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United States
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Agriculture

Natural Resources Conservation Service

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2020 Annual Report

As early as 1935 USDA Soil Conservation Service (now known as NRCS) began to search for ways to extend conservation assistance to more farmers. They believed the solution was to establish democratically organized soil conservation districts to lead the conservation planning effort at the local level. To create a framework for cooperation, USDA drafted the Standard State Soil Conservation Districts Law, which President Roosevelt sent to the governors of all the states in 1937. The first soil conservation district was organized in the Brown Creek watershed of North Carolina on August 4, 1937. Today, there over three thousand conservation districts across the country. On Thursday, April 9, 1959 the St Joseph County Soil & Water Conservation District was organized as a governmental subdivision of the state of Indiana by John R Walsh, Secretary of State of the State of Indiana.

SWCDs, or Districts, are local units of government that manage and direct natural resource management programs at the local level. We work closely with other forms of local, regional, and state government, private nonprofits, and educational institutions to provide a high level of conservation service to private landowners. We

work to promote the wise use, development, and conservation of our state's soil, water, and related resources in ways that are relevant to our unique county.

The St Joseph County SWCD is located within the USDA service center in Plymouth. This location allows us to work hand in hand with Farm Service Agency (FSA) and NRCS both of which are our closest federal partners. We are also part of the Indiana Conservation Partnership (ICP). The ICP is comprised of eight Indiana agencies and organizations who share a common goal of promoting conservation.

The St. Joseph County SWCD fills a unique and crucial role in conservation and stewardship: that of providing soil and water conservation expertise and services to private landowners. For the last 61 years you have heard us talk about topics like green manure, conservation tillage, and most recently soil health. In our current time where weather extremes are becoming the norm and production challenges are plentiful, we continue to work with individuals to address resource concerns like soil erosion and compaction that can affect soil health and water quality. Over the years as research has progressed, we've learned that many of the



Cover Crop



No-Till



Pollinator Habitat

practices that we promote have other positive impacts on our environment like sequestering carbon and other greenhouse gasses, mitigating floodwater, and reclaiming excess nutrients that could otherwise contribute to algal blooms in surface waters or create other water quality problems. Every practice that goes into place, large or small, is beneficial to our environment! We will continue to strive to provide up to date information, valuable education, and quality technical assistance.



Plymouth Location:	Mishawaka Location:
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Clean Water Indiana Grant Conservation Cropping Systems to Improve Soil Health

The St. Joseph County SWCD, in partnership with Marshall County SWCD have utilized funding through the state’s Clean Water Indiana Grant (CWI) to implement practices that help build soil health, improving soil and water quality in our watersheds. The district’s most recent CWI Grant helped install over 5,000 acres of BMPs in St. Joseph and Marshall Counties. CWI-funded practices such as no-till and cover crops that improve the soil structure and help keep vulnerable soil armored to prevent erosion while increasing the aggregate stability and water and nutrient holding capacity of the soil. Installing native pollinator areas provides much needed habitat for the bees, butterflies, and other pollinators that help produce much of the food that we eat.

The number one pollutant in our water is sediment, but sediment often travels through our water with nitrogen and phosphorus attached, which contribute to algal blooms that create hypoxic zones in our lakes and oceans. We can significantly reduce this pollution by utilizing practices like no-till and cover crops that keep soil in place and uptake excess nutrients which positively impacts our waterways here at home and hundreds of miles downstream.

In addition to the benefits to water quality, these practices also have financial and time benefits. No-tilling reduces the number of trips across the field saving time and fuel costs. The initial cost of applying cover crops should be viewed as an investment rather than an expense. The long-term benefits of planting them include reduced pesticide use and reduced need for fertilizer. Some cover crops can even act as a barrier against weeds! A diverse cover crop mix can provide multiple benefits that reduce crop inputs and costs over time.

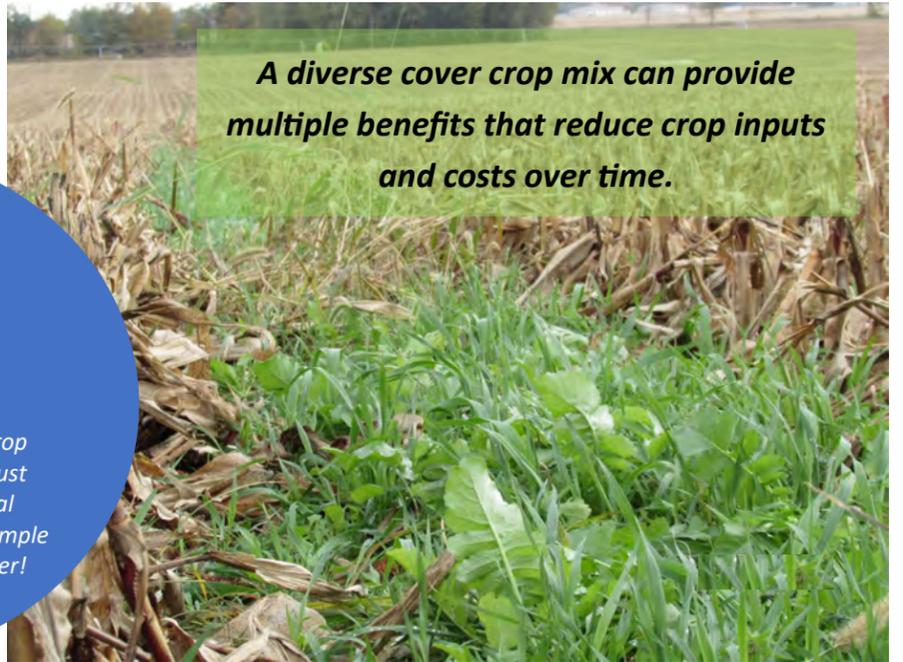
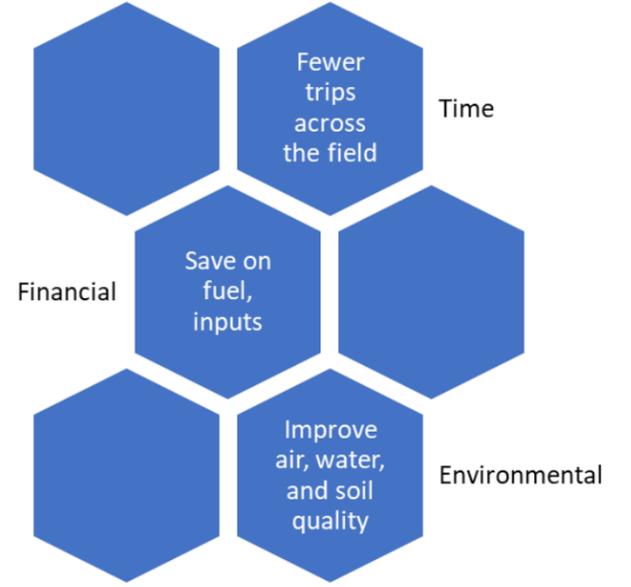
There are also a multitude of environmental benefits! As we look at climate change and the extreme weather events we have been facing, we find a couple of environmental benefits that have a great impact are carbon sequestration (capturing and storing carbon

dioxide) and increased soil water holding capacity. All of our growing crops intake atmospheric carbon as a part of photosynthesis.

