

Storm Water Pollution Prevention Clean Water: Our Only Choice

Shelby County has two drainage systems – the sewers and the storm drains. The storm drain system was designed to prevent flooding by carrying excess rainwater away from streets, homes, and businesses. Because the system contains no filters, it also serves the unintended function of carrying urban pollution straight into our streams and the Mississippi River.

This pamphlet tells you how to prevent pollution from entering our streams from “storm water” or “urban runoff”.

Rain, industrial and household water mixed with urban pollutants creates storm water pollution. The pollutants include: oil and other automobile fluids, paint and construction debris, yard and pet wastes, pesticides and litter.

Urban runoff pollution flows to the Mississippi River through the storm drain system that takes water and debris straight from the streets to our streams. Each day tremendous amounts of polluted urban runoff enters our streams untreated, leaving toxic chemicals in our creeks and river and tons of trash along their banks.

Urban runoff contaminates our streams and river, harms aquatic life and increases the risk of flooding by clogging our storm drains and catch basins. Overall, storm water pollution costs us millions of dollars per year.

These Best Management Practices (BMPs) will ensure cleaner streams and river, and a cleaner Shelby County. For storm water information, call Chris Masin, Storm Water Manager 222-7705.

For more information please visit our website at:
<http://www.shelbycountyttn.gov>
<http://www.cityofmemphis.org>

Hazardous Spill Response
Shelby County Fire Dept. 911 or (901) 222-8020
City of Memphis Fire Dept. (901) 458-3311

**Recycling and Household Hazardous
Waste Disposal**
Shelby County (901) 222-7770
City of Memphis (901) 576-6868

To Report Illegal Dumping
Shelby County (901) 222-2300
City of Memphis (901) 576-4349

To Report a Drainage Problem
Shelby County (901) 222-2300
City of Memphis (901) 636-6933

Storm Water Program Information
Shelby County (901) 222-7705
City of Memphis (901) 576-4349

Mosquito Control
Memphis & Shelby County Health and Sanitation Dept.
(901) 222-9715

Material printed by Shelby County Storm Water Program



This brochure is one of a series of pamphlets describing storm drain protection measures. Other pamphlets include:

**Food Service Industry
Automotive Maintenance & Car Care
Detention Pond Maintenance
Home Repair & Remodeling
Heavy Equipment & Earth Moving Activities**

Home repair or remodeling that includes electrical, plumbing or an addition to your home requires a permit. You must get a permit from the Memphis & Shelby County Code Enforcement at (901) 222-8300.

Shelby County Storm Water Management Program
6463 Haley Road
Memphis, TN 38134
(901) 222-7705

STORM WATER Best Management Practices (BMPs)



Landscaping, Gardening & Pest Control

Brochure 1

**Homeowners
Gardeners
Landscapers**

Problems

Landscaping and garden maintenance activities can be major contributors to storm water pollution. Soils, yard wastes, over watering, and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering our river tributaries.

For example, mud and silt from construction or tilling of a garden, as well as, poorly protected stockpiles can enter a stream, which covers eggs and fills in the habitat.

Poorly functioning sprinklers and over watering wastes water, and increases the amount of pollutants that flow into storm drains.

Fertilizers, pesticides and herbicides are washed off lawns and landscaped areas. These chemicals not only kill garden pests, they also harm useful insects, poison fish and contaminate ground and surface water. Some fertilizers can cause huge increases in algae growth in rivers.

Leaves, grass clippings and tree trimmings that are swept or blown into the street and gutter also cause storm water pollution. These wastes clog catch basins, increasing the risk of flooding on your street. As they decompose, they also absorb oxygen that fish need to survive.

Solutions

1. General Landscaping Tips

Protect stockpiles and materials from wind and rain by storing them under tarps or secured plastic sheeting.

Schedule grading and excavation projects for dry weather.

Use temporary check dams or ditches to divert runoff away from storm drains.

Prevent erosion by planting fast-growing annual and perennial grasses.

2. Garden and Lawn Maintenance

Do not over water. Conserve water by using irrigation practices such as drip irrigation, soaker hoses, or micro-spray systems.

Shelby County and some municipalities have yard waste pick-up. Call them for pick-up. Or, compost the clippings at home and use the compost around your plants.

