

Town & Country

Hamilton County Soil & Water Conservation District

Winter 2018

2018 Annual Meeting & Winter Workshop

2018 marks the 50th year of the Hamilton County Soil and Water Conservation District. We are proud of the five decades of conservation development and leadership in our county and hope you will join us to launch this celebration at our annual meeting and workshop. Education sessions, vendor tables, a review of 2017 with a short business meeting, and a delicious buffet lunch await. Join us!

Education Sessions:

Impact of Cover Crops (CCA & CCH credits applied for)

Dr. Shalamar Armstrong, Assistant Professor of Soil Conservation & Management, Purdue University Department of Agronomy

Learn about the impact of cover crop adoption and 4R nitrogen management on cash crop yield and water quality, the influence of mass adoption of cover crops at the watershed scale on water quality, and the synchrony of cover crop residue N release and the nitrogen demand of corn.

Where the Wild Things Were

David Heighway, Hamilton County Historian

Join us for a look at some of the early natural history of Hamilton County and the impact it had on the eventual settlement of the area. Learn how geology, hydrology, forestry, and animal life all combined with human interaction and contributed to why the county looks like it does today.

Dicamba Training* (CCA, CCH and PARP credits applied for)

Joseph Becovitz, Pesticide Program Specialist, Office of Indiana State Chemist

OISC will present mandatory dicamba training which will review dicamba complaints generated in 2017, changes to the 2018 dicamba labels, and how to satisfy those changes.

Indy Wildlife Watch: Using photography to understand how urban wildlife utilize urban and periurban habitats

Dr. Julia Angstmann, Director of Butler Center for Urban Ecology

The Indy Wildlife Watch project at Butler University is part of a growing national network of cities that are utilizing motion-triggered cameras to capture images of wildlife along urban-to-rural gradients. The ultimate goal of this research is to understand the types of habitats medium-to-large mammals are utilizing in metropolitan areas and how species presence and diversity changes in time and space. This information can be used by city planners and land managers to develop conservation and restoration best practices that maximize the benefits of natural areas for both humans and urban wildlife.

PARP Regulatory Meeting* (*Required for PARP Credits) 12:40-1:10 You must attend both PARP sessions to obtain PARP credit. PARP credit has an additional \$10 fee that must be paid the day of event directly to Purdue Extension.

Thursday February 22nd, 2018

8:30 A.M. – 1:00 P.M.

Hamilton County 4-H
Exhibition Center
2003 Pleasant St. Noblesville, IN

\$12 per person (includes lunch)

Registration (required by Feb. 15):

Online via credit card at
www.hamiltonswcd.org

Paper form online or by
request at 317-773-2181

Board of Supervisors

Rodney Rulon, *Chair*
Jared Kakasuleff, *Vice Chair*
Warren Sarber, *Treasurer*
Dustin Forrer, *Member*
Doug Quear, *Member*

Associate Supervisors

Chris Cruzan
Ted Engelbrecht
Amy Jo Farmer
Lisa Meek
Jim Riggs
John Talbot

Office Personnel

Ginger Davis
District Administrator

Mark McCauley
Resource Conservationist

Claire Lane
Urban Conservationist

Sue Fisher
Office Coordinator

Angie Garrison
NRCS District Conservationist

Andy Fritz
Urban Agriculture Conservationist

Town & Country

Published quarterly and distributed to landowners, farm operators, teachers, local agencies, public officials, conservation organizations and other interested individuals.

1717 Pleasant St. Suite 100
Noblesville, IN 46060
317-773-2181
soil.water@hamiltoncounty.in.gov

Impacts Now & Into the Future
Ginger Davis, Conservation Administrator

Agribusiness is one of Indiana’s the top Industries. Traditional agriculture and natural resource concerns such as erosion control, sedimentation, water and soil quality, wildlife, animal waste management, and others will continue to be priorities for our Soil and Water Conservation District. But emerging technology related to precision ag., life sciences, carbon sequestration, and resource recovery will present new opportunities for our conservation district into the future.

