



For the Bees and for the Trees

In May, the USDA National Agriculture Statistics Service reported that the number of honey bee colonies in the United States had dropped by 8 percent from 2015 to 2016 for operations with five or more colonies. It's news like this that motivated Leelanau County beekeeper Garth Ward to do more for the bees.

"I just want as many bees to survive as I can," said Ward.

Ward is an advocate for honey bees in the Grand Traverse area giving interviews and raising awareness about the importance of pollinators and the threats they face from parasites, disease and pesticides. As a member of the Grand Traverse Beekeeping Club he and fellow members rescue feral honeybees and share information and techniques to help their bees survive.

Now Ward is creating a "pollinator sanctuary" on his and adjoining properties with assistance from NRCS. In the spring, with financial assistance through the NRCS Honey Bee Initiative, Ward plans to plant 500 trees and shrubs on his land and on neighboring land he has control over.

"I'm glad there's a program to do this," said Ward.

He has spent a lot of time researching what trees and shrubs will provide the best forage for his bees and are also eligible under the NRCS practice standard. Ward is planning to find volunteers to help with the planting to help keep his cost down. Diverse forage from his pollinator planting will help his bees and other pollinators by providing a reliable source of



Beekeeper Garth Ward on his property in Grand Traverse County.

food throughout the growing season.

Ward has raised bees for 10 years, not for the money but for the bees, he said. He only makes about \$300 a year from selling honey from the handful of hives he keeps. Over the years he has lost several hives and his bees are producing less honey. He has been experimenting with different hive designs that will

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State Conservationist's Message

The beginning of a new year is an opportunity to reflect on the accomplishments and challenges experienced over the past year. Many of the accomplishments of NRCS and our conservation partners are difficult to quantify. When it comes to NRCS financial assistance however, the 2016 numbers are in.

During the 2016 fiscal year, Michigan producers contracted to apply new conservation practices on over 210,000 acres of private forest and farm land. Once implemented, these conservation activities will have a huge impact in improving water quality, reducing soil erosion, improving air quality, and improving wildlife habitat. NRCS and conservation district employees as well as our conservation partners can take great satisfaction in this accomplishment.

Of the new land enrolled in NRCS conservation programs, 111,644 acres were enrolled in the Environmental Quality Incentives Program, 76,427 were placed in the Conservation Stewardship Program and 22,105 acres were enrolled through the Regional Conservation Partnership Program.

Between the three programs, over \$21.6 million was obligated in conservation financial assistance to Michigan producers.

The conservation practice included in the most EQIP contracts was for a forest management plan, followed by cover crops and nutrient management. In terms of financial assistance obligated, the highest amount was contracted for nutrient management, followed by cover crops, waste storage facilities and agrichemical handling facilities.

Regional Conservation Partnership Program

During the 2016 fiscal year, NRCS obligated more than \$2.4 million in conservation assistance through four RCPP projects, the Saginaw Bay Watershed Conservation Partnership, the Tri-State Western Lake Erie Basin Phosphorus Reduction Partnership, the Improving Forest Health for



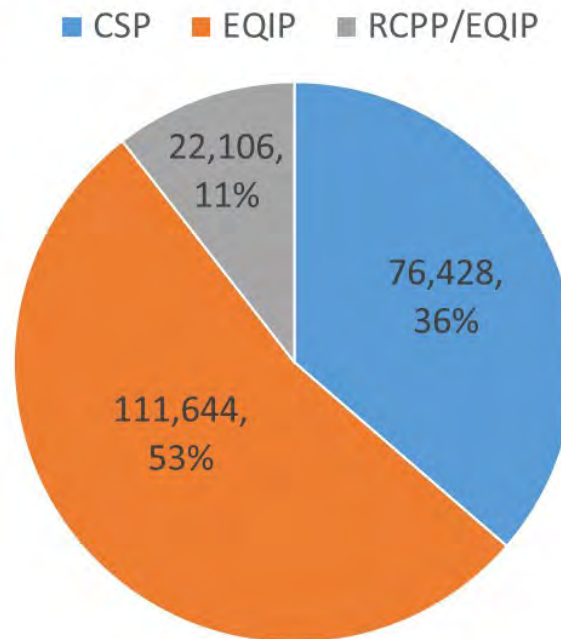
State Conservationist
Garry Lee

Wildlife Resources Project and the Michigan/Indiana St. Joseph River Watershed Conservation Partnership.