Including cover crops in crop rotation increases the amount of carbon that can be stored in soil by increasing the amount of carbon removed from the air and increasing soil organic matter and biology. We have seen a few unprecedented

rainfall events over the last few years. No-till and cover crops help mitigate the effects of these events by reducing the compaction in the soil, increasing the water infiltration through root channels, and increasing soil organic matter.

These are only some of the benefits offered by the district’s Clean Water Indiana Grant-funded practices! Contact our office to learn more!



Did you know that a 1% increase in soil organic matter equals a 20,000 gallon increase in water holding capacity per acre? So, a 50 acre field with 2% organic matter can store 2 MILLION gallons of water. This is the approximate equivalent of 3 Olympic sized swimming pools worth of water!



With over 125,000 acres of crop ground in St. Joseph County just think of how much additional floodwater we could store by simple increases in soil organic matter!

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St Joseph County SWCD Hosts 60th Annual Meeting

On Friday January 31, 2020, the St Joseph County Soil & Water Conservation District (SWCD) held their 60th Annual Meeting at St Hedwig Memorial Center in South Bend, IN. The SWCD was joined by 210 community members which included rural and urban producers and landowners. We were privileged to have Indiana Senator David Niezgodski, Indiana State Representative Ross Deal, and St Joseph County Commissioner Dave Thomas as honored guests.

Our supervisor election was held with candidate John Doods being re-elected to the board for another 3-year term. We want to thank John for his 38years of service and dedication to our district.

Since 1999, key conservation and agricultural organizations have sponsored the River Friendly Farmer (RFF) Program. The statewide initiative recognizes farmers, who through good production management practices helps keep Indiana's rivers, lakes and streams clean. For all his hard work, we

recognized Justin Daube as our 2019 River Friendly Farmer of the Year. We also honored the memory of an honorary board member who passed away in 2019; Bernie Byrd. He joined the St. Joseph Co. Soil and Water Conservation board in 1980 and served for 12 years where he served as chairman as well as serving on several committees. He has been an honorary board member since 1992 after stepping off the board. Bernie has been a great asset for the district and will be remembered fondly.

A big thank you to our 2020 Annual Meeting Speaker Sponsors; 1st Source Bank, 3130 Equipment Co., Bane Welker Equipment, Nancy & Gary Beall, Bellman Oil Company, Beutter Insurance - Andy Beutter, Farm Credit Services, Geyer Construction Co., Joe & Dorene Graff, Green Mark Equipment, Helena Chemical, Peter Holmgren, Lehman & Lehman, McCormick Electrical Services, Inc., Prairie Winds Nature Farms, Ritschard Brothers Inc., Shoemaker Welding, Dorothy Stoner, Randy & Cindi Stoner, and Rick Stoner - Stoner Farms.

The key note speaker was Chad Pregracke, the internationally named 2013 CNN Hero of the Year, founder and president of Living Lands & Waters; a nonprofit river cleanup organization, author and professional public speaker. He is proof one person can make a difference.



Save The Date:

February 24, 2020
61st Annual Meeting

Where: Zoom virtual meeting

Time: 9 am EST

If you would like to attend our virtual Zoom meeting, please contact our office for the link.

2021 Election of Supervisors

Due to COVID-19, the St Joseph County SWCD will not be hosting an in person annual meeting, instead we will be hosting a Zoom virtual Annual Meeting on February 24, 2021 at 9 am EST. During our annual meetings, the district holds an election for board supervisor. This year we are mailing ballots to all landowners in St Joseph County and asking for your vote. If you have not received a ballot and would like one, please contact our office.

Completed ballots must be returned to the SWCD office by February 12, 2021.

SWCD Annual Meeting Voter Eligibility

An individual of voting age (18 or older) or a representative of a firm, limited liability company, or corporation that owns or rents land/property located within the district/county may vote. (Eligible individuals also include the owner and tenant of the same land/property as well as any owner's or tenant's spouse.) The ballot has Chris Matthys and Marty Lappin running for the position of elected supervisor.

Nominee Name: Chris Matthys

Qualifications: Farming on his own since 2012, grew up on a farm in St Joseph County.

Occupation: Farmer corn/soybean/wheat, Peppermint/Spearmint Oil Buyer, prior had been teacher and principal

Conservation Interests: No-Till everywhere possible even tried on muck ground, cover crops

Nominee Name: Marty Lappin

Qualifications: Farming on his own for 30 years, grew up on a family farm in North Liberty

Occupation: Farmer, sells outdoor boilers on the side

Conservation Interests: No-Till, cover crops, beef herd with rotational grazing



St. Joseph & Marshall County SWCD's Host 5th Annual Producer's Workshop

On February 19, 2020 over 50 of our area producers and ag professionals joined us for a day of education and fellowship at our annual producer's meeting. Since 2019 had some rough weather and many fields were forced to stay fallow we wanted to cover topics that were timely and relevant for the 2020 planting season. Bill Johnson, Professor of Weed Science at Purdue University, discussed current weed pressures and methods to deal with them. Jamie Scott, local conservation farmer and cover crop expert, talked about cover crop termination, planting green, and other methods of establishment. He also did us a huge favor and covered our soil health topic since our planned speaker had to cancel at the last moment due to illness. Marshall County Purdue Extension Ag and Natural Resources Educator, Bob Yoder gave a brief Ag outlook and talked about drone technology in agriculture. Our day closed out with Gery Welker, BASF Corporation, doing a Dicamba training for those who needed it.



