

Wisconsin Council on Forestry

Biennial Report

2013-2014

January 1, 2013 - December 31, 2014

The Council thanks the following for assistance in preparing this report: Sally Dahir, Su DaWalt, Andrea Diss-Torrance, Kirsten Held, Allison Hellman, Sarah Herrick, Steve Hubbard, Trent Marty, Kathy Nelson, Carol Nielsen, Richard Rideout, Jeff Roe, Olivia Shanahan, Fred Souba and Andrew Stoltman.

This biennial report is required by state statute 26.02(2). The purpose is for the Council on Forestry to report on the status of the state § 26.02(2) (a) 1-10. Additionally, the Council chose to report on its accomplishments during the time period covered by this report.

The Council is staffed by the Wisconsin Department of Natural Resources – Division of Forestry (WDNR). This report was written by DNR staff, with review and approval by the Council at its meeting on _____.

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	5
CHAIR'S INTRODUCTION.....	6
COUNCIL CHARGE	6
COUNCIL MEMBERS	7
2013-2014 COUNCIL ON FORESTRY ACCOMPLISHMENTS:	
Wisconsin Forest Practices Study	8
Managed Forest Law Review and Revision Recommendations	9
Biomass Harvesting Guidelines	10
Economic Summit	11
Education Task Force.....	11
Timber Supply	12
Forest Certification	12
Deer	12
Healthy Forest Restoration Act	12
Field Tours.....	13
Items on which the Council advised the Division of Forestry	
Annosum Root Rot Treatment Guidelines for State Lands	13
MFL Streamlining	14
Certification Review ...	14
Silviculture Guidance Development Process ...	14
Council letters expressing support or concern	14

SUMMARY PER STATE STATUTE 26.02

1. The magnitude, nature, and extent of the forest resources in this state ...	15
2. The current use in this state for forest products and the benefits that these forest products provide to the state ...	19
3. The projected future demand for forest products and the projected benefits that these forest products will provide to the state in the future ...	19
4. The types of owners and forms of ownership that apply to forests in this state, including the reasons why persons own forest land ...	20
5. The success of existing incentives that are offered to stimulate the development of forest resources	23
6. The possible economic opportunities in this state that may result in improved forest-product marketing, and increased business dealing in or use of forest products, occurs in this state	29
7. Recommendations for increasing the economic development of the forestry industry and employment in the forestry industry ...	29
8. The effect of state and local governmental laws and policy on forest management and the location of markets for forest products	30
9. Recommendations as to staffing and funding needs for forestry programs and other conservation programs related to forestry that are conducted by the state to support and enhance the development of forest resources ...	33
10. Recommendations as to the need to increase the public's knowledge and awareness of forestry issues ...	35

EXECUTIVE SUMMARY

The Wisconsin Council on Forestry is a board appointed by the Governor and comprised of individuals representing the state's diverse forest stakeholders. Wisconsin State Statute 26.02 created the Council on Forestry with a charge to advise the Governor, the Legislature, the Department of Natural Resources, the Department of Commerce (now Wisconsin Economic Development Corporation), and other state agencies, as determined to be appropriate by the council, on the varied aspects of forestry in this state. The Council is required to prepare a biennial report on the status of the state's forest resources and forestry industry. This report is prepared in odd-numbered years for distribution to the governor and the appropriate standing committees of the state legislature. It covers the 24-month period ending on December 31 immediately preceding the date of the report. This report also provides the status of the state's resources and forest industry as required by state statute.

This report is available at: <http://wisconsinforestry.org/councilpages/publications>

CHAIR'S INTRODUCTION

PLACEHOLDER FOR INTRODUCTION BY HENRY SCHIENEBECK

COUNCIL CHARGE

The Wisconsin Council on Forestry was created by State Statute 26.02 in July 2002 to advise the governor, legislature, Department of Natural Resources, Department of Commerce, and other state agencies on a host of forestry issues in the state, including:

1. Protection of forests, from fire, insects, and disease
2. The practice of sustainable forestry, as defined in § 28.04 (1) (e)
3. Reforestation and forestry genetics
4. Management and protection of urban forests
5. Public knowledge and awareness of forestry issues
6. Forestry research
7. Economic development and employment in the forestry industry
8. Marketing and use of forest products
9. Legislation affecting management of Wisconsin's forest lands
10. Staffing and funding needs for forestry programs conducted by the state

COUNCIL MEMBERS (During the term of this report)

Member Name

Representing

Allison, R. Bruce	Urban and community forestry
Pending	Labor unions affiliated with the forestry industry
Troy Brown	Lumber industry
Randy Champeau (2013)	Conservation education
Rep. Fred Clark	Wisconsin Assembly
Matt Dallman	Nonprofit conservation organizations
Paul DeLong	Chief State Forester
James Hoppe	Pulp and paper industry
Pending	Wisconsin Senate
James Kerkman	Society of American Foresters
Rep. Jeffrey Mursau	Wisconsin Assembly
Kimberly Quast	Forestry consultants
Mark Rickenbach	Forestry schools
Henry Schienebeck,	Chair and Timber Producers Organization
Jane Severt	County forests
Tom Hittle	Forest products company that manages forest land
Paul Strong	U.S. Department of Agriculture
Sen. Tom Tiffany	Wisconsin Senate
Virgil Waugh	Industry that uses secondary wood
Wedepohl, Richard	Non-industrial, private forest land

