Partners News

December 2015

Welcome New PIF Member(s)

Madalyn and David Conklin
David Hoffman
Laura and Fred Locher

PIF would like to extend a big thank you to the Sayner-St Germain Fish and Wildlife Club for their support!

Contact Us

Partners in Forestry
Landowner Cooperative

6063 Baker Lake Road
Conover, WI 54519

partnersinforestry@gmail.com

715-479-8528

PIF's Website:
www.partnersinforestry.com

Inside this issue:

MANAGING RED PINE PLANTATIONS

by retired USFS Silviculturist Marion True

Objectives: Periodic commercial thinning to provide equipment access, revenue and rapidly attain large tree diameter.

The Key: Retain crown vigor.

Most experience is in red pine plantations, planted as bare root stock in scalped soil, with a density of over with 700 seedlings per acre. (PIF note: *see your Forest Service Field Manual for tree spacing equating to trees per acre).*

Thinning number one: Initiate a commercial thinning as soon as practical, when many trees yield 2 pulp sticks. In southern areas of Wisconsin likely about 23-25 years, with northern areas and the UP likely a bit longer.

Row thinning is most often appropriate with proper row spacing. The 40% rule makes sense here…thin no more than 40%. Every third row with a few suppressed trees in the remaining rows can get you the 40%. Some plantations that have been planted a little too close or that have gone a little too long before a thinning may respond best to individual tree selection from designated access routes, to retain the dominant, healthy crowned trees. This first thinning is important to provide access for future thinning as well as providing revenue and crown release. Prior to proceeding, this question could be important. "Will your First Thinning action plan result in an operable volume timber sale?" If in doubt, I suggest you take two or more 10 factor basal area plots. In each plot first identify (flag,etc) each operable tree (has 1 or more 8 foot pulp sticks). Then, also identify the operable trees you propose to remove (cut). Take a look at what the 40% rule, for row thinning and operability looks like before deciding on a go, a change or a no sale. For B.A. volume guidance see Table 1.21 of your Timber Management Field Book, 2008 Edition, USDA-FS from PIF."

From a lay person perspective, you like to keep approximately 1/3 of the tree height in growing crown so this first thinning should be timely. Remember, crown vigor is very important!

The second thinning: Look at likely a 10 year growth after the first thinning. Taking basal density reading continues to be the best tool. Some trees with good crowns are likely beginning to measure 9 inch dbh now. Good rule of thumb is thin so the remaining trees have a 2 foot gap between the crowns on 2 or 3 sides, but this may not be possible to keep your desired density. Before thinning I expect you have a 140-150 basal, thin to 90-100 basal. Remember, crown vigor. Second thinning should yield a good percentage of saw bolts.
Third thinning: Likely another 10 years, or about age 45. Basal area remains key guide, but visual observations on crown health and possible mortality is important. Basal likely 140 plus once again, thin to 90-120 basal favoring the larger diameter and fuller crowned trees. Third thinning should now yield saw logs and/or pole stock. Remember, crown vigor!

The crown response to thinning tends to decrease with age. Development of red pine crowns and stem size that provide resistance to adverse weather conditions, such as ice, snow, wind etc., needs to be set by age 40, so the choices made in your first two thinnings are very important.

A host of factors such as soil, site potential, frost pockets, quality of site preparation, controlling grass-sod and other competition, seedling spacing, and seedling quality all may

impact thrift and survival of your plantation. But, the vigor and widespread demand of red pine make it a good choice in a variety of sites, both economically and aesthetically.

But, as you have read, we must emphasis the importance of timely thinning to provide good growth and retain a healthy stand. Our experience demonstrates that suppressed red pine does very poorly, and delaying thinning does not achieve the response in growth rate that timely thinning does. A layman's guide to red pine health is to try to keep close to one third of the tree height with a live crown. Remember, crown vigor!

This story has input from Joe Hovel, in various conversations with Marion.

Marion also told us about his Southern Pine plantation he has managed in the Missouri Ozarks. He planted an old field with a machine, Arkansas seedlings Loblolly pine. He chanced planting 200 miles north of the natural range, and suffered some ice damage early on because of the long needles on loblolly, but he persevered and shared the following.

Marion notes:

"I planted in 1961, 800 trees per acre at 6'x9' spacing. First thinning at 25 years, was for fence posts to 3" top.

Second thinning was conducted at 34 years, for more posts. (1995).

A third thinning in 2008 removed more posts, to retain the growing dominate trees for upcoming saw timber."

...and Marion offers is some comparisons in growing Red Pine to Southern (Loblolly-Shortleaf) Pine:

"In the early years both respond with best survival and vigor to good planting practices and immediate removal of overstory competition.

-The first 4 or 5 years red pine seedlings grow only about half as tall as the southern pine. Of interest is a red-jack pine mix for, say, species diversity, is not recommended.

Juvenile jack pine grows faster and tends to reduce red pine crown development for years to come. Same type principle holds for Southern Pine.

-Initiate first commercial thinning asap for both red and Southern pines to continue individual tree vigor (diameter-height growth and stem stiffness) to resist ice, sleet and snow breakage, which can create some gut wrenching holes.