We Need You

You may think that soil and water conservation affects only farmers but, Indiana's soil and water quality affects the water you drink and the food you eat. If you are concerned about these issues, and want to have a voice in decisions affecting Indiana's soil and water quality and other related natural resource issues, think about becoming involved with the St Joseph County SWCD.

Volunteer We welcome your involvement. Work with us to promote legislative awareness programs for local, state and federal officials. Help us promote urban and agricultural best management practices (BMPs), conservation programs, field days, fundraising, youth and adult education events, surveying and so much more.

Serve as a Supervisor Serve as an elected or appointed representative of your SWCD by serving on our board of supervisors. Identify local soil and water conservation issues and priorities and develop SWCD programs that provide solutions to these local conservation issues. What are the responsibilities of a district supervisor? To be an effective district supervisor requires more than just attending a meeting. Supervisors are encouraged to serve on various committees within the district and /or state and have a key role in establishing

natural resource policy. Part of their role is to educate the public about soil and water conservation. They also help in the development of tours, newsletters, displays and much more. The ways in which district supervisors can contribute are endless.

Serve as an Associate Supervisor Although associate supervisors are a non-voting position, we encourage their attendance at monthly board meetings and provide input to the SWCD board on soil and water conservation issues and programs. Associate Supervisors are also encouraged to serve on district committees and help with tours, education and workshops.

Benefits of Serving Being a part of the St Joseph County SWCD has many benefits, including:

- ◆ Serving for a cause in which you personally believe
- ◆ A chance to use your skills and experiences and explore your own strengths
- ◆ Give back to your community
- ◆ Help save soil and water resources for generations to come

The SWCD works closely with the USDA Natural Resources Conservation Service (NRCS), Farm Service Agency (FSA), and other Indiana Conservation Partnership (ICP) agencies. There is a popular misconception that local SWCD and the USDA NRCS are one and the same. This is untrue. While the two often work together within the same office, the district administers its own programs and assists with programs offered by the other agency partners. NRCS provides additional technical assistance and guidance as well as their own programs to complete BMP's.

Take a look around you. The conservation practice in the field near you may belong to someone involved with the SWCD already! Supervisors, Associate Supervisors and other volunteers of the SWCD practice what they preach and usually have farms and/or land to prove it with conservation practices installed.

For more information about becoming a St Joseph County SWCD supervisor, associate supervisor or volunteer, contact our office at (574) 936-2024 Ext. 4 or email us at info@stjosephswcd.org. More information about our district is available on our website, including our 2018-2022 business plan, programs, upcoming events, resources, and so much more. Board meetings and several of our programs are open to the public and we encourage you to join us at any time.



In Memoriam

In Memory of James (Jim) LaFree
August 6, 1934 - September 28, 2020

Jim was a 30 year member of the St Joseph County SWCD Board. Jim served as an Associate Supervisor since 1990. From 2010-2013 he served as an Appointed Supervisor and in 2011 he was the Vice-Chairman of the board. Jim was a lifelong resident of the South Bend area. On June 23, 1956 in Mishawaka, he married his beautiful wife, Marianne Kreiter, who survives. James was an electrician for 30 years, then became an Electrical Inspector for the city of South Bend for five years and retired in 1999. He was also involved with the St. Joseph County Farm Bureau, the Centre Township Lions Club and was a member of the Friends of 4-H for 50 years. Jim has been a great asset for the district and will be remembered fondly. To plant memorial trees in memory of Jim, visit: <http://bit.ly/JimLaFree>



SWCD Board of Supervisors

<p>John Dooms Chairman 39 Years of Service</p>		<p>Jeremy Cooper Vice - Chairman 10 Years of Service</p>				<p>ASSOCIATE SUPERVISORS Chuck Lehman *40 years* Randy Matthys *33 years* Richard Schmidt *35 years* Dru Wrasse *13 years* Dave Straughn *3 years*</p> <p>HONORARY BOARD MEMBERS Jerry Knepp Keith Lineback William Millar</p>		
<p>Mike Burkholder Supervisor 8 Years of Service</p>		<p>Dave Craft Supervisor 20 Years of Service</p>		<p>Dave Vandewalle Supervisor 11 Years of Service</p>				



A big heartfelt thank you to all of our Supervisors & Associate Supervisors, as well as our partnership staff. Without all of you we would not be able to accomplish all that we have this year and in the years to come!

Healthy Soils Are: Full of Life

MANY PEOPLE DON'T REALIZE THAT SOIL, ESPECIALLY HEALTHY SOIL, IS FULL OF LIFE.

Millions of species and billions of organisms make up a complex and diverse mix of microscopic and macroscopic life that represents the greatest concentration of biomass anywhere on the planet. Bacteria, algae, microscopic insects, earthworms, beetles, ants, mites, and fungi are among them. All together, their value has been estimated at \$1.5 trillion a year worldwide.

Estimates vary, but if you could weigh all the organisms in the top six inches of soil on an acre of land, you'd find they would weigh between 2,500 pounds to more than 5,000 pounds, depending on how healthy the soil is. That is a LOT of life. What these low-lying creatures lack in size, they make up for in numbers. Consider bacteria, the soil microbes with the highest numbers, for example. You can fit 40 million of them on the end of one pin. In fact, there are more soil microorganisms (microbes for short) in a teaspoonful of soil than there are people on the earth. These microbes, which make up only one-half of one percent of the total soil mass, are the yeasts, algae, protozoa, bacteria, nematodes, and fungi that process soil into rich, dark, stable humus.

Like other living creatures, the organisms in the soil also need food and shelter. Some feed on dead organic matter, and some eat other microbes. As a group, they cycle nutrients, build the soil and give it structure.

The healthiest soils are those with a diversity and abundance of life. Farmers with

the healthiest soils nurture that life by creating a diversity of plant life above the soil surface, with year-round ground cover, no tillage, and judicious pesticide use. Fully realizing the soil is full of life is a game-changer for producers who are farming with healthy soils in mind. For those producers, farming centers around feeding the organisms that build healthy soils. These farmers understand that tillage, the turning of the soil that has been the standard for growing crops for years and years, is disruptive to soil microbes and destructive to the soil system. Instead, they disturb the soil as little as possible. And, they grow a diversity of living plants in the soil as much of the time as practical, covering the soil and offering food to soil microbes through living roots. Those soil organisms, in turn, cycle nutrients back to the plant, allowing it to grow and flourish.

It's a natural, symbiotic system that leads to healthy soils and more sustainable and profitable agriculture.



