

Storm Water Pollution Prevention Why this is Important...

Most cities have two drainage systems—the sanitary sewer system and storm drain system. The storm drain system is designed to prevent flooding by carrying excess rainwater away from streets, homes, and businesses. Because storm water from a storm drain system is not usually treated, it serves the unintended function of carrying urban pollution into our streams and rivers.

This pamphlet tells you how to prevent pollution from entering our streams and rivers from polluted storm water.

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

Polluted storm water flows through the storm drain system that takes water and debris straight from the streets and parking lots to our streams and rivers. Each day polluted storm water enters our streams untreated, leaving toxic chemicals in our waterways and tons of trash along their banks. Polluted storm water contaminates our streams and rivers, harms aquatic life and increases the risk of flooding. Overall, storm water pollution costs us millions of dollars per year.

For more information or assistance, call, e-mail or write:

Tennessee

Small Business Environmental Assistance Program
8th Floor, L&C Annex, 401 Church Street
Nashville, TN 37243-1551

1-800-734-3619

BGSBEAP@tn.us

<http://tn.gov/environment/ea/sbeap/>

Landscaping, Gardening and Pest Control Impacts

Landscaping, gardening, and pest control activities can be major contributors to storm water pollution. Sediment, yard wastes, over watering, pet wastes, and garden chemicals mixed with storm water pollutes our streams and rivers.

Also, when it rains fertilizers, pesticides, and herbicides are washed off of lawns and landscaped areas and enter our waterways. These chemicals not only kill garden pests, they also harm useful insects, poison fish, and contaminate ground and surface waters.

Leaves, grass clippings, and tree trimmings that are swept or blown into the streets and gutters also cause storm water pollution. These wastes clog catch basins, causing flooding of roads and streets. Leaves and grass clippings that are washed into the river start to decompose and absorb dissolved oxygen from water. If oxygen levels in the water become too low, aquatic animals die.

Best Management Practices

There are federal and state storm water regulations that require some Businesses to establish Best Management Practices (BMPs). Recent permitting requirements for local water facilities may result in greater scrutiny and enforcement of their environmental operations. The following Best Management Practices will help ensure cleaner streams and rivers across the State of Tennessee.

General Landscaping Tips

- *To protect stockpiles and materials from wind and rain-* Store them under tarps or secured plastic sheeting.
- *To avoid extra grading work and muddy runoff-* Schedule grading and excavation projects for dry weather.
- *To reduce water pollution-* Use temporary check dams or ditches to divert runoff away from storm drains.
- *To increase erosion control-* Plant fast-growing annual and perennial grasses, as these will shield and bind the soil.

Garden and Lawn Maintenance Tips

- Do not over water lawns. Conserve water by using irrigation practices such as drip irrigation, soaked hoses, or micro-spray systems.
- For cities that have curbside pickup, leave clipping and pruning wastes besides the street for pickup. Or, compost clippings at home and use compost around plants.
- Do not blow or rake leaves into streets, gutters or storm drains.
- Use organic or non-toxic fertilizers.
- Do not over fertilize and do not fertilize near ditches, streams, or other bodies of water.
- Store pesticides, fertilizers, and other chemicals in a covered area to prevent runoff.

Home and Garden Pesticide Alternatives

Only using a chemical to control pests is usually a temporary fix. A more common sense approach is needed for a long-term solution. It is called **Integrated Pest Management (IPM)**. Plan your “IPM” strategy in the following order:

A) Physical Controls

- Caulking holes
- Barriers
- Hand picking
- Traps

B) Biological Controls

- Predatory insects
- Bacterial insecticides

C) Chemical Controls – Last Resort Use:

- Less toxic products
- Insecticidal soaps
- Horticultural oils
- Dehydrating dusts
- Boric acid powder
- Pyrethrin based Insecticides

Safe Substitutes for Pest Control

Garden Aphids and Mites- Mix one (1) tablespoon of liquid soap and one (1) cup of vegetable oil. Add one (1) teaspoon of the mixture to a cup of water and spray. Note: 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 (boric acid is a mild poison).

Roaches- Apply boric acid dust to cracks and entry points.

If You must Use Pesticides

- Read labels! Use only as directed. Often to control the problem, many gardeners use way too much pesticide.
- 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.

Pesticides Disposal

- Dispose of unused and out-dated pesticides properly. Household toxins, such as pesticides, can pollute our streams and rivers and contaminate 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.
- To obtain information for proper disposal of unused or out-dated pesticides call the Household Hazardous Waste Program at 615-532-9265 or contact the Household Hazardous Waste web site at

<http://www.tn.gov/environment/swm/hhw/>

This pamphlet was produced by the Small Business Environmental Assistance Program of the Tennessee Department of Environment & Conservation.



**Tennessee
Small Business Environmental Assistance Program
(SBEAP)
8th Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1551
1-800-734-3619
(615) 532-8012**
◆ ◆ ◆ ◆ ◆

A special thanks to the City of Chattanooga, Storm Water Management for their assistance in providing the original Stormwater Best Management Practice brochures.

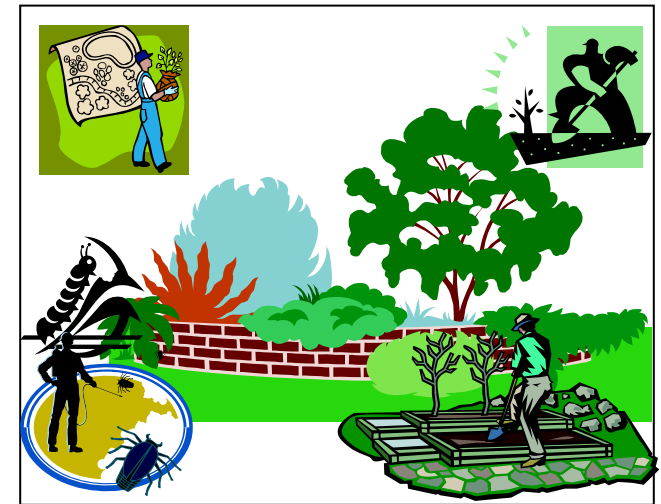
To Reach Your Local
Field Office
Call 1-888-891-8332 or
1-888-891-TDEC



The Tennessee Department of Environment and Conservation is committed to principles of equal opportunity, equal access and affirmative action. Contact the EEO/AA Coordinator or the ADA Coordinator at 1-866-253-5827 for further information. Hearing impaired callers may use the Tennessee Relay Service (1-800-848-0298).

Tennessee Department of Environment and Conservation, Authorization No. 327142, 1,500 copies. This public document was promulgated at a cost of \$0.10 per copy. March 2005. Printed on recycled and recyclable paper.

Storm Water Best Management Practices (BMPs)



Landscaping Gardening Pest Control

**TENNESSEE DEPARTMENT OF ENVIRONMENT &
CONSERVATION
SMALL BUSINESS ENVIRONMENTAL ASSISTANCE
PROGRAM**

1-800-734-3619

BGSBEAP@tn.gov