With the help of public and private partners, these RCPP funds will help address important regional resource concerns. This year, the Tribal Stream and Michigan Fruitbelt Collaborative, selected for funding in 2016, will begin selecting applications for conservation financial assistance. This project involves improving aquatic organism passages in streams and rivers in Northern Michigan and purchasing agricultural conservation easements in the region's valuable fruit growing areas.

Recently two more Michigan RCPP projects were announced, the Lower Grand River Watershed Habitat Restoration/Farmland Conservation Project and the Huron River Initiative. These projects are led by the Grand Valley Metro Council and the Legacy Land Conservancy, respectively. To learn more about these projects visit the NRCS-Michigan website at www.mi.nrcs.usda.gov.

Acres Enrolled in FY 2016



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help his and other beekeepers' bees survive the winter.

Members of the beekeeping club save feral bees that are found inside houses and other buildings. Ward constructed a "bee vac" to safely remove honey bees from inside walls and other spaces. When relocating feral honey bees he removes part of the hive's combs which he uses to reestablish the feral bees into a commercial hive. Ward likes starting new hives with feral bees because they have shown they can survive a Michigan winter.

Orchard owners Ken and Jan Engle are also utilizing NRCS programs to provide pollinator habitat. From working with beekeepers they knew about the problems.

"We're in the fruit business, plus it's the right thing to do," said Ken Engle on why he established 7.3 acres of pollinator habitat on his Grand Traverse County farm.

The Engles planted native grasses and wildflowers in 2009 through the Conservation Reserve Program's State Acres for Wildlife Enhancement (SAFE). They planted strips of pollinator habitat adjacent to their orchards. In 2013, they did a controlled burn to control weeds and improve plant density. The plantings have an abundance of flowering plants and bees.

"If you go for a walk in the summer there's a lot of pollinators, you can hear them," said Engle.

Engle has seen his pollinator plots change over the years, some flowers did not appear until the third or fourth year after planting and others that appeared in the early years are no longer around. They enjoy watching the plants change throughout the year, including in the fall.

It's hard to quantify if the planting is benefiting production of nearby apple orchards, said Engle. Just knowing that he is benefiting pollinators is enough for him to consider planting additional pollinator habitat where he recently removed an old orchard.

Engle is puzzled why more growers are not establishing pollinator habitat.



Pollinator habitat on the Ken and Jane Engle farm in Grand Traverse was well established in 2011, two years after it was planted (above). NRCS District Conservationist Jason Kimbrough and Soil Conservationist Megan Sebright look over the same plot in November 2016 (below).



EQIP and the Conservation Reserve Program (administered by the Farm Service Agency) both provide financial assistance for establishing pollinator habitat. The two programs have different eligibility requirements and financial incentives. Visit your USDA service Center to learn more about both programs and which one best fits your operation.

NRCS Engineers Help with Tribe's Minnow Problem

When the Sault Ste. Marie Tribe of Chippewa Indians had a problem with minnows entering one of their walleye rearing ponds they looked to NRCS for an engineering solution. It wasn't the Grand Coulee Dam, but the solution wasn't in the standard drawings index either.

Walleyes are a prized game fish capable of reaching a weight of 20 pounds. The fish start out life as prey however, even for the lowly minnow. The tribe raises walleyes in three rearing ponds near Sault Ste. Marie, where tiny fry are raised until they reach fingerling size. During 2013, their largest pond where they usually harvest up to a million walleye fingerlings produced only about 65,000. Minnows entering from the stream that fills the pond were feasting on the tribe's walleyes.

Minnow predation was not a problem until some ponds were constructed upstream, said Tom Gorenflo, director of the Inter-Tribal Fisheries and Assessment Program. When the stream would overflow and flood the ponds, minnows would be carried downstream to the rearing pond.

Walleye are an important resource for the Sault Tribe as well as other tribes in the UP and northern Michigan. Walleyes raised by the tribe are used to support commercial and subsistence fishing by tribal members. The fish are also important for supporting the tourism industry. Cabela's hosted two walleye fishing tournaments on the St. Mary's River last year. About 30 percent of the walleyes caught during the tournaments were stocked fish, Gorenflo said.