ORGANISM WHAT DOES IT DO?

BACTERIA Feed on organic matter, store and cycle nitrogen, and decompose pesticides.

FUNGI Up to 3,000 species of fungi are in the soil. Some feed on dead organic matter like crop residues that are more difficult to break down—others are parasites that attack other microbes. Some fan out from the root to get more nutrients and hold more water for the plant, delivering nutrients to the plant in exchange for

PROTOZOA Eat bacteria, fungi, and algae. When they eat bacteria, their main food source, they **unlock nitrogen that's released into the soil environment** slowly. They convert organic nitrogen to inorganic nitrogen

MITES Decompose and shred organic matter as an important part of the nitrogen cycle.

NEMATODES These microscopic worms are an important part of the nitrogen cycle. Most are non-pathogenic and don't cause disease. They eat other organisms in the

EARTHWORMS Expel partially decomposed organic matter, produce nutrient-rich casts, and make lubricated tunnels that aid soil

Note: It's important to know how these organisms contribute to building healthy soil, but it's also important to know what harms them. Both tillage and the non-judicious use of pesticides can harm these important organisms.

**WANT TO LEARN MORE? VISIT
WWW.NRCS.USDA.GOV**

Soil biodiversity: the hidden world beneath our feet

Plants nurture a whole world of creatures in the soil, that in return feed and protect the plants. This diverse community of living organisms keeps the soil healthy and fertile. This vast world constitutes soil biodiversity and determines the main biogeochemical processes that make life possible on Earth.

MEGAFUNA Toads, moles, beavers, rabbits and badgers are the principal agents of soil turnover and distribution.

MACROFAUNA Earthworms, termites, ants, millipedes and woodlice help with soil drainage and aeration.

MESOFAUNA Microscopic invertebrates such as collembolans, diptera, proturans, nematodes, mites and tardigrades are biological regulators of decomposition.

MICROFAUNA AND MICROORGANISMS Bacteria, protozoans, fungi and nematodes are the smallest and most numerous organisms in the soil. That are responsible of biogeochemical processes.

Soil layers: Surface litter, O-horizon, Topsoil, A-horizon, Subsoil, C-and E-horizons, Parent material, Bedrock.

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Why Are Conservation

Listed below are the acres and/or number of conservation practices installed in St Joseph County during the 2020 fiscal year and why they are important for conservation.

<p>Crop Production</p> <p>2,973 Acres of Cover Crops</p> <ul style="list-style-type: none"> ◆ Reduce erosion from wind and water. ◆ Maintain or increase soil health and organic matter content. ◆ Reduce water quality degradation by utilizing excessive soil nutrients. ◆ Suppress excessive weed pressures and break pest cycles. ◆ Improve soil moisture use efficiency. ◆ Minimize soil compaction. ◆ Provide food and escape cover for wildlife. <p>542 Acres of No-Till</p> <ul style="list-style-type: none"> ◆ Reduce sheet, rill and wind erosion. ◆ Maintain or increase soil health and organic matter content. ◆ Reduce greenhouse gas emissions. ◆ Reduce energy use. ◆ Increase plant available moisture. ◆ Provide food and escape cover for wildlife. <p>1,287 Acres of Irrigation Water Management</p> <ul style="list-style-type: none"> ◆ Improve irrigation water use efficiency. ◆ Minimize irrigation induced soil erosion. ◆ Reduce energy use. 	<p>1,040 Acres Nutrient Management</p> <ul style="list-style-type: none"> ◆ To budget, supply and conserve nutrients for plant production ◆ To minimize agricultural non-point source pollution of surface and groundwater ◆ To properly utilize manure or organic byproducts as a plant nutrient source ◆ To maintain or improve the physical, chemical and biological condition of the soil <p>358 Acres Use of Soil Health Assessment to Determine Cover Crop Mix</p> <ul style="list-style-type: none"> ◆ To evaluate and assess the cover crop mix's impact on soil health and organic matter levels <p>467.9 Acres Split Application of Nitrogen Based on PSNT Test</p> <ul style="list-style-type: none"> ◆ Improves the efficiency of nutrient uptake ◆ Protects water and air resources <p>514.6 Acres Precision Application to Apply Nutrients</p> <ul style="list-style-type: none"> ◆ Maximize nutrient use efficiency ◆ Protect surface and groundwaters <p>2 Grade Stabilization Structures</p> <ul style="list-style-type: none"> ◆ Stabilize grade ◆ Reduce erosion ◆ Improve water quality 	<p>1 Acre Critical Area Planning</p> <ul style="list-style-type: none"> ◆ Stabilize areas with existing or expected high rates of erosion by wind or water ◆ Stabilize stream and channel banks, pond and other shorelines, earthen features of structural conservation practices   
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	<p>Wildlife Habitat</p> <p>271 Acres Conservation Cover (pollinator/monarch habitat)</p> <ul style="list-style-type: none"> ◆ Native Grasses and Forbs ◆ Reduce sheet, rill and wind erosion and sedimentation. ◆ Reduce ground and surface water quality degradation by nutrients and surface water quality degradation by sediment. ◆ Reduce emissions of greenhouse gases. ◆ Improve soil health. ◆ Enhance wildlife, pollinator and beneficial organism habitat. <p>15 Acres Upland Wildlife Habitat Management</p> <ul style="list-style-type: none"> ◆ Enables movement of wildlife. ◆ Provides shelter, cover, and food in proper amounts, locations and times to sustain wild animals that inhabit uplands during a portion of their life cycle. 	<p>4.6 Acres Leave Standing Crop Over Winter</p> <ul style="list-style-type: none"> ◆ Provides food for wildlife over the winter months when options are scarce. <p>156 Acres Early Successional Habitat Management</p> <ul style="list-style-type: none"> ◆ To provide habitat for species requiring early successional habitat for all or part of their life cycle <p>53,230 Feet Firebreaks</p> <ul style="list-style-type: none"> ◆ Contain prescribed burns ◆ Reduce the spread of wildfires <p>6 Acres Restoration of Rare or Declining Habitats</p> <ul style="list-style-type: none"> ◆ To restore the physical conditions and/or unique plant community on sites that partially supported, or once supported, a rare or declining natural community 
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Practices Important?

