

Helping People Help the Land



# Conservation Notes

USDA - Natural Resources Conservation Service - Michigan

November-December 2013

## EWP Helps Flood Recovery Efforts

Last April when heavy rains overwhelmed county drains and breached levees threatening agricultural land, homes, and infrastructure, it was NRCS that came to the rescue.

“Pretty much the whole county was underwater,” said Ottawa County Drain Commissioner Joe Bush.

NRCS responds to natural disasters that threaten land, life and property through its Emergency Watershed Protection Program. In 2013, NRCS-Michigan provided nearly \$400,000 in financial assistance, along with technical assistance, to repair damage caused by heavy rains and flooding in Ottawa, Kent and Saginaw counties.

Representatives from NRCS and the Federal Emergency Management Agency toured Ottawa County to survey damage caused by the April floods, said Bush. Each agency determined what flood damage they could provide assistance with depending on each agency’s regulations. The flood damage in Kent and Ottawa counties consisted primarily of washed out banks and obstructed culverts on county drains and creeks.

The county drain commissioner, NRCS and FEMA have different responsibilities when flood events happen, said Chris Johnson, NRCS area engineer for southwest Michigan. The drain commission does what it can to prevent flood damage by maintaining the drains and clearing debris during flood events. Through EWP, NRCS assists after the flood by assisting with repairs that are beyond normal maintenance issues. If flood damage threatens to damage a road or infrastructure, NRCS usually provides assistance. If the flood damages or destroys infrastructure, FEMA may provide assistance



*April flood waters damaged banks along streams and county drains in Kent County (above). NRCS assisted with repairs utilizing funds available through the Emergency Watershed Program (below).*



-continued on page 3-



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State Conservationist’s Message	Page 2
Qualified Forest Program in N. Michigan	4
Real or Artificial Christmas Tree?	6
Area 2 Conserveationist	7
Earth Team Spotlight	8
Stewardship Nominations Sought	8
Event Calendar	9

## State Conservationist's Message

Spring floods in Michigan demonstrated the most valuable resource provided by NRCS, professional conservationists working in local field offices. When farm fields flooded and streambanks were washed away, landowners did not have to go far for help.

A lot of attention is given to the funding NRCS brings to Michigan for conservation. These funds are put to good use thanks to the work of NRCS and conservation district employees. However, not enough is said about what a tremendous asset local NRCS and conservation districts employees are to their communities. The support NRCS provided to drain commissioners and local governments following this Spring's flood events is a dramatic example. While other agencies had to bring in staff from outside areas, NRCS was already there, surveying flood damage and consulting with local entities.

Conservation assistance is available to all Michigan landowners, if not in their own county then one county over at a USDA Service Center. Having a local conservationist who can provide advice and expertise on topics ranging from managing pasture land and woodlots to controlling pests in orchards is a valuable resource for any community.

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The past two issues of Conservation Notes included articles on the Qualified Forest Program administered by the Michigan Department of Agriculture and Rural Development. This program is an excellent example of governmental agencies working together to conserve natural resources while also supporting the state's economy. Conservation

district foresters promote the program to private landowners. NRCS is providing financial assistance through the Environmental Quality Incentives Program for landowners to have forest management plans developed which is a requirement for enrolling land into QFP. MDARD oversees the program and the state of Michigan provides financial incentives to preserve private forestland.



*NRCS Michigan State Conservationist Garry Lee*

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Agroforestry is a management approach that intentionally combines agriculture and forestry to create more sustainable land-use systems. Agriculture Secretary Tom Vilsack highlighted the agency's accomplishments when he announced the release of the first-ever report on USDA's role advancing agroforestry.

Over the last five years, USDA has assisted landowners financially and with technical guidance to establish roughly 336,000 acres of windbreaks, riparian forest buffers and alley cropping; about 2,000 acres of silvopasture; and about 500 acres of forest farming. Those acres represent less than 1 percent of the potentially suitable land for applying those practices, suggesting there is an opportunity to significantly expand the application of agroforestry in the United States.

-continued from page 1-

## NRCS Assists with Recovery from Spring Floods

said Johnson.

