"This institution is an equal opportunity provider."

Partners News

November/December 2021

Protecting your wooded land for the future is essential to clean water, clean air, wildlife habitat, sustainable wood supply...all things that are necessary to society and health, and that are gone forever if the land is developed.

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PIF Board

Joe Hovel
Jim Joyce
Joe Koehler
Charlie Mitchell
Margo Popovich
John Schwarzmann
Rod Sharka

Have you paid your PIF dues?

Prepare to stay safe and warm in winter

Inside this issue:

Notes from Joe and others

Loss of PIF Member Bill Green

We were saddened by the recent passing of long time PIF member Bill Green. Bill and his wife Joan were also neighbors and friends who put their money where their mouths were, by purchasing neighboring land to avoid serious fragmentation. Following the mantra, 'act local', they were active participants in the Conover area community. We give our condolences to Joan.

It is always a great difficulty to write about the passing of a member. Especially in my own neighborhood, things have changed far too much in recent years. The passing of long-time member and even longer time friend Larry McCarthy, preceded by the death of neighbors and members Al Gellings and Betty Beverly has altered the camaraderie of my neighborhood and of PIF. We miss these good folks and work to fill their void.

Northwoods Forest Conservation Books

Following six-months without an issue of Partners News, we are back. The void was ably filled by the release of two more books in our Northwoods Forest Conservation series. A very gratifying number of reviews has made the effort fulfilling around these books. For example, the Forest Data Network was so excited about the local wood booklet, they asked for an electronic version to share with their readers. These books are all available in print or electronic version, let us know if you or someone you know would benefit from these. The continuing support from UW Center for Coops, with a recent boost from the Forest Industry Safety Training Alliance-Earl St. John Education fund made these printings possible, along with your critical support. We much appreciate these partnerships to achieve a common goal.

Northwoods Forest Conservation:
* A Handbook, released Oct. 2020
* Celebrating Local Wood and Alternative Forest Products, released June 2021
* Managing for the Future, released August 2021

NPR

I was happy to be a part of a national news story on National Public Radio. Aired on September 21, the story covered the outlook on the 30-30 initiative, the effort to protect 30% of the landscape by 2030. Early on the feature cited the sad, but now official status; the extinction of 23 more species in the USA. Habitat loss is called the greatest cause of species decline.

The story link is available at www.northwoodalliance.org/news and at the PIF website, where you can also keep abreast of other happenings from these organizations.

To Conserve Vast Areas Of Land, Biden Needs Help From Private Landowners : NPR

Laugh as you learn

PIF writer and friend, Paul Hetzler has a new book available. Very interesting and educational reading on natural resources, with a bit of humor to make learning enjoyable. Head of the Class: Smarter Than a Slime Mold, is now available at:

https://www.amazon.com/dp/B09DN16VYC

Working toward another community forest

NWA & PIF are currently laying the ground work for yet another community forest. We intend to make application to the USFS Community Forest program this winter. The project lies just south of the state line, in the heart of the very Palmer Lake- Border Lakes area in which we exposed our success in the original handbook. We would appreciate your support and any help you may offer to succeed with this goal. A grant from the John C Bock Foundation to the NWA Land Conservation Initiative gives us early hope in accomplishing this goal. This effort, if successful, will open 200 acres to the public, protect incredible stands of cedar and other timber types, as well as maintain important wildlife habitat and special plant life.

From Rod Sharka, PIF Treasurer

I just finishing reading Suzanne Simard's beautiful book, "Finding the Mother Tree". In doing so, I just learned of "The Mother Tree Project" that she started. I thought you might be interested in learning about it. As you may know, her work focuses on the forests of British Columbia, but undoubtedly applies to anywhere mushrooms grow. This is fascinating stuff. Check out this beautiful YouTube video.

https://www.youtube.com/watch?v=EuupJGko9_0

Upper Wisconsin River Legacy Forest

On September 21, a group from the SOAR Charter Middle School at Land O Lakes, visited the UWRLF to see first-hand working forest on the ground management. Local Master Logger, Roger Pluedeman was on the site conducting a cleanup operation in thirteen acres damaged by the August 2020 storm. The group also visited the area of the 2017 planting, to learn about the need for young forests for wildlife, especially the resident spruce grouse inhabiting the forest. Educational opportunities for all ages are a vital component in land conservation. We are excited to see these kids learn from these projects, and are anxious to see their reaction to Wildcat when they visit there soon.

Photos courtesy of SOAR Middle School

Soar Charter Middle School group with Roger Pluedeman.

Soar Charter Middle School group in sand.

Soar Charter Middle School group in the jack pine.

Pilgrim River: Federal funds at work in our communities

Thanks to the efforts of Sustainable Resources Institute in procuring a Great Lakes Restoration Initiative grant, there has been a big boost in mitigating damage to the forest and Pilgrim River from the severe 2018 Father's Day flood. We appreciate all the efforts from the crews conducting tree planting and stream bank restoration. A total of 720 trees were planted in 2020 and 4,450 additional trees were planted in 2021 in the Pilgrim River riparian area. Stream bank stabilization occurred over stretches of the river totaling 1.9 miles at locations of high erosion. The Pilgrim is a prized trout river harboring coaster brook trout. The project was a model conservation effort with diverse partners and widespread support; offering numerous benefits to a widespread and diverse community. PIF is proud to be a critical partner in management of the Pilgrim River Watershed Project.

Photos courtesy of the Renewable Resource Institute

Before...

After

Tree planting 1

Tree planting 2

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Pilgrimage to the Angel Oak Tree

By Joe Koehler

After spending the past year staying home as most people were, as a result of COVID-19, I was feeling cooped up and ready to spread my wings. When I received an invitation from a relative to join her in visiting the Angel Oak Tree in Charleston, SC, I jumped at the chance. I drove from WI and she flew from CO. When we arrived at the tree we were greeted with a sign stating the site is closed to the public on Wednesdays. Our one day to see the tree happened to be on a Wednesday, so we were unable to stand next to it for pictures.