Forestry

42 Acres of Tree and Shrub Establishment

- ◆ Provides forest products such as timber, pulpwood, etc.
- ◆ Provides wildlife habitat
- ◆ Provides long term erosion control and improvement of water quality
- ◆ Stores carbon in biomass
- ◆ Reduce energy usage
- ◆ Improving or restoring natural diversity
- ◆ Enhancing aesthetics

50 Acres Forest Stand Improvement

- ◆ Improve and sustain forest health and production
- ◆ Reduce damage from pests and moisture stress
- ◆ Initiate forest stand regeneration
- ◆ Restore and maintain natural plant communities
- ◆ Improve wildlife and pollinator habitat



151.7 Acres Brush Management Invasive Species Control

- ◆ Restore or release desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, or enhance hydrology
 - ◆ Maintain or enhance fish and wildlife habitat
 - ◆ Pervasive plant species are controlled to a desired level of treatment that will ultimately contribute to the maintenance of the natural area
 - ◆ Create the desired plant community consistent with the ecology of the site
- ### 1 Acre Riparian Forest Buffer
- ◆ Restore riparian plant communities
 - ◆ Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms
 - ◆ Reduce excess amounts of sediment, organic matter, nutrients and pesticides in surface water and reduce excess nutrients and chemicals in shallow groundwater flow

1,327 Feet Windbreak/Shelterbelt Establishment

- ◆ Reduce soil erosion from wind
- ◆ Protect plants from wind related damage
- ◆ Manage snow deposition
- ◆ Provide shelter for structures, animals and people
- ◆ Provide noise and visual screen
- ◆ Reduce energy use

1 Forest Management Plan Written

- ◆ Develop a site-specific forestry plan which identifies resource concerns where forestry-related conservation activities or practices will be planned and applied



Other

2 Seasonal High Tunnels (3,642 Square Feet)

- ◆ Improve plant health and vigor.
- ◆ Extend growing season.

30 Acres Wetland Restoration and 2 Acres Shallow Water Development and Management

- ◆ Increases the capacity of specific wetland functions by enhancing hydric soil functions, hydrology and vegetation.
- ◆ Enhances plant and animal habitats.

1 On-Farm Secondary Containment Facility

- ◆ Control accidental release of oil and petroleum products to prevent contamination of groundwater and surface waters
- ◆ Provide measures for a safe, effective and timely clean up of a spill or leak



Livestock

2,200 Square Feet Heavy Use Protection Area

- ◆ To provide a stable, non-eroding surface for areas frequently used by animals, people or vehicles
- ◆ To protect or improve water quality

89 Feet Lined Waterway

- ◆ Provide for safe conveyance of runoff from conservation structures without causing erosion or flooding
- ◆ Stabilize existing and prevent future gullies
- ◆ Protect and improve water quality

774 Feet Livestock Pipeline

- ◆ Convey water to points of use for livestock or wildlife
- ◆ Reduce energy use

32 Acres Forage and Biomass Planting

- ◆ Reduce soil erosion
- ◆ Improve soil and water quality
- ◆ Improve and maintain livestock nutrition and health
- ◆ Provide or increase forage supply during periods of low forage production
- ◆ Produce feedstock for biofuel or energy production



4 Acres Prescribed Grazing

- ◆ Improve or maintain quantity or quality of forage for grazing and browsing animals health and productivity
- ◆ Improve and maintain water quality, soil health, and watershed function

118 Feet Trails and Walkways

- ◆ Provide and improve animal access to forage, water, work/handling facilities or shelter
- ◆ Facilitate improved grazing efficiency and distribution
- ◆ Protect ecologically sensitive, erosive or potentially erosive sites

2 Acres Watering Facility

- ◆ Supply daily water requirements
- ◆ Improve animal distribution
- ◆ Provide a water source that is an alternative to a sensitive resource



5,676
Acres Applied

**Area farmers & landowners
in St. Joseph County
received \$2,225,044.00
through federal programs in
2020.**

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InDNR Urban Biologists

Designed primarily as “people habitats,” urban landscapes provide unique challenges and opportunities for wildlife conservation. The Indiana Department of Natural Resources, Division of Fish & Wildlife (DFW) created the Urban Wildlife Program to specialize in promoting sustainable, wildlife-friendly practices in Indiana’s most populated areas.

Currently, DFW has two urban wildlife



biologists who work with private businesses, local governments, and individual citizens to develop attractive landscapes that provide habitat for desired wildlife, reduce wildlife conflicts, improve water quality, and increase outdoor recreation opportunities.

The current list of initiatives on which the Urban Wildlife Program focuses includes:

1. Keeping wildlife wild – reducing conflict with and habituation of wildlife through effective landscape modification and education
2. Lose the lawn and go native – encouraging the replacement of high-maintenance turf grass and invasive species with lower-maintenance, native landscaping
3. Conserving pollinators – providing habitat for many of our imperiled pollinators including bees, butterflies, and others

Services provided by the Urban Wildlife Program include cost-share opportunities for habitat establishment on qualifying projects,

Before

After



technical assistance for wildlife-friendly planning and development, educational presentations and workshops, and guidance to prevent and reduce conflicts with wildlife (excluding animal removal).

Currently, urban biologists assist in Allen, Elkhart, Hamilton, Hendricks, Johnson, Marion, and St. Joseph counties. For more information about habitat assistance, visit wildlife.IN.gov/2352.htm or find your local biologist at wildlife.IN.gov/2716.htm.

How Pheasants Forever/Quail Forever Farm Bill Wildlife Biologists Works with SWCD and NRCS



In Indiana, we currently have 4 Pheasants Forever/Quail Forever Farm Bill Wildlife Biologists. Although we are employed by Pheasants Forever/Quail Forever, our positions are in partnership with the Natural Resources Conservation Service (NRCS) and the Indiana Department of Natural Resources (DNR). Each of us are stationed in an NRCS Area Office and work closely with NRCS and Soil and Water

Conservation Districts (SWCD) to promote wildlife habitat throughout the state, with a primary focus on early successional habitats, i.e. native wildflower and grass plantings. We often accompany NRCS and SWCD staff when making site visits with landowners interested in improving or establishing wildlife habitat on their property and can help make recommendations on how to accomplish the goals they have in mind. Many times, there is a program available to help those landowners cover the cost of installing the habitat, and we can provide guidance on navigating the ins and outs of each of these cost share opportunities.

