

Helping People Help the Land

Conservation Notes

USDA - Natural Resources Conservation Service - Michigan

March/April 2020



Oakland Avenue Urban Farm Hopes to Revive North End

Jerry Hebron remembers the neighborhood she grew up in as a vibrant place with family businesses, thriving schools and well-kept homes. The commercial district of the North End neighborhood was on Oakland Avenue, about 7 minutes north of downtown Detroit.

“We had everything we needed,” said Hebron.

Hebron moved away from the North End neighborhood when she was 14 years old. Although Hebron’s mother, Bertha Carter, continued as pastor at St. John’s Evangelist Temple of Truth in the North End, life took Hebron away from the old neighborhood.

After Hebron retired from a busy professional life she became involved in community activism and took renewed interest in her old North End neighborhood. “It was a long time before I came back,” said Hebron. The neighborhood was much different than the one she grew up in.

The North End neighborhood she found in 2008 had empty houses, vacant lots and no functioning street lights on the main thoroughfare of Oakland Avenue. Even worse, the people who remained in the neighborhood didn’t seem to trust each other, Hebron said. She assisted a non-profit in forming a board of neighborhood residents to revitalize the area. Through this effort an urban farm was created, initially through her mother’s church which owned 10 vacant lots. The farm became an independent non-profit, Oakland Avenue Urban Farm, and Hebron serves as the executive director. The farm purchased additional lots through the Detroit Land Bank Authority. In 2010, the farm constructed its first high tunnel, it now has three, including one funded



Jerry Hebron serves as Executive Director of Oakland Avenue Urban Farm in Detroit’s North End Neighborhood. The farm’s mission is to help restore the neighborhood while providing quality food to its residents.

through the NRCS Environmental Quality Incentives Program.

The farm has three year-round employees and about 45 to 50 students work at the farm during the summer through a partnership with the city. The students work in teams led by interns and farm employees. They learn about food from farm to table, said Hebron. When they are sitting shelling

-continued on page 3-

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State Conservationist’s Message	Page 2
CRA Receives EPA Grant	3
Michigan Project Selected for RCPP	4
National CIG Deadline Announced	4
Michigan Forest Wildlife	5
Online Events Calendar	6

State Conservationist's Message

The Covid-19 pandemic has created disruption in our country unlike anything most of us have ever experienced. Even as we take measures to isolate ourselves from the virus many of us know people who have been directly affected by the illness. I hope everyone is taking the advised measures to keep themselves and their communities safe.

As the pandemic continues, we have seen its impact spread from urban centers to less populated areas. It is now impacting the nation's food supply chain through Covid outbreaks at meat processing plants and disruptions due to the loss of demand from businesses and institutional customers.

Michigan farmers are now seeing the impact as the demand for meat and dairy products diminishes. Our customers may soon be in the position of feeding livestock and producing milk that there is no market for. NRCS is working to prepare for these possibilities so that the environmental impact can be minimized.

NRCS will strive to serve our customers and

anticipate ways that we can assist them with any new challenges that arise. In 2019, we were able to help many Michigan farmers alleviate the conservation impacts of not being able to plant a crop by providing assistance to plant cover crops. I am confident that we will be able to assist our customers with whatever unforeseen impacts that arise due to the Corona virus.

On behalf of the national and state leadership of NRCS I want to thank NRCS employees and our conservation partners for continuing to serve the farmers and forest owners of Michigan. Like all of you, I look forward to the day when we can resume serving our customers from our offices and work in the field again.



*State Conservationist
Garry Lee*



-continued from page 1-

Oakland Avenue Urban Farm Hopes to Revive North End

peas they are talking to each other without a cell phone in sight, she added.

The farm grows a little bit of everything, said Hebron's husband Billy who serves as the farm manager. "We grow what grows well and don't grow what doesn't," he said. Crowder peas are a specialty and popular with the farm's customers. "We have dedicated loyal customers." The farm's customers include people in the neighborhood as well as some area restaurants, food vendors and food banks.

The farm also has a hen house that was being restocked with future laying hens in early March. They are hoping the new hens will get along with each other better than the last group. One of the summer students at the farm enjoyed working with the chickens so much she decided to become a veterinarian, Hebron said.

Just as for the rest of us, Oakland Avenue Urban Farm will likely have a different summer in 2020 than they're used to. In past years it has been an active place with a weekly farmers' market it hosts through a partnership with the Eastern Market. Whatever the future brings the farm will strive to fulfill Hebron's motto, "everybody should have a right to quality food."

