August/September 2020

Minnesota MFA Woodlands

Minnesota Forestry Association

MFA: an organization of, by and for Minnesota's private woodland owners and friends.

www.MinnesotaForestry.org

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MFA Board Meetings
DNR Cambridge Office
10 a.m. – 3 p.m.
• October 13, 2020

Conference Calls
8 – 9 a.m.
• August 11, 2020
• September 8, 2020
• November 10, 2020
• December 8, 2020

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Suburban Sugar Bush

By Brian Huberty

The Minnesota Natural Resource Atlas, mnatlas.org/gis-tool/

As in the past newsletters, I have been highlighting the Lake Riley area, which happens to be in the Big Woods region of Minnesota.

Lake Riley is in the center of this original vegetation map layer from the Minnesota Natural Resource Atlas link to the right. The lake lies on the edge of the Big Woods. Maple, basswood and hickory trees were recorded at the section corners to the south of the lake and oak openings and barrens to the north of the lake. This map was derived from the original land surveys conducted in 1855: www.mngeo.state.mn.us/glo/index.html.

The Minnesota Natural Resource Atlas contains a wealth of information you can dive into to help you understand the context of your woodland on the landscape, such as the terrain map shown above.

Take some time to zoom into your woods and discover a variety of information. There are over 300 layers of information to choose from.

So why focus on Lake Riley? There is a little, super-sweet, secret sugar bush on the north side of Lake Riley run by John Bushey's family, friends and neighbors.

Not bad for a little woodland operation on the north shore of Lake Riley, which happens to be in suburbia. Not exactly the picture you had in mind when it comes to a maple syrup operation.

This spring's production far exceeded previous years. Over 100 gallons of syrup were produced compared to

Away from home for a time? Please contact the MFA office if you'll be away from home for an extended time and let us know when you'll be back. We'll hold onto the newsletter until you return so you won't miss a single issue! Information@MinnesotaForestry.org or call 218-879-5100

65 gallons in 2017. Tapping began Feb. 29, and they had their last boil on March 28. In those four weeks, they collected nearly 3,500 gallons of sap and boiled for about 72 hours over nine sessions. They had 78 taps on vacuum tubing and 162 taps into gravity sacks. On average, each tap yielded about 15 gallons of sap which resulted in nearly two quarts of syrup. Taps on vacuum were probably over two or three times as productive as the gravity taps. The best day and the longest day resulted in 17 gallons of syrup after 10 hours. John's crew started with 1.5 full cords of split hardwood. It took about another half cord to get them through the season with very little wood or "enthusiasm" remaining.

The quality? The best I have tasted. Over the last decade, the Riley Sugar Bush has produced a few Minnesota State Fair maple syrup award winners.

Unfortunately, with COVID-19 and the cancelation of the Minnesota State Fair, it is unknown at this time whether there will be judging for this year's production. Even more bad news, the maple syrup is not for sale since this is not a commercial operation; it is a hobby. However, if you happen to be one of John and Mary's neighbors, you probably have a bottle already.

In summary with past newsletters, this little five-acre woodland on the north side of Lake Riley has been the focus to help you understand the geospatial context of this woodland as it relates to the original forest – The Big Woods. This is in order to help you understand the past, present and potential future of not only this woodland, but yours as well.

Take some time to think about what was originally growing across your woodland, what is growing there today and what might be growing in future years. As you can tell, it does not take much land to have an award-winning track of woods, even in suburbia.

Regardless of COVID-19, I will be diving deeper into this subject via a webinar at the upcoming Minnesota Woodland Owner Weekend on Saturday, Oct. 3, at St. John's University.

John Bushey and his wife Mary Corya tending to the wood-fired maple syrup evaporator.

News from the Minnesota Women's Woodland Network

By Barb Spears, President, MN Women's Woodland Network

The Minnesota Women's Woodland Network (MNWWN) has been active for 12 years and has a membership of about 450 who stay connected via email and through our activities. We are grateful to partner with the Minnesota Forestry Association for the organizational support it will give us to continue to reach and engage women woodland owners across Minnesota.

For those who are not familiar with us, the MNWWN is dedicated to building a community of women woodland owners to sustain family-owned woodlands through peer learning and building relationships. The MNWWN has hosted many educational and fun classroom and hands-on learning opportunities on topics including chainsaw safety and maintenance, tool sharpening, woodland management, timber sale and harvesting, estate planning and land transfer, native plant ID, hands-on mushroom cultivation, a tour of the Hinckley Fire Museum and even a "massage in the woods."