2013-2104 Council on Forestry Accomplishments

Wisconsin Forest Practices Study

In early 2011, the Wisconsin Council on Forestry (Council) identified five priority issues:

- Timber supply
- Forest certification
- Wisconsin's Managed Forest Law (MFL) Program
- Deer
- Education

The FY2014-2015 Budget included funding for a Wisconsin's Forestry Practices Study (Study) of Wisconsin Department of Natural Resources (DNR) forestry and forest fire prevention practices. The funding for the Study is in the form of \$600,000 grant to the Great Lakes Timber Professionals (GLTPA) and Wisconsin County Forests Association (WCFA). GLTPA and WCFA selected the National Council for Air and Stream Improvement (NCASI) to serve as general contractor for this Study. NCASI is an independent, non-profit 501(c)(6) research institute formed in 1943 focusing on environmental and sustainability topics relevant to forest management and the manufacture of forest products.

The goal of the Study is obtain research results to guide decisions and policy development for investment in forest-based manufacturing in Wisconsin while ensuring the social and ecological benefits of forests remain viable for future generations.

GLTPA and WCFA engaged the Council to assist with the overall project design and directions for in-depth study. Input from the Council resulted in the providing the following potential research directions to address the umbrella research question: *"How does Wisconsin continue to provide sustainably grown wood fiber to support competitive wood using industries into the future?"*

- What is the availability of wood fiber in the state?
- How have landownership changes, experienced over the last 15 years, affected the supply of wood?
- What are the positive and negative impacts of regulations and voluntary guidelines on the supply of wood fiber?
- What are the positive and negative impacts of forest certification programs on both the supply and demand of wood fiber?
- What is the capacity and demand of wood using industries to utilize Wisconsin's wood fiber resource?
- What portion of the wood supply is currently being used by existing industries and how much wood fiber would be available for industry growth?
- Are there changes or bottlenecks across the supply chain from stump to mills that affect supply or present opportunities?
- Identify and explore other substantive factors that might prohibit Wisconsin from remaining competitive into the future?

A plan was developed that incorporated the Council's direction and was submitted to the Wisconsin Joint Committee on Finance with a letter signed by Council members endorsing the study plan.

GLTPA and WCFA continue to seek advice and input on the Study from the Council. The Council Study Subcommittee provides input to the development of research request for proposals (RFP) and endorsement of selected research projects for Council endorsement and support.

Currently three projects have been awarded and second RFP has been distributed for additional projects. All projects awarded will be addressing one or more of the research directions listed above. For further information about the Study, projects and updates visit <http://study.wisconsinforestry.org>

MFL Review and Revision Recommendations

The Council on Forestry discussed proposed changes to the Managed Forest Law (MFL) to:

- Reduce DNR administration cost, conflict, and/or law complexity
- Maintain public, non-MFL stakeholder, understanding and support
- Maintain municipality and local government support
- Support the core MFL purpose of sound forest management and commercial timber production (as ref. Wis. Stat. 77.80)
- Encourage continued program enrollment and discourage non re-enrollment
- Address concerns of MFL forest land owner stakeholder groups
- Address concerns of industry stakeholder groups

Recommendations included draft legislation, which were later written into 2013 Senate Bill 543 and 2013 Assembly Bill 700. Hearings were held on the proposed legislation; however the bills did not pass before the session closed.

These bills would have made the following modifications:

- Increase minimum eligibility acreage from 10 to 20 acres.
- Eliminate all buildings, structures or fixtures that would improve a parcel of lands, except for those improvements that benefit forestry.
- Require that landowners provide access to MFL-Open lands that is equivalent to the landowner's access. Landowner would be required to have the lands designated as MFL-Closed if they are not able to provide access.
- Allow leasing of lands for recreational activities by small, non-industrial private landowners only. Large landowners would not be authorized to lease their lands.
- All land sales to be in any configuration as long as lands that are sold to a new owner and lands that are retained by the old owner meet MFL eligibility requirements.
- Allow landowners to withdraw one to five acres of land for selling or use as a construction site.
- Allow withdrawal of the minimum amount of lands necessary to get lands back into compliance with MFL requirements if the lands becomes unsuitable for the production of merchantable timber due to environmental, ecological, economic or other concerns. Landowners would be exempt from paying a withdrawal tax or fee.
- Shift the calculation and issuance of a withdrawal tax and fee to the local county offices.
- Shift the issuance of a yield tax to the local county offices. DNR would continue to determine the amount of yield tax to be collected.
- Eliminate the collection of withdrawal tax based on the value of standing timber.
- Cap the number of years in the withdrawal tax formula to no more than 10 years or the number of years the MFL was subject to the MFL Order.
- Require the counties to share 80% of payments collected with the municipality.

- Allow lands to be re-enrolled into the MFL program if the lands enrolled are the same as those that are expiring and if all forest reconnaissance data and management prescriptions are current.
- Exempt large owners from the requirement to file a cutting notice if they are certified by an independent certification body or organization.
- Codify that landowners who have lands that are damaged by a natural disaster are allowed time to restore the productivity of the lands. DNR would formalize the amount of time required for the restoration. If lands fail to become productive, DNR would withdraw the minimum amount for the remaining lands to meet MFL requirements. Landowners would be exempt from paying withdrawal taxes and fees.
- Repeal all provisions for DNR Foresters to develop management plans if landowners are unable to contract with a certified plan writer or if DNR does not approve a management plan developed by a certified plan writer.
- Repeal the requirement for tribal lands that are withdrawn from MFL or FCL to have a written agreement that lands will continue to be treated as tax law lands until the Order would have expired.

