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Nonpoint Source Pollution

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Utah State University EXTENSION

WATER QUALITY

Nonpoint Source Pollution

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NONPOINT SOURCE POLLUTION has many different sources, usually associated with rainfall and snowmelt runoff moving over and through the ground, carrying natural and human-made pollutants into lakes, rivers, streams, wetlands, estuaries, coastal waters, and underground drinking water.

Various land use activities cause nonpoint source pollution problems. They are:

Land Use	Activities	Pollution Problems
Agriculture	tillage, cultivation, pest control, fertilization, animal waste management	sediment, nitrate, ammonia, phosphate, pesticides, bacteria
Construction	land clearing and grading	sediment
Forestry	timber harvesting, road construction, fire control, weed control	sediment, pesticides
Land Disposal	septic systems	bacteria, nitrate, phosphate
Surface Mining	dirt, gravel, mineral excavation	sediment, heavy metals, acid drainage, nitrate, phosphate
Urban Storm Runoff	automobile maintenance, lawn and garden care, painting	oil, gas, antifreeze, nitrate, phosphate, pesticides, paints

BEST MANAGEMENT PRACTICES (BMPs) are the most practical, effective, and economical means of preventing pollution from nonpoint sources (NPS) or reducing pollution to a level that is compatible with water quality goals. Some examples of BMPs include:

- Wind breaks
- Grass waterways
- Integrated Pest Management
- Conservation tillage
- Contour planting
- Straw bale dikes
- Terracing
- Constructed wetlands
- Filter zones

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WHAT YOU CAN DO TO REDUCE NONPOINT SOURCE POLLUTION

CIVIC LEADERS

• Sponsor a tour to identify potential causes of NPS pollution in your community and to illustrate the application of BMPs.

• Sponsor an amnesty day and allow people to bring in old paint, chemicals, oil, and other chemical wastes for recycling or proper disposal.

• Publicly encourage other civic, environmental, business, and government groups to join you in sponsoring sound preventative measures.

• Encourage local government officials to develop construction erosion/sediment control ordinances in your community.

HOMEOWNERS, GARDENERS, LANDSCAPERS

• Plant trees, shrubs, and groundcovers to filter out nutrients and pesticides and dramatically reduce the amount of runoff generated.

• Recycle or dispose of used oil, antifreeze, paints, pesticides, and other household chemicals properly -- not in sewers, or storm drains. If your community does not have a program for collecting household hazardous wastes, ask your local government to establish one.

• Encourage local government officials to develop construction erosion/sediment control ordinances in your community.

• Follow manufacturers' directions when using fertilizers and pesticides.

• Compost grass and leaves.

• Maintain your septic tank and fill line, and pump out solids periodically.

• Rural homeowners should protect private wells by keeping chemicals away from the wellhead and by placing the septic tank and fill line downhill from the well.

• Participate in the “Adopt A Stream Program” in your community.

FARMERS

• Prevent erosion because it not only costs you money and land, it also pollutes the water.

• Use a wide variety of soil and water conservation practices such as no-till or minimum till farming, terracing, crop rotation, contour planting, and irrigation tailwater recovery.

• Apply all fertilizers, including animal wastes and compost, at acceptable rates.

• Apply pesticides at the proper rate and manner (not when it’s windy or when rain is imminent).

• Dispose of pesticides, containers, and tank rinse water in an appropriate manner. Encourage a pesticide container recycling program in your county.

• Keep livestock out of streams where their wastes can pollute the water and their movements can cause erosion.

• Dispose of dead animals in an approved manner. Composting is preferred to burial for small animals such as chickens.

• Do not allow any runoff water to leave your property, particularly milkhouse wastewater and water from animal confinement.

• Plug unused wells and cap artesian wells.

LAND DEVELOPERS AND CONTRACTORS

• Before clearing a site, install sediment controls such as silt fences, hay bales, or sediment basins.

• Minimize disturbance of trees and vegetation. It is especially important to retain natural vegetation around creeks and drainage areas.

• Correct erosion problems immediately.

• Maintain the natural drainage of the site to the fullest extent possible.

• Do not channel concentrated runoff flows into natural creeks or gullies.

• Design drainage systems to maximize infiltration into the soil and minimize concentrated flows which may require curbs and gutters.