The Angel Oak Tree is thought to be one of the oldest oak trees east of the Mississippi River. It stands 65 feet tall, 28 feet in circumference and an area of 17,000 square feet is shaded by its tentacular crown. The largest branch reaches 187 feet.

Estimated to be 400 to 500 years old, this Southern Live Oak has survived a number of hurricanes, floods and earthquakes. It was damaged by Hurricane Hugo in 1989 but recovered and continues to grow.

Southern Live Oaks are native to the lowland country of the coastal Carolinas. They tend to grow more outward than upward but due to its age, the Angel Oak has done both. Its branches reach in all directions, with some driving underground and then growing back up above the surface.

Its name comes from the Angel Estate, owned by Justin Angel and Martha Waight Angel. Local legends say the ghosts of former slaves appear as angels around the tree.

The tree is now the property of the city of Charleston. Recently, an apartment development near the Angel Oak has been scrutinized and fought against by the SC Coastal Conservation League. They contend the development would alter the groundwater flow to the tree and clear the nearby forests whose root systems are intimately related with the Angel Oak.

Every tree species has a life expectancy. In fact, the Angel Oak isn't the oldest living tree. It's not even close. That honor goes to a bristlecone pine thought to be 5,000 years old. It germinated in the Bronze Age. But for a live oak, 400 years is quite a feat. As we all know, with age comes aches, pains and complications so special precautions must be taken.

One of the greatest threats to the Angel Oaks longevity is natural disaster. Trees are great conductors of lightning. A well-placed strike could end its life bringing the sap to a boil as it travels to the root system. To prevent this, lightning terminals are posted at the top of the canopy to grab a nearby lightning strike and direct the voltage down a cable attached to the outside of the tree and disperse the energy into the soil.

Even though we were unable to stand next to the tree for pictures, by reaching through the fence we could touch its leaves and I know I could feel the energy it gives. It's hard to imagine how many smiles this tree has brought to the thousands who have visited it over the years.

With all the climate changes taking place, it is only a matter of time before this magnificent tree will succumb to nature, along with all the other legendary trees throughout our country and the planet so I plan on spending as much time as possible visiting as many as I can before I'm relegated to a rocking chair in a nursing home. I would encourage anyone traveling through the Charleston area to take the time to see this beautiful tree. An important tip to keep in mind is to schedule your visit any day except Wednesday so you can give the tree a hug.

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As a service to PIF members, contact Joe for special pricing in your needs for:

- **Napoleon wood stoves**
- **wood finishes and preservatives**
- **garden and tree amendments**
- **grass seed for trails**

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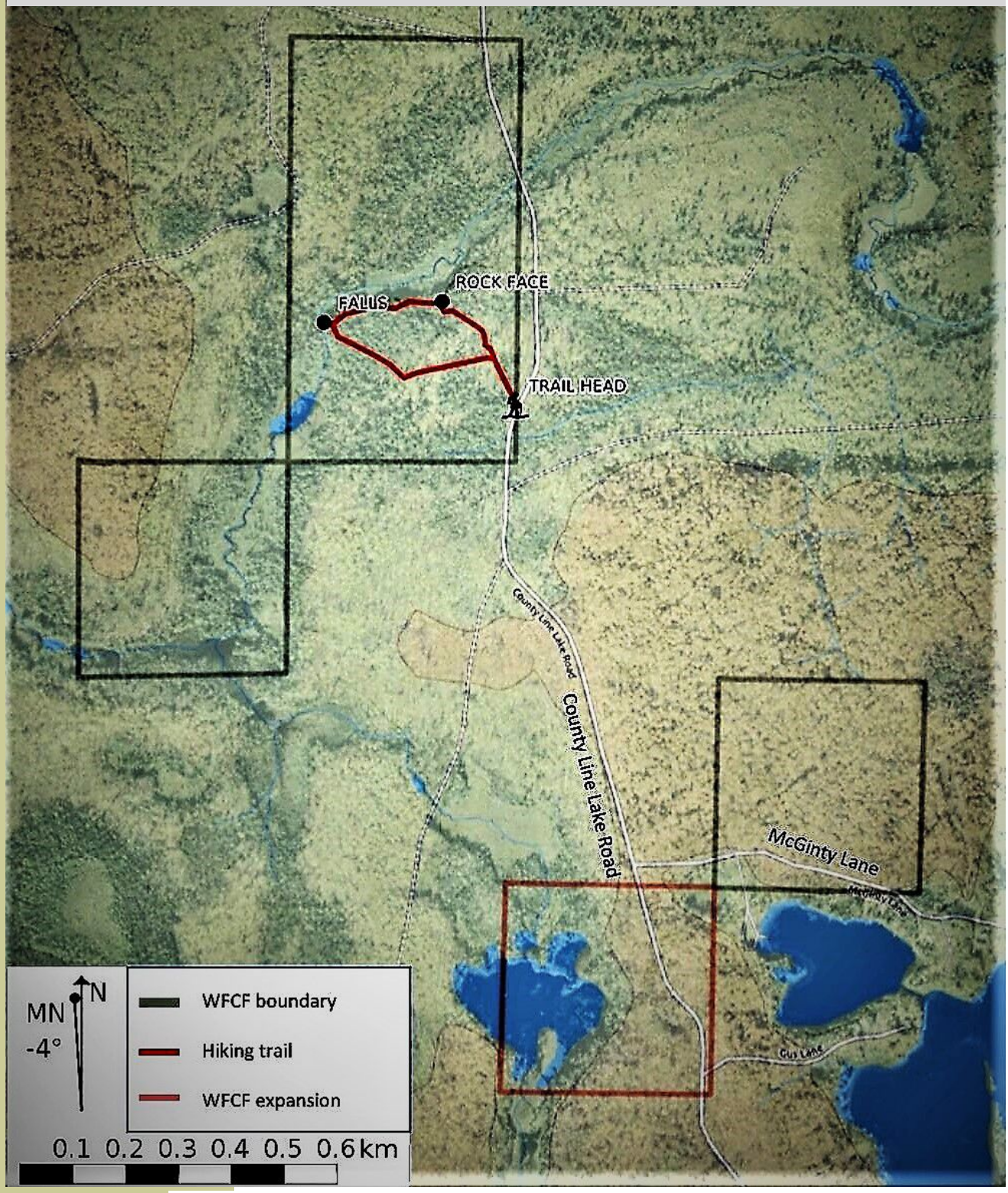
Wildcat Falls Community Forest has grown