District Conservationist Solomon Andrews and Oakland Avenue Urban Farm executive director Jerry Hebron stand in front of a high tunnel funded through the NRCS Environmental Quality Incentives Program (above right). Farm Manager Billy Hebron (right) and farm employee Carlos Leonard sort chicks the farm received in March (below right).



CRA Receives \$200,000 from EPA for Reforestation Project

Conservation Resource Alliance received \$200,000 from the U.S. Environmental Protection Agency to support Wild Roots, a mass reforestation pilot-program aimed at restoring northern Michigan's native forests with 100,000 trees and shrubs over five years.

CRA is among 15 recipients of the Great Lakes Restoration Initiative grant funding, which awarded a total of \$9,056,711 to projects that address excess nutrient runoff from non-point sources, including stormwater and agriculture, to the Great Lakes. The EPA GLRI funding is a big boost for the program

and will help to sustain Wild Roots for the next two years.

Wild Roots was developed to complement CRA's stream restoration work within 16 watersheds – all of which drain into the Great Lakes. The tree-planting program reduces runoff, improves wildlife habitat, provides shade for world-class coldwater streams, and reduces harmful sediment and nutrient inputs.

Now in its second year, Wild Roots has helped to provide Michigan landowners with more than 30,000 trees and shrubs at a substantially discounted rate.

Michigan Project Selected for Regional Conservation Partnership Program

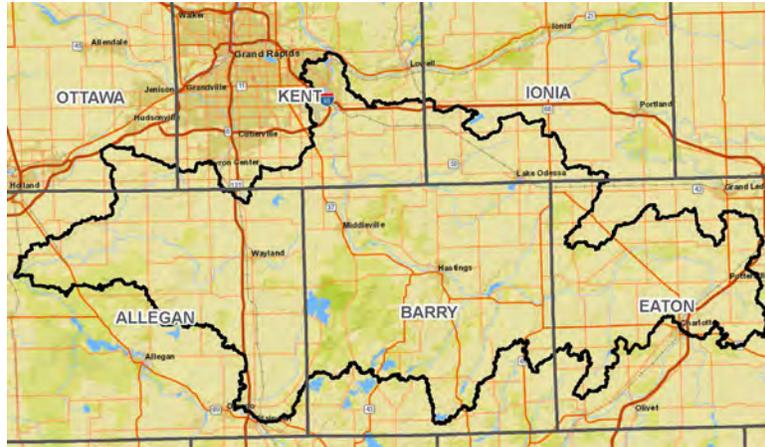
The Thornapple-Kalamazoo Water Quality Partnership was one of 48 new projects selected for funding through the USDA Regional Conservation Partnership Program. NRCS will award \$206 million for the 48 RCPP projects while leveraging nearly \$300 million in partner contributions.

The Thornapple-Kalamazoo Water Quality Partnership was allocated \$760,740 in RCPP funding. The Barry Conservation District is the lead partner for the project that aims to make measurable improvements and protect water quality and habitat for fish, wildlife, and invertebrates in the Gun, Rabbit, and Thornapple River watersheds. The project area includes portions of Allegan, Barry, Eaton, Ionia, Kent and Ottawa counties.

RCPP uses a partner-driven approach to fund innovative solutions to natural resource challenges. Through RCPP, NRCS and partners work together with private landowners and producers to implement a variety of conservation activities, including land management practices and systems, short-term land rentals, conservation easements and watershed structures. The mix of conservation activities carried out under each project is dependent on a project's goals, objectives and conservation

benefits.

These projects offer impactful and measurable outcomes. They will support diverse agricultural and natural resource objectives, from helping farmers and ranchers improve water quality, soil health and drought resiliency to protecting drinking water supplies and enhancing wildlife habitat.



Proposed project area for the Thornapple-Kalamazoo Water Quality Partnership, the project was approved for funding through the USDA Regional Conservation Partnership Program.

Though RCPP was first authorized in the 2014 Farm Bill, the 2018 Farm Bill made changes to strengthen the program and simplify its rules. RCPP is now a stand-alone program with \$300 million annually available for partner-driven projects. In addition to the general RCPP projects announced today, NRCS has already awarded more than \$50 million for 18 renewals of 2014 Farm Bill projects. A separate

RCPP Alternative Funding Arrangements (AFA) funding announcement is currently open until May 18.

Since 2015, RCPP has combined \$1 billion in NRCS investments with close to \$2 billion in partner dollars to implement conservation practices nationwide. There are currently 341 active RCPP projects and close to 2,000 RCPP partners.

