

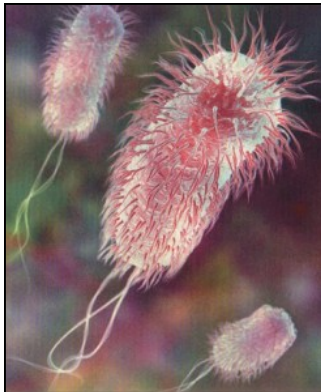


Silver Creek Droplets

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E. coli...Why Such a Bad Reputation?

Escherichia coli (*E. coli*) is one of the many bacteria species living in the intestines of warm-blooded animals (humans, cattle, & wildlife). Although they are generally not harmful themselves, their presence in streams and creeks indicate the possible presence of pathogenic (disease-causing) bacteria, viruses, and protozoans that also live in human and animal digestive systems. Since it is difficult, time-consuming, and expensive to test directly for the presence of a large variety of pathogens, water is usually tested for coliforms instead.



E. coli are important to warm blooded animals as they aid in the breakdown of forage and feed, however, some strains of *E. coli* (O157:H7) can make people and animals (including livestock) sick if ingested from their food/water supply or during recreational activities such as swimming. The forms of *E. coli* that can cause illness in humans and animals are patho-

genic. Remember, not all *E. coli* are pathogenic. In addition to the possible health risk associated with the presence of elevated levels of fecal bacteria, they can also cause cloudy water, unpleasant odors, and an increased oxygen demand.

Determining the exact source of *E. coli* is virtually impossible. Sources of fecal contamination to surface waters can include wastewater treatment plants, on-site septic systems, domestic and wild animal manure, and storm water runoff.

Various tributaries to Silver Creek and Silver Creek itself have been declared impaired by the Indiana Department of Environmental

Resources due to high *E. coli* levels. This can be changed! There are actions that we can take to decrease the level of *E. coli* in our watershed.

- Exclude your livestock from creeks and streams. By excluding livestock from streams and creeks and providing an alternative watering source you can increase productivity while improving water quality.
- Clean up after your pet. Pet waste causes a large percent of *E. coli* problems. Even if you're miles from the river, the stormwater that washes over your dog's waste is going somewhere!

- Inspect, maintain and pump your septic system. Watch for signs of a non-working system which can include, foul odors, wet spongy ground, and fixtures that leak slowly. Report failing systems at www.mysilvercreekwatershed.weebly.com.
- Create a riparian buffer. If you live along the river, maintaining a healthy buffer consisting of native plants between your property and the water will reduce runoff full of *E. coli* and many other pollutants.

Get involved!...in water quality protection in your community:

- Participate in cleanup activities in your neighborhood.
- Write or call your elected representatives to inform them about your concerns and encourage legislation to protect water resources.
- Get involved in local planning and zoning decisions and encourage your local officials to develop erosion and sediment control ordinances.
- Promote environmental education. Help educate people in your community about ways in which they can help protect water quality. Get your community groups involved.



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Certify Your Property as Wildlife Friendly

The Indiana Wildlife Federation has developed a unique program to help private landowners, businesses, schools, and others develop and enhance wildlife habitat on their property. The Wildlife Friendly Certification Program (WFCP) is a voluntary landowner assistance program that provides a source of guidance for various projects aimed at improving wildlife habitat while retaining the practical utility of a property.

Through WFCP, landowners and property managers work with IWF's wildlife biologist to develop a plan specific to each property that will accomplish the goals of the landowner and meet the requirements of



the Wildlife Friendly certification. For each project, IWF provides technical assistance and coordination to guide you through the process, and contacts natural resource agency partners to find opportunities for cost-sharing. Establishing partnerships between IWF, agencies, and landowners is a model that has proven to make habitat improvement projects a surprisingly affordable and streamlined process.

To date, IWF has helped over 30 projects restore habitat in locations across the state. Projects from less than one acre to over 100 acres in size have included prairie plantings, wetland construction, tree and

shrub plantings, and invasive plant removal. As each project is completed, the property is certified as a Wildlife Friendly Habitat by IWF. Signage and additional recognition is given to each project to acknowledge this accomplishment.

