



Helping People Help the Land

Conservation Notes

USDA - Natural Resources Conservation Service - Michigan

March - April 2014

Volunteers Help Conservation Mission



The Tuscola field office received the NRCS Chief's Award for its utilization of the Earth Team volunteer program to promote conservation. Area Conservationist Albert Jones presented the award. Pictured are (l-r) Jason Myers, Tuscola Conservation District, Tyler Pederson, TCD, Jim Kratz, TCD Administrator, Carissa Harcz, Earth Team Volunteer, Carol Schadd, district conservationist, Jeff Jones, TCD, Steve Schaub, TCD and Jones.

Earth Team volunteers are a valuable resource in helping NRCS support conservation on private lands. During 2013, 88 Earth Team members provided nearly 3,000 hours of volunteer service at 64 NRCS offices in Michigan.

One of these offices received a national honor for its participation in the NRCS Earth Team volunteer program. The Tuscola County field office received the 2014 Chief's Field Award for the northeast

region. The Tuscola field office received the award for utilizing the skills of Carissa Harcz, a recent college graduate with a degree in Environmental Science and Planning.

NRCS and conservation district employees enabled Harcz to utilize her skills on a wide variety of tasks. As an Earth Team volunteer, Harcz worked with NRCS staff in the field and applied her geographic

-continued on page 3-



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State Conservationist's Message	Page 2
Soil Health Profile - Jerry Grigar	4
Forest Regeneration	5
Equal Opportunity	7
Seasonal High Tunnel Workshops	7
Event Calendar	8

State Conservationist's Message

NRCS celebrated two events in April, the first was National Volunteer Week from April 6 to April 12. During National Volunteer Week the agency recognizes its many Earth Team volunteers.

In 2014 NRCS-Michigan honored retired soil scientist Will Bowman as its Earth Team Volunteer of the year. Will was a long-time soil scientist in Michigan and helped establish an agreement with local governments to complete a soil survey of urban Wayne County. This is the only remaining portion of the state without a soil survey. After retiring in 2012, Will worked as an Earth Team volunteer doing field work for the Wayne County survey.

Michigan also received a national honor, the Tuscola County field office was awarded the 2014 Chief's Field Award for the northeast region. The Tuscola office received the award for its utilization of the Earth Team program. It takes the effort and cooperation of NRCS field staff to get the most of the Earth Team program which the Tuscola office demonstrated.

April is also when we celebrate Earth Day. This year, NRCS promoted the importance of soil health leading up to Earth Day. In Michigan, NRCS staff participated in an Earth Day event held in downtown Lansing. An NRCS booth at the event demonstrated the importance of cover crops to soil health and water quality for visiting students.

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The first sign-up for the new Agricultural Conservation Easement Program, created under the 2014 Farm Bill, is now underway. ACEP

consolidates all of NRCS' easement programs, formerly the Wetlands Reserve Program, the Farm and Ranch Land Protection Program and the Grassland Reserve Program.

Applications for the wetlands conservation easements must be submitted to NRCS by June 6. Applications for agricultural land easements are submitted to local farmland



State Conservationist
Garry Lee

preservation organizations. For more information on ACEP, visit the NRCS-Michigan website at www.mi.nrcs.usda.gov

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Based on the applications received, there is still strong demand for conservation financial assistance among Michigan farmers. The cut-off date for applications for fiscal year 2014 Environmental Quality Incentives Program funds was March 21. We anticipate being able to utilize all of the state's allocation of FY2014 EQIP funds. NRCS plans to begin obligating EQIP contracts in late May and to complete obligating all contracts in August.

The two EQIP special initiatives received strong interests from landowners, these include the honey bee forage initiatives and the seasonal high tunnel initiative for Wayne County.



Rose Lake PMC Agronomist John Durling (above) demonstrates cover crops to students as part of the State of Michigan's Earth Day Celebration on April 22.

- continued from page 1 -

Volunteers Support NRCS Conservation Mission

information systems training to assist with mapping projects in the office. The variety of work she was able to do as a volunteer gave Harcz practical experience and helped the office increase its workload.

Anyone age 14 and over is eligible to serve as an Earth Team volunteer. In Michigan, Earth Team members include college students and recent graduates like Harcz, student groups, current NRCS employees who volunteer during their non-work hours and retirees.

Recent NRCS retiree Will Bowman was honored as Michigan's 2014 Earth Team Volunteer of the Year. Bowman spent his career as a soil scientist in Michigan and retired as NRCS-Michigan's state soil scientist. Shortly before retiring in 2012, Bowman completed an agreement with local governments for the soil mapping of urban Wayne County. This is the last area in Michigan without a completed soil survey.