In Saginaw County heavy rains overwhelmed levees protecting agricultural land in the Prairie Farms area. The Flint, Shiawassee and Titibiwassee rivers all converge near the Prairie Farms area which includes at least 16 farms and covers about 10,000 acres, said NRCS District Conservationist Will Sears.

“When the dikes wash out they get flooding right now,” said Sears.

Before providing EWP assistance, a disaster declaration must be made. NRCS then does a cost analysis to determine if the cost of repairs is justified by the value of the resources being protected. This can include the value of crops grown on the flooded land, public infrastructure like roads or utility lines threatened by further erosion or cultural or wildlife resources negatively impacted by the flood damage.

Through EWP, NRCS can provide up to 75 percent of the project costs. NRCS provided financial and technical assistance on 17 sites in the three affected counties. NRCS staff designed repairs for damaged levees and streambank stabilization projects. EWP funds were used to stabilize 3,925 feet of streambanks and levees and remove 2,140 feet of debris, protecting 2,468 acres of land and 43 private homes and buildings. All of the EWP funds were distributed by the three respective county drain commissioners. EWP requires that project sponsors have taxing authority.

“It was great working with you guys (NRCS). There was very good communication,” said Bush.

NRCS did the engineering work and the drain commission put the work out for bids, said Bush. All of the work was done by local contractors, he added. Where the banks of county drains were repaired through EWP they should hold up better than before, said Bush.

“It wasn’t a Band-Aid, they took the initiative to do it right.”

In Saginaw County FEMA was not involved in flood repair work because it involved only agricultural land, said NRCS Engineering Technician Bill Bartlett. EWP rules require that repairs be made quickly but conditions do not always comply. Continual rains made accessing and repairing damaged levees difficult, said Bartlett. The last levee repair in Saginaw County was completed on July 18.



*Above: Levees surrounding farm land in Saginaw County were damaged by April flooding. EWP funds were utilized to help make repairs (below).*



EWP work in Saginaw County involved mostly agricultural land and the Shiawassee State Game Area, while projects in Kent County involved agricultural land as well as areas adjacent to buildings and utility lines. Flood waters eroded streambanks to within feet of private homes. Another streambank stabilization site was right next to a sanitary sewer line.

Sometimes flood events are foreseeable, and close cooperation between NRCS and local entities can speed up recovery efforts after floods and other disasters, said Johnson.

## Qualified Forest Program

The last edition of Conservation Notes included an article on the Qualified Forest Program in the Upper Peninsula. This article, **submitted by NRCS Area 2 staff**, shows that the program is also being utilized by landowners in Northern Michigan.

Michigan's Qualified Forest Program has helped non-industrial private forestland owners care for their land for nearly eight years. Since its inception in 2006, (Public Act 378, 379, 380), QFP has integrated hundreds of forestland owners with comprehensive forestry management plans specifically tailored to encourage healthy forests ecosystems, provide high quality timber harvest opportunities, and enable property tax reduction incentives. In essence, the program helps owners of smaller parcels of forestland (a minimum of 20 contiguous acres in a taxing jurisdiction); those that do not typically fall under the classifications for agricultural land or do not receive a homestead exemption for reduced property taxes on productive managed forestland.

Michigan contains more than 19 million forested acres. Nearly half of that is land is owned by private landowners, also known as NIPF or Non-Industrial Private Forestland. Unfortunately, about 84 percent of private forest landowners do not actively manage their forests. Reasons may vary from lack of available time, interest or an understanding of the profound benefits that quality forest management can yield. It is widely accepted that well managed forests help the environment through soil erosion control, improved water filtration which produces healthy, vigorous forests, enhances wildlife habitat, exotic pest control and carbon sequestration.

Sound forestry is also an economic driver. According to a 2003 study, MSU Forest Economists estimate that \$11 billion in sales from forest products industries that supported nearly 60,000 direct jobs. There are about 76,000 indirect jobs also associated with the forest products industry.