In the last days of April, we were alerted to an opportunity to expand the new, six-month-old, Community Forest. We (NWA & PIF) immediately negotiated a deal for an important 40-acre addition to the forest, and with nothing but community good will we successfully closed on the purchase in mid-June. We are extremely grateful to all donors who made this great purchase a reality, and in a short amount of time. What a great testimony to the value of Wildcat Falls Community Forest to the area. The benefits of the expansion are obvious when viewing the map. A pond feeding the creek to Wildcat Falls, diverse topography, road frontage for additional access, and a link from the '40' near County Line Lake was made more fulfilling by the connectivity to the MDNR boat landing parcel.

PIF forester and VP John Schwarzmann, is currently writing the forest management plan for the addition, and this will enable a CFR entry with MDNR. Get out and enjoy the special features at your Wildcat Falls Community Forest.

Please consider Northwoods Alliance a worthy charity for your year end gifting. As an all-volunteer organization, all funds go directly to projects benefitting us all.

Expansion Wildcat Falls Community Forest Map - Legend July 2021



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From Wildcat Falls to NMU Wildcats

In August, Al and Joe installed beautiful laser-engraved wood signs at four different locations on the road frontage at the community forest. These signs were made on local red pine planks, by graduating high school senior Maddie Indermuehle. Thank you, Maddie; your actions in assisting with community wide benefits at Wildcat Falls give us hope for the future. We wish you well in your studies at Northern Michigan University.

Maddie Indermuehle
Photo courtesy of Robin Indermuehle

WFCF sign made by Maddie Indermuehle

Have you checked out PIF's website?

www.partnersinforestry.com

The website is for members to expose your business, service or tree farm, share thoughts, ideas, articles, photos, and links.

Financial difficulties

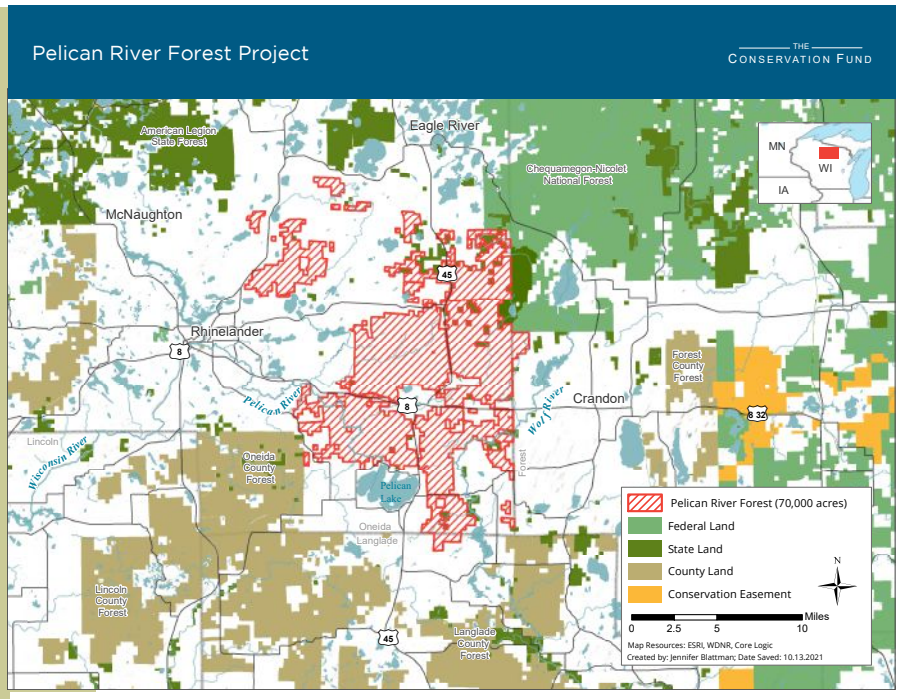
https://www.ironmountaindailynews.com/news/local-news/2021/10/theres-no-profit-anymore/

A recent story on Wisconsin Public Radio was a stark reminder of the status of the forest products economy. Wood fiber has long been a big part of our society, but unfortunately, we are in an increasing plastic world, with micro-plastics choking the ocean life. Coupled with the electronic age with less common print paper use, there are problems having surfaced. Yet, while we looked to have the recent handbooks printed, there was a delay because of a print paper shortage.

Let us further appreciate and respect all the values of our forest land. While economic values are important, the environmental values sustain our lives, the social and intrinsic values give our lives deep meaning.

Pelican River Forest

In a move that could boost the 30-30 conservation effort nationally, but relevant to northern Wisconsin, the Conservation Fund has purchased 69,000 acres of timberland in eastern Oneida and adjoining counties. Long known as the Monico block of former Consolidated Paper Company lands, this is likely the last of the big tracts of former industry lands. About 20 years ago, following the sale of Consolidated Paper Co., this land was procured by Plum Creek, a large investor owner. Some years later the block was purchased by Heartwood Forest Land Group, yet another investment owner. The Conservation Fund intends to work with Wisconsin DNR to protect the land by using the Forest Legacy program and the Knowles-Nelson Stewardship Program. The forest legacy easements will keep the land open to public use, and prevent fragmentation while maintaining a working forest. This is a large-scale testimonial to the value of our Stewardship fund and LWCF, protecting timberlands and public access, no matter who the future owners maybe.