Revision of Wisconsin's Forestland Woody Biomass Harvesting Guidelines

In December 2008, the Wisconsin Council on Forestry accepted Wisconsin's Forestland Woody Biomass Harvesting Guidelines. When accepting the guidelines, the Council on Forestry also made a commitment to review the guidelines in 2012, as the results of additional research projects became available and as information concerning the implementation of the guidelines was evaluated. In September 2012, the Council sponsored an effort to review the guidelines for the harvest of woody biomass on Wisconsin's forestlands.

The guideline review process builds on the work completed in the initial development of the guidelines, incorporates new research and addresses implementation, operational, and economic concerns. During the review, the Stakeholder Advisory Committee was assisted by three subcommittees that reviewed the guidelines and made recommendations to the Advisory Committee. The Implementation, Operability, and Economics Subcommittee addressed operational and economic aspects of the guidelines and their implementation. The Forest Ecology Subcommittee addressed ecological concerns and made recommendations based on the latest research, and the Soils Subcommittee reviewed the restricted soils criteria and the listed soil series. Subcommittees forwarded recommendations to the Advisory Committee for consideration. The Advisory Committee agreed on revisions to Wisconsin's Forestland Woody Biomass Harvesting Guidelines, which were accepted by the Council on Forestry in September 2013.

Recent revisions to Wisconsin's Forestland Woody Biomass Harvesting Guidelines:

- Changed the format from 8 to 6 guidelines with site specific guidelines listed first.
- Added an exception for red pine harvest on dry nutrient-poor sandy soils (Guideline 1).
- Made the fine woody debris retention guideline (Guideline 5) more outcome based.
- Guidelines regarding salvage harvest and sensitive species and community types are now reminders for users to refer to the Silviculture Handbook and Bureau of Natural Heritage Conservation Guidance.
- Expanded the discussion of guideline modifications in Chapter 4.

In addition, a companion guide to the Field Manual, *Assessing Fine Woody Debris in Post-Harvest Biomass Stands*, was developed to assist land managers in accurately assessing the amount of FWD in post-harvest biomass stands. Two training events were held in September 2014 to introduce practitioners to this new tool.

Economic Summit

Held on December 12 and 13, 2013 in Madison, Wisconsin, the Governor's Forestry Economic Summit was an invite-only event to bring together Wisconsin's most engaged and knowledgeable forest industry stakeholders to learn and share information from all sectors of the industry. From private and public forest management trends and concerns to participation in the global forest economy, the summit sought to address all facets of the forest industry today while preparing for and addressing future challenges and opportunities. Speakers included representatives from industry, public and private forests, state and regional associations, universities and state agencies as well as elected officials.

Summit participants suggested actions that would help address some of the issues identified at the summit. The actions were then sorted and grouped into themes. These goal statements were developed from those themes:

- Goal 1: Increase the workforce/proficiency of technical and skilled workers (i.e. manufacturing and timber producers) which support the forest industry as demands deems appropriate.
- Goal 2: Increase management of and increase timber production within Wisconsin's Federal Forests consistent with sustainable forestry practices.
- Goal 3: Increase management of and increase timber production within Wisconsin's State-owned lands consistent with sustainable forestry practices.
- Goal 4: Increase management of and increase timber production within Wisconsin's County Forests consistent with sustainable forestry practices.
- Goal 5: Increase management of and increase timber production within Wisconsin's private forests with sustainable forestry practices.
- Goal 6: Grow Wisconsin's forest product markets.
- Goal 7: Build and foster a coordinated working relationship between primary wood manufacturers and public and private forest management professionals with regards to economic and ecological considerations and the role and impacts of guidelines, policies and regulations.
- Goal 8: Increase public understanding of the benefits of sustainable forest management.
- Goal 9: Assess constraints and improve the economics of transporting materials.

The Council then asked summit participants and other interested parties to rank the goal statements. At that time participants could also offer additional actions that would address a goal statement as well as indicate if they were interested in working on a committee formed around a goal statement.

The Council chose to form the following sub-committees which would work with other interested parties to develop action plans aimed at achieving the given goal.

- Goal 1: Workforce – Mark Rickenbach (lead), Bruce Allison, Virgil Waugh and Kim Quast
- Goal 5: Private Forest Mgmt. – Kim Quast (lead), Mark Rickenbach, and Nancy Bozek
- Goal 6: Markets – Troy Brown (lead), Bruce Allison, Scott Bowe
- Goal 8: Public Understanding – Jane Severt (lead), Dennis Schoeneck and Matt Dallman

Additionally, since management of Wisconsin's federal forests (Goal 2) is a high priority issue and there are currently a number of parties already working on this issue the Council wanted to continue to explore how it could help with the issue. Therefore it was decided that Council Chair Henry Schienebeck would convene interested parties to discuss current efforts and determine if there is an opportunity to further the Council's participation in hopes of achieving this goal. An action plan will not be developed for this goal.

Education Task Force

The Council created an Education Task Force in February 2012 and tasked them to develop a framework, to be reviewed by the Council, to use to identify gaps, inventory recurrent activities and funding, assess desired outcomes, and recommend actions. Council Members included Randy Champeau as lead and Jim Hoppe as well as staff from UW-Extension and the DNR.

