



Helping People Help the Land

# Conservation Notes

USDA - Natural Resources Conservation Service - Michigan

September/October 2014

## District Aims to Cool Waters of Black River

There are at least seven streams in Michigan named Black River. The Black River in Gogebic County may be the most spectacular, with a series of waterfalls before it reaches its mouth at Lake Superior. It's no wonder that the Gogebic Conservation District decided to make the river a conservation priority.

The Black River is one of 16 nationally-designated wild and scenic river systems in Michigan. However, the river is only a marginal trout fishery due to its water temperature, said Dan Perotti, chair of the Gogebic Conservation District. One of the reasons for this is that many of the river's cold water tributaries are impaired.

"Cold water is good for trout, that's all there is to it," said Perotti.

One impaired cold water tributary to the Black River is Narrows Creek, which was blocked with sediment after a historic flood event in 2002. A deposit of both natural and man-made debris from the flood blocked the mouth of Narrows Creek. The creek altered course and spread out over a wide area, causing the water to warm before entering the river. Water that was once 40 degrees became tepid before entering the river, said Perotti.

Shortly after the flood, a group of local trout fishermen approached the district seeking help for a project to restore Narrows Creek to its former condition. Restoring Narrows Creek became the district's first project in its effort to conserve and improve the Black River. It would also be its most challenging.



*Dan Perotti, chair of the Gogebic Conservation District, stands on the bank of the Black River near the mouth of Narrows Creek.*

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United States  
Department of Agriculture

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# State Conservationist's Message

The Environmental Quality Incentives Program provides conservation assistance on agricultural and forest land. It is the agency's primary program for improving conservation on working agricultural land. EQIP resources are also being used to target important environmental concerns unique to different regions of the country.

This past year NRCS contracted to provide conservation financial assistance to 969 Michigan landowners through EQIP. These contracts will provide \$18,812,494 in financial assistance to Michigan agricultural and forest product producers to apply conservation improvements on over 115,000 acres of private land.

For the fifth year, EQIP received additional funding through the Great Lakes Restoration Initiative. In 2014, GLRI funding was primarily targeted to the Saginaw Bay Watershed and the Western Lake Erie Basin in southeast Michigan. EQIP funds provided by GLRI were obligated to producers in 22 Michigan counties. Over \$4.4

million in GLRI funds were obligated through 96 producer contracts. The funding will be utilized by private landowners for conservation improvements on 21,156 acres of farm and forest land. Included in the GLRI funding was \$1.4 million to help reduce phosphorus runoff in a priority watershed covering portions of Shiawassee, Genesee and Oakland counties.

Early this year a new initiative was launched to promote the health of Michigan's honey bees. This initiative drew a lot of attention from the media, conservation organizations and beekeepers. Landowners in 23 counties contracted through this initiative to provide

improved forage for honey bees on 1,080 acres of land. This response speaks to the general concern over honey bee losses linked to colony collapse disorder as well as to the importance of pollinators to Michigan's fruit and vegetable industry.



State Conservationist  
Garry Lee

~

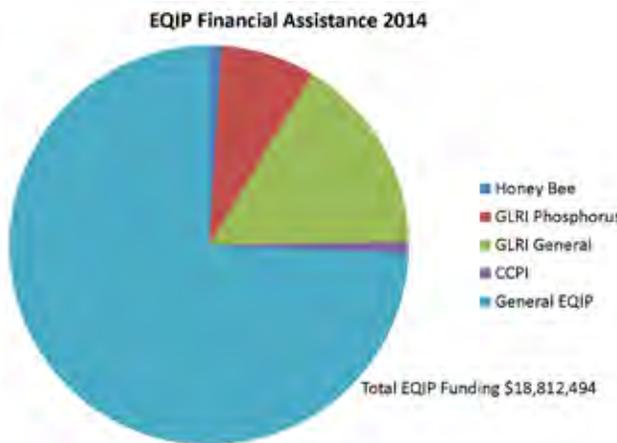
The NRCS leadership team in East Lansing is undergoing some changes with the retirements of State Resource Conservationist Jim Scott and Assistant State Conservationist for Programs Brian MacMaster.