Do not blow or rake leaves into the street, gutter or storm drains.

Use organic or non-toxic fertilizers.

Do not over fertilize and do not fertilize near ditches, streams, or other water bodies.

Store pesticides, fertilizers, and other chemicals in a covered area to prevent runoff.

Sweep excess materials off driveways, sidewalks and other hard surfaces.

3. Pesticide Alternatives

The “chemicals-only” approach to pest control is only a temporary fix.

A more common sense approach is needed for a long-term solution. It’s called:

Integrated Pest Management

Plan your “IPM” strategy in this order:

A) Physical controls

- Caulking holes
- Barriers
- Hand picking
- Traps

B) Biological Controls

- Predatory Insects (e.g. Green lacewings and lady bugs eat aphids and dragonflies eat midges and mosquitoes)
- Bacterial insecticides (e.g. *Bacillus thuringiensis* kills caterpillars.)

C) Chemical Controls – Your Last Resort

Use these least toxic products:

- Dehydrated dusts (e.g. silica gel)
- Insecticidal soaps
- Boric acid powder
- Horticultural oils
- Pyrethrin-based insecticides

Remember to apply chemicals when there is no forecast for rain.

4. Safe Substitutes for Pest Control

Garden Aphids and Mites-

Mix 1 tablespoon of liquid soap and 1 cup of vegetable oil. Add 1 teaspoon of the mixture to a cup of water and spray. (Oil may harm vegetable plants in the cabbage family).

Caterpillars-

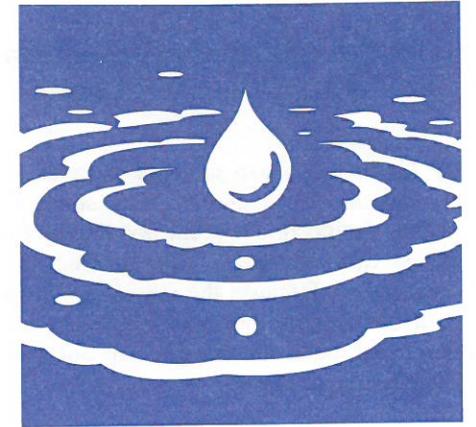
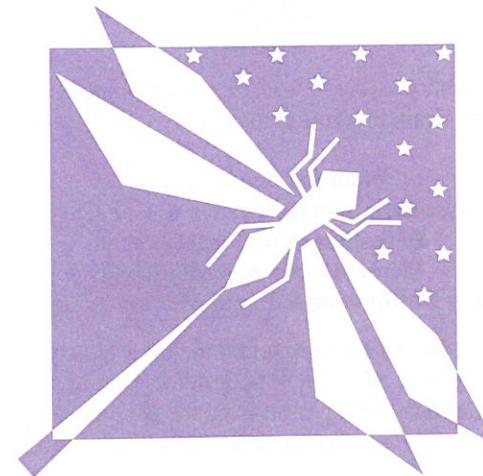
When caterpillars are eating, apply products containing *Bacillus thuringiensis* to leaves.

Ants-

Place boric acid dust or hydramethylnon baits in problem areas, cracks and insect walkways. Be sure it is inaccessible to children and pets (it is a mild poison).

Roaches-

Apply boric acid dust to cracks and entry points (see ants above). Place bay leaves on pantry shelves.



5. If You Must Use Pesticides...

Use a pesticide that is specifically designed to control your pest. The insect should be listed on the label. Approximately 90% of the insects on your lawn and garden are not harmful.

Read labels! Use only as directed. In their zeal to control the problem, many gardeners use pesticides at over 20 times the rate farmers do.

6. Pesticide Disposal

Household toxins – such as pesticides, cleaners, and motor oil – can pollute our streams and rivers and poison groundwater if disposed of in storm drains or gutters.

Rinse empty pesticide containers and use rinse water as you would the product. Dispose of empty rinsed containers in the trash.

Shelby County residents can take unused household toxins to the Memphis-Shelby County Household Hazardous Waste Facility located at 6305 Haley Rd., between 8:30 am and 1:00 pm, Tuesdays and Saturdays. Call 222-7770 for more information.