In March, the Metro Area MNWWN hosted a "Women's Hands-On Tool Sharpening and Maintenance Workshop." The workshop was led by women experienced in tool sharpening and basic maintenance from the Minnesota Society of Arboriculture and Conservation Corps Minnesota and Iowa.

This spring, the MNWWN partnered with the Minnesota State Horticultural Society to provide three webinars on landscaping with native plants: "Landscaping with Native Plants," "Landscaping for Shade with Native Plants" and "Native Plant Landscaping for Wetlands and Rain Gardens." MNWWN Board Member and owner of Landscape Restoration, Inc., Cheryl Culbreth, was the presenter. You can check out these webinars on our website at www.mnwwn.org under "Resources."

Visit our website for more information and to join MNWWN, or follow us on Facebook at facebook.com/MNWWN or Instagram @mnwwn_. Looking forward to seeing you in the woods!

Top two photos: Metro Area Women's Hands-On Tool Sharpening and Maintenance Workshop.

Middle: MNWWN members at St. Croix River Association forestry education event.

Bottom: Ginger Kopp, MNWWN vice president.

Carbon in Minnesota Trees and Woodlands

Adapted from an article by Matthew Russell, Extension Forestry Specialist

Quick facts

- Trees and forests sequester carbon dioxide and other greenhouse gases from the atmosphere.
- Approximately half of a tree's dry weight is carbon.
- Woodlands in Minnesota store on average 75 U.S. tons of carbon per acre.
- Woodland owners can manage their land for carbon storage, carbon sequestration or both.
- Forest carbon offset programs typically used by landowners with large acreages provide payment to landowners for the carbon benefits their woodlands provide.

Conifer woodland.

One of the many benefits that trees provide is removing carbon dioxide from the air. Carbon dioxide is the leading source of greenhouse gas emissions in the United States.

In trees and woodlands, carbon is measured by how much is stored and sequestered. Carbon storage refers to the current amount of carbon in a tree or woodland. Carbon sequestration refers to the process by which trees and other plants use carbon dioxide and photosynthesis to store carbon as plant biomass.

Healthy trees and woodlands increase carbon storage and avoid greenhouse gas emissions.

In the United States, trees and forests annually sequester approximately 11% of all greenhouse gas emissions. Understanding how trees and woodlands use carbon leads to a better knowledge of their importance in meeting future global challenges related to climate change.

How much carbon is in a tree?

Approximately half of a tree's dry weight is carbon. The amount of carbon that is stored in a tree depends on its size, age and species. Carbon is typically measured in pounds or kilograms. A single tree can sequester as much as 10 pounds of carbon dioxide each year.

To determine how much carbon is in a tree, foresters commonly measure a tree's diameter at breast height (4.5 feet above the ground). For the same diameter tree, maple, oak, hickory and beech trees store the most carbon compared to other species.

Trees are not the only component where carbon is stored in woodlands. Woodlands store carbon in five different pools:

- Live trees, aboveground: includes trees, shrubs and other vegetation.
- Live trees, belowground: includes coarse and fine roots.
- Dead wood: includes standing dead trees and downed dead wood.
- Litter: includes leaves and other small woody material.
- Soil: includes mineral and organic soil with dead and decaying plant material and insects.

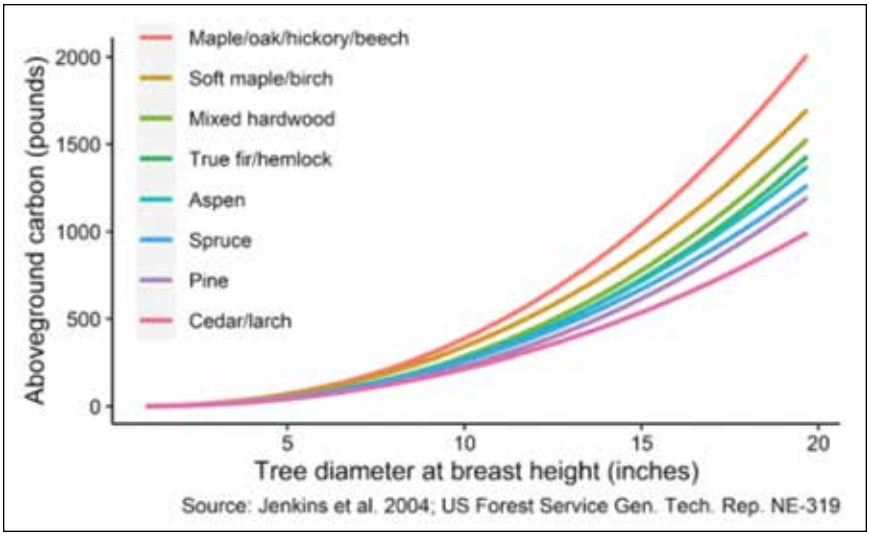
How much carbon is in a woodland?

