



1: This image, from the Adirondack Mountains in New York, is the only photo in this presentation that was taken outside of Wisconsin. The obvious deforestation resulted when areas harvested with questionable forestry practices were ravaged by the torrential rains of hurricane Irene in 2011.



2: Aspen clear cut: At first glance, this practice appears to be deforestation. However, this technique can benefit tree regeneration and wildlife, and will talk about why coppice harvests like this are an important part of sound forest management. Not all heavy cutting is deforestation, and our goal today is to talk about the complexity of this using a range of examples.



3: Aspen regeneration: The first photo should, optimistically, develop into a young aspen stand like the one shown here. Aspen is a shade-intolerant, early succession species that regenerates after a disturbance like fire, growing thousands of sucker sprouts per acre from the roots and stumps. Young aspen stands are declining as a forest type in Wisconsin, but are important wildlife habitat for many birds, small mammals, deer and moose. If the clearcut from the first photo develops into this, it is not an instance of deforestation but a transitioning habitat. However, unquestionable 'deforestation' looks like some of the following examples from our area. In forest conservation terms we refer to this more permanent loss of forests as 'forest conversion.'



4: This new cranberry farm is on County Road H, west of Boulder Junction and east of Highway 51. On the right is the NHAL state forest. In west-central Wisconsin, "frac sand" extraction has not only ruined forests, but cranberry farms as well. Following is a frac sand processing facility near Meadow Valley, Wisconsin. This site was forested in 2010.



5: Burnett County Conservation officer, Dave Ferris, told me in 2013 that processed frac sand brings \$210 per ton loaded on the Mississippi River barges. He was very concerned about the long term consequences from the changes to the landscape. Thousands of acres of shallow surface water replace forest and farm areas after sand has been extracted. According to Mr. Ferris, farmers “who have frac sand on their land become millionaires over night while those who do not suffer the consequences”, including air-borne silica dust. He also stated that most Wisconsin sand goes to Saudi Arabia to be used in hydraulic fracturing for crude oil extraction. And we think we only pay for our fuel at the pump!



6: Closer to home in the Northwoods, subdivisions like these are an all too familiar view. They are often named after the habitats they destroy. Prior to the most recent recession, these were very common and have destroyed many thousands of acres of forest land in this area. Even today, this trend continues at a time when there is an oversupply of existing houses flooding the market here. In my opinion, this oversupply in the Northwoods is now becoming a burden. Cost of Community Services studies often find that developments in rural areas consume more money over time than they generate, largely due to cost of services in these areas. One could certainly also argue that other forestry-related economic opportunities are lost in this trend of forest conversion.



7: A dramatic example of unnecessary deforestation is this view from Highway 45 north of Conover. This demonstrates the destruction that disposable money can buy. These folks created a cattle farm from the jack pine habitat, and a concern could be raised about this change possibly threatening the Hay Meadow creek just prior to its confluence with the Wisconsin River. Only 40 miles north in the UP, much better grass lands and abandoned cattle farms are for sale at a fraction of the land value in Vilas County. The future of the next photo still unknown, but it appears to be yet another example of deforestation in our area.



8: This photo was taken in May from the Upper Wisconsin River Legacy Forest, looking south west on the neighboring gravel extraction site. Whether this means permanent deforestation of this tract remains to be seen, but at the very least it was a very poor harvest treatment of this site as many mid age pine and spruce were also removed.



9: 'Sustainable Forestry' is a relative term and is often abused and interpreted widely. On public and private lands in this area, proper forestry will be dependent on management of present species, site conditions and age of the stand. Local species such as aspen, jack pine and balsam fir are short lived and managed in a 50-60 year age class. The harvest of these species while they are still healthy goes a long way to assuring they will regenerate. This is called "even-aged" management, as shown in the aspen stand at the beginning of the talk. Aspen and jack pine require full sunlight to grow, and clear cutting is essential for proper regeneration.

However, other species we enjoy here are very long lived. Red pine, white pine, oak, sugar maple, hemlock and yellow birch are all examples of long lived trees that should be managed in a multi-aged class, with stands including both young regenerating trees and also mid-size and large trees and even some old legacy trees. These are the managed forests we never tire of seeing and make management enjoyable for many forest owners.

'In between aged' species like white birch, red maple and white spruce can be a component in either even aged or multi age forestry.



10: Threats to our forests: Some threats often seem out of our reach to remedy. Climate change (see <http://www.nrs.fs.fed.us/pubs/38255>), excess deer numbers (see http://na.fs.fed.us/fhp/special_interests/white_tailed_deer.pdf), drought, insects and of course fire are always on the minds of forest managers. But perhaps our biggest threat is people and the poor management decisions leading up to several of the earlier photos.

On private lands, financial pressures often lead to poor management and misinformation. 'High grading' and premature harvests can look enticing for short term financial gain but severely jeopardize the long term economic return of the forest and cause immense harm aesthetically as well.

Threats to our forests



11: However, neglect and lack of management can also lead to poor forests as in the case of this photo. The background shows severe decline in over mature aspen and jack pine, losing its vigor and its ability to regenerate. In the foreground is young jack pine regenerating on the county forest, which was harvested 9 years earlier.