The benefits of these practices reach far beyond wildlife. Using native plants as a buffer near shorelines or hard impervious surfaces will slow runoff from storm events. This allows for toxic chemicals, sediment, and nutrients to be filtered out before reaching the water. The extensive root systems of native species help control soil erosion by keeping the soil and nutrients in place. Reducing runoff from land will protect clean water in streams, lakes, and reservoirs.

In addition to implementing habitat improvements, program participants are encouraged to use sustainable practices across the board. Such as, if you wish to fertilize, use phosphorus-free lawn fertilizer during the autumn for established turfgrass. When in doubt of the particular needs of your grass, conduct a soil test. Lower your costs by recycling grass clippings as fertilizer and minimizing herbicide applications. Practices to conserve water use, add diversity with native species, and reduce lawn size overall are important in habitat restoration.

IWF is off to another great year with the Wildlife Friendly Certification Program in 2011. To learn more about IWF programs and how you can get involved, email info@indianawildlife.org or call (317) 875-9453.

Can you ever have too many horses?

My answer would be a "No!", because I'm an avid horse lover. However, the real answer would be a resounding "Yes!", when not managed properly. ***It is possible to have too many horses if you have limited land.***

We all want to keep our horses safe and healthy. Turnout is vital for horses' fitness and spirit. But you need enough land—or plan—to naturally process your horse's manure and urine and to keep your paddocks or pastures from becoming bare and being environmental or health risks.

Pastures cannot process high amounts of animal wastes day-after-day year round. Grasses will not regrow if they are grazed every day. And barren pastures make prime candidates for soil erosion.

Generally, to naturally and safely absorb, breakdown, and utilize the manure and urine produced by an average horse during one year, wastes should be distributed over an acre of land. Any less than that and excess nutrients and wastes begin running off into our water sources.

The actual area needed for good pasture and waste processing depends on the size and number of horses, your land and soil characteristics, and your management practices. Consider these things before adding "just one more" horse to your pasture picture, and you'll be a good steward of our land and water resources!

Do You Have Ideas for Improving Water Quality?

The Silver Creek Steering Committee is a group of volunteers who work together to help improve the water quality of the Silver Creek Watershed. Committee members are vital to the improvement of the watershed. The group meets quarterly. Call for more details if you would like to become an important part of the improvement project.



What's That Smell?

A failing septic system can reek havoc on your health, your wallet (see this edition's "Drip Tip") and the environment. Malfunctioning septic systems can release excess nutrients into our streams and rivers. This contamination can stimulate algae growth.

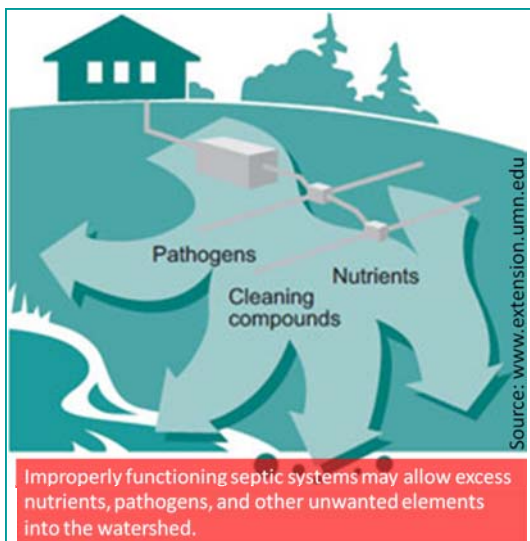
Excessive algae growth harms oxygen levels thus killing or negatively affecting fish and other aquatic organisms and reducing stream quality. E. coli can also enter our creeks and streams when a septic system is not properly functioning.

Here are 8 quick tips to properly maintaining your septic system.

