Silver Creek Droplets

Volume 1 Issue 2
Summer 2011

What is Sediment and Why Should I Care


Image source: Cornell Univeristy

Sediment is the #1 water pollutant by volume in the United States. Sediment is the loose sand, clay, silt and other soil particles that are carried from a site by runoff water that eventually settles at the bottom of streams, rivers, lakes and ponds. Sediment comes from soil erosion. Water runoff, stormwater from rain or melting snow flows from rooftops, over paved streets, sidewalks, parking lots, across bare soil, through lawns and fields. As it flows, the runoff collects and transports soil as sediment, pet waste, salt, pesticides, fertilizer, oil and grease, litter and other potentially toxic pollutants. This water drains directly into storm drains or nearby drainageways into creeks, streams and rivers most often without receiving any treatment at a sewage plant. While natural soil erosion produces about 30% of waterway sedimentation, accelerated erosion from human modifications of the land accounts for the remaining 70%.

Why should you care? Sediment entering stormwater and our creeks can cause severe water quality degradation of our waterways that we depend on for our drinking water, that provide fish and wildlife habitat, and that provide us with recreation in the form of swimming, fishing and boating. Excess sediment can also cause flooding, severe streambank erosion and undesirable physical and chemical changes to our lakes and ponds. It increases the cost of treating our drinking water and it can affect the odor and taste. Sediment fills up storm drains, catch basins, roadside ditches and streams creating costly drainage, flooding and associated problems. Sediment deposits in rivers can alter the flow of water and reduce water depth, making navigation and recreational use more difficult. Water polluted by sediment disrupts the natural food chain by destroying the habitat of the smallest stream organisms and causing massive declines in fish populations. It can also cause the water to become cloudy, preventing animals from seeing food. Sediment can clog fish gills which reduce resistance to disease, lowers growth rates, and affects fish egg and larvae development. Murky water prevents natural vegetation from growing in water. Sediment pollution causes an estimated $16 billion in environmental damage each year in the US. Truly an ounce of prevention could save a pound of cure, and free up funds for other priority issues.

In this edition of Silver Creek Droplets we will explore some different ways that the residents of Silver Creek Watershed can help reduce the amount of erosion occurring throughout the watershed. Look for articles throughout the newsletter that include tips on how to reduce sedimentation and erosion on the farm and in your backyard.

Check out the article on page two about the Silver Creek cost share program to see if you qualify for funding to help reduce erosion and sedimentation on your land.

This article adapted from Marion County SWCD.

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This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement number C9975482-10 to the Indiana Department of Environmental Management. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Get up to $20,000 to Implement Best Management Practices (BMPs) on your land

The Silver Creek Watershed Improvement Project recently began a cost share program that provides eligible farmers, landowners and other entities with up to 60% match of the allowed actual cost to implement BMPs on their land that help improve water quality throughout the Silver Creek Watershed. Technical assistance will also be provided. You do not have to be located on Silver Creek to be eligible; there are many other creeks and streams that are part of the Silver Creek Watershed. Some of the BMPs that may be funded include:

- Fencing and Watering Systems to Exclude Livestock from Streams
- Streambank Stabilization
- Riparian Buffers
- Nutrient Management Planning with Soil Testing
- Pasture/Hay land Renovation
- Rotational Grazing
- Wetland Construction, Enhancement and Restoration
- Other Approved Practices That Help Improve the Water Quality of the Silver Creek Watershed

Read the article "Saving Soil for Farm Productivity and Water Quality" in this issue to learn more about how these practices can improve water quality.

