



MARION COUNTY
SOIL AND WATER
CONSERVATION DISTRICT

Conservation in the Neighborhood

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Save The Date! Tuesday, Feb. 20th *Marion County SWCD's 54th Annual Meeting*

Please join us on Tuesday evening, February 20th for our annual meeting. Our meeting will be held in conjunction with Bethany Community Gardens' first gardening class of 2024, to be taught by Jo Ellen Meyers Sharp - [The Hoosier Gardener](#) at Bethany Lutheran Church/ Bethany Community Gardens , 4702 S. East Street in Indianapolis. (Southwest section of the intersection of I-465 and US 31.) You will also learn how the District has served the community in 2023 and what our plans are for 2024.



Watch your inbox and our website for upcoming information and a registration link.

2024 SWCD Affiliate Members Needed

Affiliate members are individuals, groups or organizations who choose to financially support the work of the Marion County Soil and Water Conservation District.

Gifts from affiliate members are used to continue services provided to county residents including consultation in land use, erosion control and drainage problems. Funds are also used for educational purposes, helping residents make informed land use decisions.

To become an affiliate member visit our [website link here](#) or call the office at 317-786-1776.

Donations to the District are tax deductible.



Winter Project Spotlight

By John Hazlett, District Manager

Throughout 2023, our district has had the pleasure of working side by side with our partners at Millersville Fall Creek Valley, Inc. (MFCV) on a restoration of two slopes above Fall Creek near the Emerson Way bridge on the eastside.

This initiative started with a grant obtained by the Millersville neighborhood through the Indianapolis Neighborhood Resource Center (INRC) Neighborhood Grant Program. MFVC has worked tirelessly on various restoration projects along Fall Creek with particular emphasis on the beautiful

stretch between the 56th St and Emerson Way bridges. One element of the INRC grant was to clear invasives from the slopes on both sides of the bridge which had overtaken the site and were both an environmental and safety hazard for users of the adjacent Fall Creek trail and the busy adjacent intersection.

Enter the district into this cool restoration project! The INRC funds were

used to have the area professionally treated by a landscape contractor for Tree of Heaven, Asian Bush Honey-suckle and other invasives common in disturbed urban riparian corridors. Working with MFCV and the Office of Land Stewardship, the area was also seeded with a custom mix of native grasses and wildflowers. Follow up treatments were conducted by a district staff member with an applicators license with the assistance of a MFCV resident. The district also secured a grant through [SICIM](#) and used it to obtain additional native seed from Spence Restoration. Recently we worked with an MFVC resident and local IU student Keegan Cougill, to frost seed the slopes with a soil stabilization mix that needs cold stratification to break open the seeds for growth this spring. We are excited to see this project take off and will be hosting additional invasive education events with our partners at this site!



Winter Seeding Supplies

June Site Prep



Initial Seeding in June

December Seeding



Support Urban Conservation Become a SWCD Affiliate Member!

[Click Here to see details on our website.](#)

Soil Health

By Kevin Allison, Soil Health Specialist

Based on a farmer needs assessment, a recent Purdue University Diversified Farming and Food Systems [publication](#) lists “nutrient management for plant health” and “nutrients, pH, and amendments” as top production challenges in urban agriculture.

I’ve long known that to be true, but hearing the collective voice of growers through this publication stoked the fire to continue my work on a nutrient calculator to overcome that challenge.

I want to extend a special thanks to the Indiana farmers, Purdue University professors, USDA-Natural Resources Conservation specialists, and the statewide Urban Soil Health program for their review of the soon-to-be released “Indiana Nutrient Management Tool - Small Farms and Gardens”. A lot of effort is going into creating a free online and excel calculator that can efficiently convert soil test results into nutrient and product recommendations for a diversity of vegetables. When a soil has levels of nutrients that are too low or too high for a specific crop, the calculator takes that information into account and adjusts the recommendations. The goal is to make it easier to apply the right amount of nutrients for production and avoid the application of excess nutrients. That’s a win for production, water quality, and the farm’s bottom line.

I hate to say “stay tuned” but I must for now. It’s currently under review, but it will in your hands in early 2024 and located [HERE](#).

It isn’t a stretch to relate this article back to the benefit of soil testing and cover crops. I see how many pounds of organic fertilizer are recommended for only 300 square feet of crops. It feels like a lot. There is not only environmental importance to cutting inputs in agriculture, but also financial. The calculator will have a ‘cost per area’ component so that a farmer can estimate the cost to apply nutrients through fertilizers and amendments. That’s where the soil test comes in. If your phosphorus and potassium soil test levels are sufficient, the pounds of product needed and subsequent costs start to go way down. For nitrogen, many organic growers use products such as feathermeal, bloodmeal, and alfalfa meal. That’s where cover crops shine. Legumes such as field peas, Austrian winter peas, hairy vetch, and crimson clover can provide a significant amount of nitrogen to the following crop, thus decreasing the demand for fertilizer. Try to find space and time to plant some leguminous fall cover crops at the end of the season, especially in beds where there will be nitrogen loving crops such as sweet corn or kale the following spring. I’m looking forward to holding workshops and webinars on the new calculator as soon as it is approved by the powers to be! Stay tuned.