The native wildflower and grass plantings we focus on are beneficial to a whole host of wildlife species including quail, pheasants, deer, turkey, and songbirds, as well as beneficial insects. Not only do these plantings support

wildlife, but they also do a fantastic job of reducing erosion and filtering runoff, leading to more sustainable agriculture and cleaner water. In many situations, farmers can install wildlife friendly practices on unproductive areas of the farm, which can lead to higher average yields and reduced input cost across their operations, while reducing erosion and improving water quality.



In addition to providing individualized assistance to landowners, we also help our local Pheasants Forever and Quail Forever chapters deliver our organization’s mission of the “conservation of pheasants, quail, and other wildlife through habitat improvements, public awareness, education, and land management policies and programs.” Our dedicated chapter volunteers have made a lasting impact on wildlife across the state through planting habitat and helping to introduce youth to the outdoors.

If you are interested in improving wildlife habitat on your property or have an interest in joining like minded conservationists through a local Pheasants Forever/Quail Forever chapter, reach out to the Northeast Wildlife Biologist, Ryan Owen at 260-226-5884 or rowen@pheasantsforever.org.

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St Joseph County SWCD

for your service to our community!

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St Joseph County January—December 2020 Financial Report

Balances in checking and savings accounts:

Name of Bank	Date of Statement	Statement Balance
PNC - Checking	12/31/20	\$6,773.48
PNC - Savings	12/31/20	\$133,523.18
Total:		\$140,296.66

Outstanding checks:

Ck# 11308	\$16.92	
Ck# 11593	\$4,000.00	
Total outstanding checks		\$4,016.92
Adjusted bank balance		\$136,279.74
Cash Change Fund		\$40.00
Total Cash Available		\$136,319.74

Balance Brought Forward		\$ 148,539.36
R122	State Funds for Soil/Water Operations	\$ 10,000.00
Federal and State Grants and Distributions -		
R134	Other	\$ 7,362.01
R423	Other Charges for Services, Sales, and Fees	\$ 8,134.34
R902	Earnings on Investments and Deposits	\$ 301.26
R908	Donations, Gifts, and Bequests	\$ 4,989.00
TOTAL (balance forward + receipts)		\$ 179,325.97
D101	Salaries and Wages	\$ 1,400.00
D201	Office Supplies	\$ 1,336.30
D202	Operating Supplies	\$ 2,378.98
D302	Communication and Transportation	\$ 2,322.27
D303	Printing and Advertising	\$ 3,885.89
D304	Insurance	\$ 1,705.53
D306	Repairs and Maintenance	\$ 87.83
D312	Other Services and Charges	\$ 14,109.44
D707	Other Disbursements	\$ 15,819.99
TOTAL DISBURSEMENTS		\$ 43,046.23
BALANCE AT DECEMBER 31		\$ 136,279.74

2020 Total Income = \$30,786.61
2020 Total Expenses = \$43,046.23
Net Income for 2020 = -\$12,259.62
2020 Beginning Balance = \$148,539.36
2020 Ending Balance = \$136,279.74



If you have questions about our financial report, contact Sandra Hoffarth, Administrative Assistant and Treasurer, at the SWCD office (574) 936-2024 Ext. 4 or info@stjosephswcd.org.

SWCD/NRCS Partnership Staff

 <p>Sarah Longenecker, SWCD County Conservationist 7 Years of Service</p>	 <p>Sandra Hoffarth, SWCD Administrative Assistant 6 Years of Service</p>	 <p>Sam Buchanan, SWCD Environmental Education Coordinator 1 year of Service</p>	 <p>Debbie Knepp, USDA NRCS District Conservationist 37 Years of Service</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

St. Joseph County Soil And Water Conservation Partnership



Helping St. Joseph County residents improve their natural resources through conservation and education.



Mission: *Helping People help the Land*

Vision: *Productive Lands Healthy Environment*



To facilitate the protection and enhancement of Indiana's land and water.

PURDUE COOPERATIVE EXTENSION SERVICE (USDA)
 Extension Educator - Agriculture & Natural Resources & County Extension Director: Rachel Rawls
 Extension Educator - Health & Human Sciences: Olivia Western
 Program Assistant—Health & Human Sciences: Nathan Kesler
 Extension Educator—4-H Youth Development: Karin Gilbert
 District Secretary: Michele Poitras
 Secretary: Julynne Freeland, Michele Poitras, & Cara Alderfer
 Nutrition Education Program Assistant: Nicole Rehlander, & Lindsay Witwer
 Expanded Food & Nutrition Education Program Advisor - Jennifer Noie
 Nutrition Education Program Community Wellness Coordinator - Rebecca Lies



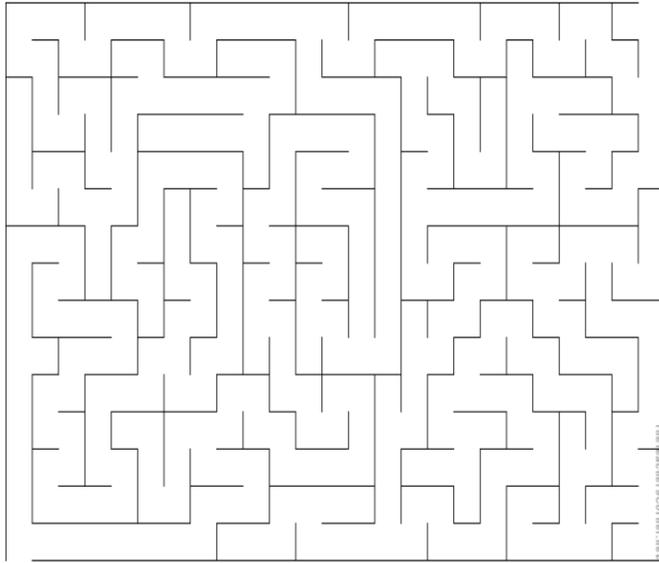
FARM SERVICE AGENCY (USDA)
 Gideon Nobbe - County Executive Director
Program Technician's:
 Devan Harrell
 Katie Leitch
 Aldona Martin
 Tara Wolfe

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Kids Corner

Monarch butterflies are important pollinators that need milkweed to survive. Monarchs can sometimes run into trouble when they are trying to get to milkweed. Finish the maze to help the monarch get to the milkweed safely!