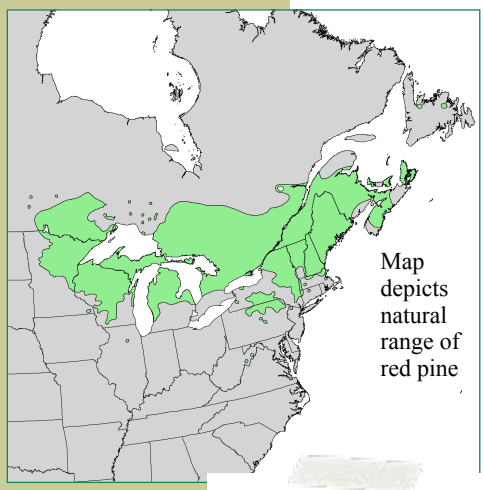
-As stands continue to develop I notice red pine seems to be able to pack on more high quality (utility 35-40-45 footer pole straightness) stems per acre than southern pines.

Site quality may enter in on this as well as genetic variation to confound apparent observations."

PIF note of interest: Southern pines (SYP) and our red pine are very good woods for the pressure treating process and both are strong! Thus SYP is a great fence post wood, and much of our red pine goes to treating market.

****

RED PINE NOTES AND FACTS



Red pine is the state tree of Minnesota

Red pine seeds average 52,000 per pound cleaned!

Cone (scale in cm)

Red pine weight is 3800 – 4500 pounds per cord, 3500 pounds per MBF green lumber, 33 pounds cubic foot dry!

Red pine is also known as Norway pine, but is native to North America.

Pollen cones of *Pinus resinosa* in spring

Long lived, red pine can live to 500 years.

Some scientists suggest red pine may have been near extinction at one time in its evolutionary history, because it is notable for constant morphology and low genetic variation throughout its range.

Red pine does not tolerate shade, but does well in wind and a wide variety of soil conditions, especially well drained sites.

Red pine has a favorable weight to strength ratio, is good for construction lumber, and treats well for outdoor use. Pulp wood, log home logs and fence posts are also common uses displaying its very importance economically, with forest industry giants, family size wood businesses as well as smaller craftsmen and do it yourselfers.

Photos provided by Mark Hovel

Red pine does well intensively managed in a plantation, and is often rotated at less than 100 years of age. But, red pine is also a trademark of the history in the north. These 2 'old timers' are in a secluded valley in Vilas County, with about a dozen other long time companions between 30"-36" DBH. Judging by the inner size with the burn scar, and the 90-100 year age of the surrounding stand free of burn, I guess they have withstood the elements for over 200 years.

Joe Hovel

****

WILDLIFE HABITAT AND RED PINE PLANTATIONS

Ron Eckstein, Rhinelander

Foresters view the forest in terms of forest stands and forest compartments. Wildlife biologists view the forest in terms of habitats and wildlife populations. Habitat is food, cover, water, and space. Habitat is the key to managing forests for wildlife. In general, mixed forests of conifer and deciduous trees have the greatest diversity of wildlife while red pine plantations have the least diversity of wildlife. How can landowners improve their red pine plantations for wildlife?

All photos for this article provided by Ron Eckstein

A dense red pine plantation exhibits poor wildlife habitat. The stand lacks structure and tree species diversity.

If you were a forest, two big events would have a tremendous influence on you. One event is the opening of your forest canopy and sunlight allowed to reach the forest floor. The other big event is the restriction of sunlight when your canopy closes. Foresters are like photographers. They work with the range of light. Light in the forest makes all the difference. By manipulating the canopy, foresters can change the structure and composition of the plants and animals that live in the forest.

There are two basic rules for managing forests for wildlife. The first rule is, whenever possible, manage for the greatest diversity of tree species in forest stands. There are over 130 large and small tree species in southern Illinois but only about 30 in the Northwoods. Many stands have only five or six tree species and some stands have only two or three. Most red pine plantations have just one species. Wildlife species diversity goes up in stands with more tree species.

The second basic rule is, whenever possible, manage for a diverse vegetation structure in forest stands. Forests with many layers of vegetation including forb, shrub, sapling, mid-canopy trees, canopy trees, and supercanopy trees have the greatest diversity of wildlife. Red pine plantations tend to have very little vegetative structure. Most red pine plantations have a carpet of needles in the understory and dense trees as a canopy layer.

All stands of trees, including red pine plantations, go through a sequence of changes in composition and structure as they grow from seedling stands through the pole stage to mature and old growth. For most

plants and animals the stand with the poorest overall habitat is the pole stage. In this stage the competition for space and light is greatest. In pole-sized plantations the tree species diversity is very low and the forest structure is very simple.

A young red and white pine plantation with forbs, grasses, and small snags.

During the first 6 to 8 years of a new red pine plantation the open country plants and animals find suitable habitat. This is particularly true if the young plantation has scattered low snags, scattered hardwood and conifer clumps, and scattered frost pockets. After 10 years the forest canopy closes and plant and animal diversity declines. Diversity will remain low until the second thinning when the canopy is again opened up enough to allow significant light to reach the forest floor. There are many ways to diversify red pine plantations. The landowner can, depending on the overall property management objectives, be very creative and work with sunlight and canopy to diversify the vegetative composition and structure of red pine plantations.

A variety of forces will work to help the landowner diversity the plantation. Blue jays will bring in acorns. Other birds will deposit all sorts of shrub and tree seeds. Seeds will rain in from the surrounding forest. Landowners, by opening up the canopy, can let the sun shine in and allow new seedlings to develop. The composition and structure of the vegetation in the plantation will increase. Eventually the plantation can move to a mixed stand with a diversity of tree species and wildlife.

Here are some considerations:

- Retain reserve trees as individuals or in clumps when a stand is to be clearcut in preparation for a new plantation. Oaks, cherries, and white pines are good candidates for reserve trees.
- Plant a mixture of conifers by adding white pine or jack pine as a component of red pine plantations.
- If treeless frost pockets develop, retain these as small wildlife openings in the plantation.
- Vegetative structure can begin to be developed after the second thinning when an understory of grasses, forbs, shrubs, and saplings begins to develop.
- In plantations destined to become sawtimber stands, the understory can be developed into small trees by letting more light into the understory.