To prevent ongoing predation, NRCS designed a structure that would allow water from the stream to enter the pond but not minnows. The structure will also allow the minnows to migrate to Lake Superior. For such a custom project NRCS engineers and the fisheries staff put their heads together, said IFAP hatchery technician Matt Allard.

"This will solve everything," said Allard.

The project has been two years in the making. "It was the hardest thing I've ever done, there were so many unknowns," said NRCS Civil Engineer Amy Bastone.

Bastone, with the assistance of NRCS engineering



Workers were busy constructing a stream habitat improvement and minnow barrier for the Sault Ste. Marie Tribe of Chippewa Indians in early November (above). The project will be completed in 2017.

staff in Michigan and at the Ft. Worth National Technology Support Center, designed a structure to allow water in and keep minnows out of the rearing pond.

The stream currently goes directly into the pond and overflow goes through a drainage pipe into a stream channel. The new structure will allow the water to be diverted around the pond after it has been filled. The pond is drained each summer so that the fingerling walleye can be harvested and stocked in lakes and rivers. When it is refilled, the new structure has a screen where the water enters the pond to prevent minnows from entering. After the pond is filled, hatchery employees can put stop log structures in place that will divert the water away from the pond.

On a disappointing note, construction could not be completed during the 2016 construction season. The structure will be completed after the pond is drained for harvesting in July 2017. With most of the work completed, Bastone is eager to see how the structure performs.

It was a challenging project but it was good to have so many resources within NRCS to call on, said Bastone. "Everyone caught something."

Tree Identification in the Dormant Season

by Bill Cook, Michigan State University Extension

Many people pride themselves on their skill in identifying trees. The curious might want to know which species grow in their yard or a nearby park. Sometimes, people simply have a heightened ecological conscience and just want to know. For whatever reason, tree ID can be done year-round.

Michigan boasts around 100 tree species, depending upon how a tree is defined. It's impossible to fully understand a forest without knowing "who" grows there. Trees are not the only life form, of course, but they are the dominant life form and impact everything that occurs in the forest. And of course, it's difficult to fully appreciate the amazing natural resources of Michigan without considering forests.

There are about a dozen characteristics available to help identify trees. Learning which subset of characteristics to use for a particular tree is where practice and skill are needed. Some characteristics are seasonal, such as leaves, fruits, and flowers. Most others are more year-round, such as twig and branching patterns, buds, bud scars, bark, tree form, site, and tree associates.

For some trees, paper birch for instance, most people only need to look at the white, peeling bark. Easy. Although, sometimes pale versions of quaking aspen have been mistaken for paper birch. Trees with acorns are one of several oaks. Most of our conifers carry needles year-round.

Many people refer to all conifers as "pines" when, actually, most conifers are not pines, especially in the U.P. Pines make up about 44 percent of the conifer volume in Michigan (14 percent of total tree volume) and about 25 percent in the U.P. (11 percent of the total). Northern white-cedar is the most common conifer in Michigan. It's not a pine! Neither are hemlocks, spruces, firs, tamaracks or larches.

Because there are only about a dozen common conifers (only four are pines!) in the forest, conifer ID is fairly easy. It's a good place to begin in order to build some confidence and skill.

Another good tactic for beginners is learning the ten most common tree species first; sugar maple, red maple, white cedar, red pine, white pine, northern red oak, quaking aspen, bigtooth aspen, black cherry and hemlock. Once these trees are known, comparing them to unknown species will often make the identification process move quicker.

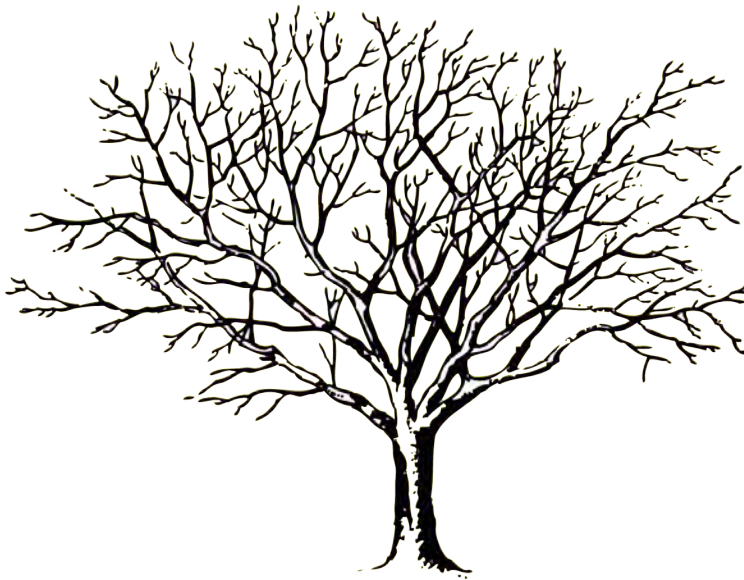
Using seasonal characteristics is another good way to learn to identify trees during the "off" season. Finding remnant cherries go a long way to segregating the cherry species. While doing that, it's a good time to observe other key features, such as bark patterns and buds. Understory trees that still have some brown leaves well into the winter are likely to be either beech or ironwood.

