Volume 4, Issue 11

The Flow

Fourteen Mile Creek Goose Creek-OH River WATERSHED Improvement Project

Water Quality and Animals

Americans have a love affair with animals. It seems the more we have the more we want. Whether a person has one animal or operates a large livestock facility, all owners play an important role in assuring that our watershed is healthy, and our creeks are clean.

All human activities including livestock keeping, can potentially affect both land and water resources. Water resources include small seasonal drainages, creeks, ponds, and both near-surface and deep ground water. As rainwater flows across the land, it can pick up and transport pollutants such as chemicals, soil and animal wastes which can be deposited into our water resources. Degradation of water resources can affect our drinking water supplies, recreational areas and wildlife habitat, as well as cause flooding and property damage. What may appear to be a small action at the top of a watershed, can in fact, have tremendous consequences for downstream neighbors.

We are all aware that within the 14-Mile Creek Watershed the landscape is in significant transition and the face of agriculture is being transformed. As our neighbors move closer and closer it will become more important for livestock owners to become stewards of the environment. Stewardship means taking care of land and water resources on your property. Three basic stewardship objectives for livestock owners to remember are:

Control Erosion – keep soil in place
Keep "clean water" clean
Manage "polluted water"

Some ways to prevent erosion:
*Keep areas well vegetated. Vegetation helps dissipate the force of rainwater hitting the ground. Plant roots also hold soil in place and help water infiltrate into the ground instead of running off.
*Avoid concentrating water. Concentrated runoff can be highly erosive.
*Control animal access and human activities in vulnerable areas.
*Manage pastures to prevent heavy or over grazing.

Basic ways to keep "clean water" clean:
*Divert "clean" water around areas with pollutants.
*Locate buildings and confinement areas away from creeks, steep slopes, and floodplains.
*Limit impacts of grading, runoff from roofs and other impermeable surfaces.
*Maintain vegetation and replant bare areas.
* Control potential runoff from water troughs.

Managing "polluted water":
*Keep the size of intensively used areas small to help reduce the volume of polluted water.
*Remove manure regularly.
*Use filter strips to trap sediment and manure that washes off high-use and manure storage areas.

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

Inside this issue:

The Impact of Septic Systems on Drinking Water

Septic systems can impact local drinking water wells or surface water bodies. The extent of this impact depends on how well your septic system is maintained and if it is used properly. Septic systems provide wastewater treatment for many homeowners who often get their drinking water from wells (either private or from a municipal water company's wells). If a septic system isn't working properly or wasn't installed correctly or is located too close to drinking wells, contaminants from the wastewater can end up in drinking water.

There are at least eight (8) different components or situations that could cause your septic system to become a source of contamination of drinking water supplies for you and/or others:

***Bathrooms and Kitchens** – Wastewater from toilets, sinks, showers, and appliances contains bacteria, viruses, and nutrients potentially harmful to human health if they are consumed in drinking water. Chemicals or medications flushed down the drain or toilet can also contaminate drinking water. Be sure your septic system properly treats wastewater and that wells are located an appropriate distance away.

***Septic Tank** – Have your septic tank serviced and pumped on a regular basis to ensure it is working properly.

***Drain field** – Protect your drain field; don't allow heavy traffic in the area; this will prevent crushing or collapse of the lines. Avoid overloading the drain field by assuring that the septic tank is working properly and that there is no breaks in the lines.

***Wastewater Treatment in Soil** – Filtering wastewater through the soil is pretty effective at removing most bacteria and viruses and even some nutrients that weren't completely broken-down in the septic tank but, this filtering through the soil can't remove everything. If untreated wastewater surfaces in the yard, it could contaminate drinking water through an unsecured well cap or cracks in the well casing.

***Water Table** – A shallow water table means that there is less soil to help filter wastewater before it reaches the source or supply of drinking water. While a water table at a site may be sufficiently deep and in accordance with health standards during normal conditions, occurrences like heavy rains or flooding can super-saturate the soil and thus lessen the depth of the water table.