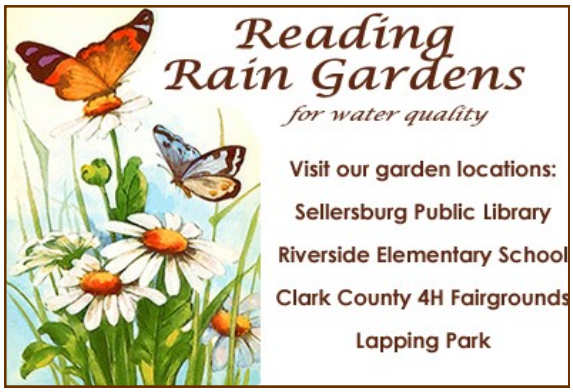
Rotational grazing systems can allow pastures to rest and regrow, distribute manure more evenly, and increase forage production (Purdue Cooperative Extension Service). This practice helps improve water quality by reducing erosion and runoff.

Upcoming Watershed Events and Opportunities:

Rain Gardens and Water Quality Workshop
Rain gardens are an attractive way to help improve water quality by reducing the amount of stormwater and pollutants that enter local streams. Come learn more about rain gardens and how to install your own at the Rain Gardens and Water Quality Workshop. Participants will learn about the benefits of rain gardens and tips for installing their own. Other practices for improving water quality will also be discussed
Date: September 17th, 2011. 9am to 12pm.
Cost: FREE ***(Space is limited)***
Location: Clarksville Community Center
Special Offer: The first 20 preregistered participants who attend the workshop will have the opportunity to purchase a rain barrel kit for half price. Only $20!

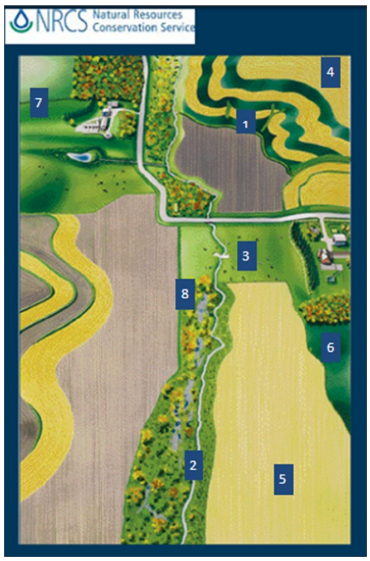
Have Ideas for Improving Water Quality?
Become a member of the Silver Creek Steering Committee and volunteer your time to help improve the water quality of the Silver Creek Watershed. The group meets quarterly.

Farming, Water Quality, & Productivity Field Day
Farmers are applying conservation and environmental practices on the land at record rates. Come learn how you can join in and help improve the water quality of our local streams and creeks while increasing productivity on your farm. The field day will take place on a local farm that has practices installed to help improve water quality and increase productivity. Presenters will include representatives from Purdue Cooperative Extension, Indiana State Department of Agriculture, USDA NRCS and local landowners.
Date: TBA
Location: Charlestown, IN
Special Offer: Tractor Supply of Sellersburg will be donating a special door prize. Come to the workshop for a chance to win!
For more information on any of the above, please call our office at 812-256-2330 ext 110.



Saving Soil for Farm Productivity and Water Quality

The impacts of soil erosion from agricultural lands occur both on and off the farm. Soil losses on the farm reduce productivity and sustainability by carrying away plant nutrients and organic matter with eroded topsoil. The offsite impacts of soil erosion include damages to water quality as discussed in the article *"What is Sediment and Why Should I Care?"*



Based on the United State Department of Agriculture estimates, the total cost of eroded soil is estimated to be between $6.10 and $6.40 per ton using 2009 values.

To help reduce soil erosion on the farm, consider using one or more of the following practices:

1. Grassed Waterways: The shaping and establishment of grass in a natural drainage way to prevent the formation of gullies acts as a filter, absorbing some of the chemicals and nutrients in runoff water while saving soil on the farm.

2. Streambank Buffers: Vegetative cover near waterbodies helps to reduce soil erosion, provide cover for wildlife, and prevent contaminants from entering the water. Buffers can reduce up to 80% of sediment (40% on average) reaching surface water by trapping it in the vegetation.

3. Livestock Exclusion from Streams: Can help reduce the amount of erosion and loss of farm land over time while reducing the amount of nutrients, chemicals, animal waste and sediment entering the stream.