Both Jim and Brian provided valuable leadership to NRCS in Michigan and they helped guide the agency through some exciting and challenging times. Best wishes to both of them in their future endeavors.

~

The Michigan Agriculture Environmental Assurance

Program reached an important milestone in October. MAEAP partners gathered at the Doug Darling farm near Milan to recognize a program milestone of reaching 2,500 farm verifications. MAEAP is now half way to reaching the challenge of 5,000 verifications by the end of 2015, set by Governor Rick Snyder. MAEAP partners, MAEAP technicians working at local conservation districts, and especially Michigan's MAEAP verified farmers can take great pride in this accomplishment. The program now serves as a national model for producer-led conservation.



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## District Aims to Cool Waters of Black River

"I was told, 'this is a very noble effort but forget it, you'll never get it done'," said Perotti.

The district asked NRCS for technical assistance to determine what it would take to restore the creek to its former path before the 2002 flood. A plan to create a new channel for the creek following its new, post-flood course, was estimated to cost over \$800,000. Returning the creek to its previous route was much more economical but there was concern about tampering with what occurred after the flood, which was a natural event.

After getting approval to restore Narrows Creek to its former route, the district began looking for funding sources. NRCS District Conservationist Tom Berndt prepared a grant proposal on behalf of the district for USDA Forest Service funding in 2009. The proposal resulted in a \$25,000 grant. Bob Gubernick, a watershed restoration geologist with the USDA Forest Service, worked with the district to plan the stream re-routing project.

Narrows Creek was diverted by the flood over an old oxbow of the Black River, said Gubernick. The new channel had no depth of water to allow for fish passage. Because of the Black River's federal designation, restoring the mouth of Narrows Creek had to be a natural solution that didn't alter the river, he said.

Excavation on the project would not happen until September of 2013. After 12 years of effort, the excavation work only took about 3 hours, said Perotti. Because of the river's classification as a wild and scenic river system, a serious effort was required to preserve the stream's environmental integrity. Sediment from the channel was removed before the excavation and replaced after the restored channel was finished. Workers also shocked and removed amphibians in the stream before starting work and later returned them.

"We put it back into the Black and it's working wonderful," said Gubernick, "so far, so good."

The conservation district is also working to restore another, and much larger, cold water tributary to the Black River, McDonald Creek. Volunteers organized by the district are removing abandoned



*The mouth of Narrows Creek where it enters the Black River (above) was re-routed to its original course prior to a major flood in 2002. The project, led by the Gogebic Conservation District, allows cold water to reach the Black River. The restoration was completed in 2013.*

beaver dams from the stream. Removing the dams will allow cold water to reach the Black River instead of being warmed in ponds created behind the dams. Beaver dams increased dramatically when landowners began growing aspen and other fast growing trees to sell for pulp, said Perotti. Beaver numbers have diminished as hardwood trees began to return and predators increased, but the dams remained, he said.

The conservation district has begun a program to monitor water temperatures on the Black River and its tributaries to see if its efforts are having the desired impact. The district's goal is to have a self-sustaining population of native trout on the Black River instead of depending on trout planted by the Michigan Department of Natural Resources.

Narrows Creek was turned off 12 years ago but it was never a dead stream, said Perotti. Brook trout continued to spawn on the stream and now it's hoped they can expand their range into the Black River. Trout have not spawned on McDonald Creek for 20 years, Perotti estimates but he hopes the removal of beaver dams can change that. There is still a lot of work to be done with 30-40 more impaired cold water tributaries on the Black River.

## Hard Work and NRCS Revive Ogemaw County Farm

There's plenty of work on a farm and that's how Larry Ross likes it. The 35-acre Ross farm, outside of West Branch, looked much different than it does today when they purchased the land in 2008.