***Groundwater** – Water below the water table is called groundwater. Groundwater actually flows much like a stream on the surface of the ground. Groundwater flowing underneath a septic drainfield captures any remaining contaminants released from the septic system. A drinking water well is at greater risk of contamination if it is in the path of groundwater flow beneath a septic system.

***Drinking Water Well** – A drinking water well is drilled or dug into the groundwater so water can be pumped to the surface. Deep wells located farther away from a septic system and not in the path of the groundwater flow from the septic system are least likely to be contaminated. Drinking water wells should be regularly tested to ensure your home's water is safe to drink.

***Setback Distance** – Most states or local health departments require a specific horizontal distance (setback) between a septic system and a drinking water well. If your soil is sandy, or porous, you will probably need to place your well farther away than the minimum required distance. Contamination is less likely the farther apart a well is from a septic system.

Could your well be affected? Your septic system could contaminate your drinking well water or even a nearby well under certain conditions. Remember to test the drinking water from your well regularly and take corrective action as needed. The contamination risk to your well is lower when wells and septic systems are located farther apart, when wells are deeper and if they are in bedrock or below a defined layer of silt or clay, or when septic tanks and systems are pumped and serviced on a regular basis. Conversely, well contamination risks are higher when wells are at a shallow depth and/or in permeable soil, if the groundwater that the well draws from flows from the septic system towards the well, if there are many homes on septic systems near the well, or if the wells and/or the septic system were poorly constructed or poorly maintained. Even if you don't have a drinking water well remember that the groundwater that a neighbor relies or a municipality utilizes for drinking water flow underground and your faulty septic system can still be a source of contamination of that water.

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Was Mud an Issue This Winter?

With springtime upon us and while your memory is still fresh, think back just a bit on conditions around your farm this past winter. Were your cows having to wade knee-deep (or deeper) in mud just to get to hay feeding areas or water? Did you cut some pretty deep ruts in lots and through gateways so you could deliver bales to animals? Did animals wait a day or two longer on fresh hay because you were waiting on a freeze that seemed to never come to turn that muck into something solid enough to drive on? Was your wife fed-up with washing muddy soaks that were a result of having a boot sucked off in the mud when you were trying to open a gate?

While these questions aren't intended to dredge up bad memories of this past winter, they are meant to make you ask yourself if there isn't a better way to do livestock and winter. And my answer would have to be Yes, yes there is a better way.

The heavy use area protection (HUAP) pads that have been installed on several farms in Clark County have been the answer to winter mud and livestock. We all realize that frozen ground for long periods of time in southern Indiana have become few and far between. That's why you might want to consider an HUAP for bale feeding areas as well as areas for little calves to go to stay dry and protected. Practical experience also shows that cows that have access to stable and mud free pads have cleaner udders (thus less bacteria for little calves to pick up plus less mud to break through before getting a good flow of milk). We also know that the less mud a cow or calf has to trudge through results in less wastage energy and a more efficient animal.

Now is the time to consider how you are going to make it through wet conditions next winter. Don't wait until to winter hay feeding season to make a change. HUAP's tend to cost about $2.00 per square foot and if properly managed will last many years. Don't forget, if your property is in the 14-Mile Creek Watershed, the cost-share program can cover up to 60% of that installation cost; that means your costs comes down to as little as 80 cents per square foot.

If you are interested in seeing what an HUAP might do for you and your cows, contact us at the Clark County SWCD Office.

Pasture Management Tips for Spring

If you are planning to renovate pastures by planting legumes but you missed the frost-seeding window, you can still no-till drill legumes until about May 1st. Remember, small legume seed should first be inoculated with the proper bacteria in order to promote nodulation; place seed ¼ to ½ inches deep and be sure to check depth several times during the planting process. Also slowing down your field speed should help ensure a more precise seeding depth and rate. Spring seeding of cool-season grasses can still be accomplished into mid-April using a drill but realize fall is really a preferred time to seeding most grasses, except for warm-season grasses, which can safely be seeded from April 1 thru June 1.