12: In our area, there are some very special private lands protecting some very important natural habitat. Public lands (which we are grateful to have at about 50% of Vilas County) offer more consistency in science based management, but there is often political pressure for the forests to earn more revenue.

For the long lived tree species, there can be decades of difference between 'economic maturity and biological maturity'. For example, our red pine slows down in growth at about 70 years of age, leading some to suggest a total harvest at that time, but red pine can live for hundreds of years. On public lands, we as citizens have a voice, and of course elections do matter. The forestry practices we see on public lands are science-based but they are influenced by politics. Examples of this influence include the size of areas not harvested, the pressure to fulfill allowable harvests, and of course deciding when to harvest.



13: This photo exhibits a stand of large pine that will be cut on the Vilas County Forest off Torch Lake Road in Conover. This 12 acre sale includes 70 MBF of large pine saw timber. The under story was removed some years ago and the practice called for leaving the large trees as seed source. The county forestry committee recently deliberated on whether aesthetics was more important than cutting this stand. They decided to cut this stand, and this sale recently went out on bids. A private owner, or a different committee, may not be subject to these pressures and may have just as easily retained these trees as a legacy for years to come.

Vilas County will receive about \$7890, or \$657 per acre for this sale. The red pine saw timber brought \$98 per MBF, the white pine brought \$89 MBF. Markets are a bit suppressed this year compared to the past few years. If this management strategy on our public lands does not suit you, please be more involved in the process.

Forest protection: what can we do?



14: Forest certification: Most of our Managed Forest Law lands, as well as our state and county forests are third party certified under the Forest Stewardship Council (FSC) or the Sustainable Forest Initiative (SFI). These certification programs are designed to make us feel comfortable with management on enrolled lands. While many of us feel these certificates are a big step in the right direction, we must remain diligent. The range of acceptable practices allowed is very broad, as we have demonstrated above. Often the economic desires, the wish to manage for one species over another, or to manage for wildlife for example, can complicate things.

Certification has, however, helped mitigate some of the horrendous forestry practices of the past, as many industry processing companies have embraced certification as the standard. Forest certification follows a chain of custody in protecting ecological and social concerns, from the management of the forest through the processing of wood products all the way to the consumer. Look for this symbol on wood products you purchase.

Forest protection: what can we do?



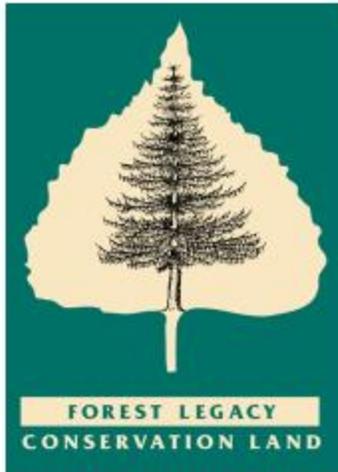
15: Forest conservation: Long-term protection of forest lands requires a staunch commitment to conservation. I often say that *'sustainable forestry with out conservation is not long sustainable'*. At the local level, land trusts and conservation groups like Partners in Forestry, can be very helpful in working with landowners interested in protecting forests and proper management. But the larger landscape is another challenge. The former industrial forests, covering much of the north, are now owned by investment organizations seeking the highest return on their investment. This can be in direct conflict with nature's time frame of growing trees and our wishes for careful management.

To protect some portion of these vast important forest lands requires a strong commitment to conservation at the state and federal level. A program designed to do just that is 'Forest Legacy', which essentially is a partnership between the USFS State and Private Forestry, participating states and enrolled landowners. Commonly, a FS grant to the state will fund part of the acquisition cost of a forest conservation easement, assisting participating states to work with eligible landowners.

In Wisconsin our Knowles-Nelson Stewardship Program is essential to match federal funds in acquiring these easements, as well as other forest protection acquisitions.

In recent years Stewardship has been cut, and the state was even forced by the legislature to dispose of 10,000 acres of land. The forest easements and acquisition assistance for county forests however, has fared better than state land acquisition.

Forest protection: what can we do?



16: The Forest Legacy program is designed to protect forests with high conservation and public values in perpetuity. The funding source is the Land and Water Conservation Fund (LWCF), a program started in 1965, designed to use a portion of the revenue from off shore oil and gas leases to conserve land and water on shore. This 51 year old program was renewed just last year, but only for a three year period. The LWCF Coalition shows that throughout the 50 year history of the LWCF, in only three years was the full amount used to fund conservation and not drawn off for other federal budget matters.

In Wisconsin we barely survived a battle last year to keep the Stewardship Program viable, as the governor's budget called for a moratorium on Stewardship. State Senator Tiffany said at that time that we "can no longer afford nature lands". About the same time last year, Vilas County board member and local realtor Jerry Burkett proposed the county begin the sale of County Forest lands. In all these instances it was only public outcry that maintained our invaluable public lands.



17: Most of our public forests and parks are possible because of programs like these. Our appreciation of the benefits of these great programs will help to keep them alive when we converse with elected leaders. It is very important to let them know how important these conservation programs are to our Northwoods way of life. Increasing our knowledge of forest management will help us identify *deforestation* from a proper timber harvest, and assist us in promoting sound forestry practices.

Partners in Forestry was founded on the belief that our forests should be cared for with the best long term benefits to society. We recognize these benefits to be not only economic, but intrinsic and social as well.