Between the years 2010 and 2050, Indiana’s population will increase 15 percent—from 6.48 million to 7.48 million residents—according to population projections released by the Indiana Business Research Center. The 10-county Indianapolis-Carmel metro area has long been the state’s engine of population growth. Between 2000 and 2010, this region added 231,000 residents, which accounted for 57 percent of the state’s total growth. Central Indiana’s role will likely become more dominant in the future.



Futuristic depiction of precision agriculture. Source: Technocracy News

Hamilton County has lost many acres of farm and open land in the last 10 years, and with each day more acres are converted to roads, subdivisions, and shopping centers. Increasing populations and rapid land use change increase the pressure on natural resources as habitats and ecosystems disappear and more pressure is placed on water supplies. Additional pressure to produce more quality food products with less land space has increased the demand for community gardens and more garden space locally. Precision agriculture is reaching new heights with UAV and other technology. Balancing the need for food and the use of land and resources will be a challenge moving forward. The Hamilton County Soil and Water Conservation District is helping to provide holistic planning to help balance the needs and future resources in our communities.

Providing assistance to landowners and encouraging the adoption of best management practices on agricultural and non-agricultural lands to address a wide range of resource concerns defines the future and the importance of local soil and water conservation districts. Utilizing our resources in a smart and holist approach will be the most important part of our future with you – the citizens of Hamilton County. Your input is critical in evaluating the impact & results of new Conservation programs. Drop a line to our Conservation Administrator Ginger Davis at soil.water@hamiltoncounty.in.gov anytime. Remember, we can’t do it without you!

2018 SWCD Board Of Supervisors Election Candidate

Rodney Rulon
Nominations from the floor can also be accepted. Join us at the annual meeting to place your vote!

2017 Native Tree Sale Update

The 2017 native tree sale was a great success with 718 trees sold. Thirty-five species were offered in three gallon containers. Everything from small shrubs like the black chokeberry to large trees like the tulip poplar were available for sale. This sale is the district’s primary fundraiser and critical to our ability to offer cost share funds to county residents. Many thanks to the customers who placed an order and to our team of volunteers who helped our organization and order pick up events run smoothly. If you missed out this year, look for online ordering available in July and an order form in the summer newsletter. More info is also available online.



Support Your SWCD — Become an Affiliate Member

The Hamilton County SWCD is funded for the majority of its expenses by the Hamilton County Council, the State of Indiana, and various grants. Your important financial contribution helps the SWCD to provide additional services and education which help protect and enhance the natural resources in Hamilton County now and for future generations.

Donations are used to help us hold workshops and programs for all age groups, produce educational publications and literature, establish demonstration sites, and support the many services offered by the SWCD. Affiliate membership contributions are tax deductible. Please consult your tax professional for details. All donations are greatly appreciated.

In 2018 the SWCD will celebrate its 50th year. We invite individuals to celebrate with us by supporting at the Anniversary Member level!

Who are SWCD Affiliate Members?

Affiliate members care about the conservation and proper use of Hamilton County's many natural resources.

Members include:

- Farmers
- Landowners
- Businesses & Nonprofits
- Homeowners
- Teachers & schools
- Those who care about our environment.
- Community leaders

Membership Levels

Dogwood Member \$25

- 1 ticket to the SWCD Annual Meeting
- Recognition on website and in one newsletter

Anniversary Member \$50+

- 1 ticket to the SWCD Annual Meeting
- Recognition on website, brochure, two newsletters, and at anniversary open house

Maple Member \$100+

- 2 tickets to the SWCD Annual Meeting
- Recognition on website and brochure and at anniversary open house
- *Small* ad in the 2018 newsletters
- One tree from the tree sale.
- Vendor spot at the SWCD Annual Meeting