After a third thinning this red pine plantation exhibits good wildlife habitat with a well developed shrub and sapling layer.

Some well-managed old red pine plantations exhibit very good wildlife habitat with understory shrubs, small trees in canopy gaps, pockets of deciduous trees, and a few very old red oaks and white pines. By following the two basic rules of working with light to influence composition and structure, landowners can develop quality habitat in red pine plantations.

An old red pine den tree.

****

HIGH-GRADING

By John Schwarzmann,
Vice President of Partners in Forestry
and Forest Supervisor of The Board of Commissioners of Public Lands.

High-grading in forestry refers to the practice of removing the best timber in one current harvest and leaving poor-quality trees with little or no future potential to add value. Basically, high-grading is an economic term that refers to a timber harvest which *"reduces the ability of a stand of timber to produce a long- term flow of timber products of equal or enhanced value."*

The problem in forestry is not in defining the term but measuring the parameters that determine a timber stand's ability to produce a long term flow of timber products of increasing or equal value. Not all timber stands produce timber value in the same way so its useful to categorize different stands according to when they produce their highest value in order to identify whether high-grading is an issue. In general, it is also useful to think of timber stands according to what products are ultimately going to be of the highest value and the proportion of trees in the stand that will reach high-values.

1) Stands where slow growth or limited product heterogeneity limits High-grading.
For forest types that produce only one type of product of more or less equal value such as a jack pine forest , high-grading is not normally an issue since the variety of values does not exist which would allow someone to selectively pick the very best and leave the worst. These pulpwood stands normally consist of slow-growing timber types on poor soils where pulpwood is usually the only product capable of growing on the site. While jack pine is one example, other forest types also fit into this category such as some aspen, white birch and spruce/fir stands capable of only growing into one product such as pulpwood.

2) Stands with different products but most trees hit their highest value at the same time
These types of forests are composed of trees that originated at the same time and are referred to as even-aged forests. As trees mature they can grow into a wide variety of different products. Since the highest value products such as sawtimber and veneer are dependent upon reaching minimum diameters, trees get more valuable as they age until they hit the specification for the highest value product. For even-aged stands, the highest overall timber value will arise if the entire stand of trees is allowed to grow into the most valuable products. In these stands, high-grading would refer to a harvest(s) that would cut a majority of trees before they reach their maximum value.

3) Stands where trees hit their highest values at different times
These forests are composed of trees of various ages so that a proportion of trees reaches their highest value in every decade. They are usually characterized by hardwood forests dominated by maples, birches, ash, and basswood. Like the multi-product stand above, trees increase in value as they grow from low-value trees with small diameters into a larger

diameter trees required by the most valuable products. Not all trees are capable, however, of hitting high values.

Most trees exhibit defects such as knots, seems, rotten wood, sweep or a low fork that precludes or limits their ability to jump in value as they grow from lower value pulpwood to sawtimber and the highest value veneer products. The most valuable sawtimber and veneer products need minimum diameters and straight wood with few or no defects.

Trees that maintain the ability to jump in value as they grow and show the potential to reach sawtimber and veneer are classified as "crop trees." It's the crop trees that contain most of the timber value in a stand. For example take a 21-inch diameter sugar maple. If the tree was full of seems and knots and could only be used for pulpwood, its value would likely range from $30-$50. Now if that tree had few knots and it was straight with good grade 1 sawtimber, it could be worth $200-$250. If the tree was free of knots and could be cut into the veneer it may even fetch $300-$400. It's not unusual for crop trees to therefore be 4-10 times as valuable as their more numerous low-grade neighbors.

For many hardwood forests, the number of crop trees varies, with poor stands containing 15-30 crop trees to valuable stands with 45-60 crop trees per acre. These trees vary in size and value but they all show the potential to jump in value as they grow larger. In stands with trees of various sizes, only a fraction of these crop trees has reached their maximum value and these economically mature trees would normally be harvested in each harvest cycle along with trees with poor form and vigor. The crop trees that are either too small and are not economically mature are left for future harvest cycles.

Any harvest that removes the non-economically mature crop trees before they reach their maximum value .would normally be considered hig-grading If a harvest cut all or nearly all of the crop-trees, including both trees that had reached financial maturity as well as those that had not, would be an obvious example. Unfortunately, these types of harvests still exist and all but wipe out and meaningful future revenue from the stand.

While the most severe cases exist, lesser forms of high-grading also exist and that's why it is wise to compare harvests by looking at the sustainable proportion of removable crop trees. Take for example a stand with 50 crop trees. If you were to harvest that stand every 15 years and trees averaged 150 years old when they were cut, you would not want to cut more than 1/10 of your crop trees per acre in each harvest cycle. For that stand, it would makes sense to mark 5 crop trees per acre and leave the remaining crop trees to grow into the highest value for future harvests.

4) Rarely that simple

While in above high-grading explanation appears to describe the practice a taking the goods off the manufacturing conveyor belt before they reach completion. In practice, there are a lot of complicating factors. The following list will briefly describe several of the most common ones.

a) As mentioned above, trees increase in grade and value as they get larger until they reach a maximum. Some species, however, may even drop in value after they exceed a certain size class like sugar maple. Crop trees hit their peak value at

different sizes depending upon tree heights, grades, and species, so it is not always obvious when a tree has reached its peak value and should be harvested.

b) Insects and disease issues can also change the decision as to when a tree has reached peak value. For example, the Emerald Ash Borer is a fatal insect pest of ash trees. If the chances that an ash tree may not live long enough to hit its peak value, then removing it before it has reached peak value may appear upon cursory inspection to be high-grading. However, it actually is a form of "salvage" given that the insect or disease could render the tree nearly economically worthless if it dies.

c) Crop trees are rarely distributed into different size classes. In some cutting cycles, more trees economically mature than at other times. The uneven flow of crop trees could result in some harvests which remove many more valuable trees than at other times when there are fewwer mature trees. The harvests where a disproportionate number of crop trees are cut can appear to be high-grading to the untrained eye.