A gap identified was the lack of coordination related to forestry education for professional foresters, industry, and citizens. The idea of a forestry center was explored as a possible long-term investment into an entity to organize and market education on the benefits of sustainable forestry enabling various institutions to better work together. The committee was directed to develop a proposal for a center.

The Task Force recommended the Council support the proposal and support efforts to seek appropriate funding and the establishment of the Wisconsin Forestry Center/Cooperative (WFCC).

The council supported the Committee moving forward in confirming funding options and gathering more information to inform future discussion on whether or not to move ahead with a Wisconsin Forestry Center/Cooperative.

Timber Supply

The issue of timber supply and identifying the variables, including logger supply, who is cutting and who is not, barriers to management, factors to influence change, and seasonality issues continues to be a priority of the Council. It is expected that work being done through the Wisconsin Forest Practices Study will provide information to assist the Council in addressing timber supply issues.

Forest Certification

At the request of the Council, Department staff assessed the current state of the public investment in certification, primarily Wisconsin DNR and Wisconsin County Forests. Since the costs of forest certification may accrue to one entity while benefits may accrue to a different entity or organization the review described expenditures and impacts as well as costs and benefits. In November 2013, the staff submitted a final report to the Council. It is anticipated that additional knowledge on the cost and impacts of certification will be provided by the Wisconsin Forest Practices Study.

Deer

The Council continues to be concerned with the impact of the deer population on the regeneration of Wisconsin's forests. The work involved in implementing the recommendations in Wisconsin's Deer Trustee Report (DTR) offered a unique opportunity to for the Council and the forestry community to engage in and bring awareness to the deer issue. Council members Jane Severt and Jim Kerkman were actively engaged in the several-month-long process of forming recommendations for deer policy based on recommendations contained in the DTR.

Additionally, the Council worked to identify representing forestry interest to serve on County Deer Advisory Committees (CDAC) which will provide input and recommendations to the department on deer management within their county.

Healthy Forest Restoration Act

In March, 2014 the Council recommended to the Governor that 21 sixth-level watersheds within the Chequamegon – Nicolet National Forest be designated as landscape-scale insect and disease treatment areas for the purposes of the Healthy Forest Restoration Act (HFRA) provision in the 2014 Farm Bill. The areas recommended by the Council are landscape-scale; experiencing declining forest health and substantial tree mortality; and areas with hazardous trees that pose imminent threats to public infrastructure, health, and safety.

Those areas were of particular concern to the Council on Forestry due to the potential impacts of emerald ash borer, spruce budworm, oak wilt and maple decline. The Council and the Governor are hopeful that the process streamlining afforded by Section 602 will facilitate management that will restore our national forest to a more sustainable and resilient condition, and provide the continued benefits of a viable forest products business sector, clean air, clean water, recreation opportunities, wildlife habitat, and jobs in our communities within Northern Wisconsin.

Field Tours

On September 9, 2013, the Council, combined with members of the Legislature, completed a tour of The National Historic Landmark Aldo Leopold Shack where they learned about the history of Leopold pines in addition to the thinning and utilization of said pines. The second stop on the tour was Devil's Lake State Park. At the park, a tour was given of an established timber sale and high-density reforestation. The final stop on the tour was the property of Doug Duren in Cazenovia. An overview of forest management was given and a tour of the Duren property. In addition to the stops along the tour, discussion took place regarding Emerald Ash Borer, Management on state owned forest lands, The Driftless Forestry Network (DFN) and wood markets in Southwest Wisconsin.

On September 17, 2014 the Council toured a post-harvest biomass study site on the Marathon County Forest. The Council also participated in a deer research discussion at the site. Following the biomass site visit, the Council toured Marth, located in Marathon. Marth Wood Shavings contracts wood shavings, sawdust, and other clean waste wood from mills and manufacturers throughout the region. Animal bedding and wood fuel pellets are produced at the facility. Finally, the Council visited the boiler project located at the Nine Mile Recreation Area of the Marathon County Forest.

Items on which the Council advised the Division of Forestry

Annosum Root Rot Treatment Guidelines for State Lands

The Council reviewed the fungicide treatment guide for annosum root rot on state lands and provided recommendations for the Division's consideration when forming a final decision on what will be the scientifically-sound and operationally-practical guidance for managing annosum and encouraging prevention on State lands.

The Council provided the following recommendations:

1. The guide should be implemented as soon as possible instead waiting for more research or giving a "reasonable period of time to prepare.
2. The distance from a known infected stand should be 25 miles instead of 1,10, or 50 miles.
3. The time for winter exemption when no treatment would be required would be from December 1st to March 31st.
4. All pines should be the tree species included in the guide instead all conifers.
5. At a concentration of 50% of pine component in a stand (pine as the primary timber type) should be treated no matter what the Basal Area (BA) of pine is in the stand.
 - a. The Council also recommended that this language be clarified so it is better understood.
6. There should be a one year grace period for implementation in areas that will be covered by a new distance buffer based on a newly confirmed annosum stand

MFL Streamlining

The Council formed a committee charged with continuing discussion on the items identified by the assessment done by Dovetail Partners and determining how to proceed and where the greatest benefits may lie.

Certification Review

In December 2012, the Council approved a review of the state's investment in forest certification. The Council's steering committee and a DNR technical team worked on the effort and submitted their report in November 2013 for Council consideration. The report provided an assessment of the current state of the public investment in certification, primarily Wisconsin DNR and Wisconsin County Forests. While the review was described as a cost/benefit analysis, it was recognized that the cost/benefit methodology is most appropriately used where costs and benefits accrue to the same entity. However in forest certification costs may accrue to one entity while benefits may accrue to a different entity or organization. Therefore the report described expenditures and impacts as well as costs and benefits.