SWCD Demo Garden sweet corn following a hairy vetch legume cover crop.

Nutrient Calculator			Bloodmeal	Feathermeal	Potassium Sulfate	Copper Sulfate	Elemental Sulfur	Bloodmeal	Kelp Meal	Pelletized 5-4-5	Lbs & Oz per Area
Area (sq.ft.)	300	Product to Apply per Area	0 lb 0 oz	4 lb 4 oz	0 lb 15 oz	0 lb 0 oz	0 lb 0 oz	0 lb 0 oz	0 lb 0 oz	4 lb 4 oz	Lbs & Oz per Area
Crop	Beets, red	Product to Apply per 1000 sqft		14	3					14	Lbs per 1000 sq.ft.
Nutrient	Goal	Actual									
Nitrogen (N)	2.3	2.4	13	12			13	1	5		
Phosphorus (P2O5)	0.6	0.6						0.3	4		
Potassium (K2O)	2.2	2.3		0.35	53			2.5	5		



Soil Stabilization In Adverse Conditions

By Robert Kendall, SWCD Urban Conservationist

Why temporarily stabilize?

To minimize the exposure of bare soil to the erosive effects of precipitation and run-off. Temporary and permanent surface stabilization are considered the most effective means of minimizing erosion. Stabilizing the soil surface and reducing the potential for erosion is considered the most effective form of sediment control.

What areas need temporary stabilization?

Non-vegetated areas shall be temporarily stabilized if the area remains inactive for more than seven days. The area will be considered inactive when no meaningful work is happening toward accomplishing a pay item in an area with soil disturbance. Areas that have been compacted are excluded from temporary stabilization needs ONLY IF the areas are planned to be impervious surfaces associated with the final land use. If so, the area's run-off must be directed to appropriate sediment control measures.

Methods of temporary stabilization

Mulching - the application of plant materials to protect vegetative establishment and minimize erosion potential.

- Popular material: Straw and mulched wood chips
- Anchoring methods:
 - ◇ Crimp or punch the straw two to four inches into the the soil; along contour of slope if applicable
 - ◇ Cleating with dozer tracks
 - ◇ Hydromulcher
 - ◇ Synthetic tackifier, or soil stabilizer
 - ◇ Netting with staples



Erosion blanket and coir logs are installed to protect seed and native plugs within a high water flow area.



Tractor with a crimper attachment



Erosion blankets and loose straw are used to protect seed while germinating. The erosion blanket nearest the water is made of coconut fiber which is more resistant within high water flow areas.

Soil Stabilization Cont.

Erosion Control Blanket -a mulch incorporated within a biodegradable, photodegradable, natural fiber, or similar netting material. It is an alternative to loose mulch and normally used on slopes and in concentrated flow channels.

Blanket Materials: Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch

Anchoring methods:

- ◇ Staples
- ◇ Pins
- ◇ Stakes



A rain basin is protected with erosion blankets while seeds are dormant underneath.

Tips to avoid noncompliance

- ◆ All erosion control measures should be installed according to manufacturer's and/or SWPPP specifications
- ◆ Advocate for a greater budget to cover erosion control measures in adverse weather conditions
- ◆ Red-line your SWPPP with deviations that are compliant with the below **Compliance Resources** or reach out to the Marion County Soil and Water Conservation District (MCSWCD)

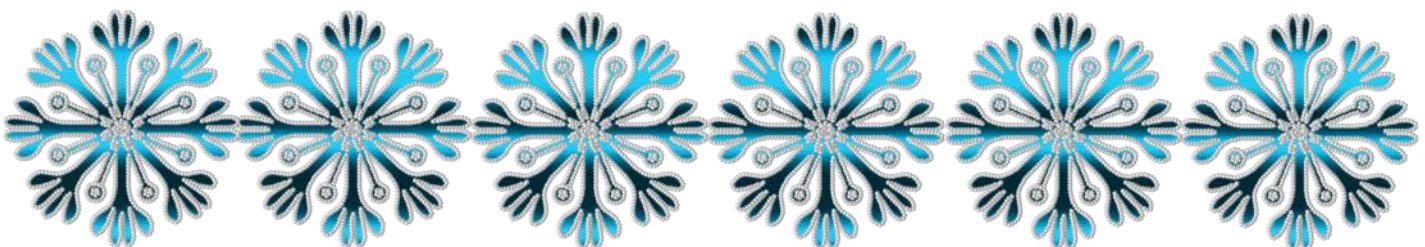
Compliance Resources:

[Construction Storm Water General Permit \(INRA00000\)](#)

[Indiana Storm Water Quality Manual](#)



Coarse wood chips protect a low velocity stream riparian buffer.



Landowner, IDNR LARE Program & MCSWCD Team to Solve Erosion & Drainage Problem

By Julie Farr, Resource Conservationist



In April of 2021 I went out to check on a log jam in Buck Creek in Franklin Township. A neighbor had called previously about drainage and flooding problems. I was surprised to find the size of the log jam – much bigger than any I had ever encountered in Marion County in over 30 years of field work. Drainage is a huge problem in our county and my philosophy has always been to prioritize clearing the main passages whenever possible.