"It was a mess out here before we started," said Ross. "People told me it was a waste of time to fix it up."

Ross began buying the farm a parcel at a time while living in an apartment in West Branch. Ross works as a personal trainer in West Branch but finding work has not always been easy. He has impaired vision that prevents him from driving and can make employers reluctant to hire him. Working on the farm is something he can do on his own, said his wife Rochelle. "He wants to work."

Larry and Rochelle now live on the property in a home set back from the road, behind neatly fenced pasture. Behind the barnyard is a large pile of stones Ross cleared from the land. He also installed the fencing that divides their pasture land into nine one-acre paddocks for the family's horses. Many of the posts Ross put in with a hand auger before he splurged for a gas-powered model.

"It was work," said Ross.

Neither Larry nor Rochelle grew up on a farm but the idea of living on a place out on their own appealed to them. It's also allowed Rochelle to keep horses and for her daughter to raise a hog for her 4-H project.

"I tried to visualize what I wanted when I first got there," said Larry.

Assistance from the NRCS Environmental Quality Incentives Program helped enable them to turn some neglected acres into a farm capable of providing forage for a growing number of livestock. EQIP funds helped pay for fencing to divide the pasture land into smaller paddocks that maximize the land's grazing potential, said NRCS District Conservationist Mieka Rueger.



*Rochelle and Larry Ross stand in a pasture with District Conservationist Mieka Rueger (l-r) who is holding a grazing stick. The Ross's are using a prescribed grazing plan to feed their livestock and improve the quality of their pasture land near West Branch. They use the grazing stick to determine when they need to rotate their horses to a fresh paddock.*

Rueger is also in the process of designing new watering facilities so each paddock will have water without having to carry it to each site.

The farm already provides more than enough forage to feed their horses and next year they will add a pair of beef cattle. A neighbor bales the hay their horses don't eat which provides feed for the winter. The neighbor keeps a portion of the hay in payment for his labor, said Rochelle.

"We don't pay for hay."

The Ross's have seen the quality of their pasture land improve after three years of following a rotational grazing plan. They use a pasture stick to measure when the horses have eaten the grass down far enough to where they need to be moved to a different paddock. This allows the grass to grow back faster after grazing and also reduces weeds and soil erosion.

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## CSP Allows Farmer to Test new Ideas

Ionia County farmer Jeff Sandborn isn't opposed to changing his farming practices.

"It gets kind of boring doing the same thing all the time."

While change can be good, Sandborn is not one to dive in. That's why he appreciates the flexibility of the USDA Conservation Stewardship Program. Farmers who enroll in CSP receive payments based on their conservation performance. A minimum level of performance is required to enroll in the program. The program also provides financial incentives for adopting additional conservation improvements.

Sandborn enrolled about 1,300 acres of mostly rented farmland in CSP. Formal rental agreements lasting the duration of the 5-year CSP contract allowed him to enroll the land. He was attracted to the program because he liked the idea of receiving payments based on his conservation efforts and also liked some of the enhancements available.

One of the enhancements Sandborn has implemented is a controlled traffic system where he uses the same path with his equipment when he plants, applies fertilizers and pesticides, and harvests. This allowed him to minimize soil compaction when working his fields during a wet spring.



*Ionia County farmer Jeff Sandborn utilizes a controlled traffic system to reduce soil compaction on his farm.*

Soil compaction in crop fields, caused by repeated use of heavy equipment, damages the soil structure and reduces water and air infiltration into the soil. Working fields during wet conditions, like many Michigan farmers experienced in the spring of 2014, exacerbates soil compaction.

Sandborn noticed areas of his fields without equipment traffic have produced better crops. As a side benefit, he believes utilizing a controlled traffic system also reduces fuel costs.

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## Hard Work and NRCS Revive Ogemaw County Farm

"We're not farmers, we learned a lot from NRCS," said Rochelle.