Since 2006, approximately 80,000 acres have been enrolled in the QFP; however that number is just a small fraction of the millions of acres of



NRCS District Conservationist Perry Smeltzer, Presque Isle CD Forester Bethany Lyons with landowners Gloria and Ted Pokorski.

NIPF in the state. Michigan's original QFP had a high penalty for withdrawal (recapture tax) associated with it and contained a stipulation that the property cannot contain any structures. These regulations are believed to have caused the initial low enrollment. Public Act 29 of 2013 lifted both of these restrictions, altering the calculations for recapture tax and allowing forestland with existing structures to be enrolled.

These recent changes have skyrocketed interest in the Environmental Quality Incentives Program, encouraging more participation in forest management practices. A current estimate is a four-fold increase in the number

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## Qualified Forest Program Draws Interest

of applications to develop a forest management plan funded through the EQIP program.

### QFP Strengthening Partnerships

A unique and sustainable aspect of Michigan's Qualified Forest Property Program is the diverse partners involved in its administration and management. This responsibility is shared between the Michigan Department of Treasury, the Michigan Department of Agriculture and Rural Development, Michigan Department of Natural Resources, Certified Technical Service Providers, and Michigan's Association of Conservation Districts. NRCS serves as a supporting agency, promoting networking among these groups and information dispersal to landowners.

Bethany Lyons, is a Forester with the Presque Isle County Conservation District and works closely with private forest landowners in Presque Isle and Cheboygan Counties. In a recent Presque Isle County site visit, she shared her views on the QFP program, "It has become apparent that more and more private forestland owners are interested in forest management and stewardship plans. Presque Isle and Cheboygan counties have a substantial amount of private forestland relative to other counties in the state of Michigan."

Lyons continued, "Many landowners realize that some type of management is necessary but most do not know how to proceed. Discussing these goals with a Conservation District Forester and/or a Qualified Forester can help identify and organize management objectives. Because of the large acreage of private forestland in both Presque Isle and Cheboygan counties, we have a wonderful opportunity to promote and implement forest management plans for the benefit of both our forest landowners and their beautiful Northern Michigan forests."

During this October site visit, we met with property owners, Ted and Gloria Pokorski and followed up on the benefits of their NRCS EQIP contract and the recent forestry work on their

land.

"At first, it's a little overwhelming, deciding where to start," shared Ted "but once you commit to a well-developed plan, the work is enjoyable and we look forward to getting into the woods and tackling our plan a little at a time."

After entering into an NRCS contract and receiving a Forest Management Plan from an area TSP, Ted and Gloria have been implementing forest stand improvements on their own. For the past three years the Pokorski's worked on their forest plan by cutting selected trees, constructing brush piles, and manipulating the species composition of the canopy and understory of their 80 acre plot.

There is an abundance of information regarding eligibility, application procedures, and important deadlines related to QFP on Michigan's QFP found online at Michigan Department of Agriculture and Rural Development. Visit their website at: [michigan.gov/mdard](http://michigan.gov/mdard).



# Environmental Effects of Christmas Trees

by Bill Cook, MSU Extension

**The environmental impacts, using life cycle assessment techniques, of real vs. artificial Christmas trees are pretty much even. Like many such analyses, much depends on variable estimates, including personal behavior.**

Which is more environmentally-friendly; a real or artificial Christmas tree? This is certainly a question that has plagued humankind since the murky origins of winter solstice traditions in northern Europe. German Christians are generally tagged as the initiators of this cultural custom, although earlier citations can be found. "Tannenbaum" is a German word for "fir tree".

There is a set of "life cycle assessment" protocols that can be applied to almost any consumer product or activity which can illustrate and compare environmental impacts. Inputs and outputs are measured or estimated beginning with extraction, through manufacturing, and then disposal. Some call this "cradle to grave".

These protocols undergo regular review and modification to provide increasingly better answers and exploit ever-changing technology. Although for wood products, according to some experts, the protocols need serious tweaking.

So, what's the bottom line? Real vs. artificial is a close wash, with some caveats.

The calculations involve a number of variables that are assigned values. Some values are pretty good averages while others require looser estimation. And then, there are all the assumptions. This is beginning to sound like a mathematics exercise. Well, it is, really.