Hickory Member \$300+

- 4 tickets to the SWCD Annual Meeting
- Recognition on website and brochure and at anniversary open house
- *Medium* ad in the 2018 newsletters
- Two trees from the tree sale
- Vendor spot at the SWCD Annual Meeting

Walnut Member \$500+

- 4 tickets to the SWCD Annual Meeting
- Recognition on website and brochure and at anniversary open house
- *Large* ad in the 2018 newsletters
- Three trees from the tree sale
- Vendor spot at the SWCD Annual Meeting
- Business logo featured on our website with a link to your website
- Business profile in one newsletter distribution email (1000+ readers)

Affiliate Membership

_____ Dogwood \$25 +

_____ Anniversary \$50 +

_____ Maple \$100 +

_____ Hickory \$300 +

_____ Walnut \$500 +

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Email: _____

Use my business name in print materials.

Send your membership form along with your check payable to:

Hamilton County SWCD
1717 Pleasant Street, Suite 100
Noblesville, IN 46060

Or pay online at:

www.hamiltonswcd.org/affiliate

As allowed by law, this donation is tax deductible.

Microbiomes: The Balance of all things

Ginger Davis, Conservation Administrator

Animals, plants, and microbes have been co-operating with one another for about as long as they have been in existence. There is a lot of the news recently surrounding the Microbiomes, or the microorganisms in a particular environment, especially the human microbiome. The study of these systems has resulted in realizations that the microbiome effects the health of our internal systems. "Scientists are increasingly convinced that the vast assemblage of microfauna in our intestines may have a major impact on our state of mind" (Schmidt, C., Scientific American-March 2015). It is not that far of a stretch to understand how this sort of relationship occurs in the soil too and how our plants depend on these relationships for healthy and resilient growth. Every environment where plants grow have a unique soil food web with a particular proportion of bacteria, fungi, and other groups of critters, and a particular level of complexity within each group of organisms. These differences are the result of soil, vegetation, and climate factors, as well as land management practices.

Grasslands and agricultural soils usually have bacterial-dominated food webs - that is, most biomass is in the form of bacteria. Highly productive agricultural soils tend to have ratios of fungal to bacterial biomass near 1:1 or somewhat less. Forests tend to have fungal-dominated food webs. The ratio of fungal to bacterial biomass may be 5:1 to 10:1 in a deciduous forest and 100:1 to 1000:1 in a coniferous forest. -Elaine Ingham

Like in the human system if we feed and nurture the good microorganisms we can improve the overall health of the body and be more resistant to the few microbes that cause disease and illness. The same is true for the soil microbiome. Increasing food sources for plants with carbon rich soils by increasing the biomass and carbon sources in the soil will encourage the growth of a healthy soil. The plant roots need the fungal community and beneficial bacteria for transfer of minerals, water and nutrients into the plant root. The microbial organisms need the sugars naturally secreted by the roots to thrive. By releasing digestive enzymes into the soil environment, microbes break down dead plants, animals, and other microbes. This process of recycling makes nutrients available to living plants, soil microfauna and microbes. Decomposition by microbes also builds soil organic matter, which gives healthy soils its beautiful dark color, provides rich texture, and stores nutrients, carbon, and water.

So, what does that mean for our landowners? Provide the basic needs of all living things (Food, Water, Shelter, and Safety) and the balancing effect of the system will improve the overall health and long-term durability of the system to thrive even when other stresses (droughts, floods, cold spells, long periods of heat, etc.) occur.

If you are an agricultural producer, leaving residual was the first step and most of our producers now do this as a matter of routine. Some producers are even grinding up the residue to make breakdown quicker and help reducing the clogging of our drainage system. The next step is providing shelter and food sources over the winter. Cover crops not only provides protection for the microorganisms but also provides a root structure for food. After winter and the cover is not needed, the excess biomass can provide additional food sources for other groups and in turn improve the organic matter levels in the soil. Because the soil system is a dark, moist (but not saturate), and insulated many of the basic needs of the living things are meet in an undisturbed system. Reducing the disturbance over time, will encourage the growth of the soil biome and cause an increase in other beneficial properties like structure and drainage capacity.