Protecting our Land--Density Matters

By: Thomas D. Hovel

As the world continues to deal with the COVID-19 pandemic, school, work and home may never be back to the life and routines of our pre-pandemic age. We are already seeing some employers allowing people to continue to work remotely from home or any other preferred location. With continued internet enhancements in the rural area of the state, remote working opens up a much larger location for living as one is not tied to a daily commute. The Northwoods, in large part due to its natural features, is one of Wisconsin's premier vacation destinations, and therefore, is prime for a move to year around living. While this move has been occurring with retirees, the installation of broadband and remote working now make it possible for many others. The question is how will the Northwoods adjust to the population and concomitant building, not to mention an increased desire for lake front lots, by year-round and seasonal populations? I would suggest that proper planning is important to meet the coming challenges in a manner to balance the natural resources, but yet allow for population growth. To do so, there has to be a recognition that density matters. This however, will require a different way of thinking than most are used to.

Protecting resources, yet allowing for suitable population growth and construction is always a challenge, but proper planning, recognizing land and water capacities, and planning informed by the community, and enlivened with community values, can assist to safeguard the natural resources while meeting demands of growth. Planning is a balancing of varied community values and concerns, and following a plan can also provide important fiscal benefits to communities. However, new ways of thinking will be required. This article will consider a method, by recognizing density, that could allow for development while also limiting development effects on the natural environment and amenities that create the Northwoods experience. The Northwoods experience is that unique culture derived from the flora and fauna, that unique geography of the Northern Highlands, that create the environment that attracts so many.

Since its founding, and until recently, the United States population often thought of its land resources as inexhaustible. However, as we now know, our land resources, not to mention the carrying capacity of the land, are not limitless. Density can assist in protecting what is important--that Northwoods experience. It can limit forest fragmentation and can assist in protecting water quality.

Density is important, as it can help preserve that which is important to us. Often people desire that large parcel on the lake, or in the woods. Large-lot living is ingrained in the American population's psyche. But, given the carrying capacity of the land, and our resources becoming more finite, density allows for protection of what is best enjoyed, while still accommodating development. Important to the Northwoods are the lakes, the rivers, the forests, its landforms, and the related flora and fauna. The experience of the Northwoods is first and foremost related to these important natural features--it gives the Northwoods experience its feel, its life.

Many years ago, I led a workshop on housing for residents of the city in which I worked (it was one of over a hundred meetings for the creation of its Comprehensive Plan). From state and regional planning resources, we knew the population we needed to meet for the next ten years, and from there extrapolated to the number of housing units required for the increased population in this growing area of the state. During the workshop the many participants were broken into small groups and given maps of the current city and different colored overlays reflecting different density levels. Most attendees were from the standard single-family subdivisions, and they laid out the maps recognizing their experience in subdivisions of 3 to 4 units per acre - they gravitated to that to which they were most familiar. When we calculated how much land would be needed to accommodate ten years of growth, they realized that the rural--or pastoral--land features they all highly valued would be significantly reduced. They then adjusted their development densities, believing that 7 or 8 units per acre would be more suitable. By doing this, they cut land consumption by about half. These people realized

the importance of this rural agricultural resource not only to themselves, but to the character of a city. After all, it was the first incorporated municipality in Wisconsin to adopt exclusive agricultural zoning. Forest land of the north is the farmland in the southern part of the state.

I am not suggesting this level of density in the Northwoods, since local opinion, local development character, and community values are important. What I am suggesting is that a development that has, for example, one to four acre lots causes a destruction of what is valued (that Northwoods experience), leads to greater forest fragmentation, uses more resources, and is more costly to service than say a development that is twice its density, or more. In a compact, more dense development there are less streets and less utility lines, which lead to reduced maintenance costs and lower development costs on a per dwelling unit basis. As density increases there are more options for green infrastructure to manage runoff and other development effects.

Accommodating population growth requires housing. Population and housing are intertwined and each affected by three key factors. First is native population (births, and deaths); second, is in and out migration; and third is the composition of the population and how that affects housing. For example, the state average in persons per household (number of persons living in a house, or apartment) is 2.39, but Vilas County has a persons per household of about 1.97. As persons per household decreases, more housing units are needed to accommodate the same population. With more in-migration even more housing is required to accommodate that increase in population. Vilas County has significant second and even third home options, which also significantly affects land use and development. The county population swells to over 105,000 (2007 figure) persons in the summer months, putting additional pressure on resources beyond the year-round county population. Vilas County has a population older than the state population, as its growth has been driven by retirees who have chosen to make their primary residence among the trees, lakes and wildlife that create the Northwoods landscape. Combined with the cultural features that have been influenced by the natural features, the natural and cultural are intertwined forming a unique Northwoods experience. Many of the older lake developments have homes that are as close or closer than homes in suburban subdivisions, and hence an increase in density would not negatively affect the character of the community set by the original lakefront home construction.

Additionally, by using a more compact development pattern forest fragmentation becomes less noticeable, and the forests, water features, and wildlife are less affected. A reduction in forest fragmentation leads to healthier forest, and a healthy forest helps with maintaining water quality. Much has been written about the effects of forest fragmentation on the natural ecosystem of the Northwoods, so I will not repeat it here, but compact development, properly accomplished, can assist in limiting forest fragmentation and in that sense help retain that Northwoods experience.

