

## Stormwater Management and Water Quality *Urban Nonpoint Source Pollution*

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What is nonpoint source pollution? Water washing over the land from rain, snowmelt and our everyday activities picks up an array of contaminants including oil and sand from roadways, agricultural chemicals from farmland and

by impervious surfaces (roads, parking lots, driveways, rooftops). This combination of people, pollutants and pavement produces runoff that can carry a greater pollutant load than municipal sewage. Sediment from construction sites, chemicals over-applied to lawns and golf courses, automobile wastes (petroleum products, heavy

discharges associated with industrial activity.

Two important changes are the NPDES Phase II Rule will affect small municipal separate storm sewer systems (serving populations of less than 100,000 and located in an urbanized area or designated by the permitting authority), and construction activities disturbing between one and five acres. In addition to implementing these federal programs, many states have passed laws altering local land use (planning and zoning) processes and building codes to address the problem of polluted runoff.

### What We Can Do

Preventing pollution by better land use planning is by far the least expensive and most effective way to protect our critically important water resources. Minimizing impacts to natural drainage ways and vegetation increases stormwater infiltration, decreases flooding and pollutant loading during storm events, reduces erosion



and maintain our land. These policies are usually decided at the municipal level, through the actions of local officials and commissions. While stormwater runoff problems are nothing new to our officials, historically the focus of stormwater management was public safety, getting the most water off paved surfaces as quickly as possible. Little thought was given to the increased volume and velocity of runoff, increased erosion, increased frequency and severity of flooding, reduced groundwater recharge or the receiving waters of stormwater runoff. Informed, community level decision-making is becoming more and more critical in the effort to preserve the quality of our neighborhoods and environment.



nutrients and toxic materials from urban and suburban areas. This runoff finds its way into our waterways, either directly or through storm drain collection systems.

The term *nonpoint* is used to distinguish this type of pollution from *point* source pollution, which comes from specific sources such as sewage treatment plants or industrial facilities. Although huge strides have been made in cleaning up major point sources, our water resources are still threatened by the effects of polluted runoff. The U.S. Environmental Protection Agency has estimated that this type of pollution is now the single largest cause of the deterioration of our nation's water quality.

metals), road salt, pet wastes and industrial contaminants all end up in the nearest body of water.

### Current Issues for Municipal Officials

Urban nonpoint source pollution and its management are likely to affect you and your town in the near future. Concern over polluted runoff has resulted in an ever-increasing number of state and federal laws enacted over the last five years. The federal government is currently finalizing regulations for storm water management in smaller communities. The regulations are known as the National Pollutant Discharge Elimination System (NPDES) Phase II Rule. The purpose of the NPDES Phase II Rule is to comply with the requirements of the 1972 Clean

Water Act and to further protect our nation's streams, rivers, wetlands and lakes. Proposed Phase II regulations follow the 1990 NPDES Phase I Rule. The Phase I Rule addressed

storm water discharges from medium and large separate storm sewer systems (those serving communities with a population of at least 100,000), as well as

and sedimentation, and protects wildlife habitat. Development can be directed to appropriate land parcels based on soils and natural resources inventories. Better site designs that reduce grading and filling and reduce the amount of impervious surface in a watershed can save money for developers.

So why haven't we done this before? The economic, social and environmental costs of suburban sprawl are just now becoming better understood. Polluted runoff is largely the result of how we develop, use

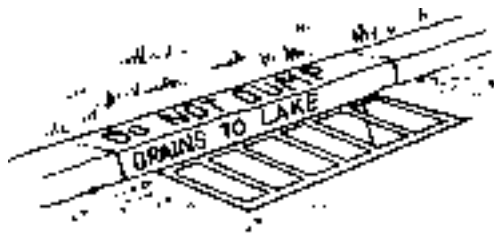


If you are on a local commission or board, learn a little about polluted runoff and how you can combat it in your everyday decisions. Does your municipal master plan identify important natural resources? Does it address potential impacts of development on water resources? Do local ordinances allow for innovative site design? Are your storm drains properly maintained? There are many techniques and regulations that can greatly reduce the effects of polluted runoff, and there are more being developed every day. Also, there are many good publications and programs that can help each citizen do simple, but important things to help reduce runoff pollution like conserving water, properly disposing of hazardous wastes, and gardening and maintaining lawns in an environmentally responsible manner. (KH)

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With urbanization comes more intensive land use. People and the pollutants that result from their lifestyles are concentrated in areas largely covered



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