



UNIVERSITY OF ILLINOIS
EXTENSION

Linking

Land Use to

Water Quality

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NON POINT SOURCE WATER POLLUTION

What is Nonpoint Source Pollution?

Nonpoint source pollution (NPS) is the nation's largest water quality problem. NPS pollution seems to flow from many different sources and *can not* be traced to a specific origin or starting point. NPS pollution normally occurs when water washes over the land, and picks up an array of contaminants including oil and sand from roadways, agricultural chemicals from farmland, and nutrients and toxic materials from urban and suburban areas. This runoff finds its way into our rivers and lakes. 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. Huge strides have been made in cleaning up major point sources, but our precious water resources are still threatened by the effects of polluted runoff.

Why Should I Care About It?

Chances are that you don't have to look any farther than your neighborhood stream or pond. Water pollution in your town, and perhaps in your own backyard, can result in anything from weed-choked ponds to fish kills to contaminated drinking water. The bottom line is that both polluted runoff and its management are likely to affect you.

What Causes Polluted Runoff?

We all do. Polluted runoff is the cumulative result of our everyday personal actions and our local land use policies. Major types of pollutants are listed below.

Pathogens: Pathogens are disease-causing microorganisms, such as bacteria and viruses, that comes from the fecal waste of humans and animals. Exposure to pathogens, either from direct contact with water or through ingestion can cause a number of health problems.

Pathogens wash off the land from animal waste and can also enter our waterways from improperly functioning septic tanks and leaky sewer lines.

Nutrients: Nutrients are compounds that stimulate plant growth, like nitrogen and phosphorous. Under normal conditions, nutrients are beneficial and necessary, but in high concentrations, they can become an environmental and health threat. Over fertilization of ponds and lakes by nutrients can lead to algae blooms, the decay of which can create odors and rob the waters of life-sustaining dissolved oxygen. Nutrients in polluted runoff can come from agricultural fertilizers, septic systems, home lawn care products, and animal wastes.

Sediment: Soil eroded by runoff usually ends up in stream beds or ponds where they can alter stream flow and decrease the availability of healthy aquatic habitat. Poorly protected construction sites, agricultural fields, roadways and gardens can be major sources of sediment.

Toxic Contaminants: Toxins are created by a wide variety of human practices and products, and include heavy metals, pesticides and organic compounds. Oil, grease and gasoline from roadways, and chemicals used in homes, gardens, yards and on farm crops, are major sources of toxic contaminants.

Debris: Trash interferes with our enjoyment of water resources and, in the case of plastic and styrofoam, can be a health threat to aquatic organisms. Typically this debris starts as street litter that is carried by runoff into our rivers and lakes.

What Can I Do About All This?

Simple but important things, like conserving water, disposing of hazardous waste properly and environmentally gardening are the key.

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