The Ross's also utilized EQIP to plant a windbreak that will shelter their animals and reduce erosion. The next conservation practice they plan to implement through EQIP is to reseed their pasture.

"I think everyone thinks it's (USDA programs) for big farmers and small farmers can't participate. All that conservation affects all of us," said Rochelle.

Utilizing a prescribed grazing plan will allow the Ross's to expand the number of livestock they raise if they choose to. It will also provide Larry all the work he can handle.

"Now I can see why a farmer's work is never done," he said.

## CSP Helps Tribe to Better Manage Forest Land

For the Hannahville Indian Community, managing its 6,000 acres of forestland is a careful balance between the tribe's cultural values and economics. Enrolling most of its land in the NRCS Conservation Stewardship Program has helped the tribe manage and preserve this balance.

The tribe has traditional uses for the land that can conflict with timber production, said Dave Anthony who leads the tribe's economic development department. Tribal members utilize the tribe's land for firewood and hunting as well as cultural practices like basket making and medicinal plant gathering.

Hannahville used to be a medicine capital for indigenous people, said Earl Meshigaud, a member of the Hannahville Tribal Council. Plants like bitter root and ironwood blossoms were collected for medicinal uses. Indigenous people learned what plants were safe by watching the animals, said Meshigaud.

"Whatever the bear eats, you eat."

Many of the medicinal plants tribal members historically harvested are now difficult to find due to over harvesting of timber, said Meshigaud.

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## CSP Allows Farmer to Test new Ideas

Soil compaction from working the land with heavy equipment has a long lasting impact, said Sandborn. This past summer, a Michigan State University researcher flew drones over his fields utilizing different sensors to analyze crop conditions. Traffic patterns from how the fields were worked 20 years ago were still visible.

"This stuff that happens on farms has long lasting effects," said Sandborn.

CSP has the flexibility of allowing participants to implement conservation enhancements on only a portion of the land they enroll in the program, a feature Sandborn likes.



*Ash baskets, like these on display at the Potawatomi Heritage Center in Wilson, Mich., are one of the traditional ways Hannahville tribal members utilize their forest resources.*

The tribe recently created a forest management plan for its land utilizing a forester from the Bureau of Indian Affairs, said Rory Mattson, director of the Delta Conservation District.

"They're following the plan quite well," said Mattson. "I think this was a good thing for them."

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Applying a practice to all of your land and then comparing your yields to your neighbor's does not mean much, said Sandborn. It's more helpful to apply a practice to some of your fields and compare the results against the rest of your farm.

In addition to adopting a controlled traffic system to reduce soil compaction, Sandborn is employing additional precision agriculture practices to his land including global positioning system technology to more precisely apply fertilizers and pesticides. He is also experimenting with different tillage practices that allow him to work through heavy crop residue with minimal disruption of soil structure.

## Sidedressing Crops with Manure Made Easier

by Jerry May, Michigan State University Extension

The late, wet spring that occurred across Central Michigan forced many farmers to reprioritize their normal spring schedule and condense field activities into as few days as possible. Gratiot County farmers James and Bob Weburg were among those farmers who normally plan to start field work in mid-April but were forced to wait until late May before weather and field conditions allowed getting crops in the ground. In a normal year Weburg Farms hauls manure from the farm's swine finishing facility prior to planting corn. To save time this year, the cousins decided to plant corn then sidedress with manure once the crop was up. Fortunately they had previously purchased and had some experience with a spreader and injectors capable of sidedressing in standing crops.

In mid-June, Weburgs started sidedressing corn with manure. The farm employee operating the equipment reported that the GPS and automatic guidance used on the farm simplified and improved the process. The driver was able to set the tractor to follow the line previously established during planting. The tractor and manure spreader combined create a long piece of equipment. Any slight direction corrections by the tractor pulling the spreader are magnified at the rear of the spreader and have the potential to either cover the

corn or till it out. Because the planting tractor was equipped with automatic guidance, rows were planted such that the tractor pulling the manure tank didn't need to respond to row variation and the manure spreader was held straight. The operator reported slightly adjusting the line of the sidedress tractor to center the manure injectors between the rows. The small corn plants were not disturbed by the operation.