Deadline for National Conservation Innovation Grant Proposals Announced

The U.S. Department of Agriculture (USDA) announced today a \$15 million investment to help support the adoption of innovative conservation approaches on agricultural lands. USDA's Natural Resources Conservation Service (NRCS) is accepting proposals through **June 29, 2020**, for national Conservation Innovation Grants (CIG). CIG projects inspire creative problem-solving solutions that boost production on farms, ranches and private forests and improve natural resources.

This year's priorities are water reuse, water quality,

air quality, energy and wildlife habitat.

CIG is a competitive grants program that supports development, testing and research of conservation technologies, practices, systems and approaches on private lands. Grantees must match the CIG investment at least one to one.

All U.S.-based non-Federal entities and individuals are eligible to apply. Complete information can be accessed through the [Conservation Innovation Grants webpage](#).

Forest Wildlife Before Timber Harvests in Michigan

By Gary Roloff, Michigan State University

There's a huge ongoing, forest regeneration study occurring across the northern forests of Michigan. One of the aspects involves use and impacts by wildlife, especially white-tailed deer.

Northern hardwoods occur over millions of acres in the Great Lakes Region. This forest type includes a variety of tree species that currently include maples, oaks, birches, beech, and ironwood, and secondarily conifers (like white pine and hemlock), aspen, and basswood.

Northern hardwoods are valued for timber production and wildlife habitat but concerns about the ability to grow new trees after timber harvest prompted the Michigan Department of Natural Resources (MDNR) to study alternative approaches for managing this important resource. These concerns prompted the "big northern hardwoods study".

This study started in winter of 2017 with collection of data prior to timber harvest. In winter of 2018, MDNR and forest industry partners harvested timber from 140 30-acre sites spread throughout Michigan. One of four timber treatments was assigned to each site. These treatments ranged from the typical, historical way of managing northern hardwoods using what is known as selection silviculture, to more aggressive techniques like seed tree, where most trees are cut leaving 6-8 seed trees per acre. Although a primary focus of the research project is tree regeneration and recruitment, the MDNR Wildlife Division was also interested in wildlife responses to the different treatments.

For 48 of the 140 study sites, the Applied Forest and Wildlife Ecology Lab (AFWEL; <https://www.afwelsite.com/>) at Michigan State University deployed four trail cameras within the 30-acre harvest areas to monitor wildlife activity prior to timber harvesting. Although the focus of the project is deer use and behavior and how that affects tree recruitment, cameras offer an opportunity to learn about other species. These cameras collected data for about a year prior to timber harvest and accumulated over 250,000 photos.

One question the AFWEL needed to answer was whether four cameras were enough to reliably portray deer use of the study sites. To answer this question, the AFWEL deployed 25 cameras on one site (a camera every 1.2 acre) and compared deer use among different combinations of the 25 cameras. Although there was considerable variability, the AFWEL found that four cameras portrayed deer use almost as good as 25 cameras for a 30-acre site. Thus, the AFWEL was confident that the camera design would provide meaningful information on deer use to the project.

In the process of sorting through 250,000 photos, the AFWEL quickly recognized that there was an opportunity to collect information on wildlife other than deer, particularly for some of the medium to large-sized animals using the sites. The AFWEL ultimately

looked at two broad groups of wildlife: herbivores (or plant eaters) and omnivores/carnivores (or meat eaters). Within these groups, the AFWEL further



Photos captured during an MSU forest wildlife study included a fisher (above) and an up-close white-tailed deer (below).

- photo courtesy of Michigan State University



- continued on page 6 -

Upcoming Online Events - Upcoming Online Events - Upcoming Online Events

May

- 8, 15 National Parks Virtual Tour, 11 a.m. to noon, www.canr.msu.edu/events
- 14 Navigating Money Challenges: Tools to Manage Finances through the COVID-19 Crisis, 6 p.m. to 7:30 p.m., www.canr.msu.edu/events
- 14,21,28 MSUE Field Crops Virtual Breakfast, 7 - 7:30 a.m. www.canr.msu.edu/field_crops/events
- 19 Navigating Money Challenges: Tools to Manage Finances through the COVID-19 Crisis, 1:30 p.m. to 3 p.m. www.canr.msu.edu/events

May ctd.