Silviculture Guidance Development Process

The Council supported the Division's proposed team model aimed increasing partner involvement. The Council assisted with the nomination of stakeholder representatives. The model is as follows:

- The Wisconsin Silviculture Guidance Team would be comprised of representatives from affected forestry stakeholder groups, including industry, government, consulting foresters, conservation organizations, landowners, and university (see attached model). The proposed composition of the team reflects a desire to provide enhanced forestry community input relating to the WDNR Silviculture Handbook and other silviculture guidance.
- The Guidance Team's primary role would be to review draft Silviculture Handbook revisions and other silviculture guidance from the ad hoc subject teams. Once the draft guidance is approved by the Guidance Team, the team would facilitate a review by internal, external and expert partners. Final approval of Silviculture Handbook revisions and other silviculture guidance would lie with the WDNR Division of Forestry Administrator. The team's goal would be to develop sustainable silviculture guidance that is based on best available science and field experience from a wide variety of Wisconsin's forestry stakeholders.
- Ad hoc subject team membership would be developed by the Guidance Team and would vary according to the topic and the expertise required. Membership would consist of appropriate DNR field staff, but interested partners may be part of these teams as well.

Letters expressing support or concern

The following is a list of letters sent by the Council on various issues impacting forestry in the state.

1. October 2013 – to Wisconsin's US congressional delegates explaining the negative impacts Wisconsin will incur from both sequester implementation and the transfer of funds due to the shortfall in federal firefighting funding.
2. June 2014 – to United States Fish and Wildlife Service regarding concerns that the proposed addition of the northern long-eared bat to the federal List of Endangered and Threatened Wildlife would have a profoundly negative impact on Wisconsin's sustainable forest management, forest industry and economy.
3. December 2013 – to Joint Committee on Finance members in support of the proposed 2013 Wisconsin Forest Practices Study grant.
4. Letter of Endorsement for Invasive Species Council grant request for funding for promotional activities for Invasive Species Awareness Month.

2013-2104 Report Content Required by State Statute

1. The magnitude, nature, and extent of the forest resources in Wisconsin

Forest Resources

Of Wisconsin's 35 million acres of land, 17 million acres are forested. Forest area in Wisconsin has been steadily increasing for decades due mainly to the conversion of marginal agricultural land back to forests. Currently forests cover 49% of the total land area of the state. Urban forests (the trees and green space in communities and other built areas) cover an additional 2 million acres or about 5.8% of the total state land area.

Acres of forest land by forest type

The most abundant forest types in Wisconsin are hardwood forest types. Oak-hickory, maple-beech-birch and aspen-birch forest types are the most common. Oak-hickory accounts for 4.2 million acres followed by maple-beech-birch with 3.8 million acres and aspen-birch with 3.0 million acres. While most of Wisconsin's forests are hardwood types, there are also significant softwood types occupying large areas, especially in the north and central parts of the state. Red pine, eastern white pine, tamarack, black spruce, northern white-cedar and jack pine are the most common conifer forest types.

Species composition by forest type

- The maple-beech-birch forest type is the most common type in the northern part of the state accounting for 29% of all forestland in the region. A predominance of hard and soft maples and basswood characterize this type. Northern red oak, white ash, eastern hemlock, yellow birch and quaking aspen are also common. Maple-beech-birch supports a variety of understory plants and animals.
- Second to maple-beech-birch in the northern part of the state is the aspen-birch forest type. About 23% (2.6 million acres) of the Northern Mixed Forest region is in aspen-birch. Common tree species in this forest type include quaking aspen, bigtooth aspen, paper birch, red maple and balsam fir.
- The Northern Mixed Forest is distinguished in large part by the prevalence of conifers. The most common conifer forest type is spruce-fir accounting for 11% (1.3 million acres) of the Northern Mixed Forest. Spruce-fir forests are fairly diverse and can occur in many moisture regimes. They are the most common wet forests in the north and often surround and blend into bogs. Common tree species in spruce-fir forests include northern white-cedar, tamarack, black spruce, balsam fir and white spruce.
- Nine percent (978,215 acres) of the Northern Mixed Forest in Wisconsin is pine forest type. Red pine, eastern white pine and jack pine are the most common species that occur in Wisconsin. Forest character can vary from jack pine barrens to red pine plantations and from thick stands of young white pine to old growth stands with pines several hundred years old. Other than pines, common associates of pine forests are eastern hemlock, red maple, quaking aspen, sugar maple and balsam fir.
- The most common forest type in the Southern Broadleaf Forest is oak-hickory. It represents about 51% (2.7 million acres) of the forests in the southern part of the state. Dominant tree species in oak-hickory forests include northern red oak, red maple, white oak, northern pin oak, black oak, basswood, shagbark hickory and bur oak.
- The elm-ash-cottonwood forest type generally is a lowland type that makes up a slightly higher percentage of the southern forests (12.0%) compared to the north (9.9%). However, the Northern Mixed Forest contains a larger acreage of this type (1.1 million acres compared to

616,000 acres in the south). Common species in this forest type are black ash, green ash, silver maple and red maple.