The other issue with this log jam was the tremendous amount of sediment that had been lost over the

years due to the stream cutting through one side of the streambank in order to get around the log jam and bank instability on the high side from undercutting the bank and tree roots.

Log jams are an increasing problem as we have felt the results of non-native insects such as the Emerald Ash Borer and various tree diseases attacking our woodlands and forested corridors. As trees fall into our streams they often get stuck and begin collecting other trees, limbs and debris. Illegal dumping, lawn waste and increased sedimentation accelerates



the problem. This particular log jam had been accumulating for many years and while the adjoining neighbor had tried years ago to remove it, they had been unsuccessful and had given up. Enter the IDNR Lake and River Enhancement Program and the Soil & Water Conservation District. The SWCD applied for and received a LARE grant which would pay 80% of the cost of the removal up to a total of \$35,000. The Department of Business and Neighborhood Services pitched in by waiving their permit fees. The landowner paid the cash match and the SWCD provided technical & clerical contributions with project oversight.

After many meetings and contractor bids the District chose Solid Rock Contractors who were able to use their wench system (Continued on page 7)



Invasive Highlight: Asian Bush Honeysuckle

Asian Bush Honeysuckle can easily be found in every township in our county. It is a prolific fruiter. The fruit or berry turns from green to black to red/orange as it matures and is high in carbohydrates which is detrimental to migratory birds. Migratory birds need high protein and high fat diets to prepare for long migratory flights. It has an allelopathy effect on other plants causing understory plants to die out resulting in total domination of a site by the honeysuckle. The plant does not host native insects reducing available food for birds. It grows profusely along roads often creating traffic hazards especially at intersections. It is fairly easy to pull small plants growing in moist soil due to shallow root system. Cutting stems low to ground and treating stumps with a systemic herbicide like glyphosate, triclopyr or picloram is the most common treatment to eliminate the plant. Control is a long term project due to seed in the ground and the spread of seed by wildlife.



Bush Honeysuckle takes over the understory.



(LARE project—continued from page 6)

to pull the logs out with minimal environmental impact to the area. While there was not enough finances available to remove all of the logs, the main channel was opened and logs left will actually help to protect the banks, allowing nature to heal the area over time. The project was completed in December.

The city has also been working on a hydraulic study of Buck Creek which has identified high erosion potential locations and existing log jams. Landowners with streams on their properties should understand that they can be held responsible for log jams which occur on their property. The city will not remove these for you. They are limited in using tax dollars for public infrastructure only, not for private land issues. Keep all drainageways free of obstructions and do not put lawn debris in or near the creek where it could wash in, to keep a small obstruction from turning into a huge problem.

For more help maintaining the streams on your property [contact the SWCD](#) and check out our [Stream Steward Guide](#) on our website.



MARION COUNTY
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The Mission of the Marion County Soil & Water Conservation District is to assist Marion County land users in conserving soil, water, and related natural resources by providing technical, financial and educational services.

**** PLEASE NOTE****

SWCD staff work in the office, remotely, and in the field.

To reach us, email marioncountyswcd@iaswcd.org, utilize our website's 'Contact' tab, or call 317-786-1776 to leave a message when staff members are not in the office.



Winter in our part of Indiana usually comes with more than our share of icy sidewalks and roads. Salt (sodium chloride) is often our "go to" to melt our streets, sidewalks and driveways but salt can have an adverse effect on our wildlife, soil & water quality. **Negative Impacts:**

- At high concentrations, sodium chloride is toxic to fish and insects, and at low levels it reduces the reproduction and survival rates of their young.
- Direct road salt splash can kill plants and grass.
- Sodium in road salt can destroy soil stability, decreasing the ability of the soil to filter water, and increasing soil erosion. It can actually cause soil to release more nutrients into water.

Tips for Protecting Our Natural Resources in Winter:

- **Shovel and follow application directions.** The more snow and ice you remove manually during a snowstorm instead of waiting until the end, the less salt or chemical de-icer you will have to use and the more effective it will be when you do use it. Adding more salt than is recom-

mended won't speed up melting, so follow label directions (1 cup per sq. yd) and spread salt out a few inches apart for best results.

- **Less is more.** Save your back and reduce chemical application by evaluating where you need snow removed. Do you need access to every door or the entire patio? Consider paths versus full snow removal of an area.
- **15° F is too cold for salt to melt snow.** Most salts stop working at or below 15F. An alternate is to use small amounts of sand for traction instead, but remember that sand does not melt ice and too much sand can become sediment pollution if it washes into streams or storm drains.
- **Sweep up extra.** If salt or sand is visible on dry pavement it is no longer doing any work and will be washed away into your local streams through a storm drain or ditch system.
- **Pet Safety.** Even if the de-icer says it's safe for pets - look at the ingredients! Calcium and magnesium chloride can burn their paws. Use potassium acetate (hard to find, so ask to create demand) or just use sand.

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Facebook!



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