The amount of carbon in a woodland is constantly changing as new trees grow and old trees die. Generally, the amount of carbon stored in a woodland increases as it ages. Carbon in a woodland is typically measured in U.S. tons (where 1 U.S. ton = 2,000 pounds) or metric tonnes (also known as megagrams).

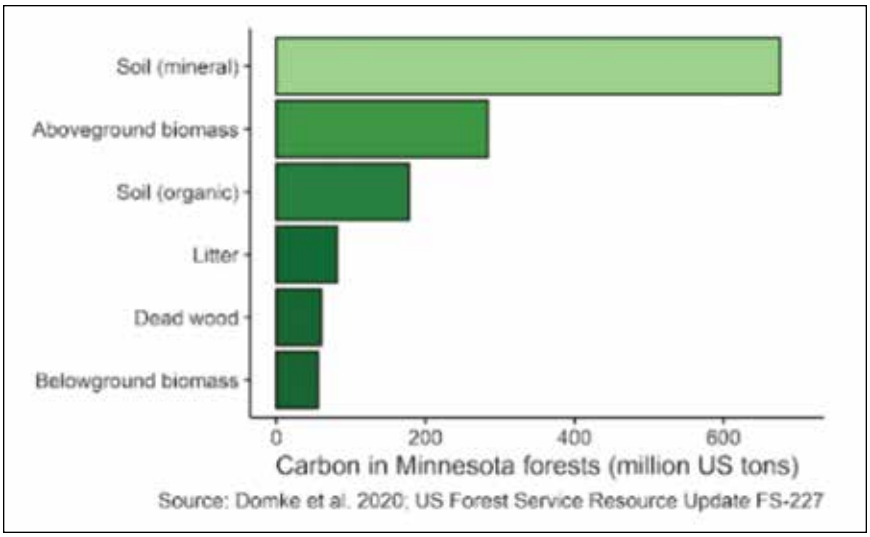
In Minnesota, woodlands average 75 U.S. tons of carbon per acre across all five carbon pools (or 169 metric tonnes per hectare). Most of the carbon found in Minnesota woodlands is distributed in mineral soil and aboveground live trees.

Disturbances will affect how much carbon is stored in a woodland depending on its type and severity. Common disturbances in Minnesota include insects, diseases, windstorms and fires.

To compare how different disturbances impact woodlands, consider two events: a wildfire and an insect outbreak. If a wildfire burns all trees in an area, there is an immediate release of all carbon stored in trees to the atmosphere. This would be an immediate loss of carbon. In contrast, if an insect defoliated all trees in an area and it led to tree mortality over a few years, many trees would remain standing dead and eventually fall to the forest floor. As these dead trees decompose, they will slowly release carbon to the atmosphere typically over the span of several decades or more.



Approximate aboveground carbon storage for eight different tree species.



The distribution of carbon in different pools across Minnesota forests.

Despite major forest disturbances, carbon storage has increased over the last several decades in Minnesota. Total forest ecosystem carbon stocks in Minnesota have increased from 1,243 million U.S. tons in 1990 to 1,337 million U.S. tons in 2019.

Carbon in wood products

If wood is harvested from a sustainably managed forest, it is a renewable resource. Carbon can be stored in wood products in a variety of forms that can be short-lived (such as paper) or long-lived (such as utility poles or wood-based construction materials).

Harvested wood products in use and solid waste disposal sites represent 4.5% of the total amount of carbon found in the U.S. Wood-based bioenergy generally has a smaller carbon footprint compared to fossil fuels and other renewable energy forms.

The benefits of wood products include carbon storage and lower emissions than fossil fuel-intensive materials such as steel and concrete. Wood is an environmentally friendly building material.

Carbon offset markets

A number of forest carbon offset markets have been established that seek to capitalize on the value that trees and forests provide in storing carbon and removing carbon dioxide from the atmosphere. In these markets, corporations and individuals pay for carbon dioxide emissions to offset their own emissions. Landowners are paid for the carbon storage and sequestration their trees provide.

Carbon markets can be categorized as voluntary or compliance-driven. Voluntary markets are typically managed by private entities while compliance markets involve government agencies.

Carbon offset projects are structured so that woodland owners can receive payment through a variety of approaches. These include:

- Establishing a forest or stand of trees in an area where there was no previous tree cover (afforestation).
- Reestablishing a forest on understocked or recently harvested land (reforestation).
- Protecting a forest from being converted to non-forested land.
- Improving forest management activities to increase carbon storage in the forest or associated forest products.