- About 10% (535,000 acres) of the forestland in the Southern Broadleaf Forest is in the maple-beech birch forest type. Species composition is similar to the northern maple-beech-birch forest with sugar maple and basswood being the dominant species. However, there is less hemlock, yellow birch and quaking aspen and an increased occurrence of oaks in the south compared to the northern forests.
- Other forest types of note in southern Wisconsin are white-red-jack pine (650,000 acres) and aspen-birch (361,000 acres).

Age class by forest type

Most forests in Wisconsin are 41-80 years old. Approximately 13% are 20 years old or younger and 4.1% are over 100 years of age. The forest types proportionally best represented in the younger age class are aspen, oak-hickory, and pine; the latter two predominantly associated with dry sites. The forest types proportionally best represented in the over 100 age classes are oak-hickory, maple-beech-birch and pines.

Volume by species

In 2013, there were 21.4 billion cubic feet of growing stock volume, of which 5.9 billion or 28% were conifer and 15.5 billion or 72% were hardwood. The highest volume softwood species were red pine, eastern white pine and northern white-cedar. The highest volume hardwood species were sugar maple, red maple, northern red oak and quaking aspen.

Growth, removals, mortality volume by species

In Wisconsin, our forests are growing at a rate that significantly exceeds harvest. Between 2009 and 2013, average net annual growth exceeded harvests and other removals by almost 245 million cubic feet (mortality is taken into account when calculating net growth). Growing stock average annual mortality was 235 million cubic feet. During the period between inventories, average annual net growth was 560 million cubic feet. Average annual removals were 315 million cubic feet, about 56.3% of average net annual growth.

Along with net growth exceeding removals overall, net growth exceeded removals for the state's northern red oak and white oaks, white and red pine, hemlock, ash, red and sugar maple, spruce and balsam fir. Removals exceeded growth for paper birch, elm, jack pine, aspen, black and northern pin oak, and yellow birch. Growing stock average annual mortality exceeded average net annual growth for paper birch, elm, balsam fir, jack pine, aspen, black and northern pin oak and yellow birch.

Changes in trends

Most of the major trends in Wisconsin forests have remained relatively constant since periodic inventories by the Forest Service began in 1936. Although trends have not changed, the forest itself has. Areas and relative proportion of various forest types have changed significantly over the last 70 years. Hardwood succession is very apparent. Since the first official statewide forest inventory in 1936, aspen-birch forest area has decreased steadily, although it is still much more common than at the beginning of the Cutover. The Cutover was the period of intense timber harvest in the Lake States, lasting about 40 years, from 1880-1920. Since 1936, maple-basswood, elm-ash-cottonwood, and oak-hickory forests have increased steadily. Conifer forest area has increased at roughly the same pace as total stocked forest area in the state over the last 70 years (18% of total stocked forestland).

Wisconsin forests have increased in age over the past 40 years. In 1968, only 23% of the forests in Wisconsin were over 60 years old. By 2013, the percentage had increased to 46%. However, forests over 100 years old declined during the same period from 6% to 4.1% of total forest land.

Most forest types followed the same pattern as total forest land. The exceptions were the elm-ash-cottonwood and white pine forest types which have each maintained about the same percentage of total forest land over 60 years during this time period. The percentage of black spruce forest type over 60 years old increased more than any other forest type over the past 40 years (18% to 52%).

Overall growing stock volume on Wisconsin timberland has increased steadily since the first forest inventory in 1936 (7.6 billion cubic feet) to the 2013 inventory (21.4 billion cubic feet). Between 1996 and 2013, overall growing stock volume in Wisconsin's forests has increased by almost 11%, over 2.0 billion cubic feet. Along with this overall increase, the state's maples, oaks (except black oak), ashes and white and red pines are some of the commercially important species whose growing stock volume increased. Paper birch, aspen, balsam fir, yellow birch and jack pine volumes decreased between inventories.

Growing stock average net annual growth exceeded average annual removals between 2009 and 2013 for most major species groups. This is virtually unchanged from the previous inventory done between 2002 and 2006, when removals exceeded growth for jack pine, paper birch and bigtooth aspen. Average annual removals for yellow birch, paper birch, aspen, elm and jack pine continue to exceed average net annual growth.

Urban Forest Resources

According to Wisconsin DNR's definition of urban forest, the area encompassed by incorporated cities and villages, Wisconsin has about 2 million acres of urban forest or about 5.8% of the state's land area. This is a conservative number as it does not include developed area of towns which are managed as urban forests. Pilot Wisconsin urban forest inventory and assessment studies were completed by the USDA Forest Service in 2002 and 2012. Using the Forest Service's more restrictive definition, the 2002 study classified 729,270 acres as "urban" which expanded to 932,877 acres in 2012.

The 2012 study reported Wisconsin urban areas contain 42.8 million trees, averaging 45.9 trees per acre with an estimated total structural/replacement value of \$19.3 billion. The study showing changes and trends from 2002 to 2012 is still in progress and will be reported when complete.

The information derived from the 2002 and 2012 urban forest inventory projects has been extremely useful. However, the low number of sampling points, lack of focus on measuring urban canopy and limited study area has not met the increasing demand for timely, consistent, and reliable forest assessment and monitoring information for urban forests. Therefore, the Division of Forestry is developing a continuous Urban Forest Inventory and Assessment (WisUFIA). WisUFIA will have three main components: a continuous, permanent plot-based sampling program on all urban ownerships, a remotely sensed urban forest canopy measurement to be repeated on a five to ten year cycle, and a data aggregation tool to collect and report on other existing data sources such as municipal street tree databases. Analysis of the data will qualify and quantify the urban forest structure, condition and threats to the resource and establish the environmental, social and economic values and products provided by the urban forests of the state. This program will increase capacity to provide timely data to our customers and track progress towards statewide strategic and performance goals.