Join the Earth Team!

Anyone 14-year-old and over can be an Earth Team volunteer. Contact your local USDA Service Center or e-mail Michigan Earth Team Volunteer Coordinator Teresa Moore (teresa.moore@mi.usda.gov) for more information.

Bowman has spent 170 hours doing field work for the urban Wayne County soil survey since his retirement. He completed field work on over 7,268 acres of land in Detroit and surrounding communities. His work included taking 80-inch-deep soil samples and then recording their properties and GPS coordinates.

Working in an urban area, Bowman had frequent contact with the public and was often asked about his work. He would explain to them what a soil survey was and what it can be used for. With many areas of Detroit losing population and industry, the soil survey will be useful to local governments when determining new uses for vacated residential and commercial areas. Some former residential and industrial areas in Detroit are being converted to

urban agriculture.

Bowman shared what he learned by leading an Urban Soils course for NRCS-Michigan employees in the summer of 2013. The course was held in Detroit which allowed students to do soil mapping in an un-mapped area. The course addressed challenges in urban soil mapping such as distinguishing fill from native soils and gaining the cooperation of local governments.



State Soil Scientist Marty Rosek presents Will Bowman with the Michigan Earth Team Volunteer of the Year Award for 2014 (above). Bowman did field work on the urban Wayne County soil survey as an Earth Team volunteer. Bowman and Flint MLRA Project Leader Joe Calus spoke at an event held at Belle Isle in Detroit to announce the urban Wayne County soil survey.



NRCS Agronomist Follows his own Prescription for Soil Health

NRCS State Agronomist Jerry Grigar credits over 30 years of no-till on his 140-acre farm in Gratiot County for higher yields in rain-challenged growing seasons.

“2013 was a disappointing year for our producers here,” said Dan Rossman, MSU Extension agent for Gratiot County.

After two years of excellent harvests, heavy early rains delayed planting for many Gratiot County farmers and a mid-summer dry spell further hurt yields for many growers, said Rossman. Countywide, corn yields were down about 25 to 30 bushels an acre compared to the county’s average yields. There was a lot of variation in yields depending on whether farmers were able to plant before wet weather set in, said Rossman.

Grigar harvested 200 bushel-an-acre corn in 2013. He credits getting his crop in early and no-till for his high yield.

“I was quite happy with that,” said Grigar.

Contrary to popular belief, Grigar’s fields dried out sooner than surrounding conventionally tilled ground, allowing him to plant sooner. Water was able to infiltrate the ground easier on his no-till land due to improved soil structure and higher organic matter, said Grigar. When fields dried up in the summer, Grigar’s no-till fields also retained more moisture than conventionally tilled fields.

“I’ve seen it so many years when it’s dry, corn in surrounding fields will turn yellow while mine doesn’t,” said Grigar.

Grigar made the switch to no-till after a bus trip to Pennsylvania in 1982 to observe long-term no-till farming at Penn State University. No-till is a method of planting where the soil is not disturbed, in conventional tillage the soil is turned over to create a seed bed. Grigar has used no-till exclusively on his land, with the exception of chisel plowing a field one year to control wild carrot, ever since attending the no-till tour.

Rossman estimates that about 30 percent of



NRCS State Agronomist Jerry Grigar has utilized no-till on his Gratiot County farm for over 30 years. Grigar also utilizes strip cropping to improve yields and plant diversity.

farmers in Gratiot County use no-till on soybeans but only about 10 percent use no-till when planting corn. At the very least, Grigar’s yields in 2013 show high-yield corn is possible using no-till.

“Those that were no-tilling probably had a little advantage last year,” said Rossman.

No-till is a valuable practice for maintaining and improving soil health. Leaving residue on crop fields increases organic matter which retains more moisture. Not disturbing the soil also improves the soil structure which improves water infiltration. Conventional tillage leads to higher soil compaction due to more trips over the field and continually breaking up the soil.

Less soil disturbance using no-till is also beneficial to biological activity in the soil. Leaving soil in place is beneficial to a wide

- continued on page 5 -

Forest Regeneration

by Bill Cook, MSU Extension

The Michigan Society of American Foresters recently held a conference about forest regeneration. Foresters, perhaps more than any other group, tend to worry about what the next forest will look like – decades down the road. And, they are uniquely suited for these prognostications.

A century of research and practice has produced a set of management prescriptions that effectively regenerate our Lake States forests, and also provide wood products, forest health, and a wide range of other environmental and social services. These management systems are designed to provide forest conditions that favor the natural regeneration of trees. Trees are actually pretty good at reproducing themselves, when given a chance.