Most landowners with currently forested lands will enroll in a carbon offset project that improves forest management activities. A private woodland owner can be paid for the value of carbon that their trees store and sequester, but specific details vary across programs and market prices fluctuate. The following conditions are common across many carbon offset markets if landowners seek to enroll:

- The landowner provides evidence that the property is sustainably managed.
- The landowner agrees to terms and conditions that the property remains forested over a specified period of time.
- The landowner has a detailed inventory of the property, including the type, size and composition of tree species in the woodland.

Continued on page 7

Some Positive News

By Bruce ZumBahlen

The pandemic, riots, protests, police reform: makes you wonder, "Is there any good news out there?" Well, for those of us who believe in managing woodlands in a sustainable manner, there is!

I sought a reprieve from the usual headlines and thought it might be interesting to report in this newsletter on how well the Sustainable Forest Incentive Act (SFIA) has fared since its inception in 2001, and the 2c Managed Property classification in 2008. MFA has had a strong hand in establishing both programs. So, I checked in with the Minnesota Department of Revenue for the latest figures.

Here's what they reported:

As of this year, there are now 3,253 claimants who have enrolled 1,088,129 acres; and, the program continues to grow. Another 29,417 acres have been certified to receive their first payment this coming October. Compare that to the initial sign-up by 320 participants who enrolled 140,000 acres in 2002.

Much of the interest in the SFIA likely has been fueled by the increase in the annual payment rates. Those early enrollees in 2003 received $3.19 per acre. At that time, the SFIA had only one option for recording the required covenant on the land to protect it from development — eight years. Today, there are three options: eight-, 20- and 50-year covenants.

Here are the rates per acre as of last year based on the lengths of the recorded covenants.

Covenant Length (Yrs)	Total Acres	1,920 Acres or Less	*More than 1,920 Acres
8	678,148	$9.40	$13.01
20	83,132	13.01	16.63
50	326,849	16.63	20.24

**The higher rate is in recognition that the lands must be open to public recreation whereas smaller acreages do not.*

There are other nuances to the SFIA if conservation easements are also recorded on the same lands. If the conservation easements were in place in 2017, the annual rate per acre is $7. For lands with conservation easements on 2020 applications, the rate is $3.62.

In counties where property taxes on rural lands are generally higher than in northern counties, the 2c Managed Forest Property classification is often a better deal. The value of woodlands classified as 2c is assessed 0.65 of 1%, instead of 1%. Last year, assessors reported that 289,180 acres were in that classification.

Together, the acreage under the SFIA and 2c classification amounts to 1,377,309 acres — representing almost 25% of Minnesota's 5.7 million acres of private woodlands. More information on the two programs can be found under "State & Local Property Taxes" on MFA's website: minnesotaforestry.org.

New Citizen Science Program Seeks Volunteers to Track Invasive Plants

Researchers from the University of Minnesota Department of Forest Resources are recruiting Pesky Plant Trackers. Pesky Plant Trackers is a new citizen science opportunity focused on two non-native plants: wild parsnip and Japanese knotweed.

By joining Pesky Plant Trackers, you can:

- learn to identify these plants,
- share weekly observations on Nature's Notebook
- and contribute to the restoration of Minnesota environments.

Learn more and register to participate online at peskyplants.umn.edu.

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For MFA members, the two best online sources of woodland information are the MFA website at minnesotaforestry.org, and the University of Minnesota Extension Forestry website at myminnesotawoods.umn.edu.

Ask a Forester: Should I water my seedlings in dry weather?

Much of northeastern Minnesota is facing abnormally dry or moderate drought conditions this summer. You may have planted seedlings this spring and are concerned they will not make it through the dry weather. Here are a few tips from Extension Educator Mike Reichenbach to determine whether or not watering is needed on your seedlings:

1. Know how much soil moisture there is around your seedlings. Dig down and inspect the soil.
2. If present, remove any weeds around the tree.
3. Mulch around the tree with wood chips to reduce weeds, keep soil temperatures low and retain soil moisture. Do not place mulch too close to the tree. Instead, decrease the mulch depth as it's spread closer to the stem.
4. If you water, do so in a way that allows the water to penetrate and wet the soil to below the existing root depth.
5. Avoid frequent watering as it can create trees with shallow roots. Trees will be less able to survive when you stop watering and the soil dries out.

Carbon in Trees continued

To date, enrollment in a forest carbon offset program has generally been restricted to large landowners (greater than 1,000 acres). Programs continue to evolve and a number of new ones may be appealing to landowners with smaller ownerships. For example, the Family Forest Carbon Program's goal is to make carbon offset programs accessible to smaller landowners.

