

Effects of Runoff

☉ Runoff can cause a variety of problems for local water bodies. It transports sediment that reduces the quality of habitat and smothers aquatic life. It carries heavy metals and chemicals that make the water unsafe for human use. Excess phosphorus from grass clippings, leaf litter and some fertilizers are washed into lakes causing algae blooms. Excess algae competes with native aquatic vegetation and decreases the amount of dissolved oxygen in the water which can result in a fish kill. To prevent these problems, water quality improvement and volume reduction efforts need to be made by everyone, not just the people living near a water source.

Water Conservation Outdoors

There are many ways to landscape your yard that will reduce runoff and water use. Many of them relate to the fact that traditional turf grass is not adapted to live in our climate and requires a lot of water to keep alive. By limiting turf grass on your property to the areas of active use you can dramatically reduce your watering needs.

- ☉ Convert some lawn to "xeriscaping", a form of landscaping that uses drought tolerant plants.
- ☉ Replace high maintenance lawn with low maintenance shrubs or trees that provide shade and reduce the amount of water needed to keep lawn healthy.
- ☉ Install a water-free landscape feature, such as a rock garden.

Consider natural landscaping for the rest of your yard.

Natural landscaping is the use of native vegetation that is well adapted to the soil, moisture and sunlight conditions of the property, greatly reducing long term maintenance.

Natural landscapes also provide wildlife habitat, require very little maintenance once established, resist disease and drought, and save you money on water, fertilizers and pesticides.

One form of natural landscaping that is especially beneficial for water conservation is a rain garden, which catches runoff and allows it to soak into the ground instead of flowing directly into a nearby water body.



Indoor Solutions

☉ ENERGY STAR APPLIANCES. If you are considering new appliances, look for those with the energy star logo. They have met water use and energy requirements set by the EPA and US Department of Energy. Energy Star appliances save enough energy each year to reduce greenhouse gas emissions equivalent to that of 27 million cars. Those energy reductions also result in saving of over \$16 billion per year on utility bills.



☉ LOW VOLUME SHOWERHEADS. Installing a low volume showerhead is an easy and inexpensive way to reduce the amount of water you use everyday. Normal showerheads can dispense 5-10 gallons of water per minute. Low volume showerheads can reduce water use in the shower by 50%. Reducing your time in the shower, or turning off the water while you soap up, will also dramatically reduce water use.

☉ FRONT LOADING WASHERS. These washers use half as much water as a standard top-loading washer. Because they use less water, they also use 60% less energy to heat the water. They can also hold more and are easier on your clothes. Savings while using a front loading washer can top \$100 per year. To increase savings, only wash clothes when you have a full load.



☉ LOW VOLUME DUAL FLUSH TOILETS. Standard toilets use 3-5 gallons of water per flush, while low volume toilets use only 1-2 gallons. This will cut indoor water use by about 30%. A dual flush toilet allows you to choose between a high and low volume flush. You can reduce the amount of water used by a standard toilet if you sink a couple plastic bottles full of sand and water in the tank.

☉ FAUCET AERATORS. This is the easiest and cheapest way to reduce water use in the home. Most cost less than \$6 and come in a variety of styles.

Additional Information

<http://www.ec.gc.ca/default.asp?lang=En&n=FD9B0E51-1>

<http://www.watersmart.net/>



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Chisago SWCD Brochure Series



☉☉ WATER SMART
LIVING ☉☉
Conserving water at home



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Bringing Conservation to Chisago County

Where Our Water Comes From

Household water can come from a variety of places including private wells, municipal wells and treatment plants that take water from local rivers. The majority of our water is taken from aquifers located deep beneath the ground. Aquifers near the surface have their water supply “recharged” relatively quickly through infiltration, while deeper aquifers take much longer to recharge. Some of the water pumped by city wells was from glacial melt 10,000 years ago and once it is used up, it won’t be recharged in our lifetimes. Water from these reserves is very clean and requires very little treatment to make it safe to drink.

The average suburban home will use over 40,000 gallons of water each year for lawn irrigation. That’s about one third of the total annual household water use! Saving this water for drinking instead of growing grass will help maintain our drinking water supplies.

Storm-water Runoff

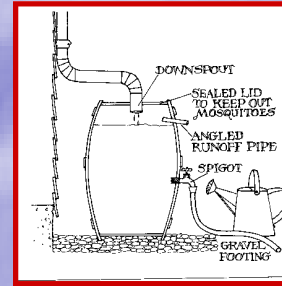
We all value clean lakes and rivers for recreation and clean abundant water for drinking and other household uses. What we do at home can greatly influence the quality and quantity of these resources.

In a 1” rainfall, a 1/4 acre lot can produce over 5,000 gallons of runoff from roofs, sidewalks, driveways and even the lawn itself. Grass clippings, leaf litter, soil, fertilizer and other pollutants are washed off the lot into a storm drain and then directly to lakes, streams or rivers UNTREATED! This effects water quality by introducing pollutants and excess nutrients.



Other Outdoor Options

To further reduce water use and runoff from your property, recycle rainwater with a rain barrel. Rain barrels capture rainwater from your gutters and store it so you can use it later to water your plants.



A very simple step you can take to reduce runoff from your yard is to redirect downspouts so that they empty into the yard where the water has a chance to infiltrate. Do not direct downspouts onto a side walk or driveway

because the water will run into the street and down the nearest drain, rather than infiltrating into the ground.

Driveways, sidewalks, patios and roofs all produce runoff during a rain storm. However, there are ways of maintaining a hard surface area while also allowing water to soak in. Permeable pavers lock together to create a solid surface but have gaps between the pavers that allow water to soak through. The gaps can be filled with gravel or even seeded to allow small plants to grow. They are great for driveways, sidewalks or patios.



Permeable asphalt is another hard surface that will allow water to soak into the ground. It is extremely durable, can be plowed in the winter and will reduce ice buildup because water will not sit at the surface.

Lawn Maintenance Tips

With proper maintenance, you can keep your lawn healthy through the hottest part of the summer while still reducing your water use.

- Water thoroughly but infrequently to encourage deeper root growth.
- Install a rain shut-off device to prevent watering during rain.
- Repair leaking sprinklers and adjust sprinklers to prevent spraying water onto driveways or streets.
- Water in the morning to reduce water lost to evaporation.
- Mow your grass no shorter than 3” for deeper roots and less weeds.



- Use low maintenance grasses like fine-leaved fescues and drought-resistant types of Kentucky bluegrass in newly seeded areas.
- Let your lawn go dormant during the hottest months. Water 1/4” every two weeks (minus rainfall) to keep the crowns healthy.
- Mulch around trees, shrubs and in your garden. Mulch keeps moisture in the soil and reduces weed growth.
- Use a plug aerator to improve water infiltration, making a healthier lawn and reducing runoff.
- Utilize drip irrigation in gardens to apply water directly where it is needed and minimizing loss due to evaporation.

Saving water outdoors