The heart of forest management is a science called silviculture, which is the study and practice of forest ecology to provide all the goods and services that society demands. It's sort of like agriculture, but much more complex.



Regeneration is at the root of silviculture (excuse the pun!).

The Lake States forest consists of a wide range of forest types, each with their own set of ecological requirements. Shade tolerance, disturbance, a seed source, and seed bed conditions are four key variables for regeneration. Management systems are tailored for different forest types. There is no “one size fits all” approach.

For many decades, the application of particular practices, under appropriate conditions, regenerated forests with a high degree of reliability. Aspen and jack pine are two species that evolved with major disturbances and require full sunlight, so clearcutting was employed to mimic natural circumstances. Sugar maple – beech – basswood forests, on good sites, are species that do much better with a selection system, which mimics smaller disturbances common in these kinds of forest types. Foresters evaluate forest conditions, take into account forest owner goals, and then design management plans accordingly.

- continued on page 6 -

- continued from page 4 -

No-Till

variety of soil organisms ranging from earth worms to bacteria. These organisms break down organic matter and make more nutrients available to crops. Grigar has increased the organic matter in his fields about 1 percent since adopting no-till. That might not sound like a lot, but increasing organic matter in loamy soils is not easy, said Grigar. It is estimated to take 60 tons of organic material on an acre to increase soil organic matter by 1 percent.

Grigar has experimented with a number of practices to improve his soil and profits. Like many farmers he has increased his use of cover crops in recent years. He had his best soybean crop ever following a cover crop of rye, radishes

and oats. Narrow strip cropping, especially corn and soybeans has also been encouraging. Corn in the edge rows benefited from extra sunlight and the neighboring beans benefited from the shade. Planting corn in narrower twin rows in narrow strip cropping is another method Grigar is using to increase production.

After 30 years of results, Grigar is convinced that no-till works on his farm. There is still some misperceptions about no-till and more research is needed, he said.

“A lot of conventional wisdom on cropping needs to be re-evaluated for long-term no-till.”

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Forest Regeneration

It's a rewarding experience for both the forester and the forest owner.

Unfortunately, there are several threats to forest regeneration and some of the traditional management systems may no longer yield the expected results. Foresters are faced with altered successional pathways, novel forest communities, and a less predictable future. Failure to regenerate forests could result in the loss of forest certification status, which would threaten a regional industry worth tens of billions of dollars.

Deer pose a huge threat, but this idea is a hot-button issue for many. In 2007, a survey revealed that the majority of Michigan foresters, collectively with over 400 years of experience, perceive deer depredation as a significant threat to forests. Ecological research literature across North America clearly supports this premise. Deer are, of course, a very natural part of Lake States forests and a crucial part of our hunting heritage. Their populations also vary widely across time and geography. However, long-term over-browsing translates into long-term negative impacts that are not easily reversed, even if the deer impacts were removed from the forest.

Exotic species, animals, plants, and fungi, are wild cards in their impact on forest regeneration. Research into known species impacts reveals a range of outcomes. Unfortunately, each new species can potentially change the game a bit more or, in some cases, dramatically. The exotics often work in concert with each other, and sometimes with native species, to alter seed bed conditions to the point that some native trees may not be able to adequately regenerate.

For example, earthworms, slugs, and certain shrubs (exotic players) will work with small rodents and deer (native players) to discriminate against the regeneration of native ground flora and tree species. Simple elimination of the exotic species may not result in the restoration of natural conditions.

Forest parcelization (ownership) and

fragmentation (permanent canopy disruption) change forest structure, composition, and function. Smaller parcels and higher numbers of owners in a particular area make for an increasingly difficult and expensive opportunity for management and/or restoration. The human element also accelerates exotic introductions and, in many cases, higher deer numbers.

All of these ecological dynamics exist in an era of rapidly changing climate conditions. Rapid is defined in decades, in this case. As current trends continue with precipitation, temperature, wind, and growing seasons, so changes the forests. Nobody is confident in defining these changes, but nearly everyone knows that change is in the wind (another bad pun?).

Lastly, benign neglect of forests (doing nothing) allows all these agents to operate unchecked, sometimes with undesirable outcomes for both the forest and human society. Benign neglect may also allow native pests and diseases to unnecessarily gain the upper-hand, at least for a while. These pests evolved with our native forests. However, the forests have changed considerably over the last two hundred years. Relationships between the forests and pests have changed.

New forest stressors work with the usual stressors in both predictable and currently unpredictable ways. The massive historical disturbances associated with the Lake States logging era will likely pale in comparison with the challenges our forests face in coming decades. That sounds like a long time, but for foresters, it's not much more than the blink of an eye.