A tree with an opposite branching pattern narrows the choices down to

maples, ashes and dogwoods. Once you know that, it's not too difficult to use a field guide to learn the individual species. However, make sure you have a tree and you're not looking at a shrub. Some of our shrub species also have opposite branching.

Leaves are a popular way to learn tree species, and they're a good technique during the growing season. Naturally, some tree species have variable leaf characteristics, so be cautious. Use multiple samples from the same tree to get an "average" appearance. Using fallen leaves takes special care to make sure the leaves fell from the tree that you're looking at.

Considering "where" the tree grows can be quite helpful, especially for sites that are particularly dry or wet. A pine on a dry sandy plain will most likely



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NRCS Staff Learn about Breast Cancer Awareness



NRCS Women's Special Emphasis Program Manger Tiffari Jenkins (above right) presents a certificate of appreciation to Corrie Bourdon, a genetic counselor from the Sparrow Cancer Center. Soil Conservationist Kandrea Johnson (above right) participates in an exercise during the event.

About 20 NRCS employees, including men and women, attended a breast cancer awareness training held in East Lansing on Oct. 21.

The event featured a presentation by Corrie Bourdon, a genetic counselor for the Sparrow

Cancer Center. Bourdon talked about how to detect breast cancer and risk factors lined to breast cancer including genetic factors.

After skin cancer, breast cancer is the most common cancer for American women.

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Tree Identification

be jack pine. A broad-leafed tree in a swamp will likely be black ash or one of the elms. Black and white spruce can be difficult to distinguish by needle appearance, but if it's in a lowland site, it's probably black spruce. If the site is upland, it's probably white spruce.

The more trees you know, the easier it is to learn more. One of the best field guides is "Trees of Michigan" by Linda Kershaw. Norman Smith's "The Trees of Michigan and the Upper Great Lakes" is also good. For the U.P. and nearby regions, the U.P. Tree ID website is good. Happy hunting.

This article was published by Michigan State University Extension. For more information, visit <http://www.msu.edu>.

Save the Date!

Saturday, February 4th, 2017

MICHIGAN FAMILY FARMS CONFERENCE

"Farmers Leading the Future: Blending Established Wisdom with New Ideas"

The 14th Annual Michigan Family Farms Conference

Network, learn and build sustainable farms!

This customized forum for beginning, small-scale, and culturally diverse farmers, includes energizing workshops, uplifting speakers, marvelous food, exhibitors and a youth track . . . all within an inspiring and supportive atmosphere.

When:
Saturday,
February 4th, 2017
9:00 AM - 4:30 PM

Where:
Marshall High School
701 N. Marshall Avenue
Marshall, MI 49068



Michigan to Host Midwest Cover Crops Meeting

The Midwest Cover Crops Council will hold its annual meeting in Grand Rapids on March 15.



The meeting will begin at 8:30 a.m. at the Crowne Plaza Grand Rapids. The conference will feature learning tracks for field crops, vegetable crops and forage and grazing. The conference will include cover crop researchers and educators from throughout the Midwest.

Researchers and farmers will team up to present new ideas and practical application of cover crops. Participants will learn the value of covers in a production system, their role in protecting resources and their contribution to soil health.

Conference registration is open to anyone interested in learning more about field experiences from researchers, farmers and educators on how to make cover crops work in three cropping systems; row crops, vegetable production and forage systems.

The registration fee is \$85, or \$50 for graduate student registration. After Jan. 31, registration is \$100, and \$60 for graduate students.