The Wisconsin Urban Forestry Council presented its 2013 report on the status of urban forestry to the Wisconsin Department of Natural Resources Chief State Forester in May of 2013. This report documented accomplishments since the 2009 report, identified specific challenges and opportunities, reiterated their strategic directions, and provided policy, funding and staffing recommendations. Read the report at <http://dnr.wi.gov/topic/UrbanForests/documents/UFCouncilReport2013.pdf>

Forest Health

Detection and management efforts continued to fight against major forest insects, diseases, and invasive plants that pose significant threats to the health of Wisconsin's forests. In 2013, emerald ash borer (EAB) was found in six additional counties (Dane, Dodge, Douglas, Fond du Lac, Sauk and Winnebago) and in 2014 the pest was detected in nine more counties (Adams, Buffalo, Calumet, Columbia, Grant, Jefferson, Monroe, Oneida and Sheboygan as of Oct 10, 2014), bringing the number of known-infested counties to 29. The quarantine has been extended to 39 counties: those where EAB has been detected plus those surrounded by infested counties or where a find was near the border of the county. The southern third of the state is now quarantined for EAB with two isolated quarantined counties in the north, Douglas and Oneida. Releases of specialist parasitoids continued in 2013 and 2014 in six sites in southeastern counties of the state where EAB is present across the landscape. *Tetrastichus planipennis* was recovered in 2013 at Newburg where they had been released in 2011.

Populations of gypsy moth remained low in most of Wisconsin in 2013 and 2014. In 2013, 12,248 acres were lightly defoliated, most along the south shore of Lake Superior in Ashland and Bayfield counties. In 2014 only 80 acres of light to moderate defoliation was mapped. Demand for the state suppression program for gypsy moth outbreaks was very low in both years: in 2013 230 acres were treated at Governor Dodge State Park and in 2014 only 29 acres of private land in Rock County. In 2013, oak wilt was confirmed for the first time in Rusk County. In 2014, the disease was found in Washburn County. Oak wilt is now detected in 60 of Wisconsin's 72 counties. In southern counties it is widespread but in recently added northern counties it is still localized.

Surveys confirmed that beech scale, the insect associated with beech bark disease is present throughout most of the range of American beech in Wisconsin. Despite the widespread distribution of the beech scale, high populations of the insect and mortality of beech due to beech bark disease is limited to Door County.

Fight against the spread of terrestrial invasive plants continued through education and implementations of BMPs and Invasive Species Rule NR 40. Work continued on early detection and suppression of priority species. As part of the early detection work, inventories of invasive plants were done on many state properties.

Crazy worms, (*Amyntas* sp.) were a surprise discovery in 2013 at the University of Wisconsin Arboretum in Madison. In 2014, however, it became obvious that this group of invasive worms was commonly established in Madison, Milwaukee and Appleton as well as in communities along the corridor between Madison and Milwaukee, the Fox River Valley and as far north as Grantsburg. It appears that more than one species is established in Wisconsin. This group of invasive worms is of concern because it consumes organic material on the soil surface at a much faster rate than do the previously established European worms. A layer of leaf litter is necessary for the regeneration of several important northern forest trees as well as understory plants and forest wildflowers, so the establishment of crazy worms in the forests of the state could have significant impacts on the ecosystem and timber industry.

Firewood is a major pathway for the accidental introduction of wood-borne invasive pests and diseases of trees. WI DNR regulates firewood that may enter state lands and in 2014 the distance firewood allowed into state lands could be brought in from was decreased for 25 to 10 miles. Firewood certified by DATCP as treated to kill any infesting organisms continued to be welcome regardless of distance traveled. Regulations, together with education efforts have helped increase public awareness toward limiting the movement of firewood.

2. Current use of forest products and the benefits to the state

The pre-dominant wood product produced in Wisconsin is roundwood for pulp and paper. Saw logs are second in prominence followed by a variety of other forest products including, composites, fuelwood, furniture, flooring, cabinets, moulding and millwork, bio-fuels, posts, poles, and pilings. Hardwood species comprise nearly 80% of total roundwood production in Wisconsin, a proportion that has been stable over the last decade.

The forest products industry in Wisconsin supports 59,597 jobs and generates \$22.9 billion in value to the state's economy. The pulp and paper sector is the largest employer with 30,656 jobs followed by sawmills and other wood products with 24,699 jobs. Further, these businesses generate \$156.4 million in direct taxes.

A steady flow of products, besides helping to manage the forests, provides for a strong economy through the direct jobs that exist in the forest product industry. The timber production industry provides for primary, secondary and reconstituted wood products. Wisconsin's forest products industries comprise 15.2% of all manufacturing sectors. Wisconsin's forest product industry creates high paying jobs. In all, the forest products industry contributes about \$3.6 billion per year in wages to the Wisconsin economy.

Other amenities provided by the forest are difficult to put a value on, but are significant. On an annual basis, forest-based recreationists spend approximately \$2 billion within Wisconsin communities. This spending stimulates the economy further and it is estimated that forest-based recreation is a \$5.5 billion dollar industry (WEDI, 2004).