Bill Cook is an MSU Extension forester providing educational programming for the Upper Peninsula. His office is located at the MSU Forest Biomass Innovation Center near Escanaba. The Center is the headquarters for three MSU Forestry properties in the U.P., with a combined area of about 8,000 acres. He can be reached at cookwi@msu.edu or 906-786-1575.

CRAC Promotes Equal Opportunity

Providing all people equal access to services and employment is a core value of the USDA. Assisting in this effort are members of the NRCS-Michigan Civil Rights Advisory Committee.

CRAC members are NRCS employees who advise the management staff on ways to ensure that all producers have access to agency programs and that the NRCS workforce reflects the diversity of the customers we serve. NRCS employees voluntarily serve on the committee for 3-year terms.

Included in the membership of the CRAC are eight Special Emphasis Program Managers (SEPM). Each SEPM represents an under-represented group among NRCS employees. SEPMs promote awareness of these groups to their NRCS colleagues. They also promote NRCS careers to members of these groups and career advancement opportunities.

Current members of the NRCS-Michigan CRAC include:

- Eddie Glover-Chairperson
- Stacy Filipiak-Member-at-large
- Sandy Penn-Outreach Coordinator/Native American SEPM
- Lisa Johnson-LGBT SEPM
- Olandous Curry-Member-at-large
- Diane Gray-Administrative Officer
- Jessica Modert-Human Resources Officer
- Tamarra Roseburgh-Black SEPM
- Elyne Tran-Member-at-large
- Caitlain Thompson-Disabilities SEPM
- Linda Ortiz-Hispanic/Latino SEPM
- Heather Simoneta-Federal Womens Forum SEPM
- Silvester Perez-Veterans SEPM
- Ruben Torres-Asian American/Pacific Islander SEPM

[Michigan-NRCS CRAC Web page](#)

High Tunnel Workshops Planned

A series of instructional workshops on seasonal high tunnels will begin on May 10, with a session on warm weather production. Six workshops, targeted to Wayne County producers, have been scheduled through August.

The workshops are organized by the Southeast Michigan Resource Conservation and Development Council with financial assistance from NRCS. They are free-of-charge with Wayne County producers given first priority for available spaces.

Seasonal high tunnels allow growers to substantially extend their growing season. Seasonal high tunnels typically consist of a metal-ribbed structure covered with a layer of plastic. They are often referred to as hoophouses based on their construction. The six workshops include:

- Warm Season Production - May 10
- Anatomy of a Hoophouse - May 19
- Seasonal High Tunnel Installation/Build - June 9-11
- Tips, Tricks and Techniques - June 24
- Farm Tour - Aug. 10
- Cool-Season Production & Other Issues - Aug. 16

For more information including times, locations and how to register go to semircd.org, call 517/851-2372 or e-mail jessica.simons@semircd.org.



Conservation Notes - March/April

Upcoming Events - Upcoming Events - Upcoming Events

May

- 9 SWCS Highway Clean Up, noon, meet in NRCS State Office parking lot - East Lansing
- 10 Seasonal High Tunnel Workshop - Warm Season Production, 1 - 5 p.m., Earth Works Urban Farm - Detroit, for more information call 517/851-2372 or go to semircd.org
- 17 Branch Conservation District Coldwater River Stream Team aquatic macro-invertebrate sampling and identification, 8:30 a.m. - noon, meet at Branch Area Career Center - Coldwater, for more information call the Branch Conservation District at 517/278-2725 ext. 114
- 19 Seasonal High Tunnel Workshop - Anatomy of a Hoophouse, 6 - 9 p.m., Oakland Avenue Community Garden 7 Farm - Detroit, for more information call 517/851-2372 or go to semircd.org
- 28 Bug ID Night, 5:30 - 9 p.m., Branch Area Career Center - Coldwater, for more information call the Branch Conservation District at 517/278-2725 ext. 114

May ctd.

29 Growing Organics: Back to Basics Workshop, 6:30 to 8:30 p.m., Sidney Township Hall - Sidney, for more information call 989/831-4212 ext. 3 or by e-mail at judy.cloer@mi.nacdnet.net, RSVP by May 23

June

- 7 Branch Conservation District Native Plant Sale, Coldwater, for more information call 517/278-2725 ext. 114
- 9-11 Seasonal High Tunnel Workshop - SHT Installation, Buffalo Street Farm - Detroit, for more information call 517/851-2372 or go to semircd.org
- 24 Seasonal High Tunnel Workshop - Tips, Tricks & Techniques, Plum Street Market Garden - Detroit, for more information call 517/851-2372 or go to semircd.org

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