



what is the problem?

Suzanna Carrithers, MSU Extension Water Quality Program
scarrithers@montana.edu; (406) 994-6589

It is no secret that Montana has been in drought conditions for the past several years. In fact, as of February 2008, much of Montana is under moderate to severe drought according to the Palmer Drought Index, a water balance indicator that considers precipitation, plant uptake and evaporation (evapotranspiration), and runoff to determine drought potential. In addition, more people are moving to Montana. The result is that we are putting a lot of straws into a cup that is already half empty.

In recent years water managers have become proactive in conserving local water resources. While moratoriums and restrictions on water use within city limits are effective, it does not address the thousands of water users in rural communities across the state. Conserving water resources on the rural landscapes of Montana is the sole responsibility of the individual water user.

Am I part of the problem?

Read the following true or false questions and circle your answer.

- 1) I keep the water running while brushing my teeth or washing the dishes. T F
- 2) When waiting for the water to turn warm or cold, I let it run down the drain. T F
- 3) I primarily take long showers or baths. T F
- 4) At least one of my faucets or toilets leak. T F
- 5) I use a sprinkler to irrigate my lawn, garden, and/or pasture during the day. T F
- 6) I use a hose to clean my sidewalks, driveway, garage floor, barn, etc. T F

If you answered true to any one of the statements above, you could be wasting water. In terms of indoor water use, you might think, "But if it goes down the drain, it doesn't disappear – it goes back into the groundwater." If you have a septic system, this is not always true because the system is designed to lose as much water as possible to evaporation. A telltale sign of this evaporative loss is the rich green grass that often grows over septic leach fields. When wastewater is evaporated it helps to protect ground-water quality, but the water is then lost. The better alternative is to prevent water waste down the drain and out of the septic system.

Outdoor water use has the potential to waste even more water through runoff and evaporation. A garden hose can run from 5 to 10 gallons per minute. This means that out of just one hose, you could pump 600 gallons of water out of the ground. If this water is used during hot summer daylight hours, much of it could be lost to evaporation. Similarly, a large portion of water that is used to rinse driveways and sidewalks will probably be lost to evaporation before it ever makes it back to surface water and water that is not lost to evaporation may take several years to return to ground water. If we are wasting water at a faster rate than it is returned to the system, we could be temporarily draining our water supplies.

How can I be part of the solution?

The largest use of household water (about 75 percent) is in the bathroom. It makes sense to consider modifying those behaviors first and the solutions are very simple and practical.

- Install low-flow toilets and low-flow faucets with aerators. If this option is too expensive, take shorter showers and only flush the toilet when needed. Repair leaks in both toilets and faucets.

- Turn off the water in the shower while you soap up. If you take a bath, close the drain before starting the water.
- Collect running water in pitchers or jugs to use for drinking water, watering houseplants, pets, cleaning, etc.
- If washing dishes by hand, do not keep the water running. If you have a full sink of dishes it is actually more water efficient to use the dishwasher, especially if it is a water and energy efficient model.
- Do full loads of laundry.

Depending on the size of the property and time of year, a person can use up to 50-70 gallons per day watering their lawn, garden, or pasture. Yet, many times up to 30 percent of water applied to these landscapes is lost to evaporation and/or runoff. Follow these landscaping practices to prevent unnecessary water loss while sustaining healthy vegetation on your property:

- Irrigate in the early morning or late afternoon when the sun is low and wind is calm. This will prevent unnecessary water loss to evaporation.
- Drip or trickle hoses are more water efficient than sprinklers. They water slowly, reduce runoff and allow you to water more thoroughly to promote deep root growth.
- If you are new to your property consider landscaping with native Montana plants. Though Kentucky bluegrass looks lovely, it is an impractical water hog in a Montana climate. See the article, "Native Plants" in this issue for suggestions.



- Consider developing a rain garden which promotes water conservation while replenishing groundwater resources (see <http://www.mtwatercourse.org/WaterResources/rain.gardens.pdf>). Xeriscaping is another low maintenance, water conserving approach to landscaping.
- Install rain barrels to collect rainwater for plants and other outdoor uses.
- Use a broom and/or a bucket of water (perhaps captured rainwater) to clean your garage, sidewalks, driveway, or barn.

Remember, it goes back to the idea that it is the responsibility of the individual to protect and conserve water resources. Simple, contentious acts within your home and around your property can make a difference in the amount of water available to your family and your Montana neighbors. ■

For more information on drought and water saving facts and ideas, visit the following websites:

<http://extn.msu.montana.edu/yard.asp>

<http://nris.state.mt.us/drought>

<http://ga.water.usgs.gov/edu/qahome.html>

