



St. Joseph
County
Soil & Water
Conservation
District



Today's Visions for Tomorrow's Future

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What's Going On...

Events hosted by the St. Joseph County SWCD
& Our Partners in Conservation

September

4th - Labor Day - Office Closed

19th - Monthly Board Meeting
Open to the Public 7 PM
LOCATION: Alligator Room Centre Township Library at Kern and Miami Roads in South Bend - 1150 Kern Road South Bend, IN 46614

October

9th - Columbus Day - Office closed

17th - Monthly Board Meeting
Open to the Public 7 PM
LOCATION: Alligator Room Centre Township Library at Kern and Miami Roads in South Bend - 1150 Kern Road South Bend, IN 46614

November

10th - Veteran's Day - Office Closed

21st - Monthly Board Meeting
Open to the Public 6:30 PM
LOCATION: Butterfly Room Centre Township Library at Kern and Miami Roads in South Bend - 1150 Kern Road South Bend, IN 46614

23rd - Thanksgiving - office closed

24th - County Holiday

The Online NRCS Office

By Lynn Betts 1 (Jun 20, 2017 www.comandsoybeandigest.com)

Just as many people can access their health records and banking records online, farmers and ranchers can save time and miles by doing some conservation business online. Landowners and operators can track payments, report completed practices, request conservation assistance, and electronically sign documents through a secure web portal.

"The online option, called Conservation Client Gateway, is especially helpful to people, especially those who have to drive a long way to the office, or any farmer who catches up on bookwork in evenings and weekends, or even for landowners who live outside the county or in another state," says Brandon Walter, a conservationist with NRCS in Burke, South Dakota.

"NRCS staff will still be available in field offices to work with you face-to-face as we always have—this online tool just provides another option for you," Walter says.

E-signature valuable

"The remote signature appeals most to me," says South Dakota farmer Austin Gross. "I have a friend who lives in Sully County but has

farm and rangeland more than 100 miles away near Dupree. It's common these days that anyone purchasing ground will be farming far from home. Just traveling to the NRCS office and back can take a good part of your day—that's time you don't have when you're busy farming." Gross likes the fact that you can sign on any time of day. He says the online service is a good secondary tool, to use when you need it.

"It's available 24/7, and a real time-saver," says Iowa farmer Tim Palmer, who helped test the software two years ago and was the first farmer to log onto Client Gateway when it opened in May of 2015. Palmer, a board member of his local conservation district and

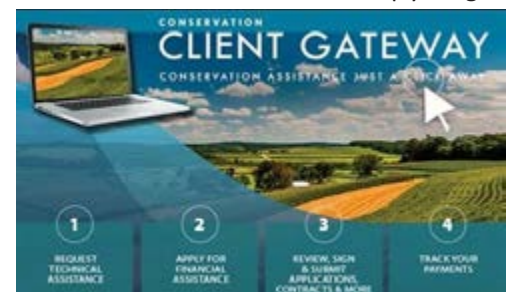
now first vice-president of the National Association of Conservation Districts, volunteered to advise the software development team from a producer view.

Time saving convenience

"I just kept pointing out the process needed to be simple and easy to follow," Palmer says. "I think they did pretty well on that. What I like most about the online gateway is the time savings and convenience of working with NRCS, from wherever I happen to be. I've learned your conservation plan is never finished. If I'm planting corn late in the day and see a problem, I can just make a note of where the problem is, and then later that night put the note into gateway to request help from the NRCS. I know they'll follow up with me after planting season."

Palmer agrees the e-signature technology is handy. "It makes frugal use of both my time and NRCS time," Palmer says. "I think it could be a big benefit to absentee landowners who live out of county or out of state, too."

You can sign up for Conservation Client Gateway from your computer at any time. Go to www.NRCS.USDA.gov and look for Conservation Client Gateway. You'll need a valid email address, and an eAuthentication account. It took me 25 minutes to sign up, take a quick look at my plan, soil maps, field numbers, conservation practices applied, etc. If you have trouble gaining access, NRCS suggests you contact your local NRCS office and have them help you sign up.





Soil structure, pore space key to proper soil function

“Soft and crumbly.” “Like cottage cheese.” “Like a sponge.” “Loose and full of holes.” Those and other common descriptions of what healthy soil looks and feels like refer to good soil structure.

Soil structure, the arrangement of the solid parts of the soil and the pore space between them, is critical to how the soil functions. When the solid parts—sand, silt and clay particles—cling together as coarse, granular aggregates, the soil has a good balance of solid parts and pore space.

Highly aggregated soils—those granular, durable, distinct aggregates in the topsoil that leave large pore spaces between them—are soils with good tilth and good structure.

Well-structured soils have both macropores (large soil pores generally greater than 0.08 mm in diameter) and micropores (small soil pores with diameters less than 0.08 mm that are usually found within structural aggregates).

An interconnected network of pores associated with loosely packed, crumbly, highly aggregated soils allows rapid infiltration and easy movement of both water and air through the soil and provides habitat for soil organisms.

Tillage destroys soil structure

Soil structure, the arrangement of the solid parts of the soil and the pore space between them, is critical to how the soil functions. However, management practices can reduce soil cover, disrupt continuous pore space, compact soil, or reduce soil organic matter, and negatively impact soil structure.