The Weburgs are also cooperating on a field trial facilitated by the Michigan State University Extension Nitrogen in the Environment work group. This trial is currently designed to compare nitrogen (N) provided by sidedress manure to 28 percent

liquid N applied with herbicides after the crop was planted and a combination of a reduced rate of liquid N plus sidedress manure. Using previous manure analysis, the manure application rate was adjusted to provide the crop with the equivalent amount of N as the normal farm application rate using the 28 percent liquid N. The trial was originally designed to include manure applied prior to planting, but weather prevented including that component in the plots. Evaluation factors include grain yield, nitrogen use efficiency and the impact of compaction caused by the manure spreader when sidedressing.

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## Tribe Balances Forest Resources

The tribe is not harvesting trees in riparian areas as part of their CSP contract. Timber stand improvement enhancements through CSP are conducted to benefit tribal members first.

When a selective cutting of trees is done, trees to be removed are marked and tribal members may harvest them for firewood or timber, said Anthony. This allows tribal members to continue utilizing the resource while improving the forest

at the same time.

Through CSP, the tribe receives annual payments for managing the land in an environmentally responsible way. In addition to maintaining riparian buffers along streams, the tribe also leaves dead trees and brush to benefit wildlife. Through CSP, the tribe is able to produce income from its land while allowing tribal members to maintain their traditional uses of the forest.

## NRCS-Michigan Staffing Update

### New Hires:

Josue Gandia-Rivera, District Conservationist, Sandusky

Litza Lopez-Ramos, Soil Conservationist, Flint

Michael Krmarik, CET, Flint Area Office

Solomon Andrews, District Conservationist, Bay City

Jorge DeJesus Rosado, Soil Conservationist, Portage

Megan Chludzinski, Soil Conservationist, Traverse City

Karolyn Karl, Soil Conservationist, Bay City

Tiffari Jenkins, Soil Conservationist, St. Johns

Maureen Stine, Soil Conservationist, Onaway

Charles Ronk, SCT, Jonesville

Joshua Davis, SCT, Ionia

Carla Ahlschwede, Soil Scientist, Flint MLRA

Allison George, District Conservationist, Baraga

### Departures:

Jay Blair, District Conservationist, Retired Aug. 30

James Scott, State Resource Conservationist, Retired Sept. 2

Brian MacMaster, Assistant State Conservationist Programs, Retired Oct. 3

Caitlain Thompson, SCT Bad Axe, transferred to EPA Oct. 18

Nathan McNett, SCT Adrian, term employment expired Oct. 9

Jacob Swaney, Soil Conservationist Caro, transferred to NRCS Minnesota

Ronnie Maurer, District Conservationist Bay City, transferred to NRCS Louisiana

## Dierberger New State Resource Conservationist

Betsy Dierberger was selected as NRCS state resource conservationist following the retirement of Jim Scott.



*State Resource Conservationist  
Betsy Dierberger*

As state resource conservationist, Dierberger leads the NRCS Ecological Science staff in Michigan. The ECS staff evaluates new conservation technology and develops conservation standards and guidance.

The staff also provides technical assistance and training to NRCS field staff.

Dierberger served on the Michigan ECS staff as a grassland and forage specialist since 2005. Prior to joining NRCS, she was the MSU Extension agriculture educator serving Livingston and then Ingham counties where she worked directly with landowners on their pasture and grazing management challenges. Dierberger also was an assistant instructor in the Agronomy Department at the University of Nebraska-Lincoln, where she earned her Ph.D. and taught introductory soils courses.