Start here 



Soil and Water Word Search

E U E B W T L N P R E K X F T
 T R R R M J V V O S R Q A Y N
 T N U B U X Z T Q O O X U Q E
 P F B T A T A V D I S C M F M
 R O H N L N A R X L I J F J N
 J M L G I U I N R U O O N F O
 H N Q L L F C D E Y N F W N R
 Y B L F U F B I M U I S A Y I
 Y O N O I T A V R E S N O C V
 P W A T E R I D A G Y S M O N
 T S O P M O C O F G A M F I E
 Z H Z U N C Q W N L E Z S P E
 J D R E S O U R C E S G Y I V
 R O E G M W C I C R F V I F G
 Y O B D F E B X U Y O B P B A

- | | | |
|-------------|------------|--------------|
| AGRICULTURE | COMPOST | CONSERVATION |
| ENVIRONMENT | EROSION | FARMER |
| NATURE | POLLINATOR | POLLUTION |
| RESOURCES | RUNOFF | SOIL |
| URBAN | WATER | |

Discover Cover Crops

EDARIHSS _____ GSRYEARS _____
 AOTS _____ ERCLAE EYR _____
 ROLCVE _____ IYRAH CTVHE _____

1) radishes; 2) oats; 3) clover; 4) ryegrass; 5) cereal rye; 6) hairy vetch

Soil is the upper layer of the earth where plants grow. Humans and animals need soil to grow their food. What is soil? Soil is made up of mineral particles and organic material. Over time, these particles form layers called horizons. If you dig a deep enough hole, you can see the horizons

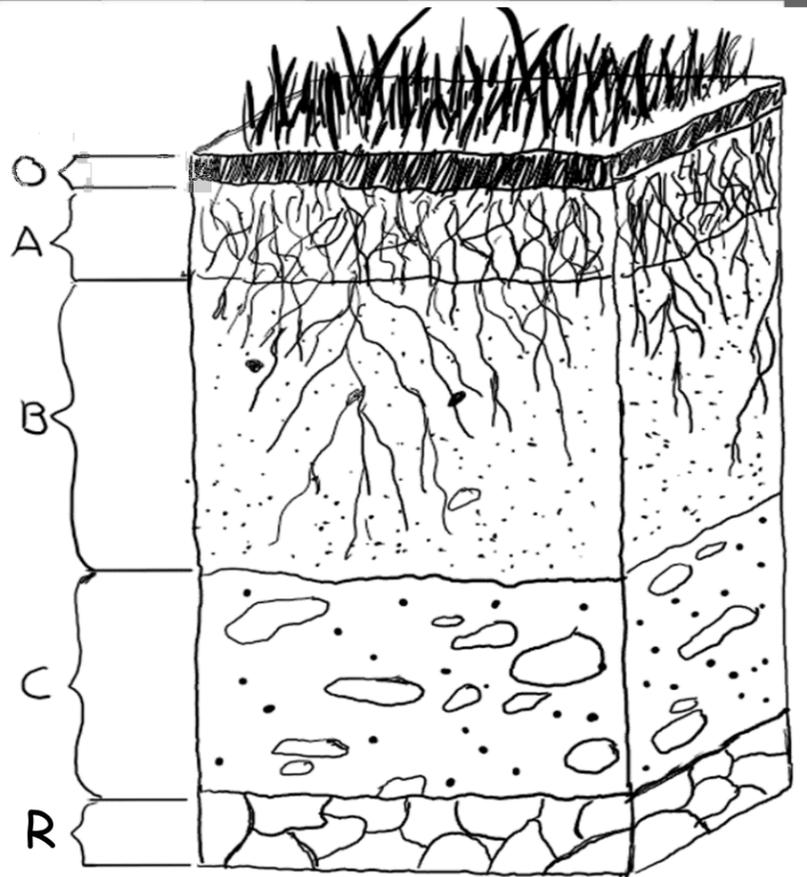
The **O Horizon** is the top layer of soil. It is made up of plants that have fallen on the ground and decayed and keeps the soil very healthy. The decomposed plant litter breaks down into nutrients that make the soil healthier and help form the next layer. **Color the O Horizon dark brown.**

The **A Horizon** is also called topsoil. This is where plant roots grow best. It is also home to many bacteria and fungi that help the soil grow plants and hold water. **Color the A Horizon gray.**

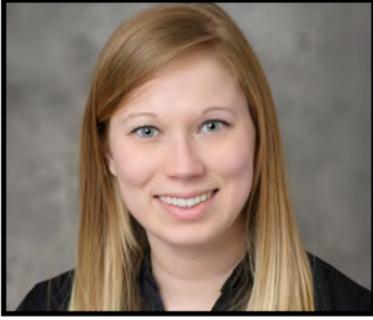
The **B Horizon** is also called subsoil. It is tougher and harder for plants and animals to use. It has lots of clay and other compounds that seep down from the upper layers. **Color the B Horizon brown.**

The **C Horizon** is also called the substratum. It is rocky from larger pieces of weathered rocks and has fewer living things. **Color the C Horizon tan.**

The **R Horizon** is also called bedrock. It lies beneath the soil and is very, very deep. **Color the R Horizon black.**



Connecting with Purdue Extension St. Joseph County



Rachel Rawls, Agriculture and Natural Resources Educator and County Extension Director
With a year like 2020, one could choose to look back with a “glass half empty” or “glass half full” perspective. At Purdue Extension in St. Joseph County, we choose to reflect on these hurdles with opportunity for innovative programming and better ways to improve our connection with the community. Like it or not, this year has forced many to think outside of the box and operate in new ways. Purdue Extension was not immune to

the changes and many Extension Educators learned how to work from home and host virtual programs for the first time ever. Through it all we found new methods for interacting with the community and continued to make significant impact across the state through technology. Our Extension Master Gardener volunteers continued their necessary work at community gardens and donated over 700 pounds of fresh produce to local shelters, our 4-H youth participated in their first ever virtual county fair, and farmers joined Extension Educators and Specialists online for Pinney Purdue Field Day.

We are excited to continue offering agriculture and natural resources programs for our county and the surrounding area in 2021 through innovative and safe approaches. Local residents of St. Joseph County recently joined a cohort to become Extension Master Gardener volunteers and participated in the first ever statewide Extension Master Gardener Basic Training online course. Local female farmers and producers will have the opportunity to join two exciting programs in 2021: ‘Annie’s Project’ and ‘Annie’s Project for Urban Farming’. Annie’s Project is a national program that empowers female farmers and producers to become more confident and involved

with their family farm operations. We’re excited to announce that we will also be offering ‘Annie’s Project for Urban Farming’, which focuses on minimizing the risks that women who farm in urban areas face. These are two new programs to

St. Joseph County and we are hopeful that we reach those who have not typically been served by Extension programming. Other new and exciting programs coming to St. Joseph County are the Grass to Garden program that prepares community members to build sustainable community gardens and a DIY Lawncare course for homeowners. To make these events safe for attendees, Extension Educators are currently exploring hybrid viewing options to allow for in-person and virtual viewing.