On the other hand, if you are a resident with a yard, increasing the rooting depth and structure within your yard can improve the health of the soil. Native plants are great for accomplishing this. Many of us want to hold on to our turf, or grass lawns. We are addicted to our lawns, but of what use are they to us? Mowing and input costs to keep a green lawn are creating more of a problem to the health of the soil than the initial disturbance in the construction process. Common treatment programs used for turf and landscape plant care are focused mainly on nutrients, water, weeds and pest or disease control. This does not address the living or organic part of the soil at all. In fact, many common practices are detrimental to the living component of the soil. The soil microbiome is so important for many facets of all plant growth and health including turf.

Healthy soil gives us clean air and water, bountiful crops and forests, productive grazing lands, diverse wildlife, and beautiful landscapes. Soil does all with the help of our microbial friends in the soil microbiome.



The downward spiral that some land treatments can cause.

USDA Seeks Applications for \$10 Million in Conservation Innovation Grants

USDA's Natural Resources Conservation Service (NRCS) is offering grants for innovative ideas for conservation strategies and technologies. NRCS plans to invest \$10 million in the Conservation Innovation Grants (CIG) program, funding innovative conservation projects in three focus areas: grazing lands, organic systems and soil health. Grant proposals are due Feb. 26, 2018.

CIG is funded under the Environmental Quality Incentives Program (EQIP) and works with partners to accelerate transfer and adoption of promising technologies and approaches that address some of the nation's most pressing natural resource concerns. This year, NRCS is focusing funding in these areas:

- **Grazing Lands:** Helping livestock producers make grazing management decisions, encouraging prescribed burning as a grazing management practice, and improving access to conservation planning tools used for developing grazing management plans.
- **Organic Agriculture Systems:** Helping organic producers develop innovative cropping and tillage systems, edge-of-field monitoring, crop rotations, and intercropping systems.
- **Soil Health:** Supporting both cropping and grazing systems, in a variety of climatic zones, that incorporate soil health management systems for addressing specific resource concerns like nutrients and availability. Evaluating multiple soil health assessment methods to assist in the development of new soil health indicators and thresholds.

Potential applicants should review the announcement of program funding available at www.grants.gov, which includes application materials and submission procedures. For more information about NRCS and other technical and financial assistance available through conservation programs, visit www.nrcs.usda.gov/GetStarted or contact your District Conservationist, Angie Garrison, at 765-482-6355 x3.



1967 **HAMILTON COUNTY** 2017
PARKS & RECREATION DEPT.

Celebrating **50** Years of Fun!

myhamiltoncountyparks.com
317-770-4400



Hamilton County Farm Bureau

www.infarmbureau.org
317-773-2431

*If one person can make a difference,
think what thousands of us can do, working together!*

Healthier soils. Better crops.



GYPSOIL
BRAND GYPSUM



www.gypsoil.com
1-866-(GYPSOIL) 497-7645



Waitt
Grain Co., Inc.

22755 Six Points Road
Sheridan, IN 46069
800-622-4794 • 317-758-6060

WOODY WAREHOUSE

Nursery Inc.

www.woodywarehouse.com
317-994-5487
3216 W. 850 N. Lizton, IN 46149
Offering Superior American Native Trees



JOHN WARD CONSTRUCTION INC.
EXCAVATING • BULLDOZING
27649 Gwinn Rd.
ATLANTA, IN 46031
317-984-5404



16222 Allisonville Rd.
Noblesville, IN
317-773-0870

Centered on you.

