Storm Water Management
Landscaping, Gardening & Pest Control

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 water bodies.
For example, poorly functioning sprinklers and over watering wastewater, 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, but 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 storm water pollution. These wastes clog catch basins, increasing the risk of flooding on your street, and carry lawn chemicals into the river. As they decompose, they also absorb oxygen 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. These will shield and bind the soil.

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.
- Compost 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.

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
- Hand picking
- Barriers
- Traps

B) Biological Controls

- Predatory Insects - Green lacewings eat aphids
- Bacterial insecticides - *Bacillus thuringiensis* kills caterpillars

C) Chemical Controls - Your Last Resort
Use these least toxic products:

- Dehydrating 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 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 toxics- such as pesticides, cleansers, and motor oil- can pollute our streams and river 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.