Throughout all of these programs a common topic is soil health and water quality. These are two reoccurring issues regardless of where you live in the county. In addition to the programs previously mentioned, we are excited to announce that Purdue Extension has partnered with the NRCS/SWCD across the state for an urban conservation agreement that will offer educational opportunities on soil health in Indiana.

For more information on future programming and events, please contact our Extension Educator, Rachel Rawls at rwgingt@purdue.edu or 574-235-9605.



St Joseph County SWCD Environmental Education Coordinator

As the coronavirus crisis hit and Indiana began to “hunker down”, requests for in-person SWCD education programming slowed dramatically. District Environmental Education Coordinator (EEC) Sam Buchanan began offering remote curriculum designed as an option for folks who would like to utilize SWCD educational opportunities during remote learning. Teachers from both public and private schools as well as colleges reached out to her for curriculum design and custom presentations. Topics included water footprint and conservation, Indiana’s natural resources, and teaching how to use environmental education in the elementary classroom. In addition to offering custom curriculum and presentations, the EEC also created many online presentations, videos, and lesson plans available on the SWCD website

(www.stjosephswcd.org/education) for visitors to access. Topics included watersheds, soils basics, erosion, the rock cycle, cover crops, wildlife, and pollinators. When the Indiana Terrestrial Plant Rule came into effect, she created a video presentation to help residents better understand and be in compliance with the rule.

The EEC began working with a South Bend elementary school to help them revive and rebuild a wetland nature trail that had previously been installed in the forest behind the school building. She created an accompanying wetland-centered curriculum and fall weather curriculum for teachers to use when guiding students through the trail.

The EEC held a community BioBlitz program for families to explore the natural world and identify species, as well as a few various in-person programs for an elementary school class and college program. In addition to education and outreach programming, the EEC also assisted in writing the district’s 2021 Clean Water Indiana (CWI) Grant to help the district continue to provide technical and financial assistance to landowners who wish to implement soil health best management practices (BMPs) on their properties. The district was later awarded this grant.



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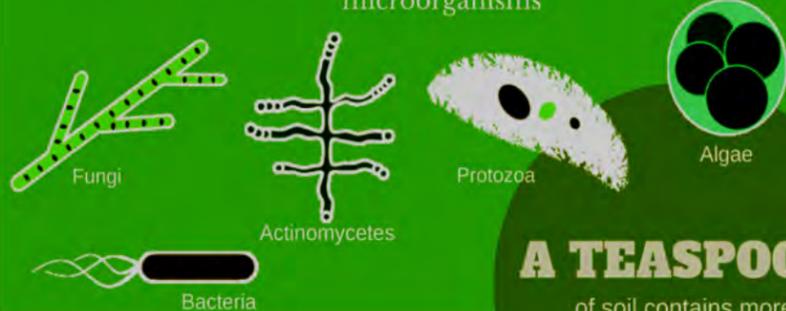
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Microorganisms

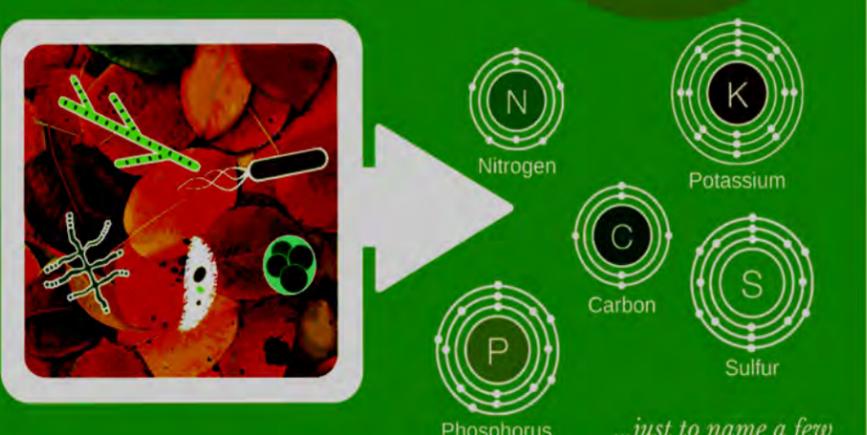
A WORLD BENEATH YOUR FEET!

One of the least appreciated aspects of healthy, living soil are microorganisms



A TEASPOON of soil contains more microorganisms than there are people on the planet.

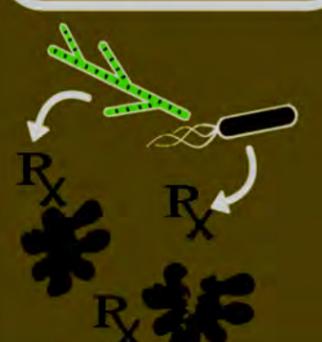
Microorganisms break down organic matter into compounds that feed plants and animals



...just to name a few

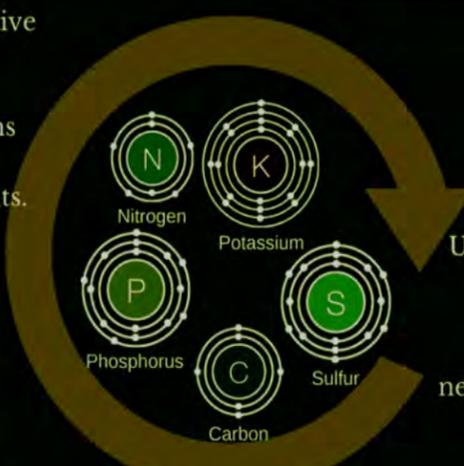
Microorganisms also help keep the soil environment healthy

Some naturally-occurring bacteria and fungi produce antibiotics that kill pathogens



Competition for resources in a healthy, well-populated soil keeps levels of "bad" bacteria and fungi low, preventing diseases from taking hold.

Soil that is biologically active with a healthy balance of microorganisms will use and recycle nutrients.



Unbalanced soils will be less efficient in recycling and need the constant application of high levels of fertilizer.

"Healthy Soil Creates a Healthy Lawn"

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