- 27 Navigating Money Challenges: Tools to Manage Finances through the COVID-19 Crisis, 9 a.m. to 10:30 a.m. www.canr.msu.edu/events

June

- 4 Navigating Money Challenges: Tools to Manage Finances through the COVID-19 Crisis, 6 p.m. to 7:30 p.m. www.canr.msu.edu/events
- 4,11,18,25 MSUE Field Crops Virtual Breakfast, 7 - 7:30 a.m., www.canr.msu.edu/field_crops/events

- continued from page 5 -

Forest Wildlife Before Timber Harvests in Michigan

summarized photos for medium- and large-sized animals. For example, large herbivores included deer and moose, and medium herbivores included snowshoe hare and porcupine. Large carnivores included black bear and wolf, and medium carnivores included bobcat, coyote, fisher, marten, and red fox.

Not surprisingly, the AFWEL found that deer used all 140 sites prior to timber harvest. As part of the study, the AFWEL will quantify deer residence time (e.g. how long deer stay in front of the camera, exposing the trees to potential browsing) and behaviors by season. The AFWEL predicts lower residence times and less deer browsing behaviors in some timber harvest types, particularly those designed to restrict deer access to portions of the harvest areas (e.g., by leaving treetops to shelter seedlings).

Research indicates that predators also affect herbivore behaviors. The camera data provide the AFWEL an excellent opportunity to look at activity times of predator-prey combinations on study sites. For example, the AFWEL found that in the western Upper Peninsula, morning and evening deer and wolf activity peaked at the same times, but wolves also showed an increase in afternoon activity when deer were not active. This frequent wolf activity may reduce the time that deer spend on particular sites, thereby giving the trees that deer like to browse a better chance to recruit into the overstory.

This pattern was not as clear in the eastern Upper Peninsula, where deer and wolf activity did not closely synchronize. For medium sized animals, the AFWEL found that activity of snowshoe hares and porcupines peaked at night, whereas fisher and marten activity peaked during the day.

A big part of AFWEL’s work is to continue monitoring sites for wildlife use now that timber harvest is complete. After timber harvest, the AFWEL added four cameras around study sites to monitor deer activity in the surrounding area. This is an important part of the research because a timber treatment that successfully recruits desirable tree species in a landscape heavily used by deer (thus, likely exposing the trees in harvest areas to browse pressure) is a win for forest and deer management; which is the ultimate goal of the project. Hence, knowing how deer are using the areas around timber treatment sites is important.

All of the AFWEL’s cameras have a metal tag that read “MSU Forestry Research.” So, if you are in the Michigan woods and come across a camera with this tag you are standing in part of the “big northern hardwoods” study.

This long-term study is being conducted in cooperation with Michigan State University, the Michigan DNR, the forest products industry, and Safari Club International, Michigan Involvement Committee. For more information, contact Gary Roloff (roloff@msu.edu) or Mike Walters (mwalters@msu.edu).

NATURAL RESOURCES CONSERVATION SERVICE (NRCS) USDA United States Department of Agriculture

unlock the secrets in the soil

www.nrcs.usda.gov

"We know more about the movement of celestial bodies than about the soil underfoot."
-Leonardo da Vinci

Living in the soil are plant roots, bacteria, fungi, protozoa, algae, mites, nematodes, worms, ants, maggots, insects and grubs, and larger animals.

science of soil
soil is made of about **45% minerals**, **25% water**, **5% organic matter**, and **25% air**

what's underneath

Healthy soil has amazing water-retention capacity.
Every **1%** increase in organic matter results in as much as **25,000** gal of available soil water per acre.

One teaspoon of healthy soil contains **100 million-1 billion** individual bacteria

All of the soil microbes in **1ac/ft** of soil weigh more than **2 cows**

Earthworm populations consume **2 tons** of dry matter per acre per year, partly digesting and mixing it with soil

what it does

Healthy soil is key to feeding **9 billion** people by **2050**

Source: Conservation of Soil: The Nature & Properties of Soils page 17; Royal Society; Roy R. Wells | Water holding capacity: Kansas State Extension Agronomy #-100000, Number 357, July 6, 2012 | Bacteria in a teaspoon: Soil Biology Primer page 6-1; James Ingram, Andrew B. McInnes, Chris Edwards | Microbes weigh! The Nature & Properties of Soils page 404 | Earthworm population consumption: Earthworms & Free Soil: Introduction by Steve Oehler, Assoc. Prof. of Soil Management and Richard Shelton, Assoc. Prof. Environmental Soil Science | Feeding people: The United Nations | USDA is an equal opportunity provider and employer.

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