Private woodland owners can also receive incentive-based payments that are not a part of carbon markets but may incorporate some aspect of carbon storage and sequestration. These payments can be in the form of a property tax incentive payment, conservation easement or cost-share assistance to complete woodland management activities that promote carbon storage and sequestration.

Examples of incentive-based payments for Minnesota woodland owners include enrollment in the Sustainable Forest Incentive Act or 2c Managed Forest Law and establishment of a conservation easement that limits the development of your property.

Learn more about managing woodlands for carbon online at extension.umn.edu/forestry/carbon-minnesota-trees-and-woodlands.

Female Woodland Owners Sought to Participate in Study

Olivia Lukacic is looking to the MFA for help on woodland owner research. Currently a master's student at the University of Massachusetts Amherst, Olivia is conducting a study for the Family Forest Research Center (familyforestresearchcenter.org) that seeks to understand the experiences, challenges and goals of female woodland owners across the northeast and midwest areas of the U.S. in effort to develop a resource for women who have woodlots and are in need of more support.

In 2016, a study found that women in the U.S. are increasingly choosing or inheriting the role of primary decision-maker for their land and the percentage of woodland owner primary decision-makers who are female in the U.S. doubled from 11% in 2006 to 22% in 2013. Olivia wants to interview female landowners to document the stories of this growing segment of the woodland owner demographic and learn more about what they need to feel more confident in what has been a typically male-dominant world.

So far, Olivia has interviewed many women that she would consider to be "engaged landowners," meaning they might have utilized state and federal programs, met with foresters, or have management plans. While this has been good, data shows that most land owners are not like this, but rather "unengaged." To reflect this reality, Olivia is in search of female woodland owners who own, or co-own, forests of 10 or more acres but have not been directly engaged in the management of the property.

If you or someone you know fits this description and would like to contribute to this study, contact Olivia at olukacic@umass.edu or by phone at 978-394-9186.

Upcoming Events

Find more events, and more information on these events, at the MFA website, www.MinnesotaForestry.org,or by calling MFA at 218-879-5100.

Webinar: The Future of the Forest Products Industry

Tuesday, Aug. 18, 12-1 p.m.

Speaker: Katie Fernholz, Dovetail Partners, Inc.

The forest products industry has faced a number of setbacks recently, including numerous mill closures and an aging logging workforce. At the same time, a number of new opportunities have emerged that use wood in innovative ways, including constructing buildings with mass timber and using wood for biomass and bioenergy. Katie Fernholz will provide an overview of these opportunities as well as an outlook for the forest products industry. Learn more and register: sfec.cfans.umn.edu/2020-webinar-aug.

Webinar: Emerald Ash Borer: Current Status, Trends and New Resources for Landowners and Managers

Tuesday, Sept. 15, 12-1 p.m.

Speakers: Angie Ambourn, Minnesota Department of Agriculture; and Matt Russell, UMN Department of Forest Resources

Emerald ash borer continues to advance across Minnesota and presents challenges to maintaining healthy forests. This three-part webinar will begin with a presentation by Angie Ambourn with the Minnesota Department of Agriculture (MDA) discussing the current status, distribution and quarantine updates related to EAB. Then, the MDA will present results from EAB biocontrol efforts across the state. Lastly, Matt Russell with the University of Minnesota will provide an update on Extension efforts and new resources for private landowners seeking to manage ash woodlands. Learn more and register: sfec.cfans.umn.edu/2020-webinar-sep.

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Minnesota Woodland Owner Weekend and MFA Annual Meeting Goes Virtual Amid COVID-19

Due to COVID-19, the MFA Annual Meeting will take place virtually this year. Attend a virtual workshop designed for woodland owners and nature lovers in Minnesota, Saturday, Oct. 3. Watch all the pre-recorded sessions at your convenience, then join for live Zoom Q&A sessions with all the presenters.

Keynote speakers for the event include Lee Frelich, University of Minnesota, “Conservation of Minnesota’s Big Woods;” and Doug Tallamy, University of Delaware, “Nature’s Best Hope.”

Registration includes access to pre-recorded presentations, virtual tours and exhibit hall, and live Q&A with keynote speakers and session presenters. Registration closes Friday, Sept. 25.

Registration costs are:

- $35 Early Registration (through Friday, Aug. 28)
- $40 Late Registration (Aug. 29 - Sept. 25).

Members of MFA, MNWWN and Outdoor U get $5 off the registration price.

Learn more, see the schedule of events and register online at: csbsju.edu/outdooru/events/mnwow.