



## PREVENTING STORMWATER POLLUTION

The City of Brookings has been participating in a statewide storm water pollution prevention awareness campaign through a partnership with cities and organizations throughout the state.

The Storm Water Outreach Alliance is comprised of South Dakota's Storm Water Phase II agencies that are regulated under the federal Clean Water Act for storm water pollution prevention. Aberdeen, Brookings, Huron, Mitchell, North Sioux City, Pierre, Rapid City, Spearfish, Sturgis, Sioux Falls, Vermillion, Watertown, and Yankton, Pennington County and the South Dakota Department of Transportation (SDDOT) make up the alliance.

Please visit the Storm Water Outreach Alliance website at [www.sdstormwater.org](http://www.sdstormwater.org) to learn more about the alliance, to gain more information about preventing storm water pollution, and to browse the several informative links related to the protection of our water resources. You may also contact the City of Brookings Engineering Department at 692-6629, or visit our website at [www.cityofbrookings.org](http://www.cityofbrookings.org).

The goal of the Storm Water Outreach Alliance Project is to Educate South Dakota's statewide in a manner that will result in behavioral/attitudinal changes as to what storm water is, where storm water goes, how storm water gets polluted, and what practices are available to minimize storm water pollution.



Storm water can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, or wetland. Anything that enters a storm sewer system is discharged **untreated** into the bodies of water we use for swimming, fishing and providing drinking water. The primary method to control storm water quality is through the use of best management practices.

### DID YOU KNOW?

**Anything that is washed into the storm sewer system drains directly into streams and lakes. That is because, unlike the wastewater from our kitchens and bathrooms, stormwater is not treated before it is released into our waterways.**

**If you have any questions about stormwater, please call the Engineering Department at 605 692-6629.**



Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

## Stormwater Pollution Solutions



### Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

### Lawn Care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.



- \*Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- \*Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- \*Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- \*Cover piles of dirt or mulch being used in landscaping projects.

### Auto Care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.



- \*Use a commercial car wash that treats or recycles its wastewater, or wash

your car on your yard so the water infiltrates into the ground.

- \*Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

### Pet Waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.



- \*When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

### Residential Landscaping

\*Permeable Pavement - Traditional concrete and asphalt don't allow water to soak into the ground. Instead, these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through decreasing stormwater runoff.

\*Rain Barrels - You can collect rainwater from rooftops in the mosquito-proof containers. The water can be used later on lawn or garden areas.



\*Rain Gardens and Grassy Swales - Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into

storm drains.

- \*Vegetated filter strips - Filter strips are areas of native grass or plants created along roadway or streams. They trap the pollutants that stormwater picks up as it flows across driveways and streets.

## Commercial



Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- \*Sweep up litter and debris from sidewalks, driveways, and parking lots, especially around storm drains.
- \*Cover grease storage and dumpsters, and keep them clean to avoid leaks.
- \*Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

### Construction

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- \*Divert stormwater away from disturbed or exposed areas of the construction site.
- \*Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls, and properly maintain them, especially after rainstorms.
- \*Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.