In an ironic twist, we often develop that which we prize most. In that way, the land and water, which are the focus of that Northwoods experience, and so highly valued, are slowly taken away not to be recognized by future generations, except by place names borrowing from that which was destroyed. With proper resource-based planning, using compact development, and development that is at a higher density than the norm, we can achieve the three main preservation measures that are laid out by the United States Environmental Protection Agency (EPA) in its online document “Protecting Water Resources with Higher-Density Development.” (Available at: https://www.epa.gov/sites/default/files/2014-03/documents/protect_water_higher_density1.pdf)

1. Preserve large, continuous areas of absorbent open space;
2. Preserve critical ecological areas, such as wetlands, floodplains, and riparian corridors; and
3. Minimize overall land disturbance and impervious surface associated with development.

(See p. 4)

Add the accrued benefits of avoiding fragmentation of the forest, and you have four critical components which density can better manage, and better maintain the Northwoods culture.

What is critical to our water resources, the lake, wetlands, and stream health, is to limit the percent of impervious surfaces in the watershed. Generally speaking, once the watershed is about 10% developed water quality starts to decline. Compact development limits the amount of development in the watershed and thus can assist in water quality protection. As noted by the EPA, “Minimizing land disturbance and impervious cover is critical to maintaining watershed health. The amount of land that is converted, or ‘disturbed,’ from undeveloped uses, such as forests and meadows, to developed uses, such as lawns and playing fields, significantly affects watershed health.” (p. 6) The EPA modeled compact, dense development and found its benefits to water quality over that of low-density sprawl. A development that assists in limiting water quality degradation will also assist in limiting forest fragmentation, and maintaining the Northwoods experience.

This past October my wife and I visited the Northwoods, and I was dismayed to see the condition of some of the lakes--algae floating on top of otherwise clear water with a nice sand base. I am not sure if it was blue-green algae, but it did not look inviting. As water quality problems common to the southern part of the state creep north, new ways of thinking to maintain the resources and what is valued of the Northwoods is crucial.

However, this type of model requires community input into what its values are. No plan can succeed without properly identifying the community values, as expressed by the varied stakeholders. To identify and promote goals, objectives and policies to implement those values requires balancing the varied opinions of the stakeholders. Part of it is education, people need to know the effects of development on what they value, and what the alternatives are to that situation.

A higher density may also require a different way of thinking in terms of construction. One example is waste water management. As density increases the single septic system for each individual house becomes problematic, and I suspect is not the best method for lake front lots. The technology for community systems exists, it is a matter of proper planning and application.

The COVID-19 pandemic coupled with retirements of the large baby boom population cohort, provides an almost perfect storm to challenge rural areas of Wisconsin, by increasing development pressures. I find it doubtful that the Northwoods can be retained without some level of intervention by better and more advanced planning. Some Northwoods counties saw growth well above the state average. For example, Vilas County saw a 7.1% population increase between the 2010 and 2020 census, while adjoining Oneida was at 5.1% and Iron County at 3.7%. This points to the confluence of the unique natural and cultural features that draw the population to north central Wisconsin. The Northwoods is a desirable location, the key is to keep it that way - this can be accomplished only through proper planning.

People have different beliefs, experiences and memories which have formed their values. The task of a planner is to take those varied values and find common ground. But it is crucial to do so within the confines of what is valued, and the resources available. The limitations of our resources need to be recognized. The built environment is an interplay between the population, its social relations, and its values. Development is an expression of what is valued, and it is time to think of a new and better form of development for the Northwoods. Good planning depends upon an informed citizenry willing to make the choices to advance growth options that can better protect the area's resources, and in so doing the Northwoods experience.

Density matters, and perhaps a more dense, compact model is a method to be employed in balancing the varied concerns that exist in the Northwoods. I think all will agree on what is valued in the Northwoods. What is important is finding a model to deal with the varied degrees of opinion within the overarching priority of that which is valued. It is hard to say no to development, particularly in trying economic times, hence the

importance of a new model, or development paradigm, that can balance varied concerns. In my opinion, it is time to think differently about development in the Northwoods and that a new way of thinking about density can have more positive effects than current development methods. The Northwoods has a limited carrying capacity, and for the sake of what is valued, the limitations have to be recognized. This is why density matters.

Tom Hovel was city planner for the city of Fitchburg, WI for 32 years, retiring in 2018. While in Fitchburg he pioneered resource-based planning. He had prior planning experience in the city of Monona and Sauk County. He served for four years on the Dane Co Regional Planning Commission; and has served many years as a Commissioner of the Madison Metropolitan Sewerage District, and currently serves as President of the Commission.

He and his wife Toni are frequent Northwoods campers, while photographing water, trees and wildlife.

PIF note: We greatly appreciate input such as this article, to assist in adjusting our thinking to an ever more dynamic landscape. As Hans stated in the Handbook: Failing to plan is planning to fail.

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Money Trees

Paul Hetzler

If money grew on trees it seems that could result in vast monocultures, with ruinous effects on the environment. I suppose it depends on currency. Money trees that produced Iranian rials or Venezualan bolivars would likely be considered noxious weeds.

On the South Pacific island of New Caledonia, there's a rainforest understory tree that doesn't bear money; it is money. More or less. The milky sap of Pycnandra acuminata is 25% nickel, the exact same percentage of the shiny metal that the US has been putting in its nickels for the past 155 years. To me, the fact a tropical tree can bleed money is nowhere near as strange as the fact that the thing is alive at all, given that even small amounts of nickel – we're talking below one percent – will kill most plants.

