A Homeowner's Guide to

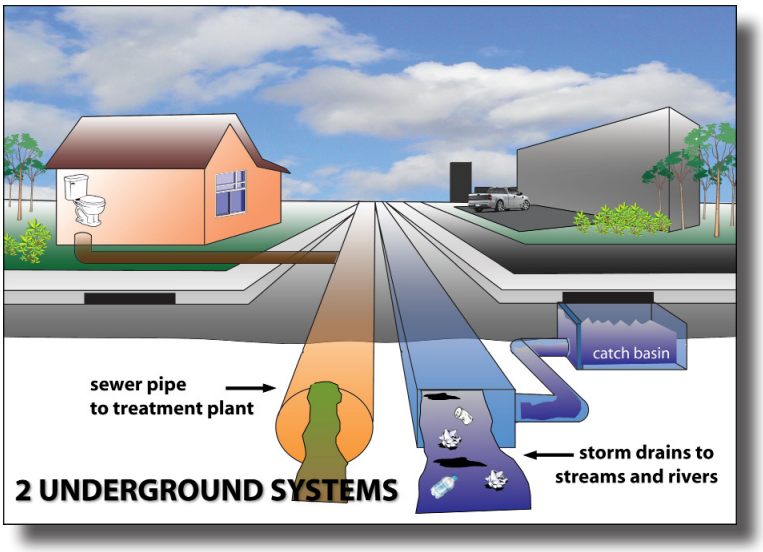
Clean Water

It Begins in Your Backyard!

Did you know?

Stormwater is precipitation or sprinkler water that flows over the ground, picking up debris, chemicals, dirt and other types of pollution and carrying them into a storm drain system or stream. Completely separate from the sewer system that leads to a treatment plant, storm drain systems include gutters, pipes, ditches and drainage ways that transport water directly to local streams, rivers or lakes.

Fertilizer, dirt, pet waste, trash, oil and other types of pollution picked up by stormwater can change the ecology of a stream and devastate the natural balance fish and other wildlife depend on for survival. By making a few simple changes in behavior, we can ensure future generations have access to clean and safe water.



Pet Waste

Stormwater transports pet waste from lawns and sidewalks to nearby streams, lakes, and rivers. Waste carries bacteria, viruses, and parasites that threaten the health of humans and wildlife. Waste also contains nutrients that promote weed and algae growth which consume oxygen, creating “dead zones” and fish kills in our lakes and estuaries.

Many public areas provide pet waste stations. If you don't have a pet waste station in your neighborhood, make sure you carry a bag and pick up the poop! Waste can be thrown away or buried.

Vehicle Maintenance

Maintaining and cleaning your vehicle at home is an excellent way to reduce maintenance costs and ensure your vehicle is getting reliable service. However, if done improperly, regular maintenance can pollute ponds, streams, and groundwater.

Lubricants and internal fluids including motor oil, brake and steering fluids, transmission fluid, and antifreeze are extremely toxic to aquatic ecosystems, even in small concentrations. Solvents used in soaps and detergents, heavy metals washed off brakes and engine parts, and residue from various chemicals and fluids all have the potential to alter water chemistry. If you maintain your vehicles at home, there are some preventative measures you can take to reduce contamination.

- Wash vehicles over a pervious surface like the yard where water seeps into the ground rather than running down the driveway and into a storm drain.
- Use environmentally friendly, biodegradable, phosphate-free cleaning products.
- Use your local car wash which is equipped to treat the soapy, pollutant laden water.
- Dispose of used motor oil at a nearby service station, repair facility, quick lube, or auto part store.

Hazardous Waste

We use hazardous materials almost every day. They are found in products used for housework, gardening, home improvement, and car maintenance. Danger, warning, and caution signs are all indicators of toxic substances. They can be found in everything from oven cleaner and floor wax, to motor oil and paint supplies. Use these products appropriately and NEVER dump down the storm drain. Check with your local government to discover your options.

Lawn & Garden Care

Fertilizers Runoff from lawn irrigation and heavy rain carries unused fertilizer directly into our streams, rivers and lakes. Nutrients from fertilizer and other sources cause algal blooms. Algal blooms can cause fish kills, threaten recreation, and be expensive for water treatment plants to remove. Following these simple guidelines can help keep fertilizer out of our waters:

- Check the weather. Rain should not be forecasted for at least 24 hours after applying fertilizer. Fertilizer that doesn't have time to absorb into the ground will wash off the lawn and into storm drains or creeks.
- Use commercially available compost, or make your own using garden/yard waste. Mixing compost with your soil means your plants will need less chemical fertilizer and puts your waste to good use.