Why is is important to avoid high-grading

Te ability to produce a long-term flow of high value crop trees is crucial to maintaining forest cover and some forest products markets based upon value added products. If a harvest takes the best and leaves the worst, then the future income from the property will be nil. It's the future income stream that will provide a big incentive to landowners keep their forestland. Remove the economic incentive to maintain forest cover, and in times of hardship, potentially more lucrative competing uses such as real estate development, gravel pits, deer farms and conversion to agriculture often replace forests.

****

FUTURE ARTICLES

Future stories we are working on and hoping to share with you soon!

- *Jane Severt from the Wisconsin County Forests Association on the value of our County Forests and sustainable forest management*
- *Roy D' Antonio of Associated Title on the things to look for in title issues when buying or selling a real estate holding*
- *Dustin Bronson on woody biomass.*
- *Toward spring, learn about the forest fire two years ago in NW Wisconsin*
- *An announcement of The Upper Wisconsin River Legacy Forest*

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:

Partners In Forestry
6063 Baker Lake Rd
Conover, WI 54519

****

High grading can point to low standards

Story Comments

Posted: Monday, November 2, 2015 11:07 am

By Joel Taylor | The Understory | 0 comments

In a recent article I wrote about clear cuts and their place in sound forest management. In the article I pointed out that I was referring to harvests called for as part of a sound silivi-cultural decision based on timber type or stand health.

The opposite of these are what we call liquidation harvests or “high grading” and are what give our industry a black eye and make the public so afraid of logging. These sales are entirely about making as much money as possible and have no regard for the future of the property, the public’s reaction, or the future of the timber industry. All of the trees that have any value are harvested and everything else is left behind.

Loggers, foresters and truck drivers are trained to industry standards every year, and the mills that take wood are supposed to abide by management guidelines by the forest certification groups that they belong to and proclaim to endorse. Fortunately most of these professionals have a great deal of integrity and are proud to work at or above these standards.

Unfortunately some are only out to maximize their profits and have no regard for the industry or the resource they are destroying, and often in addition to their disregard for forest management they ignore rutting, water quality and other environmental concerns. They represent only a fraction of the timber industry, but they are what many people think of when they think of logging.

These concerns are easy to see and understand by anyone, but there is an underlying issue that is probably just as, or more, important. It is hurting the rest of the people trying to make a living in our industry. It just plain costs more money to do things the right way, so the good loggers are at a huge economic disadvantage.

The problem is that our industry knows who these people are and nothing is being done to make them stop. Ask anyone in the forest industry from anywhere in the state to name a person or group that conducts business this way, and I bet they can name someone in their area within five seconds. They are notorious in the industry, yet nothing changes.

Recently, I got a call from a logger who had just been made aware of a property that was in the process of being high graded just down the road from his house. This is a logger who has tried several times to do something about these sales and gotten nowhere. The anger and frustration in his voice was loud and clear. After going and taking a look at the harvest, I was just as angry as he was.

These conversations are not unusual for me. I know DNR foresters, Master Loggers, consulting foresters and county foresters who have all tried to do the right thing and have essentially given up on attempting to make changes within our ranks. I myself have been down the same road trying to get our industry to put a stop to these activities and been shut down.

Most sawmills and paper mills belong to forest certification organizations such as the Sustainable Forestry Initiative, Forest Stewardship Council and the American Tree Farm System. All have very specific forest management guidelines and harvest standards they require to maintain certification. When mills become aware of practices that do not conform to these standards, they are supposed to take corrective action to stop the activities and educate the suppliers so they are aware of the problem. If that is not effective they should stop buying timber from the disreputable supplier to give them an economic disincentive for

continuing to do business as they have. This is really the most powerful tool that could be used to bring about change but all too often nothing changes — especially when the mills are short of wood.

In my next article I will share some ways the public can get involved to help bring about change and give you some tips to make sure your property is not degraded during a timber harvest. I also hope to update you on the status of the sale that I mentioned earlier. The "good guy" logger did contact one of the certification agencies, and I contacted one of the mills that is buying the wood from the liquidation. We have gotten some positive reactions so far and hopefully I will be able to report some progress.

Joel Taylor operates JT's Outdoors Land and Forest Management, Ladysmith. He can be reached at 920-427-8904 or joeltaylor@jtsoutdoors.com.

This article is reprinted with permission from Country Today.

****

Sugar Maple in Trouble

contributed by Joe Hovel

In past issues you have previously read of our concern for sugar maple. Being a very important species to this region both ecologically and economically, this subject is garnering attention through out the North East United States and Canada.

Scientists from the State University of New York (SUNY) School of Environmental Science and Forestry (ESF) analyzed growth rings from hundreds of trees through out the Adirondack Mountains in northern New York state. Although reasons are unclear, research showed a significant decline in growth starting about 1970, in a majority of the sugar maples.

"Given their relatively young age and favorable status in these forests, these sugar maples should be experiencing the best growth of their lives. This is a complete surprise to see growth slow down like this." said Daniel Bishop, who conducted the study for his masters thesis at ESF.