So, researchers have actually studied this topic. Carbon and energy were the currencies evaluated. Other impacts were evaluated, too, depending upon the study.

The American Christmas Tree Association (ACTA) commissioned a study that was published in 2010. ACTA is a manufacturer of artificial trees. The 109 page report is loaded with technical jargon. Just the table of contents is over two pages. Another study (91 pages) was published in 2009 by a consulting firm out of Montreal.

The ACTA provided a few tips based on their study.

1. If you go natural, try to select locally-grown.
2. Minimize the number of miles driven to acquire the tree. The reports show that driving to get the tree has more impacts than the tree itself.
3. You'll need to use an artificial tree for 8-9 years before certain benefits exceed those of an annual natural tree.
4. When an artificial tree is replaced, consider donating the old tree.
5. Where possible, dispose of natural trees in re-purposeful ways, such as mulch.



Of course, in the annual carbon and energy footprint of an average American family, a Christmas tree of either breed is pretty much inconsequential. The choice of real vs. artificial goes beyond just environmental impacts, and those impacts can be highly variable depending on family behavior.

Buying a real tree from a local tree farm helps area growers stay in business and might slow a bit of urban sprawl. Most artificial trees are made in China but the transportation efficiencies are actually quite high. The studies did not recognize the difference between "fossil" carbon and "biological" carbon, which is an important distinction. Avoiding fossil carbon by using biological carbon has atmospheric advantages that

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## Area 2 Conservationist Edwin Martinez

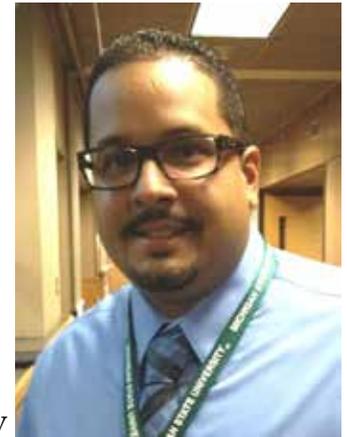
The opportunity to continue his education at a university with a strong reputation in agriculture while advancing his NRCS career is what brought Area 2 Conservationist Edwin Martinez to Michigan.

Martinez began his current position of area conservationist for Area 2 working in the Gaylord area office on Nov. 4. As Area Conservationist, Martinez will supervise 14 NRCS field offices serving 27 counties in northern Michigan.

He came to Michigan as district conservationist for Clinton County in August 2008. Working in St. Johns afforded Martinez the opportunity to pursue his doctorate degree at nearby Michigan State University. He will finish his course work in Plant and Soils Sciences and Biosystems Engineering in December and plans to complete his dissertation in January 2014.

Martinez began his NRCS career as a student trainee in Nebraska and continued working as a student trainee in his native Puerto Rico in 2005. His first career position with NRCS was as a soil conservationist with the Klamath Basin conservation planning team in Tulelake, Calif.

In addition to his regular duties Martinez is very involved with the agency's training efforts. He served as a Conservation Boot Camp trainer in 2012 and 2013 in North Carolina and assisted with a proposal to redesign the Conservation Boot Camp to allow the agency to meet current and future training demands. Martinez is also involved in the agency recruitment and retention efforts and heavily promoted NRCS career opportunities at Michigan State University.



*Area Conservationist  
Edwin Martinez*

Outside of work, Martinez enjoys traveling, reading and photography. His travels include trips to Spain, Italy and Mexico. In 2009 he traveled to Veracruz, Mexico as part of an NRCS international detail and provided training related to mangrove conservation and restoration.

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## Environmental Effects of Christmas Trees

aren't yet often recognized in life cycle analyses. Real trees rule in this regard, as do forest products.

How do Americans fall-out in the real vs. artificial debate? The ACTA says that 83 percent of homes that participate in Christmas tree traditions will use an artificial tree. Last year, Americans bought nearly 22 million real Christmas trees and 12 million artificial trees. Some households displayed both. According to the ACTA survey, the average cost for a real tree was \$45, and \$80 for an artificial tree.