The 2016 conference held in Madison reached its attendance capacity at 150, this year's conference can accommodate 300 participants. Online registration for the conference is available until March 1, at <https://events.anr.msu.edu/event.cfm?eventID=DCBB51F08423699F>.

The Midwest Cover Crop Council includes 12 states and Ontario. The Council was created in 2006, with a goal of restoring year-round living cover in the Midwest. The MCCC's work is supported by a number of private foundations along with state universities including Michigan State University. The MCCC undertakes a wide range of activities to supports its goals including cover crop research, education and outreach.

N-Mich Farm Conference set for Jan. 28

The Northern Michigan Small Farm will take place on Jan. 28, at the Grand Traverse Resort in Acme, preceded by a one-day Farm School on the 27th.

The conference is targeted to the small farm community and offers educational workshops and an opportunity for producers to exchange ideas. Information about the conference and Farm School, as well as online registration is available at www.smallfarmconference.com.

The cost of the conference starts at \$75, and the Farm School on Jan. 27, is \$140. The Farm School offers learning tracks for fruit production, season extension and grazing. Child care is available as well as an educational program for school-age children.

Educational sessions are led by local producers, MSU Extension educators and industry experts. NRCS representatives will be available at the trade show.



Online Soil Health Resources

- Publications
- Downloadable Posters
- Soil Quality Lesson Plans
- Guides for Educators
- Videos
- More on the [NRCS Soil Health web page](#)

Upcoming Events - Upcoming Events - Upcoming Events

January

- 7 Project Learning Tree Certification Workshop, 10 a.m. to 4 p.m., Petoskey State Park - Petoskey, for more information and to register call PLT Facilitator/NRCS Earth Team Volunteer, Maureen Stine at 231/838-4913
- 17 Dry Bean and Beet Symposium, 9 a.m. to 4 p.m., Horizons Conference Center - Saginaw, for more information go to <http://msustatewide.msu.edu/Programs/Details/2104>
- 26 Forestry Workshop: Management Opportunities for your Woodlands, 6:30 to 8:30 p.m., Hesperia Community Library - Hesperia, for more information contact the Oceana Conservation District at 231/861-5600
- 28 Northern Michgian Small Farm Conference, 9 a.m. to 5 p.m., Grand Traverse Resort - Acme, for more information go to www.smallfarmconference.com

February

- 1 American Chestnuts Presentation, 7 to 8:30 p.m., Boardman River Nature Center - Traverse City, for more information and to register contact Kama Ross, District Forester at 231/256-9783 or kama.ross@macd.org
- 2 North Country CISMA Semi-Annual Community Partners Meeting, 10 a.m. to noon, Baldwin American Veterans Post - Baldwin, for more information call 231/429-5072 or vicki.sawicki@macd.org
- 2 Mid-Contract Management Workshop, 7 to 9 p.m., Coldwater Township Hall - Coldwater, for more information call 517/278-2725 Ext. 5 or kathy.worst@mi.nacdnet.net

February ctd.

- 4 Michigan Family Farm Conference, 9 a.m. to 4:30 p.m., Marshall High School - Marshall, for more information go to www.miffs.org
- 20 Branch County Farmers Day, 9 a.m. to 4 p.m., Branch Area Career Center - Coldwater, for more information call 517/ 279-4311 or msue.branch@county.msu.edu
- 22 Planting Native Tress and shrubs for Timber, Wildlife and Aesthetics, 6:30 to 8:30 p.m., Government Center Community Room - Suttons Bay, for more information and to register contact Kama Ross, District Forester at 231/256-9783 or kama.ross@macd.org

March

- 3 Forest Soils and Glacial History Presentation, 6:30 to 8:30 p.m., Boardman River Nature Center - Traverse City, for more information and to register contact Kama Ross, District Forester at 231/256-9783 or kama.ross@macd.org
- 8 Planting Native Tress and Shrubs for Timber, Wildlife and Aesthetics, 6:30 to 8:30 p.m., Benzonia Township Hall - Benzonia, for more information and to register contact Kama Ross, District Forester at 231/256-9783 or kama.ross@macd.org
- 15 Midwest Cover Crop Council Annual Meeting, 8 a.m. to 5 p.m., Crowne Plaza Grand Rapids - Grand Rapids, for more information go to <http://mccc.msu.edu/>



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Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.