See past Partners News for related features from Gary Willis, Robert Heyd and Melanie Fullman as well as our own John Schwarzmann.

True to our fears, Oak Wilt is getting more established in the northwoods, with confirmation in Conover!

****

THE IMPORTANCE OF TREES

by David Hoffman

A POEM AS LOVELY AS A TREE? With all due respect to Mr. Joyce Kilmer and his 1914 poem, today's environmentalists look differently upon the forests. Not only is each tree a botanical garden unto itself, it also is a machine capable of extracting minerals from the soil and, along with water, pump them directly upward in a complex spiral fashion. Mix in a little air and sunshine, and in a magical burst of green, the tree becomes a working masterpiece. Any forester … or poet … would be proud.

Pride in forests was of a fleeting character in past civilizations, including modern day. Historically, forests were traditionally looked upon merely as sources of building material or, especially, sources of fuel, with little consideration for their consumption. For example: early Greece was self-contained and had no need for resources from outlying islands. As the culture prospered, more raw materials were needed, including lumber. The many isles of Greece had untouched timber waiting for harvest. Great leaders have a talent for looking into the future. Four millennia ago, during the Bronze Age, great quantities of wood were used for melting tons of copper and tin to achieve bronze. In Babylon, Hammurabi developed conservation to reduce consumption of wood during the late Bronze Age. In ancient Rome, a large villa's furnace needed two cords of wood a day to address a moderate climate. With no known reforestation policy, eventually the Romans ran out of their own forests and began extracting timber from the forests of Spain and France to supply their fuel needs.

Centuries later while the Crusades waged in Europe, jump across the Atlantic and ahead to 1000 A.D. The early native community of Cahokia (near present-day St. Louis) had an estimated population of 25,000 people, larger than London at the time. Here, like any civilization, timber was used extensively. In fact, an enclosing stockade used approximately 20,000 trees. Archaeologists have confirmed this stockade was built four times over three hundred years. One of the reasons for this community's demise, after several hundred years as a prime metro area, was the depletion of all the timber within its reach. No reforestation.

In the northern Midwest lay a fabulous bounty of trees. Was it always so? Not according to a Smithsonian Report from 1875. A modern mining engineer examined some ancient copper mining sites in the Lake Superior region (there were thousands). He noted that in one site the ancient miner used boulders weighing 300 to 400 pounds to support their mine shafts where the modern miner would put timbers. Any wood bracing used was merely roots and "stumps of every brand". The engineer surmised that the ancient mining, after hundreds of years, had used up all the timber within its reach. No reforestation.

Scientists are beginning to discover evidence of vast consumption of forests in ancient times. As the Greenland ice cap builds up year after year, each layer, like the rings of a tree, retains a chemical signature of the precipitation and dust that settle out of the atmosphere. Deep ice drilled from Greenland provides affirmation of heavy metals being smelted causing airborne pollutants. Copper concentrations in ice date back through the last 7,000 years with stronger concentrations during the Bronze Age. Trees provided the only fuel for hundreds and hundreds of years.

Moving into modern times, forestry study centers in on the Northern Highland

area of Wisconsin. Included here are four thousand lakes, one million acres of land. This area is one of the largest lake regions on the planet. Seen from the air, there are sections which look more like a vast lake with many islands. In this region today, forests cover more than seventy-five percent of the land mass.

This was not always like this. For fifty years in the mid-1800's, America used five billion cord of wood primarily for manufacturing facilities, locomotives, steamboats and heating plants. Surprisingly, only a small amount was used for construction lumber. Relatively untouched until the late 1800's, northern Wisconsin represented an uninterrupted expanse of living, breathing biodiversity. In fact, in 1878 the Wisconsin legislature created a 760-square mile State Park. However, the state only owned about ten percent of the total acreage. Budgets were tight for acquisition. Most of the land was held by lumber barons who were not about to limit their cutting options. Within twenty years, the State Park concept was dropped, and much of the state land was sold for eight dollars an acre primarily to lumber companies. A general feeling at the time was that trees represented a hindrance to agriculture, something that needed to be removed so the land could be plowed or grazed. The lumber barons harvested their crop making Wisconsin the leading state in the union for lumber harvest in 1907.

There are maps of the cutover land from one hundred years ago offering large parcels for sale as farming lands. The tradition from the southern part of the state where laws are made was attempting to ingrain its culture in the north. One early conservator in 1909 was initiating the concept of counties to be empowered to acquire forests in cooperation with the State Board of Forestry. In 1915 the State Supreme Court ruled that most of the forestry laws passed by the legislature were unconstitutional. This is not unlike the current debate over county zoning ordinances. One northern county, that had been against the state forestry program since 1913, lauded members of the legislature who opposed the state forestry program claiming they would lose their best agriculture lands. The pine timber was already gone. There were no efforts at reforestation. Partners in Forestry was still over the horizon.

Twenty years passed and this northern county reversed its efforts, taking the lead in passing zoning regulations and promoting county forests. County forest lands now comprise in excess of two million acres. A state tree nursery was established in the North in 1911 and the first tree plantation was begun in 1915. The North knows how to grow trees. Reforestation had begun.

Private industry, mainly paper mills, helped to found Trees For Tomorrow in the middle of last century. Several decades ago the 10,000,000th tree was planted. The Romans wished they had this concept. Reforestation continues.

