

# The Flow



## Practice Roadway Safety During Harvest Season

Field crops in our area are looking great and harvest season is upon us. Farmers are in the process of traveling the roads with slow-moving, large pieces of farm equipment. To increase roadway safety, we join the Indiana State Department of Agriculture in encouraging motorists to exercise caution and patience when approaching large farm equipment over the next few months.

When you are traveling in rural areas this fall, we encourage you to prepare for extra travel time and slow down when approaching large farm equipment sharing the roadways.

Farmers also have some responsibilities for making road travel with equipment as safe as possible. Farm equipment must have the national designated slow-moving vehicle (SMV) sign on all farm equipment. This sign is intended to warn approaching drivers that slow moving equipment is on the roads (equipment often traveling at speeds no higher than 25 mph).



It is critically important that motorists and farmers alike slow down, be patient and share the road this fall. At this time of year, motorists are encouraged to leave 10 minutes early and to be aware of alternative routes. Also, motorists should watch for wide vehicles, especially when approaching hills and curves in the road. When attempting to pass farm equipment, always look for oncoming traffic. Farmers should pull over for motorists when they are able to do so, but be aware that it may take some time to find a safe place to do so. At all times, follow the rules of the road: don't tailgate farm equipment, pass only in designated passing zones, and ensure you are following the hands-free driving law.

### Clark County Soil & Water Conservation District

Partners helping to make our project happen:

- > Clark/Jefferson/Scott County Health Departments
- > Jefferson and Scott County SWCDs
- > IDNR Division of Nature Preserves
- > Indiana State Department of Agriculture
- > Natural Resources Conservation Service

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## Page 2 Nonpoint Source Pollution

Just as the name implies, nonpoint source pollution cannot be attributed to any one source. This type of polluted runoff is caused by rainfall or snowmelt water moving over and through the ground. As the runoff moves over the land, it picks up and carries away natural and man-made pollutants, eventually depositing them in lakes, rivers, wetlands, coastal waters, and even in our groundwater supplies.

Researchers have determined that polluted runoff is the number one cause of water pollution in the U.S. today. Often, it is not one source of runoff that causes all the problems, but a combination of different sources. Nutrients and eroded soil are the most common pollutants causing degradation of water resources. Along many of Indiana's beaches the water quality has been degraded because of combined sewer overflows and failing septic systems.

There are several categories of pollutants that regularly result from common land use practices. Each type of pollutant can impact our water resources. The six major categories of pollutants are discussed in brief below:

**Nutrients:** These are compounds that stimulate plant growth. The two most common nutrients reaching our waters are nitrogen and phosphorous. Under normal conditions, nutrients are beneficial and necessary, but in high concentrations, they can become an environmental and human health concern. Nutrients in polluted runoff can come from a variety of sources such as agricultural fertilizers, septic systems, home lawn care products, and yard and animal wastes.

**Pathogens:** Pathogens are disease causing microorganisms, such as bacteria and viruses, which can be found in fecal waste of humans and animals. Pathogens can wash off the land from wild animal, farm animal, and pet waste, and can also enter our waterways from improperly functioning septic tanks, leaky sewer lines and boat and RV sanitary disposal systems. Exposure to pathogens that reach our waters can cause a number of health problems. Water recreation areas are closed to the public when testing reveals significant pathogen levels.

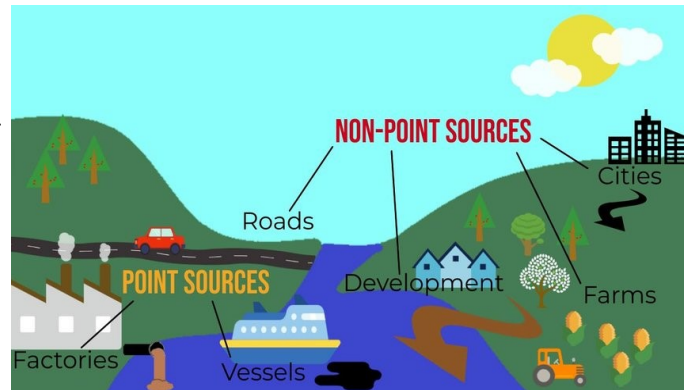
**Sediment:** Sand, dirt, and gravel eroded by runoff usually ends up in stream beds, ponds, or lakes, where it can alter stream flow and decrease the availability of healthy aquatic habitat. Poorly protected construction sites, agricultural fields, roadways, and suburban gardens can be major sources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

**Toxic Contaminants:** Toxic contaminants are substances that can harm the health of aquatic life and/or human beings. Toxins are created by a wide variety of human practices and products, and include heavy metals, pesticides, and organic compounds like PCBs. Many toxins are very resistant to breakdown and tend to be passed through the food chain to be concentrated in top predators. Fish consumption health advisories are one result of toxins reaching our waters. Oil, grease, and gasoline from roadways, and chemicals used in homes, gardens, yards, and on farm crops are some sources of toxic contaminants reaching our waters.

**Debris:** Trash is without a doubt the simplest type of pollution to understand. It interferes with enjoyment of our 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 waterways.

**Thermal:** Removal of streamside vegetation, land clearing for development, paved surfaces, shallow water impoundments, concrete canals and other artificial structures can result in heated runoff and elevated temperatures of surface water. Elevated water temperatures can be detrimental to aquatic life and can negatively impact normal life and reproduction cycles.

In the next edition of *The Flow* newsletter, we will discuss control and prevention of nonpoint source pollution to our water resources.



