

Did you know?

Nearly everyone thinks that water pollution is caused by industry. In the past, most of it was. But today the #1 threat to streams and rivers is from polluted storm water runoff. Much of this polluted runoff reaches our streams and rivers through storm drains. Eventually that pollution flows into the Kanawha River.



What are storm drains?

Storm drains are found on city and suburban streets along the curb. They are on the sides of roads, bridges and parking lots. Storm drains are holes or openings, usually with a grate over them, that lead to underground pipes. These pipes or conduits carry water to nearby ditches, hollows, streams and rivers.



It's the Law?

The Clean Water Act mandated by the US EPA and administrated by the WV DEP establishes permit requirements for storm water.

The City of Charleston is a designated MS4 (Municipal Separate Storm Sewer System) community and is required to have a storm water discharge (NPDES) permit issued and administered by the WV DEP under the guidelines of the EPA.

The US EPA requires six minimum control measures to improve storm water quality:

1. Public Education and Outreach
2. Public Participation and Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post Construction Stormwater Management
6. Pollution Prevention and Good Housekeeping

For Municipal Operations

For more information about the Clean Water Act, MS4, and NPDES— go to www.wvdep.org or www.epa.gov.



Charleston's 'River Proud' Program is an initiative of the Charleston Stormwater Department to recognize the citizens of Charleston who take action to reduce storm water runoff and pollution by successfully managing the water on their property.

What is stormwater management?

Rain Barrels, Dry Creek Beds, Swales, Rain Gardens, and disconnected downspouts are just a few.

Who qualifies for this designation?

- Properties of 1 acre or less
- Within the city limits of Charleston
- Residence or Business

Properties that wish to be considered for the award may download the entry form on the back of the River Proud brochure located on our website: charlestonstormwater.org and submit it to the Stormwater Department office.



STORMWATER DEPARTMENT

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This Brochure has been distributed to you by the City of Charleston, West Virginia in an effort to increase your knowledge of our stormwater management program and educational efforts.

YOU ARE THE SOLUTION TO STORM WATER POLLUTION!



The City of Charleston
Stormwater Department

What is storm water runoff?

When rain falls or snow and ice melt, it either soaks into the ground or evaporates. When the water meets hard surfaces like roofs, paved parking lots, streets, and driveways, it flows as runoff, traveling down streets and gutters into storm drains — which carry it into nearby streams and rivers.



How does runoff become polluted?

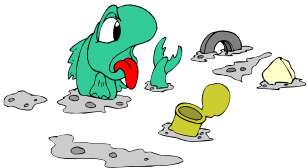
As water flows down streets and across parking lots and lawns it picks up pollutants such as:

- Yard trash like pet waste and grass clippings;
- Fluids that leak from cars and trucks like oil, gas and antifreeze;
- Litter of all kinds, including waste paper, bottles and cans;
- Fertilizers and pesticides;
- Sand, salt, and soil from roads, unpaved driveways, or construction sites



How can polluted runoff harm streams and rivers?

Polluted storm water runoff carries pollution directly into storm drains and then to our streams and rivers. Hundreds of storm drains throughout the Kanawha Valley's watershed carry storm water runoff polluted with motor oil, gasoline, pet waste, pesticides, fertilizers, paint and detergents straight to our streams and rivers. Some people even dump trash and pollutants right into the storm drains. These contaminants can destroy the water's ecosystem by killing fish, frogs and plant life while making the water unsafe for us as well.



10 EASY WAYS YOU CAN HELP



STOP STORM DRAIN POLLUTION

1. Use less fertilizer on your lawn

You can use less fertilizer and still keep your lawn green and healthy. Many lawns need as little as one-half of the fertilizer recommended on fertilizer bags. Sweep fertilizer off your driveways, sidewalks and roads. Excess fertilizer contributes to green algae bloom, reducing oxygen levels in the river and can kill aquatic life.



2. Use fewer toxic pesticides less often

All pesticides, even natural ones, are poisons. Some that seem safe to use in your home or garden can be lethal in the environment. For example, rotenone is a natural pesticide that is extremely toxic to fish. Use pesticides sparingly, Prepare and use only the amount that is absolutely necessary, Follow label directions exactly.



3. Compost yard waste

Glass clippings, leaves and garden trimmings can block storm drains and they use up oxygen from water leaving less for fish and other aquatic life. Compost your grass clippings, leaves and garden trimmings to make a great "NATURAL" fertilizer. Go to www.charlestonstormwater.org for info on how to compost.

4. Don't Litter

Garbage that washes down storm drains spoils the beauty of our waterways and can harm or kill wildlife. Some litter, such as plastics, break down so slowly they can remain in the rivers for centuries.



5. Properly dispose of pet waste

Pet waste is raw sewage. Pathogens in pet waste can cause health hazards and increase the fecal coliform bacteria in our streams.

6. Recycle used motor oil and antifreeze

Take used motor oil and antifreeze to your local participating auto parts store or recycling center. Go to www.charlestonstormwater.org for a list of recycling drop-off sites.



7. Dispose of hazardous household materials properly

Household hazardous waste such as leftover paint, pesticides, solvents, fuels, and cleaners must be disposed of properly and never poured down a storm drain.



8. Wash your car on the lawn and use organic soap

Wash the car on the lawn so the water is absorbed into the soil rather than running off your driveway. A mild vegetable (organic) soap also benefits your lawn by washing away pollutants from the grass blades and inhibiting many pests and diseases.



9. Disconnect roof downspouts

Roof runoff increases flooding and carries pollutants to streams and rivers. Disconnect downspouts from the storm sewers as per approved methods. Contact your Stormwater Department for advice and approval. Install a rain barrel to store water for watering gardens and lawns. Check out this link for information — http://www.wvdep.org/Docs/14962_instructions%20parts.pdf



10. Spread the word

Most storm water runoff pollution is caused by the actions of uninformed people. Share what you know and help protect our streams and rivers.