America has grown more trees than it has harvested for the past 75 years due to a modern realization of the importance of forests to our survival and well being. Its citizenry will hopefully continue good stewardship into the future, for it knows this is where the rest of life will be spent. Most people are more aware today of just how they impact the planet's ecosystem … a system that has been in balance for the last 4.6 billion years.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Increase Lapham Notes – 1867

"No other fuel can be found in Wisconsin to supply the demand for wood, and, therefore, it must either be preserved or provided for."
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

CONSUMPTION BY RAILROADS.
The railroads of this State must ever consume vast quantities of wood for for fuel, sleepers, bridges, piles, cars, buildings and other uses where it is absolutely indispensible. Take the Milwaukee & Prairie du Chien railroad as an example, and the amount of all may be arrived at It takes 150 cords of wood as fuel for each mile of this road to move its freight, for one year.

Apply this rate to all the roads in the State, already nearly 1,200 miles in length, and we have an annual consumption of 180,000 cords of wood burnt.

If 40 cords of wood be cut from the acre, it will take 4,500 acres to be cut over every year to supply this demand, and as the same land if replanted to to trees, cannot be again cut over, under 25 years, it must take 112,500 acres of land to grow wood for railroad fuel, even if there be not that increase in the amount of business, which is more than probable to happen. This land . stretched out the entire length of the roads would give a strip 48 rods wide.

The above is an excerpt from a fascinating paper written by Increase Lapham in 1867. The entire paper (Lapham, I.A. *Rapid Destruction of Forest Trees*, Atwood & Rublee, Madison, WI 1867) may be accessed on line at the following link:

https://books.google.com/books?id=QEcDAAAAYAAJ&pg=PA25&lpg=PA25&dq=Lapham+Increase+railroad+wood&source=bl&ots=7AuhJ-Rmc7&sig=sK5hSwU3G3V6hFDZ1hINcyaydG0&hl=en&sa=X&ved=0CCoQ6AEwAmoVChMIjeG685CJyQIVyMo-Ch2_hQfV#v=onepage&q=Lapham%20Increase%20railroad%20wood&f=false

Readers who would like additional information about the colorful role of wood in the development of human civilization throughout the world as well as locally may be interested in the following books:

Perlin, John, *A Forest Journey*, 1989, Harvard University Press.

Karamanski, Theodore J., *Deep Woods Frontier: A History of Logging in Northern Michigan*, 1989,Wayne State U. Press.

Wells, Robert W., *Daylight In The Swamp*, 1984, Northword Press.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

David Hoffman is an accomplished and passionate local historian currently living in Eagle River, WI. He has collaborated with archaeologist Gavin Menzies, and has published articles about ancient copper mines on the shores of Lake Superior. PIF thanks David for the above submission to the Partners News.

Author David Hoffman standing with the famous MacArthur White Pine prior to its demise.

****
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

The American Chestnut Revival in Houghton County, Michigan

At the turn of the 20th century, an estimated 4 billion American chestnut trees thrived in the eastern forests of the United States. American chestnut had numerous beneficial qualities including providing wood products and nutritious food for humans, livestock, and wildlife. Then in the early 1900s an accidentally introduced deadly fungus struck. By 1950 the American chestnut was essentially eliminated as a forest canopy tree.

A small group of citizens in Houghton County are taking the initiative to join nationwide efforts to return chestnut trees to the landscape and restore the many environmental and societal benefits. These folks are working on assisted migration in an attempt to expand the range north and west.

At this time – Fall 2015 – they have planted 12 heritage American Chestnuts in 3 locations in Houghton County: BHK Child Development Center, near the Seaman Mineral Museum and in the wooded area above the Forestry School parking lot. In the coming year additional plantings will be done at the Marsin Nature Center. New plantings will also include blight resistant varieties.

Chestnuts are wind-pollinated. In 7 – 8 years the trees reach maturity and begin producing nuts.

The following groups and their members have made this Chestnut Planting Endeavor in Houghton County possible:

- **BHK Early Child Development Center** facilitated trees planted on their grounds and included pre-school students in educational opportunities.
- **Michigan Technological University School of Forestry** initiated this project, obtained and cared for the seedlings, and coordinated the plantings.
- **Keweenaw Unitarian Universalist Fellowship** provides enthusiastic sponsorship and community outreach.

For additional information contact:
MTU School of Forest Resources and Environmental Science
Karena Schmidt, Greenhouse and Soil Lab Manager kmschmid@mtu.edu
Also *visit the American Chestnut Foundation website (http://www.acf.org/) to learn more of their activities.*

CHESTNUTS ROASTED OVER AN OPEN FIRE

1 -2 pounds of chestnuts in the shell
1 tsp of oil
¼ cup of water
Sharp knife
Large heavy skillet with lid

1. Cut a large X into each chestnut with a sharp knife, piercing through the shell. Toss chestnuts and oil in a bowl.
2. Heat skillet over moderately low heat until hot, then roast chestnuts in covered skillet, stirring every few minutes, for 15 minutes
3. Add water and continue to roast, covered, stirring occasionally until water is evaporated and chestnuts are tender, about 5 minutes more. Serve hot, and enjoy this true North American delicacy.

****

Forest Park School District Log-A-Load: "A Community Event"

By: Don Peterson
President, Renewable Resource Solutions

The Crystal Falls Forest Park School District has three school forests totaling over 2,000 acres resulting from the consolidation of three school districts in 1968. These forest lands have been activity managed since the 1970's with the assistance of John Force. Initially John was an employee of Keweenaw Lands and worked with the schools as a volunteer. When he went into his own consulting business, John was officially contracted as the school district forester until his retirement in 2013. The district has had a very active timber sale program that continues with the new school district forester, Brock VanOss. Unfortunately, John passed away in 2015 and the Crystal Falls Forest Park School Board honored his service to the district by dedicating the forests, the "John E. Force Memorial School Forest earlier this year. John's 35 years of forestry assistance not only brought in considerable income for the school district, but also left the district with a healthy, sustainable forest that can provide educational opportunities for generations to come.

