

Nonpoint source pollution. How can one help?

There are two types of source water pollution: point and nonpoint. Point source pollution comes from single specific locations. Examples of this type of pollution include sewage treatment plants, manufacturing plants, and large confined livestock feeding facilities. Point source pollution sites are usually easy to identify and control. Controlling point source discharges came under federal regulations in 1972.

Nonpoint source pollution occurs over a large area, over a period of time, and from a large range of sources from both rural and urban areas. Nonpoint source pollution sites are hard to identify and control, because the

contaminants are not usually traceable to an exact source.

Do your part

Water covers 75 percent of the earth's surface. It would seem that we have enough water for all mankind. Realization that 97 percent of the earth's water is found in oceans is a sobering first step. About two percent of the remaining three is stored in ice caps, glaciers, and snowy mountain ranges. So that leaves one percent of the earth's water supply for our daily water supply needs. Considering that one percent of earth's water is the only fresh, or drinkable water available, we should each do our part to help protect it.

Nonpoint source pollution results from a wide variety of human activities on land. Each of earth's residents can contribute to the problem without even realizing it. What isn't readily known can hurt the environment. When rain falls or snow melts, chemicals and

source pollution? A start can be made at home, the workplace and everywhere in between.

The items covered here are ways to help reduce nonpoint source pollution around the house but they can and should be practiced no matter where.

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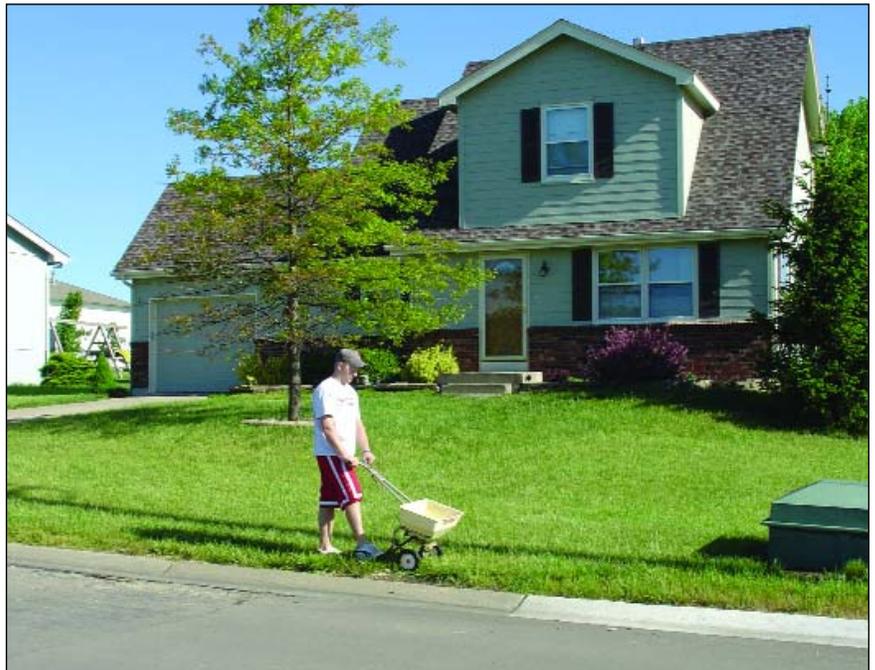
Household chemicals

Use non-toxic or less toxic chemicals whenever possible. Many chemicals used around the home are toxic.

More is not better. Buy only the amount of chemical for the

other pollutants around the house, workplace, and everywhere in between, get picked up and carried as runoff into the ground, storm drains, and surface water. What can be done to help protect ground and surface water from nonpoint

Jim Jackson
Source Water Tech



Lawn care – A drop spreader should be used when applying fertilizer or pesticides along walks, streets, driveways, and waterways. This will eliminate the possibility of the over-spread from getting into runoff.



Far Left: Antifreeze – Antifreeze and oil should be recycled. This is an antifreeze recovery facility permitted by Kansas Department of Health and Environment. Reverse osmosis is used to clean the used antifreeze.

Left: Oil Spill – Leaking oil and fuel storage tanks pose a risk to the protection of drinking water. All leaks should be fixed as soon as possible; waste oil should be transferred to storage tanks that do not leak.

expected use and use only as directed.

Soil cannot filter most chemicals and those will likely end up as runoff. Do not pour chemicals down drains; they may disrupt a septic system or may contaminate waste treatment plant sludge. Take unwanted chemicals to a hazardous waste collection site.

Use low-phosphate or phosphate-free detergents and use water based products whenever possible.

Lawn and Garden

Whenever possible, try to select plants that require little water, fertilizers, and pesticides.

Plant trees, shrubs and preserve existing trees in order to prevent erosion and promote infiltration of water into soil.

Spread mulch on bare ground to help prevent erosion and runoff.

Use proper amounts of fertilizer and insecticides; when spreading them, do not allow over-spread on streets or walkways where runoff water is sure to carry it away. Fill the spreader on a hard surface for easy cleanup of spills.

Use landscape techniques like grass swales and porous walkways to increase infiltration and decrease runoff.

Keep storm gutters and drains clean of leaves and yard trimmings.

Dispose of unwanted chemicals at a hazardous waste collection site.

Vehicle Maintenance

Recycle used antifreeze and oil. Never put oil and chemicals down a storm drain or pour on the ground. One quart of oil can

contaminate up to two million gallons of drinking water.

Wash vehicles with low-phosphate or phosphate-free detergents.

Repair or replace leaking fuel, oil, and antifreeze lines and fittings.

Fuel spills should be absorbed with dry methods.

Fuel storage should be maintained to eliminate spills and leaks.



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Septic Systems

Inspect your system annually.

Pump out septic systems regularly. Three to five years is recommended.

Do not divert storm drains and sump pumps into a septic system.

Avoid or reduce the use of a garbage disposal. It will increase the amount of solids going to a septic tank.

Don't use toilets as trash cans. Excess solids may clog a drain field.

Other areas

Clean up after your pets. Pet waste contains nutrients and pathogens that can contaminate surface water.

Erosion control at construction sites keeps soils where they should be and runoff at a minimum.

Wise water use in any home or work environment coupled with appropriate conservation techniques helps keep that one percent of the world's fresh water working for the benefit of all.

Why Protect?

Protection of drinking water at the source can be successful in providing public health benefits and reducing the treatment challenge for public water suppliers. As shown

Supervision Program, and must respond to this threat to public health with regular water quality monitoring and actions ranging from well closure to expensive treatment. In some cases, source

The Kansas Rural Water Association will be happy to help with any water festival or water educational program. The Association currently has three water education activities planned for this summer in Jewell, Rice, and Morris counties.

by the examples above, source water quality can be threatened by many everyday activities and land uses ranging from industrial wastes to the chemicals applied to suburban lawns.

Private well owners are urged to test regularly for common contaminants such as microbes and nitrate-nitrogen. Water systems are heavily regulated through the Public Water System

water protection can eliminate or forestall the need to change or modify treatment processes. Treatment is expensive and source water protection can save consumers significant money.

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Education is a key component for long-term success of sourcewater protection. We have some unique education tools to help make these exciting ground water protection points. A hands-on visual aid is used in our sourcewater demonstrations. KRWA's new "enVISION" simulator is designed to demonstrate a complete water cycle, by recycling internal water via a pump mechanism through the simulator. The water pump recharges the front aquifer compartment illustrating groundwater flow through the face of the model.

Call KRWA at 785/336-3760 or check the Association web site at www.krwa.net if you would like more information on source water protection.



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