used shower water, dish water, etc.) is used for other non-consumptive household uses like toilet flushing, in lieu of first use water. There is virtually no additional consumption of water from the well or municipal source.
- Gray water is used for a consumptive use. Gray water (used shower water, dish water, etc.) is used for other more consumptive uses. Outside irrigation is the best example. Water that would have resulted in a return flow is instead consumed by the more consumptive use.

### **DWR Administrative Position**

1. For water users that rely on an exempt well, permitted pursuant to Section 37-92-602, C.R.S., the gray water may be used for other non-consumptive household uses (including toilet flushing) in lieu of using first use water for those uses. In this scenario, the amount of water pumped from the well is reduced and there is no additional consumption of water from the well.

**Office of the State Engineer**

1313 Sherman Street, Suite 818 • Denver, CO 80203 • Phone: 303-866-3581 • Fax: 303-866-3589

[www.water.state.co.us](http://www.water.state.co.us)

2. Additionally, for water users that rely on an exempt well, the gray water may be used for other more consumptive uses, for example, outside irrigation, only if that more consumptive use is allowed for the first use of water according to the well permit. In this scenario, the amount of water pumped from the well is reduced and there is no additional consumption. However, if the well is permitted for indoor uses only, gray water may not be reused for more consumptive, outdoor uses. While no additional water is pumped from the well when reusing it for outdoor use, the return flow will be reduced. That result would conflict with statutory return flow requirements that are the basis for allowing the well to operate.
3. For water users that rely on wells that are part of an augmentation plan and are permitted pursuant to 37-90-137(2) or (4), or 37-90-107, the use of the gray water must be evaluated on a case-by-case basis due to the fact that an augmentation plan may be premised on a certain percentage or amount of return flow occurring as a result of non-consumptive household uses. If the anticipated return flow does not actually occur in the on-site treatment system or the central treatment plant, the plan may not be properly augmenting the depletions that impact the stream. That result would conflict with court-decreed return flow requirements that are the basis for allowing the well to operate.
4. For water users that rely on municipal water supplies, the Division of Water Resources does not regulate the reuse of gray water within the municipal system. If water is reused or re-circulated as a part of residential, commercial, or industrial operations, and that reuse or recirculation takes place within the confines of that operation, that is, there is no reuse of water after it leaves the site, there is no water rights conflict. This is based on an assumption that the water right allows Municipal uses, or Residential, Commercial, and Industrial uses, and due to the fact that, if certain reuse or recirculation systems are used in a residential, commercial, or industrial operation, they are by definition Residential, Commercial, or Industrial uses.

**Other considerations regarding the reuse of gray water, unrelated to water rights and the Division of Water Resources' administration**

Currently, the treatment, disposal, and potential use of gray water is regulated by the State of Colorado Guidelines On Individual Sewage Disposal Systems and applicable county Individual Sewage Disposal System (ISDS) regulations. The Colorado Department of Public Health and Environment (CDPHE) does not currently separate gray water from black water in its regulations. Consequently, surface applications require permitting and monitoring. Application of gray water from systems discharging 2,000 gallons or more per day requires a permit from the CDPHE; smaller systems require permits from the local health department.

If gray water is discharged below the soil surface and below the root zone in the manner of a leach field, a permit from the local health department is all that is required. If gray water is used to irrigate below the soil surface, but within the root zone (above frost line), a local permit plus monitoring is required. Many county ISDS regulations prohibit the issuance of any type of individual sewage disposal system permit for a lot within 400 feet of service by a municipal or community sewage treatment facility. Many municipalities have similar connection and usage requirements that technically prohibit the use of gray water in urban areas.

Gray water can be distinguished from warm-up water, or wasted potable water allowed to run down the drain before it reaches a desired temperature. Warm up water is not considered to be the same as gray water and instead should be regarded the same as first use water, subject to its restrictions. Warm-up water that has not been used for bathing or dishwashing is generally free from bacteria and other pathogens if it is captured before it reaches the drain. Amounts of wasted warm-up water can be significant in homes where water heaters are located a considerable distance from showers or tubs and where no recirculation system is installed. Catching this water in a bucket and using it to water plants can contribute to home water conservation savings.