One such educational opportunity was the Log-A-Load Charitable Harvest Event conducted on the school forest near Alpha, Michigan on September 16th and 17th. On September 16th, the Forest Park School District, along with the Dickinson-Iron Intermediate School District cognitively impaired classroom, brought nearly 500 school children (grades K-12) to the forest. Other area school districts including: Florence, Niagara, West Iron County, Breitung Township, North Dickinson, and Northland Pines brought almost 300 fifth grade students to the event on September 17th.

Students were excited to learn about forestry and the forest industry, which is such an important part of the local culture and economy. Students learned about sustainable forestry topics ranging from how to protect the forest to how its products are safely harvested to how they are utilized. Students learned about different forest habitats and the wildlife that lives within them. This was accomplished by rotating the students through eleven stations and by leading them on forestry tours through the harvest area.

The sale was marked by VanOss and two local Master Logger companies, Shamco and Hilberg Logging jointly harvested the sale. Educational stations and guided forestry hikes through the timber sale area were set up for the students to learn about all aspects of natural resource management. Stations included:

- DNR Fire Control Officers, Chuck Sartori and Jeff West, with a tanker truck and bulldozer along with Smokey Bear, discussed forest fires and how to prevent them
- GLTPA Staff, Toni Engstrom, Heather Zimmer, and Aaron Nieman, discussed forest industry careers and the purpose of the Log-A-Load Charitable Harvest
- Matt Stachowicz, portable sawmill owner, with Consulting Forester Stuart Boren explained the process of converting logs to lumber on the 16th, and Johnny Johnson, Potlatch, was there on the 17th
- Forest Management station staffed by MIDNR Foresters, Ben Wiese and Linda Lindberg, who explained how and why forests are managed
- Tree identification station, staffed by Conservation District Forester Roger Jaworksi and retired DNR Forester Jerry Divine, demonsrated how to identify different trees within the sale area
- Chainsaw safety, where MATSIF Loss Control Specialist, Rick Desselier and Hilberg Logging, demonstrated handfelling techniques, personal protective equipment and safety measures involved with tree felling

- Wildlife Station in which retired DNR Biologist Jim Hammill showed students the blue heron rookery that is located on the site, talked about the nearby osprey nest, and community member Dave Bradley demonstrated a fur display
- Water quality station where students learned about importance of maintaining water values on a timber sale, and looked at the macroinvertebrate community from the stream that runs through the sale area. This station was staffed by Forest Park educator Jen Toivonen and her students on the 16th and Kari Divine, Renewable Resource Solutions, on the 17th.
- A harvester station, provided by Nortrax and explained by Brian DeBernardi, where students could sit in the machine and see the technology used to cut trees on the sale.
- Invasive species stations where Conservation District staff, Jen Ricker and Michael Zukowski, taught students about identifying and treating both terrestrial and aquatic invasives in the area.

On the first day the kitchen staff from Forest Park had a tent and grills set up on site to provide lunch for the students. On the second day, lunch, water and snacks were provided by Nortrax and prepared by volunteers.

The porta-potties were provided by Louisiana Pacific. The harvested wood went to Potlatch and Louisiana Pacific.

This event had been originally planned for May of 2014, but was delayed because an active blue heron rookery was found on site. The timber sale and the event were delayed to the fall, when the herons are no longer on their nests. This was done in coordination with the Michigan DNR Wildlife Manager and was an excellent example of how forest and wildlife management can work together.

This was a great event to show students the many aspects of forest management and how the finished products that they use every day come from the forest. In addition, other values such as wildlife management, water quality, recreation, and aesthetics were demonstrated on the same site showing how all these values can be intertwined.

The proceeds from the timber sale will be donated to the Children's Miracle Network at one of their participating hospitals, the specific hospital will be chosen by the Forest Park School District. The Children's Miracle Network helps support research and training, purchase equipment, and pays for uncompensated care.

****

Have you paid your PIF dues?

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.

This is your COOP, we need your input as much or more than your dues.

****

Ongoing Challenges & Crimes Against the Earth! Thinking globally, acting locally.

GLYPHOSATE Probable Carcinogen

Earlier this year a branch of the World Health Organization, the International Agency for Research on Cancer, listed the herbicide 'Glyphosate' as "probably carcinogenic to humans." Many of you know this as 'Roundup', mass produced by Monsanto, the very popular weed killer used abundantly in agriculture, forestry, landscaping, gardening and even extensively on lawn care. This news, while alarming, is not necessarily surprising to any one keeping abreast of health and environmental issues.

LAND GRABBING! (and a subtle comparison to our regional situation)

You have read here of PIF concern for the fate of former industrial forest land now in the hands of investment organizations. Much of this forest land becomes sold, parcelized, fragmented and converted out of forestry. This is a very real concern, triggered by very adverse consequences.

Displaying that we are not alone in our concerns for the fate of land, accordingly, at a global scale, the World Watch Institute has identified land grabbing as a global threat to sustainable food and fiber production in identified countries. They define land grabbing as the purchase or lease of productive land by foreign investors who have other motives than sustainable production. They report that 89 million acres have been 'grabbed' since 2001, and currently another 37 million acres are under negotiation!