4. Cover Crops: Growing crops that temporarily protect the soil from wind and water erosion during times when cropland isn't adequately protected against soil erosion. Cover crops help keep the ground covered, add organic matter to the soil, trap nutrients and improve soil tilth, and reduce weed protection.

5. Nutrient Management: By applying the correct amount and form of plant nutrients, optimum yield can result and the impact on water quality is reduced.

6. Critical Area Planting: Planting grass or other vegetation to protect a badly eroding area from soil erosion can also reduce the amount of sediment, nutrients and chemicals running off farmland.

7. Rotational Grazing: Improves vegetative cover, reducing erosion and improving water quality. It can also increase harvest efficiency and help to ensure adequate and improved quality of forage throughout the season helping to increase feed efficiency and improving profits. Rotating also evenly distributes manure nutrient resources.

8. Wetland Construction and Enhancement: Wetlands filter nutrients, chemicals and sediment before water infiltrates into the ground water supply. Wetlands also provide habitat for waterfowl and many other species while adding beauty and value to a farm.

Many farmers have already accepted the challenge of protecting our water resources and saving their soil. When considering which practices to put on your farm, select practices which will help you balance the needs of the environment with your own economic needs and the needs of the hundreds of people you help feed every year. Contact Clark County SWCD to learn more about programs that could be used to fund some of the above practices.

Information and picture from the USDA-NRCS brochure "Conservation Choices."

Here's a Drip Tip For You!

Landscaping with native plants can help reduce sedimentation and erosion and save you money. Native plants are preferential because they are adapted for the local climate and once established, do not need a lot of extra water, fertilizer or maintenance. Many are deep rooted, allowing them to survive droughts and help stabilize soil, reducing erosion. They provide habitat and food for native wildlife and attract diverse native pollinators. Consider planting native plants in a rain garden or a low maintenance low impact garden. Don't forget to consider the sunlight, moisture and soil requirements during plant selection. Think about a color scheme and visual interest for each season of the year. Contact your local nursery or Clark County SWCD for more information. View the US EPA's Native Plants Factsheet (*http://www.epa.gov/greenacres/nativeplants/factsht.html*) to learn more about how native plants offer an attractive, hardy, drought resistant, low maintenance landscape while benefiting the environment. Remember, native plants, once established, save time and money by eliminating or significantly reducing the need for fertilizers, pesticides, water and lawn maintenance equipment.

Check out our next newsletter for more ***Drip Tips*** that will help protect our **watershed** and your **wallet**!

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To view this newsletter electronically, visit www.mysilvercreekwatershed.weebly.com
LIKE US ON FACEBOOK AND BE ENTERED INTO A DRAWING TO WIN A RAIN BARREL KIT!

Quick Tips to Reduce Sedimentation and Erosion at Home

- Preserve existing trees, and plant trees and shrubs to help prevent erosion and promote infiltration of water into the soil. They will absorb up to 14 times more rainwater than a grass lawn and don't require fertilizer.
- When planting new areas, choose native plants. Native plants are well suited to their area. They often have deep roots that can help stabilize the soil.
- Gutters and down spouts should drain onto vegetated or gravel-filled seepage areas- not directly onto paved surfaces. Splash blocks also help reduce erosion.
- Consider diverting your gutters into a rain garden or a rain barrel to capture storm water and reduce runoff and erosion.
- Cover bald or bare spots in your yard with mulch and get something growing there ASAP.
- If using the land adjacent to a stream consider leaving a buffer strip, a vegetated area of land adjacent to the creek that is often made up of native grasses, shrubs or trees (contact Silver Creek Watershed Improvement Project to learn more about potential funding for buffer strips).
- Do not mow your lawn too short. Try to keep the grass height at 2 ½ inches.
- Grow plants on slopes. Grass does not always stop erosion on slopes.
- Consider stabilizing the banks of the stream or creek in your backyard. Funding is available for streambank stabilization projects.