Peyton Framing
20202 Grassy Branch Road
Westfield, IN 46074
Phone: (317) 896-5000



Pamela Dunn-Louks
SA Certified Arborist

PH: 317-385-6476
EM: pam@in2trees.com
Website: www.in2trees.com

Assisting private & public landowners



Farm Credit Services
OF MID-AMERICA

Zach Murphy
Rick Hahn

4985 N State Road 9
Anderson, IN 46015

Ph: 765-644-7172
zach.murphy or rhahn@e-farmcredit.com

Urban Conservation Spotlight

Claire Lane, Urban Conservationist



Save the Date– Getting Started with Permaculture Workshop

April 14th, 2018 • 9am-3pm • 4-H Fairgrounds Noblesville

Permaculture is a design process by which we mimic the patterns and relationships we find in nature to build a resilient, sustainable, and productive ecosystem. In this daylong workshop, we will explore the ethics and principles of permaculture and how this whole system approach can improve our land and lives. There will be opportunities in the afternoon to learn how to apply these principles to your property whether that is residential and landscape based or a small farm/production focused land. Attendees will walk out with a personalized plan to help them get started. This event is a partnership between the SWCD and Purdue Extension Hamilton County. Look for more details online soon on the events page of our website or email claire.lane@hamiltoncounty.in.gov to be placed on a mailing list for more info.

Tool Loan Program

In 2018, the urban program will be launching a tool loan program to provide less accessible tools to Hamilton County landowners. This program will start small offering propane weed torches and invasive shrub “puller bars” that help provide leverage to pull out invasive shrubbery by the roots. These tools will be available for loan/check out for use on personal property or at community gardens, invasive removal work days, etc. More info will be available as the program is finalized.

Cost Share Deadline Reminder—March 8th

Deadlines for the Heartland Backyard Conservation cost share program and the district’s internal cost share program are March 8th. These programs offer small matching grants to help offset the cost of installing conservation practices. Approved practices include those that benefit water quality, remove invasive species, create wildlife or pollinator habitat, reduce erosion, and more. The first step in taking part in this program is scheduling a site visit with a SWCD conservationist. After development of a conservation plan for your property, we can help you apply for financial assistance. As the process of site visit and plan development can take several weeks, we encourage you to contact the SWCD well in advance of the deadline to get started. A second application deadline will be on August 3rd. For more info including outlines of approved practices, policies, and more, visit www.hamiltonswcd.org or contact Claire Lane at the SWCD.

Pond edge enhancements—solution to common pond issues

Detention ponds dot the landscape of hundreds of Hamilton County communities. While their primary function is stormwater detention and flooding prevention they can also be assets to neighborhoods and boost property values when well maintained. These ponds do face a variety of challenges including erosion, nuisance geese, poor water quality and algae, lack of habitat, poor soil/grass growth, and more. Improving these ponds is the most common request of the urban program at the SWCD and, luckily, the use of pond edge enhancements is a great solution. These enhancements, also called filter or buffer strips, are plantings of native, low stature grasses and wildflowers along the pond bank. The native plants have dense fibrous root systems that stabilize the bank and limit erosion. The native plants absorb excess nutrients that contribute to algae in the water. The plantings discourage geese from coming ashore because of fear of predators. Additionally, once established, the meadow-like planting of beautiful flowering forbs not only creates habitat for pollinators, but creates a softened, beautiful landscape that is more pleasant to recreate in and view. Pond edge enhancements can also include emergent plantings that are planted at the waters edge.



Pond erosion



Edge enhancements

Edge enhancements also have the great benefit that, in some situations, they can pay for themselves over time. Reductions in mowing expenses for HOA’s or fewer pond treatments can offset the cost of planting and maintenance in many cases. These projects also qualify for our cost share programs. If you are interested in edge enhancements for your personal property, HOA, or church contact Claire Lane to set up a free site visit where we can evaluate your pond and prepare a comprehensive plan.

Urban Agriculture Update

Andrew Fritz, Urban Agriculture Conservationist

What do Crop Rotation and Trail Mix have in Common?