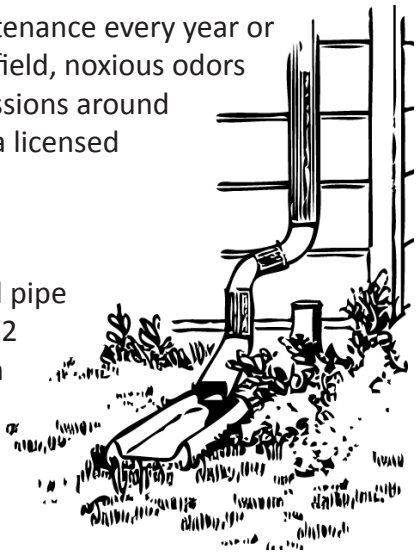
Pesticides & Herbicides Surface runoff of pesticides and herbicides into water bodies changes natural ecosystems by killing or damaging a variety of organisms. They collect and accumulate in the food chain, becoming dangerous to a variety of animals and other organisms. If applied inappropriately, pesticides and herbicides can mix with stormwater and result in "non-pests" being killed. If you choose to apply pesticides and herbicides, make sure you read the application instructions and check the weather forecast, or determine natural alternatives to traditional pesticides and herbicides.

Backyard Streams Vegetation along stream banks is one of the most effective ways of protecting water quality. Vegetated buffers physically protect waterways, preventing lawn chemicals and other pollutants from washing directly into the water. Roots absorb pollution and provide shade, keeping temperatures down and dissolved oxygen levels up. Vegetation also provides habitat for wildlife and deposits detritus in the stream which provides food and shelter for aquatic species. Plants also stabilize stream banks, preventing erosion from stormwater and high speed flood waters. Without a vegetated buffer, your valuable property may be lost due to erosion.

Native Plants Native plants are naturally pest-resistant, less water-dependent, and adapted to our climate. Many native plants produce showy flowers, abundant fruits and seeds, and brilliant fall foliage. Their long roots make them very efficient at absorbing water and leave deep tunnels for water and oxygen to filter into the ground. As more people use native plants in their landscaping, it adds to the available habitat for wildlife and benefits the community as a whole.

Septic System Maintenance

If you have a septic system, it's important to properly maintain it. Failed or broken septic systems can threaten the health of humans and wildlife in a watershed by releasing harmful microbes and chemical contaminants. Even the most efficient tanks require regular maintenance every year or two. If you see excessive moisture or standing water in the drain field, noxious odors in the yard, dead grass or other plants over the drain field, depressions around or over the septic tank, or slow or plugged drains it's time to call a licensed professional and make sure your tank is maintained.



Downspout Disconnection

A downspout is a vertical pipe used to drain rainwater from a roof. During a heavy rain, each downspout can deliver 12 gallons a minute to the stormwater system. By simply disconnecting a downspout from the stormwater system, the volume of stormwater is minimized, reducing flooding and erosion and minimizing the number of stormwater pollutants that reach our local waterbodies. Water from the disconnected downspout can also be used for irrigatingyour lawn or garden.

Rain Barrels

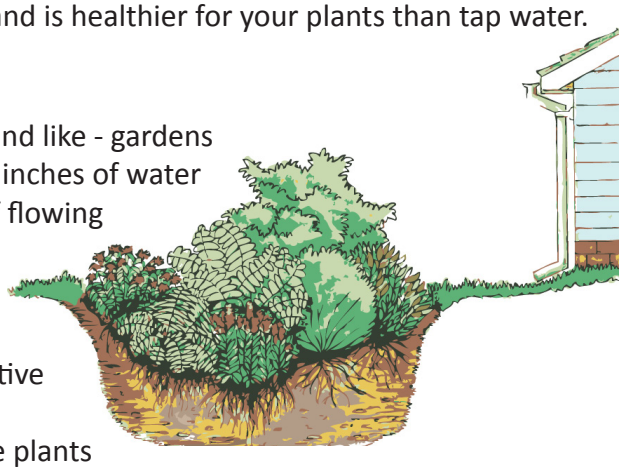
Lawn and garden watering make up nearly 40% of total household water use during the summer. For every 1000 square feet of roof line, one inch of rain equates to over 632 gallons of water. This water can be stored and used later to wash cars and windows, water plants, fill ponds, or feed a garden during periods of drought.

Rain barrels or cisterns are above ground water storage vessels. They capture rain runoff from the roof using gutters and downspouts. Rain barrels collect the first flush, the most critical rain that is loaded with pollutants, and then slowly releases the water, allowing it to absorb into the soil where most of the pollution is filtered out.

Rain barrels can be purchased from many garden catalogues or you can make your own following the directions posted on many websites. You can even attach a soaker hose to your rain barrel and deliver nutrient rich rain water directly to your plants. Rain water is softer than tap water; it has no chlorine, lime, or calcium and is healthier for your plants than tap water.

Rain Gardens

Rain gardens are just what they sound like - gardens designed to soak up rain water. A shallow depression collects a few inches of water and allows it to be absorbed into the ground or by plants instead of flowing into nearby streams and lakes. Plants and soil trap, absorb and filter pollutants found in stormwater runoff including fertilizers, pesticides, oil, grease and metals.



Rain gardens are typically planted with wildflowers and other native vegetation. Native plants have roots that grow twice as deep as the plants are tall, making them very efficient at absorbing water. These plants are the basis for restoring natural ecosystems to open space, residential, and urban areas. Rain gardens are diverse, beautiful habitats to many animals that we don't normally see.