## Fall Grazing Hazards



A fall frost can cause some grazing animal health concerns and really deserves some good management steps by the producer. Things like prussic acid formation, nitrate poisoning and the risk of bloat are three concerns related to forages getting frost, especially with early season frosts. A new article on the 14-Mile Creek website ([14milecreekwatershed@weebly.com](mailto:14milecreekwatershed@weebly.com)), "**Fall Freezes and Forage Hazards**" covers these three fall forage related issues more in depth than

we have room for in this edition of the newsletter, so highly recommend all livestock producers log on to the website and take a closer look. Here are a few points to keep in mind about livestock (mainly ruminants) and fall forage plant frosts:

- \*Know what species of forages that are in the fields you are grazing.
- \*Prussic acid is not usually a concern when affected forages are cut for hay or silage.
- \*Nitrate concentrations are not reduced with haying nor ensiling.
- \*If nitrates are a potential concern and a hay or silage harvest is planned, wait 5 days after a frost before cutting and also raise the cutting height 6 to 8 inches to reduce nitrate poisoning risk.
- \*When grazing, waiting 5 to 7 days after a hard frost can help limit the risk for both nitrate and prussic acid poisoning. With a non-killing frost, waiting two weeks before grazing can limit risks.
- \*Bloat can happen in the fall just as readily as it occurs in the spring. A watchful eye and animals with full stomachs prior to grazing turn-out can be two valuable management practices.

Check-out the website for more information and recommendations to avoid these three grazing-related issues

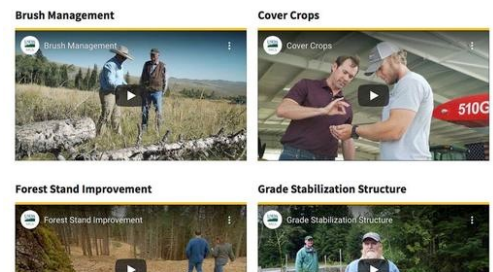
## Conservation at Work Video Series



A new video series from NRCS and farmers.org, "*Conservation at Work*", presents short and easy to understand videos about popular conservation practices. These videos feature producers explaining how an individual practice helps their land and why they are using it. The videos shine the spotlight on farmers, ranchers, and forestland owners from across the U.S. who explain why they've implemented the conservation practices and how they work on their land. They also provide insight into how each practice is helping them protect and improve resources and save time and money.

Of the 15 initial videos, four of the featured practices are part of the cost-share program for the 14 Mile Creek/Goose Creek Watersheds Improvement Project. Those four practices are Cover Crops, Grade Stabilization, Grassed Waterway, Trails and Walkways. These videos may give you some ideas for improving your property

It is the hope of NRCS that by sharing the conservation successes of landowners using these practices, the general public, as well as, other landowners and managers will be educated and even motivated to consider conservation on their properties. The *Conservation at Work* video series can be found at [www.farmers.gov/conserve/conservationatwork](http://www.farmers.gov/conserve/conservationatwork)



# Why Care About Native Plants?

Native Plants are an important part of any watershed. Here are just some of the benefits of native plants:

**1). The web of life depends on plants.** Through photosynthesis, plants convert the sun's energy into food for insects and other herbivores. These feeders in turn sustain a whole range of wildlife that feed upon them, and so forth, all the way up the food chain. Our local herbivores are especially adapted to feeding on native plants, and in many cases they feed on only one or a few species of plants. For example, the larvae of monarch butterflies will only eat leaves of plants in the milkweed family. No milkweed, no monarchs!



**2). Biodiversity!** Our best hope in maintaining our state's native biodiversity is to protect the mix of native plants and animals that exist in our few surviving natural areas. Restoring degraded areas to their natural condition, and even planting a variety of native plants in our backyards, can also help. We need to preserve native biodiversity where it exists and "create" it where it does not. Each of us can play a role in protecting and restoring the habitat that has been lost to human development.

**3). Sustainability.** Plants that have lived in Indiana for thousands of years are adapted to our climate and landscape. A complex set of checks and balances enables ecosystems to function in a way that allows for the greatest diversity possible. This can change significantly with land degradation, such as caused by severe landscape alteration and the proliferation of certain non-native (exotic) species. Transplanted to Indiana, some of these romp mercilessly through our woodlands, shading or choking out our native flora.

**4). Healthy Water.** Nature's way is to let rainwater percolate gradually into the soil, getting filtered and cleansed in the process, and slowly recharging underground water stores that, in time, well up out of the ground to replenish our waterways. Native plants have extensive root systems that hold soil in place as well as create channels for water to slowly percolate into the ground. By doing so this helps to maintain and improve our water quality.

**5). Aesthetics.** Indiana's native plants are what compose our natural woodlands, grasslands, and wetlands. They are part of what makes Indiana "Indiana." And extraordinarily beautiful they are, whether it be a forest floor covered with spring blooming wildflowers, or a natural prairie's floral eye candy. Landscapes that mimic native woodlands, prairie grasslands, woods edges, and wetlands lend a sense of place while offering habitat to the wildlife with whom we share our little corner of the planet.

**For more information about Indiana's native plants, visit: <https://indiananativeplants.org/>**

## Here's a Flow Fact for You!

Maintaining your septic system to ensure good water quality in the 14 Mile Creek Watershed is important, but another major reason to maintain your septic system is to save money. Failing systems are expensive to repair or replace, and poor maintenance is often the culprit. Preventive maintenance is a whole lot cheaper than repair or replacement. For example, it could cost up to \$40,000 or more to replace a failing system with a new one, compared to about \$200 to \$400 to have a system inspected, and \$150 to \$250 to have it pumped. Maintaining a septic system is a lot like maintaining a car. A small effort on a regular basis can save a lot of money and significantly prolong the life of the system.



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