The ability of Pycnandra acuminata to scavenge nickel from the soil and concentrate it is called hyperaccumulation. Most plants take from the soil the nutrients they need for optimal growth, and leave the rest. But for reasons unknown, a few species have fetishes for certain minerals. Alpine pennycress (Thlaspi caerulescens) gathers zinc and chromium for a hobby, while a Japanese tree called Chengiopanax sciadophylloides (I can't find an English name) takes first prize for its manganese collection. Since there's no strict definition of what qualifies a plant to be a member of this exclusive guild, estimates of the number of hyperaccumulator species worldwide range from 400 to 700.

Aside from the point that such ability is "wicked cool," in technical parlance, folks are excited about hyperaccumulator plants because they can help us clean up some of our worst messes: toxic metals. In the presence of oxygen, petroleum eventually breaks down to carbon dioxide and water, thanks to native microbes. Even persistent chemicals like DDT will biodegrade. Metals don't, which is generally good. It would be a drag to unearth a stash of buried gold, only to find it had rotted.

Back in 1867, farmers in the central US got their hands on "Paris Green," a copper/arsenic rat

poison, to see if it was effective against Colorado potato beetles. It was a brilliant success, and its use on a range of crops became widespread. In 1898, the insecticide lead arsenate was introduced, which thrilled apple growers to death (sometimes literally) because it killed codling moths and other apple pests. Then in the early 1900s, dimethylmercury and other mercury-based pesticides came into use. For almost a hundred years, we sprayed fields with lead, arsenic, mercury, and copper; stuff that lasts forever. What could possibly go wrong?

Well, the answer to that is obvious. Plenty can go wrong, and children have been poisoned by these heavy metals (another term lacking a definition – all metals feel heavy to me). Far more kids have been unwittingly exposed. Old apple orchards are among the most heavily contaminated sites we know of. Some have been identified and remediated at great cost, usually by removing the topsoil to a hazardous-waste landfill. Other such places grew homes many years ago. Once a lawn is established, exposure is negligible, but I'm sure some people would like to garden.

Back to hyperaccumulators. Some are in active use on contaminated sites, but unfortunately, the plants that collect agro-metals are either not very efficient, or not hardy to our zone. The Chinese brake fern (Pyeris vitata) vacuums arsenic from the soil at a furious clip, but is tropical. Salix miyabeana, a species of willow native to northern Japan, is fairly good at mercury removal, and is actually available in Canada. The catch is that it's better suited to the Great Lakes and upper St. Lawrence Valley regions. Ironically, two of the most pernicious invasive aquatic plants, hydrilla (Hydrilla verticillata) and water-hyacinth (Eichhornia crassipes), are super-efficient as toxin accumulators. Dang!

Research on hyperaccumulator plants continues to focus on remediation, but the possibility of phytomining, the extraction of minerals from the ground using plants and without disturbing the soil, is being investigated too.

Paul Hetzler is an arborist in Val-des-Monts. He denies being a hyperaccumulator, saying he just needs a barn.

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Helpful Enough

Paul Hetzler

"If I knew for a certainty that a man was coming to my house with the conscious design of doing me good, I should run for my life." David Henry Thoreau's statement, funny in a way, also brings to mind the grave harm done to cultures around the world by Western powers in the guise of "helping" them. In a less horrific sense it applies to how we've "assisted" nature to disastrous ends. Cane toads in Australia, mongoose in Hawaii, Kudzu in the Southeast, and Asian harlequin ladybeetles that invade our homes each fall are a few examples of being too helpful.

Due in part to a pandemic-driven rush to buy rural property, I've fielded a lot more questions recently from folks who've just purchased a camp or home on a wooded lot and want to know if they should clear brush, thin trees, or do other things to improve the woods. It's a fair question, and an important one.

Just to clarify, as an arborist I specialize in trees in the human landscape, whether they're naturally occurring or intentionally planted. A forester manages tree communities on a larger scale for commercial ends. There's enough overlap in training and skillsets, though, that I feel able to provide general guidelines.

While I have tremendous respect for commercial forestry when done with integrity, its principles are sometimes at odds with preserving the well-being of small woodlots and backyard forests. One of its main

concepts is Timber Stand Improvement (TSI), which encompasses things like removing unwanted species and thinning around high-value trees. At its best, TSI can increase the annual growth rate of desired trees from about 1% in natural settings to perhaps 9%.

This is great for improving timber value and maximizing profits. However, TSI doesn't necessarily make forests better. In fact, if not done carefully it can reduce overall plant and animal diversity, degrade habitats, and remove genetically superior stock that should be left to propagate. TSI is a tool to achieve specific ends which must be well-defined before changes are made to any stand of trees, regardless of size. I've found it's hard to un-cut a tree. Just saying, in case that was your backup plan.

If you have an acre or two of woods, the best way to improve it is generally to leave it alone, a strategy which becomes more appealing the older I get. Dead standing trees and trunks (snags) are vital habitat for roughly 30 bird species that either nest in cavities or take shelter in them. A lot of what appears to be brush is native understory plants such as leatherwood, witch-hazel, moose maple and ironwood. Downed trees and branches decay at varying rates, gradually returning nutrients and carbon to the soil.

Leaving the forest alone applies to motor vehicles during wet-soil conditions. Even heavy foot traffic can damage sensitive areas in springtime, so keep to trails. It's imperative that timber harvesting be done when soils are either dry or frozen. Today's heavy skidders weigh three times what they did in the 1980s. I've seen waist-deep ruts left by these machines; damage of such magnitude will take centuries rather than generations to recover from.

Take heart, you vibrant young folk with infinite ambition who find leisure frustrating (yeah, I was there once) – there may be chores in your woodlot that cry out for attention. Not all "brush" is in league with puppies and Christmas. Invasive honeysuckle (Lonicera spp.) bushes often lurk in otherwise intact forest systems. If your back is OK you can easily uproot honeysuckle, the simplest way to eradicate it.