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## Sidedressing Manure

MSU Extension's Nitrogen in the Environment work group is comprised of Extension educators and specialists. The work group's goal is to help farmers understand the complexity of maintaining N in the soil available for crop uptake and encourage the adoption of practices that increase the efficiency of N utilization. Information on this trial, and the two other similar field trials the work group is facilitating, will be available in late fall. These field trials are being financially supported by the Corn Marketing Program of Michigan.

*This article was published by Michigan State University Extension. For more information, visit [www.msue.msu.edu](http://www.msue.msu.edu).*

## Upcoming Events - Upcoming Events

### November

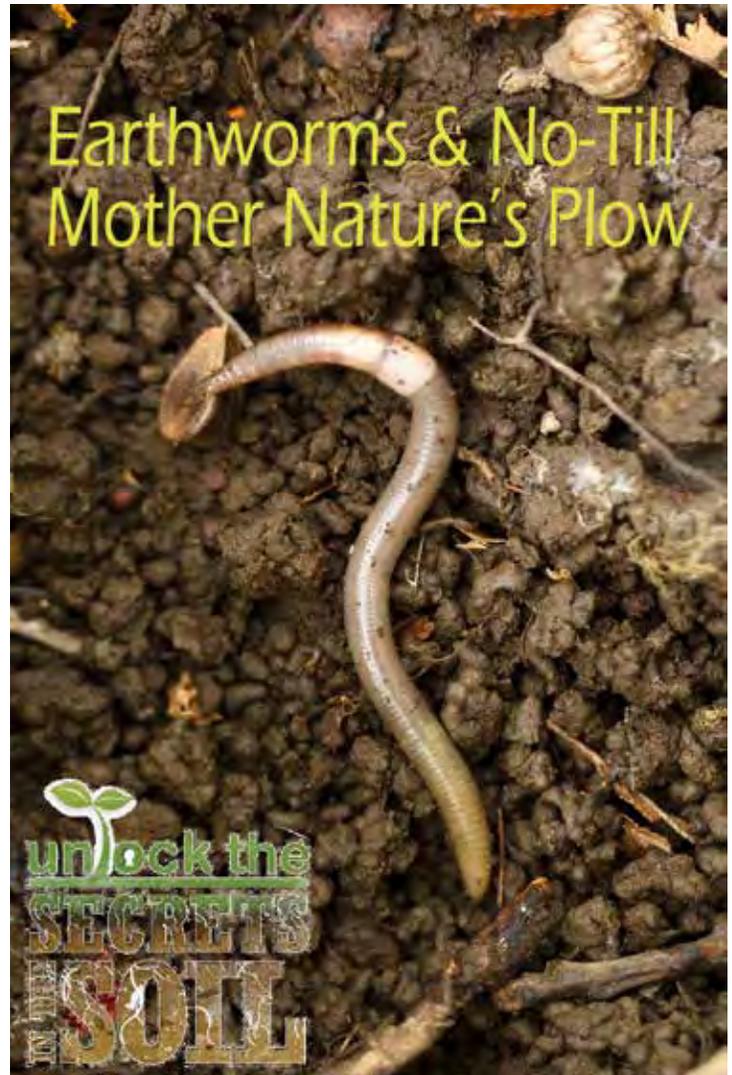
- 4 Fifth Annual Northern Great Lakes Invasive Species Conference – The Dry, the Wet and the Ugly, Northern Michigan University - Marquette, Early registration deadline is Oct. 28, contact Dan Watt for more information and a complete conference agenda at: [daniel.watt@uprcd.org](mailto:daniel.watt@uprcd.org).
- 10 Hoophouses and Cold Storage Crops for Michigan Winters, 1 p.m. to 4 p.m., MSU Organic Farm - Holt for more information go to: <http://mifma.org/events>

### December

- 9-11 Great Lakes Fruit, Vegetable and Farm Market Expo, Devos Place Conference Center - Grand Rapids, for more information go to [www.glexpo.com](http://www.glexpo.com)

### January

- 17 Michigan Family Farms Conference, Marshall High School - Marshall, for more information go to [www.miffs.org](http://www.miffs.org)



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