If you have heavy traffic areas such as small lots and hay feeding areas, begin smoothing those areas and seed as needed. Pastures that have been overseeded with legumes like clovers should be the first to be grazed to reduce competition from the existing grasses but remove livestock from these fields before they begin grazing the new clover plants. Provide a free choice high-magnesium mineral to grazing livestock to prevent grass tetany on those lush spring growth pastures.

Here's a Flow Fact for You!

Did you know that improper nutrient management on the farm and in your yard not only costs you extra money but can also pollute our watershed? Over applied nutrients not utilized by plants have the potential to leach into groundwater or enter nearby surface water via overland runoff. Too much nitrogen or phosphorous can impair water quality by decreasing the levels of oxygen available to fish and other stream life. By properly applying fertilizer we can protect water quality and our bottom line. Don't Guess, Soil Test to know the nutrient needs of fields and lawns.

Pesticide Applicator's First Aid Kit *(taken from Kentucky Forage News, posted 3/1/22)*

For many farmers, applying pesticides can be a routine task. But sometimes, unexpected events happen: a broken hose under pressure, a leaky tank, a hose popping off the backpack sprayer, or just blowback from the nozzles. When you are contaminated with pesticides, you need to quickly get cleaned up. If someone has swallowed or inhaled a pesticide or gotten it in their eyes or on their skin, and the person is unconscious, having trouble breathing, or having convulsions, then call 911. Always check the pesticide label for directions on first aid for that product. For help with first aid information, call the Poison Control Center (800) 222-1222 or the National Pesticide Information Center (800) 858-7378.

If pesticides are inhaled, remove the person to fresh air immediately. Loosen the victim's tight clothing. If the victim is not breathing, provide artificial respiration, preferably mouth-to-mouth. Open doors and windows so no one else will be poisoned by fumes if in an enclosed area like a greenhouse. Seek medical attention.

It's a very good idea to have a pesticide first aid kit handy and to bring it with you when making applications. Keep in mind that first aid is not intended as a replacement for care administered by professional medical personnel; rather, first aid is the initial effort to help a victim until professional medical help can be provided. A pesticide's risk is a function of the toxicity of the material and a person's exposure to the material. Exposure can occur through the eyes, skin, nose, mouth, stomach, or lungs. But another aspect is the time of exposure; the quicker the exposure can be interrupted, the better the exposure can be limited. Always check the label for pesticide-specific first aid procedures.

Basic items that need to be in a Pesticide Applicator's First Aid Kit include:

Gloves – good all-purpose gloves, such as barrier laminated, to protect against a wide range of pesticides. Remember to protect yourself from pesticide exposure prior to and while giving assistance. Make sure you wear the appropriate personal protective equipment (PPE), including a respirator, before assisting someone in an enclosed area.
Coveralls – when a change of clothes are needed after contaminated clothes have been removed.
Liquid Soap and Clean Water – a couple of gallons of clean water to decontaminate the victim. Avoid harsh scrubbing since this can increase pesticide absorption.
Saline Eye-Wash – hold the eyelid open and immediately begin gently washing the eye with clean running water or eye-wash solution. Continue washing for 15 minutes. Cover the eye with a clean piece of cloth and seek medical attention immediately. If contact lenses are worn, remove and discard the contacts before washing the eyes.
Disposable Towels
Syrup of Ipecac – used only with ingestion of certain pesticides. Read the first aid statement on the pesticide label carefully. Induce vomiting ONLY if emergency personnel on the phone or the label tells you to do so. Never try to administer anything by mouth to an unconscious person.
Activated Charcoal – used only with ingestion of certain pesticides when vomiting is NOT permitted. Again, read the first aid statement on the pesticide label carefully.

After giving first aid, call the emergency number listed on the label and/or the Poison Control Center at (800) 222-1222. Have the pesticide label on hand when you call.

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