An understory tree called buckthorn (Rhamnus cathartica) is likewise moving into our woodlands. Impossible to pull, you have to cut it low and cover the stump with black plastic for a couple years or apply the herbicide glyphosate (20% concentration) to fresh stumps. Buckthorn and exotic honeysuckles alter soil chemistry to weaken endemic plant species, and neither has fruit which is healthful for birds.

Garlic mustard (Alliaria petiolate), an invasive biennial, is a fragile and edible herbaceous plant. Doesn't sound dangerous, but it's a wily woodland adversary and managing it is not straightforward. Small infestations which have appeared within the last few years can be hand-pulled in early summer. Five to seven years of meticulous hand-weeding are usually enough to wear out the soil seed bank.

Conversely, established and widespread patches should be ignored, or at most, kept from expanding. Garlic mustard poisons its root zone to suppress native plant germination and growth to the point that it kills itself in about ten years. Pulling entrenched garlic mustard prolongs infestations well past the ten-year mark, and the annual soil disturbance causes untold ecosystem harm. A large-scale garlic mustard invasion is a call to action for the lazy, if such a thing is possible.

Helping nature can mean sweating or staring at treetops, as long as it's informed by solid research. Let's tread lightly and with humility and respect as helpers. Even for small woodlot owners, education is vital. And a plan can assist your future wishes develop.

Paul Hetzler is an ISA Certified Arborist and a former Cornell Cooperative Extension Educator.

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The Dedication of Looking Here

by Marianne Pantinelli Dubay

"Oh, look at your fish!" he said, and left me again to my own devices. In a little more than an hour he returned, and heard my new catalogue.

"That is good, that is good!" he repeated; "but that is not all; go on;" and so for three long days he placed that fish before my eyes, forbidding me to look at anything else, or to use any artificial aid. "Look, look, look," was his repeated injunction.

This was the best entomological lesson I ever had—a lesson whose influence has extended to the details of every subsequent study, a legacy the professor has left to me, as he has left it to many others, of inestimable value, which we could not buy, with which we cannot part.

– From *The Student, the Fish and Agassiz* by Samuel H. Scudder, a student of Professor Louis Agassiz at Harvard University sometime between 1850 and 1860

Whenever I question what philosophy has to do with natural resources, I start leafing around in some of my favorite books to find the answer. It doesn't take long before my initial doubt is replaced with *yes, obviously*. Though admittedly my ability to make connections between distant subjects is my superpower, and these connections aren't obvious (or reasonable) to everyone.

Here is an example of my talents: Summer is turning towards fall as I write this and so I've been thinking about Henry Thoreau. This is always the case because as anyone who has a child or remembers childhood knows, September is back to school season which means fresh notebooks, new shoes and pencils. It is a little-known fact that Henry joined his family's pencil making business after college, going on to revolutionize the pencil before deciding to make his way in the world by writing with them rather than making them. Therefore, fall equals Thoreau.

Thoreau once joked that he traveled extensively in Concord, the town where he spent his entire life apart from a few months on Staten Island working as a tutor with an eye towards publishing. It is widely known that Henry did not travel great distances, but he traveled deeply when and wherever he went. A meticulous note taker, he cataloged and marked natural occurrences and changes that contribute to phenological records that ecologists still rely on throughout the northeast.

In a way, Henry was in constant conversation with the natural world carefully observing and then looking for more in what he saw. I picture him kneeling, in what his friend Ralph Emerson would call being in *active commerce* with the natural world. The record of his regional exploration shows that in addition to being a herald of autumn, Henry was also an authority on the timber industry in the early nineteenth century documenting its impacts on society and local economies.

One great example of this is his book called *The Maine Woods* which was published in 1864 and sourced from his 6,000-page field journal. The book is a literary record of forestry and logging practices as well as a natural history of the landscape complete with a detailed appendix of plants and trees "which I noticed in the Maine woods" (415). On his trips into these woods Thoreau "noted the changing conditions of the forest environment, making frequent references to land-clearing techniques practiced by both loggers and farmers" (3).

One important part of the scientific process is observation so it should come as no surprise that the most detailed accounts of the northern landscape comes not from a scientist (per se) but from a natural philosopher. And better yet, one who is known to have set out on every backcountry excursion with binoculars, paper and pencil in hand.

Following in Henry's footsteps, minus the note-taking, detailed cataloging and the production of anything useful by way of data, I was an expert once too. I used to live on a small private pond in the Adirondacks and for sixteen years when weather and obligations allowed, I would float in a little ochre canoe given to me by my mother. I'd never paddled before but the featherweight of this boat, the proximity from home to shore and the sense I had of floating on a leaf were irresistible.

Exactly once, I drove up the road to a much larger lake but that single excursion was the extent of my travels, my preference being for the close to home, the small perimeter of the pond, the carry over and slide in. On my little pond I knew where the boulders were that would scrape the hull, how the shallows were more

outstretched from shore on the opposite side and when I'd need to point out towards the center to avoid skimming through the high grasses – though I loved that reedy sound they would make against the sides like a wind-chime.

I loved to paddle the edge, especially after a storm came up on a day when I'd decided to cross the belly of the lake boldly and uncharacteristically. Barely making it to the far beach with the wind roiling the water and the Gilligan's Island theme ringing in my head, I tucked my boat into the woods and walked the trail safely home. You could say that for sixteen years I traveled extensively in Concord. Thoreau would have approved, even if I left nothing to show for it but the richness of my memory and the longing I still feel every time I see someone with a Hornbeck canoe atop their car.

My experience on the pond gets to the heart of Thoreau's method which is more about developing a deep familiarity with a place than recording its particulars. Although field journaling and sketching is one way of developing this relationship, the aim (knowledge) and the way we achieve it (experientially) are different. My point here is that observation alone isn't enough – it's the quality of observation and the acquaintance that over time draws the observer together with his or her landscape that distinguishes a casual encounter from real knowing and with that, authority to claim. Either to claim a place as one's own or to claim knowledge about it, like knowing a person requires more than a casual interaction.