- Inspect your septic system annually
- Pump out your septic system every 3-5 years, using a licensed septic hauler
- Avoid or reduce the use of garbage disposals, they can contribute unnecessary solids to your septic system.
- Avoid drainfield failures by avoiding hydraulic overloading. Install

water efficient shower heads, faucets, and toilets to help limit wastewater levels and reduce the likelihood of septic system overflow.

- Obtain proper permits from the county health department before making or allowing repairs to



- your system.
- Don't plant anything over your soil treatment area except grass.

- Divert roof drains and surface water from driveways away from the septic system.
- Don't use your toilet as a trash can! Chemicals can corrode septic system pipes and might not be completely removed during the filtration process. They may also interfere with the proper function of your septic system. Keep grease, disposable diapers, tampons, gasoline, oil, paint, pesticides, etc. out of your septic system.
- Watch for signs of a nonworking septic system. Signs include foul odors, wet spongy ground or puddles of water near a drainfield, lush plant growth near drainfield and fixtures that drain slowly. To report a nonworking septic system in the Silver Creek Watershed visit www.mysilvercreekwatershed.weebly.com. Click on the *Septic Systems and Water Quality* tab on the left of the website screen and fill out the form at the bottom of the page.

Rain Gardens 101

Does a rain garden form a pond?

No. The rain water will soak in so the rain garden is dry between rainfalls.

Are they breeding ground for mosquitoes?

No. Mosquitoes need 7 to 12 days to lay and hatch eggs, and standing water in the rain garden will last for a few hours after most storms. Also rain gardens attract dragonflies, which eat mosquitoes!

Do they require a lot of maintenance?

No. They can be maintained with little effort after the plants are established. Some weeding and watering will be needed in the first two years, and perhaps some thinning in later years as the plants mature.

Is a rain garden expensive?

It doesn't have to be. A family and a few friends can provide the labor. Purchase native plants on sale or use those that may already exist in your or a neighbor's yard.

Want to see a rain garden in action?

Visit the 4 locations within Silver Creek Watershed: Lapping Park, Clarksville; Clark County 4H Fairgrounds, Charlestown; Riverside Elementary School, Jeffersonville; and Sellersburg Public Library.

Here's a Drip Tip For You!

Maintaining your septic system to ensure good water quality in Silver 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 approximately \$200 to \$400 to have a system inspected, and \$150 to \$250 to have it pumped. Maintaining a septic system is 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.

—Facts from Massachusetts Department of Environmental Management.

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



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For additional information or details on the Silver Creek Watershed Improvement Project or this newsletter contact:

Melanie Davis, Watershed Coordinator

812-256-2330, ext. 3, or melanie.davis@in.nacdnet.net

To view this newsletter electronically, visit www.mysilvercreekwatershed.weebly.com

Farming for Water Quality Field Day Held

A Farming for Water Quality field day was recently held at Roger Prather's farm in Charlestown, IN. Roger's farm is a demonstrate site for the Silver Creek Watershed Improvement Project.

Robert Zupancic, Natural Resources Conservation Service (NRCS) Grazing Specialist, spoke on grazing practices that benefit water quality, and nutrient management on the farm. Mike Johnson, Indiana State Department of Agriculture (ISDA) Resource Specialist, talked about BMP design standards and installation guidelines for projects that may be funded by the Silver Creek cost share program.

Participants in the workshop had the opportunity to view the BMPs installed on the site: Heavy Use Area Protection, Pipeline, and Watering Facility. They also received a coupon for a free soil test compliments of Jackson-Jennings Co-op, Seymour, IN, and were entered in a door prize drawing for an automatic waterer donated by Tractor Supply, Sellersburg.



Cost share dollars for the installation of Best Management (BMPs) like those shown above are now available through the Silver Creek Watershed Improvement Project. This cost share program provides eligible farmers, landowners and other entities with up to 60% match of the allowed actual cost to implement BMPs on their land. 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. A full listing of BMPs and maximum cost share available for each of them can be obtained by calling Melanie Davis, Silver Creek Watershed Coordinator, at 256-2330, ext. 3.