The most popular real tree choices are true firs, such as balsam and Fraser, followed by Scots pine. However, there is a range of species to suit the desires of most tastes.

Michigan's Christmas tree industry is valued at

about \$50-60 million and is one of the nation's top producers through selling around three million trees each year. Most of the production is exported.

The bottom line? Use whatever suits your family's needs best and however your family likes to engage the Christmas tree tradition. If the environment is important to you, there are much bigger fish to fry than deliberating between a real and artificial Christmas tree.

*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](mailto:cookwi@msu.edu) or 906-786-1575.*

## MSU Student Pursues Interests Through Earth Team

Earth Team Volunteer Dennis Maxwell brings a diverse work background and valuable skills to NRCS.

Maxwell began as an Earth Team volunteer at the state office in East Lansing in September after starting classes at Michigan State University. Following four years of service in the U.S. Navy, he attended film school at Columbia in Chicago and earned a video production certificate. He worked in the film industry from 2010 to 2012. He left film work to serve as an AmeriCorps volunteer doing conservation work in Montana and in 2013 he worked as a park ranger at Crater Lake National Park in Oregon.

As an Earth Team volunteer, Maxwell works with the operations staff. His current assignments include filming and producing videos promoting NRCS programs and practices. When not volunteering, he attends MSU where he is

pursuing a degree in the school's Environmental Sustainability Program.

Maxwell's passion is preservation of the land and educating the public about climate change and how to actively participate in conservation. Serving as an Earth Team volunteer provides him the opportunity to pursue his professional interests and to utilize his professional skills.



*Earth Team Volunteer  
Dennis Maxwell*

*We would like to regularly feature Earth Team volunteers and the work they are doing in Conservation Notes. If you know an Earth Team volunteer who should be featured please contact State Earth Team Coordinator Teresa Moore at [teresa.moore@mi.usda.gov](mailto:teresa.moore@mi.usda.gov).*

## Nominations Sought by March 7

The National Cattlemen's Beef Association is seeking nominations for its annual Environmental Stewardship Award.



The award is presented to a cattle producer who demonstrates environmental stewardship in his or her livestock operation. Individuals cannot nominate themselves, but any individual, group or organization can nominate on behalf of a cattle producer. Nominations must be postmarked no later than March 7.

The Environmental Stewardship Award has been presented to cattle producers since 1991. NRCS is one of the sponsoring organizations for the award. NRCS and conservation district employees are encouraged to nominate cattle producers who incorporate sound conservation principles.

For more information, including nomination materials, go to: [conservationstewardship.org](http://conservationstewardship.org).

A poster for the Michigan Family Farms Conference 2014. The central graphic shows two hands cupping a mound of soil with a small green plant growing from it. Above the hands is a stylized sun with rays. The text "Michigan Family Farms Conference" is written in a green, curved font around the top. Below the hands, the year "2014" is written in large, bold, black numbers. At the bottom, the event details are listed: "Saturday, January 18, 2014", "Lakeview High School", "15060 Helmer Road South", and "Battle Creek, MI 49015".

Upcoming Events - Upcoming Events - Upcoming Events

January

February

18 Family Farms Conference, 8 a.m. to 5 p.m., Lakeview High School - Battle Creek, for more information go to: [miffs.org](http://miffs.org)

1 Winter Stonefly Hunt, 1 p.m. to 4 p.m., Dahlem Center 7117 S. Jackson Rd. - Jackson, For more information and to RSVP call 517/784-2800 ext. 208

4-6 Forest Adaptation Planning and Practices, Kewadin Casino - Sault Sainte Marie, for more information go to: [miforestpathways.net/140206-Adapt.pdf](http://miforestpathways.net/140206-Adapt.pdf)

18-19 Integrated Pest Management Academy, Okemos Conference Center - Okemos, for more information go to: <http://events.anr.msu.edu>



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To file a complaint of discrimination, complete, sign and mail a program discrimination complaint form, available at any USDA office location or online at [www.ascr.usda.gov](http://www.ascr.usda.gov).