

Problems

Landscaping and garden maintenance activities can be major contributors to stormwater 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.

Poorly functioning sprinklers and over watering waste water and increase the amount of pollutants, such as fertilizer, 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.

Leaves, grass clippings and tree trimmings that are swept or blown into the street and gutter also cause stormwater pollution. These wastes clog catch basins, increasing the risk of flooding on your street, and carry lawn chemicals into the river and sinkholes. 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.
- ◊ Cookeville has curbside brush and leaf pickup. Call (931) 520-5201 to request a pickup. 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 run-

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 eat aphids)
- ◊ 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

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-

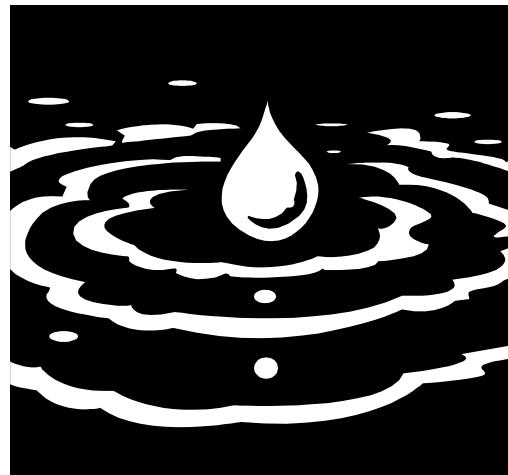
When caterpillars are eating, apply products containing *Bacillus thuringiensis* to leaves.

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



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.
- ◊ Cookeville residents can dispose of unused household toxins at periodically announced Household Hazardous Waste Collection Events. Call (931) 528-3884



Stormwater Pollution Prevention

Clean Water: Our Only Choice

Cookeville has two drainage systems – the sanitary 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 underground aquifers through sinkholes.

This pamphlet tells you how to prevent pollution from entering our streams and sinkholes from "stormwater" or "urban runoff".

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

Urban runoff pollution flows through the storm drain system that takes water and debris straight from the streets to our streams and sinkholes. Each day tremendous amounts of polluted urban runoff enters our streams untreated, leaving toxic chemicals in our creeks and aquifers.

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

These Best Management Practices (BMPs) will ensure cleaner streams and rivers, and a cleaner Cookeville.

Spill Response

Cookeville Fire Department
911
Tennessee Division of Water
Pollution Control
(931) 432-4015

Recycling and Household Hazardous Waste Disposal

Putnam County Recycling Center
(931) 528-3884

To Report Illegal Dumping

Cookeville Codes Dept.
(931) 520-5233
Cookeville Stormwater Management
(931) 520-5249

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

Detention Pond Maintenance

Heavy Equipment and Earth-Moving Activities

Automotive Maintenance & Car Care

Home Repair & Remodeling

Food Service Industry

This pamphlet was produced by Cookeville Stormwater Management. For more information please call (931) 520-5249.



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Stormwater Best Management Practices (BMPs)



Landscaping, Gardening & Pest Control

Brochure 1

**Homeowners
Gardeners
Landscapers**