Getting back to Wisconsin, Plum Creek owned about 551,000 acres in Wisconsin a little over a decade ago, now owns only about 11,000 acres. Their original purchases included 307,000 acres of the former Consolidated Paper lands and about 244,000 acres of the former Nekoosa Paper lands. Now, we recognize Plum Creek has cooperated with the State of Wisconsin and the Forest Legacy program in some instances prior to reselling, and that much of their holdings has gone to other investment groups but a startling figure it would be, if we only knew the acreage fragmented, developed or converted to other uses.

For a further understanding of the Investment Owner land parable in Wisconsin please see the Jan. 2014 Partners News interview with Dick Steffes.

APPEAL COURT DENIES PIF COMPLAINT in DELICH LAND SWAP!

The sixth circuit court of appeals has ruled in favor of the US Forest Service in the Delich Land Exchange.

From a PIF statement in 2012!

"PIF has felt from the beginning that this is an ill-advised and poorly-conceived project, with a great loss to the public. This is both a significant restriction of public access to a unique landscape attraction and a loss of integrity of a rare ecological feature. We are saddened and surprised that the public outcry against this plan was ignored."

The following comments are from PIF president, Joe Hovel, and contain facts and opinion:

The ruling that affirms the Forest Service decision cites that the *Forest Service did not act arbitrarily or capriciously*, but that does not mean the decision was wise. For example, in this case we have learned that the National Environmental Policy Act (NEPA) is a lot more about how well the environmental loss is documented, not on if the decision is wise! To affirm this, Ottawa Forest Supervisor Tony Scardina rather arrogantly told us in a spring 2012 meeting, "I could approve a bombing range on the Ottawa, and if I disclose it properly it is legal." In this case, apparently the court agreed that the Forest Service disclosed the loss of Wildcat Falls and old growth cedar- hemlock stands. If they disclosed it, they sure as heck did not justify it. The land they will acquire is more area in acreage, but ubiquitous regrowth with no outstanding features.

The court amazingly affirmed that the appraisals need not be part of the record, yet the four different forest supervisors who were in the Ottawa through this process apparently did not read the appraisals nor visit the land. The appraisals (obtained by a PIF FOIA request in 2011) showed us the timber value on the land to be traded was higher than the compensatory value of the land, demonstrating another tragic loss to the public.

The Forest Service claims that one day the Delich land will have old growth, yet in its current state there is essentially only regrowth stands starting after a virtual clear cut-deforestation action in 2006-2007. The worst forestry practices seem to gain favor in this instance.

A beautiful waterfall will now be part of private ownership, after it was promoted as a tourist destination for years.

Supervisor Scardina stated there was support and opposition to the Delich exchange, yet a FOIA request demonstrated at least 43 individuals and several groups wrote comments in opposition during the scoping phase alone, prior to the decision.

The court decision made some pretty outlandish mistakes of fact. For example, originally Delich asked for 320 acres in exchange for his cutover 420 acres. In 2010 the appraisals were first ordered for the 320 acres, then as values were better known, dropped to 280 acres, then 240 acres. As released in the original Environmental Assessment the acreage had already dropped to 240 acres in late 2010 and our first administrative appeal was based on that acreage in 2011, as was our second administrative appeal in 2012. (We won the first appeal forcing the Forest Service to bring the action forward again). Yet the court decision stated that the acreage was adjusted following and in response to our 2012 appeal! In another error, during oral arguments the government attorney told the court there is not public access to Wildcat Falls. A map from the Forest Service clearly demonstrates otherwise, as does a visit to the area.

Another memorable comment from Mr. Scardina in our 2012 meeting came after I asked him how they could justify trading away land that had more timber value than the compensatory value of the land. (We had already received no concern from him for the intrinsic values they were disposing of). He looked rather startled and asked where I had gotten that information. I then knew, and he confirmed, he had not seen the appraisal. To trade away these features, intrinsic and economic, and not have visited the land or even read the appraisal document, displays a vast disregard for the importance of his position as deciding official and a serious dereliction of his duty to the American people.

Following the decision and prior to the second appeal decision, Northwood Alliance board member Susan Sommer delivered over 1000 signatures in her petition opposing this trade, to the regional office in Milwaukee on Good Friday 2012!

I will never be able to accept this trade as fair and legitimate, and in talking to many others about this I am sure the Ottawa National Forest has been harmed extensively in the eyes of some of their most loyal supporters. We can only hope for better leadership on the Ottawa going forward. We all deserve it.

Please see page 18 of the April 2014 Partners News for a thorough summary of the Wildcat Falls issue!

*** The plaintiffs intend to make a final at reason attempt by filing a motion of reconsideration with the appeal court as we felt they had significant facts very wrong! ***

Land and Water Conservation Fund (LWCF)

Have you ever heard of a conservation program not paid for by tax payers, but funded by a portion of off shore oil and gas revenue, a program that has protected lands from national parks and forests to state and local parks, to outdoor recreation areas, even helps with matching grants to protect working forest lands? Sounds too good to be true in this political cloud we are under, but the United States has benefited from the Land and Water Conservation Fund for 50 years! Every county in the country has benefited from LWCF, with 42,000 projects funded at a value of $3.9 billion.

Sadly this congress has failed to reauthorize LWCF as the 50 year timeline expired on September 30, 2015. Does this display a void of thought on the economic and ecological values of LWCF? Apparently so, as the LWCF was the federal funding source for the Forest Legacy Program as well as a wide host of funding other conservation and recreation measures through out the US.

We are in dark days for conservation, it is time to turn the lights on.

If you agree with the PIF position on any issues we discuss please let us know. If you disagree with us, or if you have another important topic we should cover, you need to tell us! This is your COOP, thank you for being a part of it.

****

Partners In Forestry
6063 Baker Lake Road
Conover, WI 54519

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.