These days as we are invited to "follow the science" I would counter that the message is more accurately, "follow the method" which is always only as good as its most thoughtful observer both in terms of fidelity to the process, openness to the unexpected and a persistent dedication to curiosity and close looking.

Work Cited:

- Henry David Thoreau. The Maine Woods, Penguin Books, 1998.
- Geofrey Paul Carpenter. "Deforestation in Nineteenth-Century Maine: The Record of Henry David Thoreau." Maine History 38, 1 (1998): 2-35.

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As a Forest of Wildlife

by Marianne Pantinelli Dubay

The term "Forests" (or Forestry) has a broader concept than the average layman appreciates. This concept of forestry includes not only trees, but in addition the organisms that are associated with them, whether or not these have any direct influence on trees. Forests are more than trees. They are rather land areas on which are associated various forms of plant and animal life. The forester must deal with all. Wildlife is as essentially and legitimately an object of his care as are water, wood and forage." –History, Policy and Program of the Huntington Wildlife Forest Station, 1941

"The first and most important piece of work to be carried on at the Huntington Forest is the establishment of a check-area" roughly three miles long and two miles wide across the property. – Director King, Roosevelt Wildlife Forest Experiment Station on the Huntington Forest, 1936

The check-area inventory carried out on the Huntington Wildlife Forest by nearly eighty ESF faculty, technicians and students between 1936 and 1952 encircled five lakes, three mountains and 5,000 acres. The archive produced during this time is a gorgeous record of weather, phenology and species observations from grouse and eagles to brook trout and bobcat.

Had I been here at the Huntington on this day in 1950, Mr. Van Etten, one of the crew, might have shared a story from the field as he left his notebook with the secretary, unloaded his pack and gathered his things for home perhaps anticipating a weekend fishing or hiking nearby. I know from his notes about the weather at least, that my day has unfolded similarly to his; these same woods are wet from last night's rain and a moody fog has been lifting up all morning. We share a place but not a time and still, distance closes and proximity develops between my presence and his on the same forest years apart.

The purpose of this landscape catalog was to document what the observer heard, saw, felt and generally noticed in the time he spent in one place. Each recording reads like what the philosopher John Dewey described as an *active and alert commerce with the world*. This deep encounter communicated through field notes occurs when the observer is immersed in a particular landscape day after day, until over many seasons the boundary between man and world becomes less rigid and undefined. Each observation is delicate, intimate, patient and part of the extended arc of time.

In the process of being and recording, the observer becomes part of the observation. It is noticeable even in the small habit of referring to his position on a rock, the way the sun felt or the wind, in what he wonders and supposes beyond what he sees, to predict, to intuit and to imagine. The evidence for this is subtle and yet it comes to the surface naturally once we take these observations up whole, as a composition rather than as fragments.

These notes record ice in and out on the lakes, the migratory pattern of song birds, the winter range of deer, and cumulatively they are an accounting that becomes the story of a life in place. Certainly they attest to a quiet personal meeting with a particular world where field yields to forest; a stand of spruce, balsam and fir becomes yellow birch, maple and beech; and a fast inlet runs into the still, wide globe of a lake.

Ecologists and foresters are often curious about landscape edges and transitions like these, because interesting things happen at the borderlands. In this country where geographic boundaries are robust, dimensional and rich one might not even notice being inside the transition at first. And as in foot travel, so too in philosophy where passing through something requires an alertness and an openness to a deeper way of seeing.

These notes are a living example of border-crossing and the join between self and world where action, feeling, and meaning become one. The act of noticing over time that emerges through this archive of simple notes draws the natural world and us together into a shared experience. These files are a revelation of the twofold landscape of a forest and the souls who inhabit it still.

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Future Articles

If you have questions that you would like to see addressed in the newsletter, suggestions for, or have articles for, future newsletters, please contact us at partnersinforestry@gmail.com or by mail:

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Clearing storm damage on the Tenderfoot Forest Reserve

by Rod Sharka

I'm sure folks here in the northwoods will remember the line of thunderstorms that passed through northern Wisconsin the evening of Monday, July 26, 2021. There were scattered trees down and power outages everywhere. Considering the wide spread damage occurring in multiple counties, as stewardship manager of The Nature Conservancy's Guido Rahr Sr. Tenderfoot Forest Reserve, I decided to visit the reserve a week later to see if there was any tree damage there. Unfortunately, there certainly was. There were at least a dozen and a half big old trees, hemlocks, maples, yellow birch, basswoods down mostly on the south side of Mirror Lake. At least 6 fell across the trail around Mirror and had to be cut to open the trail.

One in particular was an interesting challenge. A huge basswood growing on one side of the trail broke off near the ground and fell across the trail. When it did so, it fell into and uprooted a large maple on the other side of the trail creating a large hole covering half of the 10' wide trail where the maple's rootball was torn out. My helper and I were able to cut a large section of the basswood to clear the trail, but then what to do with the hole left by the uprooted maple? I was told once by an experienced tree service worker that one needed to be very careful cutting the trunk of an uprooted tree as the weight of the root ball would cause the portion of tree trunk to snap back upright as the root ball fell back into its hole.

Since most of the basswood was still lying across the maple but the first 10' of the maple's trunk was clear, I decided I could safely cut through the trunk of the maple about 6' from the base still attached to the root ball. Sure enough, once I cut through the trunk, the 6' base immediately snapped upright and the root ball fell back into its hole. If you ever have the opportunity to try this, be sure to stand back out of the way so you don't get smacked by the fast moving action. Trust me...that root ball and portion of truck still attached to it moved at lightning speed. That tree service worker wasn't kidding.

Before...

After

Photos courtesy of Rod Sharka