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# Best Management Practices for The Urban Dweller



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## **BMPs FOR THE URBAN DWELLER**

### *Suggestions to Reduce Urban Nonpoint Pollution* *Rolland Z. Wheaton and Edward B. Hale<sup>1</sup>*

Storm runoff from urban areas poses serious threats to State waters. There is evidence that urban runoff (nonpoint source) is as harmful to the water quality as the municipal sewage plant discharge (point source). When rain falls and runs off, it picks up pollutants from the air, land surfaces, streets, and sewer systems. Best Management Practices (BMPs) can be used to reduce the pollutants in the runoff water.

Following is a list of some common urban pollutants, their sources and effects on water quality.

1. *Sediment* is the result of soil erosion. It carries nutrients, pesticides, and other pollutants. The large volume may plug sewers and drainways, fill reservoirs and cover fish spawning grounds.
2. *Nutrients* come from fertilizer washoff and decomposition of leaves, grass clippings, and so forth. The nutrients of greatest concern are nitrogen and phosphorus which can lead to large algae growths in lakes and ponds.
3. *Pathogenic Microorganisms* from fecal wastes represent a health hazard. Primary sources are bird and animal droppings and septic tank overflows.
4. *Toxic Substances* include heavy metals, asbestos, pesticides, and other chemicals. They may prevent the use of the water, cause fish kills or enter the food chain causing long-term damage to aquatic organisms.
5. *Oxygen Demanding Substances* include all organic materials. As they decompose, they deplete the oxygen in the water, often resulting in fish kills. Animal droppings, septic tank wastes, leaves and grass clippings are examples of these materials.
6. *Petroleum Products*, especially gasoline, oil and grease, are found in the street and parking lot runoff. These products are particularly damaging to aquatic organisms.

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7. *Chlorides* are present in the street runoff, mainly due to deicing chemicals. At high levels they can be damaging to plants and aquatic organisms.

### **What Can the Individual Do**

Each individual should be aware of the pollutants, their sources, and their water quality effects. Construction activities, a major source of sediment, are regulated under the State Erosion and Sediment Control Law. Local governing bodies are responsible for application of BMPs in Urban Areas. If you are concerned about pollution, contact your local governing body.

There are many BMPs that each individual can use. Here are a few:



1. *Fertilize your lawn and garden according to needs as shown by soil tests. Try not to apply fertilizer when it might be washed off by heavy rains.*



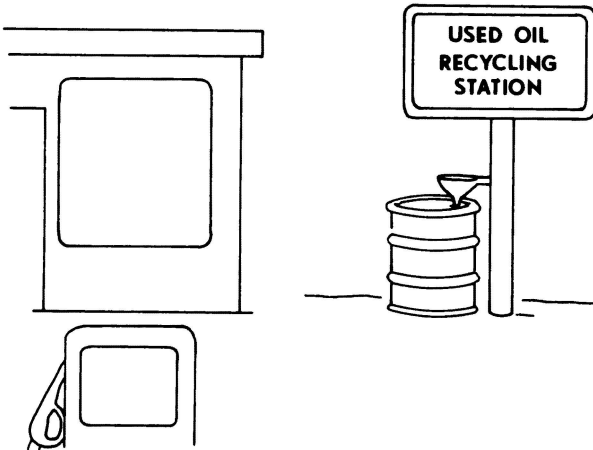
2. *Apply pesticides according to the labels on the containers.*



3. *Pick up litter and animal wastes before they wash into the storm drains.*



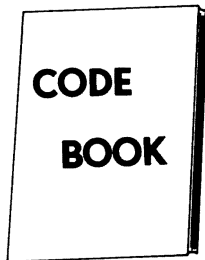
4. *Recycle grass clippings and leaves by mulching or composting. If this is not possible, collect and dispose of them according to local provisions.*



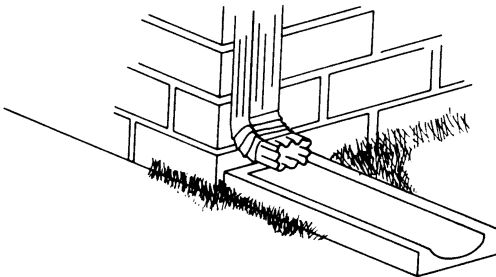
5. *If you change your own oil, dispose of the used oil at a recycling depository. Check with your local service stations for locations of such facilities. DO NOT dump the oil into a storm drain.*



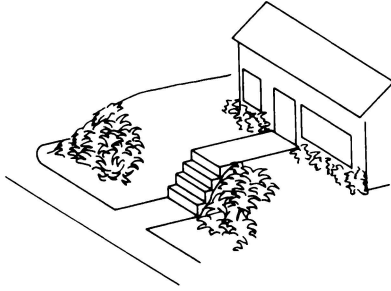
- 6. Reduce your driving. Use a carpool, mass transit, bicycle, or walk. This not only saves you money but reduces pollution from automobiles.**



- 7. Home sewage disposal systems should be located, constructed, and installed according to regulations. Maintenance and prompt correction of problems are important.**



- 8. Direct roof water onto a grassed area. Be careful it does not flood your or your neighbor's basement. Roof drains should not be connected into a sanitary or storm sewer system.**



**9. Watch for soil erosion around your home. Seed to grass, install sod or plant ground cover to protect the site.**

Information to help you improve water quality may be obtained from the local Cooperative Extension, Soil and Water Conservation District, or Soil Conservation Service Offices. They can tell you what variety of grass or plants to use, where to get soil tests, and the local agency responsible for water quality.

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