Since tillage negatively affects all of these properties, it’s high on the list of practices damaging to healthy soils.

When tillage loosens the soil, it leaves soil particles exposed to the forces of wind and water. Transported by wind and water, detached soil particles settle into pores, causing surface sealing, compaction and reduced infiltration. When this happens less water is available to plants and runoff and erosion increases.

By contrast, soils that are not tilled and are covered with

diverse, high residue crops throughout the year have better soil structure, are highly aggregated, with high levels of organic matter and microorganism activity, high water holding capacity, high infiltration rates, and little compaction.

Can your soil pass “The slake test?”

Does your soil have good structure? Give it the slake test! Ray Archuleta, an agronomist with the USDA Natural Resources Conservation Service with a passion for soil health, has done the test scores of times. Anyone can do it, he says, and he predicts it will open your eyes.

“What happens with poor soil structure is that the pores collapse in water and the soil breaks apart,” Archuleta says. “Soil with good structure—the untilled soil—can still be intact for the most part even 24 hours later. The reason for the difference is soil structure. Biological cementing, the work of soil microbes, glues the aggregates of the untilled soils together.”

In a similar test, an infiltration or rainfall simulation test, Archuleta puts the two soil samples in wire mesh inserted into empty jars, then simulates rainfall onto them.

“When you put a tilled soil and an un-tilled soil in yarn jars and simulate rainfall onto them, you quickly see the untilled soil allows the water to infiltrate the whole profile. On the other hand, water stays on top of the tilled soil much longer,” Archuleta says.

“I think these tests are powerful visual tools to help explain and help people remember how soils function” Archuleta continues. “I used to think if I tilled the soil—fluffed it up—it would allow more water in. But that’s just not true. Tilling soil closes pore space and keeps rainfall from infiltrating. You’ve got to have pore space in your soil from top to bottom.”

“The tests tell me in our watersheds we have an infiltration problem, not a runoff problem,” he concludes. “What I mean is, if we focus on building healthy soils that result in more infiltration, we’ll do what we need to do to eliminate much of the runoff.”

Continued on next page...

How to do the Slake Test

Ray Archuleta, an agronomist with the USDA Natural Resources Conservation Service with a passion for soil health, has done the slake test scores of times. Anyone can do it, he says, and he predicts it will open your eyes.

The slake test compares two chunks of topsoil in water to see how well and how long they will hold together. Here are the steps:

1. Collect a chunk of topsoil—a size that would fit in your hand—from an area where you don't till, like a fencerow, or a field you've no-tilled or had in grass for many years.
2. Get a second spade-full or chunk of soil from a field you've tilled consistently. It should be the same soil type as the first sample.
3. Find two glass jars, yarn jars or some kind of clear glass jars large enough to hold the chunks of soil.
4. Put together some type of wire mesh that you can hook at the top of each jar that will allow the soil to be submerged in the water, yet be held within the top half of the jar.
5. Insert the wire meshes into each jar.
6. Fill the jars with water.

7. At the same time, submerge the tilled sample in one jar, and the untilled sample in the other.
8. Watch to see which soil holds together and which one falls apart. The soil with poor structure is the one that will begin to fall apart.

Watch Ray do the slake test in one minute:

<http://bit.ly/2uq0qUX>

Watch Ray do the infiltration test in one minute:

<http://bit.ly/2thrmHZ>

To learn more about soil health, and to meet some of the farmers who are “Unlocking the Secrets in the Soil,” visit www.nrcs.usda.gov.



The Division of Fish & Wildlife Citizen Science Programs

Written by Jennifer Helrigel, Indiana Department of Natural Resources

Citizen science is scientific research conducted by volunteers. The volunteer's time and knowledge assist Fish & Wildlife (FW) biologist in their research. Working together, biologist and volunteers gather more data to analyze. The data allows FW biologist to make informed decisions about Indiana's wildlife.

FW has several citizen science projects around the state. If you are a birder we have quail roadside bird surveys and waterfowl counts. Do you happen to have bats roosting on your property? If yes, we need your help counting the population.

One of our biggest citizen science projects, called Snapshot IN, uses trail cameras. Volunteers with ten or more acres set-up provided trail cameras for 30 days. From this study the cameras detected 42 species. Much to the excitement of the biologists, the first record of a bobcat in Boone County was recorded by a Snapshot volunteer!



Checkout all our volunteer opportunities:

www.wildlife.in.gov/8301.htm





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St. Joseph County Soil And Water Conservation Partnership



What's the buzz???

As part of our Clean Water Indiana Grant, the St. Joseph County SWCD can now provide cost-share for pollinator habitat! If you have a minimum of 1/2 acre (up to 10 acres) of ground that is not being useful the SWCD will cost share 75% up to \$750 an

acre to plant native wildflowers for pollinators! Irrigation lanes, field borders, fence rows and more! Contact our office for an application or more information!

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Scan me to go Green!

Are you ready to "GO GREEN" and help us save money and natural resources? We can deliver your "Conservation Kaleidoscope" newsletter by email ... Give us a call or send us an email and tell us you'd like to "GO GREEN" THANK YOU!!!!

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