Soil is like trail mix. Imagine that each nutrient of the soil (i.e. nitrogen, phosphorus, potassium, calcium, etc.) is a raisin, peanut, pine nut, almond, and chocolate chunk. When considered as a whole, the trail mix represents a balanced soil nutrient profile. Now consider a family gathering where one person, your uncle, eats only the almonds. A single plant, like a tomato, grown in the same location season after season, is like your uncle. This leads to an imbalance in the mix. Similarly, when a single plant, like a tomato, is planted in the same spot year after year, a soil imbalance occurs and the tomato plant is likely to suffer.



This is why rotating crops season to season is important. It helps maintain a balance in the soil. Where there is an imbalance there is likely a disease or pest issue looming. For example, tomato plants, or any plant within the Nightshade family, are susceptible to a fungal disease often referred to as leaf spot. Growing plants within that family year after year in the same location would perpetuate leaf spot. To avoid growing plants from the Nightshade family for a season or more can limit further disease or pest issues.

While some plants remove nutrients from the soil, others add. Legumes, like beans or clover, fix nitrogen in the soil. Other plants, like buckwheat, make phosphorous more available. This further supports crop rotation as a means of soil and garden health.

Methods of Crop Rotation

The basic rule of crop rotation is to plant different plants and varieties of vegetables within the same area from season to season. You may return to the same plant in subsequent years, but not the following season or year.

Rotating by Family

A common method is to rotate by family. There are approximately thirteen families of fruits and vegetables common to the garden. Each family contains a variety of plants. For example, the Brassicaceae family includes vegetables like horseradish, cabbage, broccoli, and kale. It also includes weeds like shepherd's purse and herbs like alyssum. For more information, type the following link into your web browser: <https://goo.gl/mhRYx1>

Rotating by Groups

Another rotation method has more to do with the type of vegetable based on a four-year rotation. These types of garden plants can be referred to as groups; leaves, fruits, roots, and legumes. Each area in your garden would run through this rotation every four seasons.

The leaves group includes salad greens, lettuce, broccoli, cabbage, spinach, and brussels sprouts. Group two is fruits like tomatoes, peppers, eggplant, squash, corn, cucumber, and potatoes. The third group, roots, includes carrots, turnips, onions, beets, and radish. Finally, the fourth group, legumes, includes beans, peas, peanuts, and cover crops like alfalfa or clover.

For more information on this method, type the following link into your web browser: <https://goo.gl/btMU1w>

Go More In-Depth

Crop rotation can be more specific and complex depending on your needs. For more information, please contact Andrew at 317-773-2181.

Hamilton County Garden Network Updates

The inaugural year of the Hamilton County Garden Network was a success. With a mission to sustain a vibrant urban agriculture culture by supporting the knowledge and inspiration of its leaders, we hosted four quarterly meetings, which included discussions on weed management, cover crops, and unique challenges. It also included a site visit to a local community garden.

We are set to continue supporting the nearly 30 community gardens in the county for 2018! To learn more visit www.hamcogardennetwork.org.



Free Garden Technical Assistance

In 2017, the HCSWCD provided technical assistance to nearly 80 vegetable gardeners and farmers on anything from how to start a garden to developing a integrated pest management plan, and more.

If you are interested in starting a garden, improve yield, improving soil quality, or troubleshooting a disease, contact Andrew Fritz at andrew.fritz@hamiltoncounty.in.gov or call (317) 773-2181.

Celebrating 50 Years of Conservation in Hamilton County



We are thrilled to be celebrating our 50th year of conservation leadership in Hamilton County throughout 2018. Join us by becoming a '\$50 for 50' affiliate member. More info on page 3.

If you wish to be removed from our distribution list, to make a name or address change, or to switch to email newsletters, please call 317-773-2181 or email soil.water@hamiltoncounty.in.gov.

All programs and services of the Hamilton County Soil and Water Conservation District are offered on a nondiscriminatory basis without regard to race, color, religion, sex, marital status or disability.