Urban forests in Wisconsin provide myriad ecological, social and economic benefits. The 2012 urban forest assessment pilot estimates showed Wisconsin's urban forests annually remove 4,005 tons of air pollution valued at \$27.1 million, annually sequester 212,000 tons of carbon valued at \$15.1 million, store 4 million tons of carbon valued at \$285 million and annually provide residential energy savings valued at \$86.1 million. The structural value of the urban forest (the cost to replace the trees) is estimated at \$19.3 billion.

3. Projected future demand and benefits for forest products

The forest industry is still recovering from downfalls in the housing industry and the economic downturn of 2009. Projecting the future is difficult. In Wisconsin, the pulp and paper industry is the largest sector within all forest industries. It accounts for approximately two-thirds of the output in value and raw material consumption. Paper demand has historically grown with the growth of population, but has followed a five year up and down cycle as new plants come on line; capacity exceeds demand, and demand catches back up to production and the cycle starts over again. Pulp and paper markets continue to be challenged by the growing presence of new facilities in countries such as China and Brazil.

It is reasonable to assume that the demand for paper will grow in the world, but determining the supply source is a greater question. If domestic suppliers can stay competitive in the global marketplace, they should survive. Demand has been growing for the high quality paper that Wisconsin produces. China, who has been a net importer of fine writing paper, has begun to export fine writing paper, which has generated increased competition for Wisconsin's paper industry. There are concerns that the paper industry in Wisconsin has not been investing enough capital to keep their plants efficient and competitive in global markets. This is changing as more recently we have seen significant investment in infrastructure by the industry. It will take an active role by the government to make sure that the long term direction of this industry is growth and not decline. If the paper industry remains competitive in global markets, it should be able to grow and provide markets for Wisconsin wood. The transition of the paper industry to bio-refining and producing non-paper products like ethanol, hydrogen, acetic acid, and others will be key to the long term survival of the pulping industry in today's global market.

The housing slump impacted sawmills and veneer plants in Wisconsin with some of the lowest lumber prices in recent history. Many firms have explored exporting their products in order to make up for the decline. Kitchen cabinets and flooring continue to provide solid markets to Wisconsin companies. However, these markets have still not fully recovered. Home building levels have been unstable but are showing promise of recovery. Pallets continue to move products world-wide and as such retain a place of stable wood manufacture.

International markets offer increased potential for Wisconsin companies, particularly in the high end furniture sector. Current limits on hardwood exports from Russia to China have opened markets. European markets also appear to be opening up. Those sawmills and veneer plants that are exporting have been finding success. Continued assistance by the state to help companies move into these foreign markets is needed to help Wisconsin family-owned businesses take advantage of these opportunities and capture wider markets for their product offerings.

Wisconsin has high quality hardwoods and a rich species mix that will continue to be in demand for solid wood products. Basswood has grown in popularity as a solid choice for wooden blinds. Tie markets remain strong as well. In addition, there is speculation that closed loop pulping processes can provide useful byproducts at those mills. There are discussions about the feasibility of Cross Laminated Timber production in Wisconsin.

4. Types of owners, forms of ownership and reasons for ownership

Ownership of the 16.9 million acres of rural forest land in Wisconsin:

Public

National Forest	8%
Other federal	1%
State	7%
County	14%

Private

Tribal	2%
Forest industry	4%
Misc. corporate	7%
Individuals/Families	57%

In addition to rural forest lands, there are 2 million acres of urban forest in Wisconsin.

Number of Private Owners and Parcel Size

According to the 2011 Forest Inventory Analysis (FIA) and National Woodland Owners Survey (NWOS), more than 380,000 private forest landowners hold an estimated 11.8 million acres of forestland. This is a 5% increase over the number of private landowners reported in the 2006 NWOS. While this is only a 5 year trend it does appear on track for an increase that is significantly less than the 38% increase in the 10 year period from 1997 to 2006. The private forest acreage is well-distributed throughout the state with each survey unit showing an increase in the amount of private forest land.

Survey Unit	Acres of Private Forest Land	
	Year 2006	Year 2011
Northeastern	2,586,000	2,744,000
Northwestern	3,195,000	3,389,000
Central	2,432,000	2,594,000
Southwestern	1,944,000	2,039,000
Southeastern	962,000	1,104,000
State Total	11,119,000	11,870,000

Statewide, the 1-9 acre parcel size class has 54% of the landowners, but only about 8% of the 9.3 million acres of individual “family forest” land (see table below). About 175,000 owners hold the 8.5 million acre balance. The overall average parcel is about 24.4 acres in size for all family forest owners. For family forest owners with 10 or more acres, the average parcel is 48.7 acres. These parcel sizes have changed very little from parcel sizes in 2006 which were 25.8 and 48.6 respectively.

Size of forest landholdings	Acres		Owners	
	<i>Thousands</i>	<i>Percent</i>	<i>Thousands</i>	<i>Percent</i>
1-9	766	8	205	54
10-19	618	7	51	13
20-49	2,298	25	73	19
50-99	2,150	23	31	8
100-199	2002	22	16	4
200-499	1063	11	4	1
500-999	321	3	<1	<1
1,000-4,999	74	1	<1	<1
Total	9,292	100	380	100

Forest Industry Ownership

Forest industry and other companies own 12% of Wisconsin’s forests (Perry et. al.). A growing trend in forest industry ownership is the transferring of woodland as global corporations realign or divest their land holdings. Lands once held by paper companies and sawmills are increasingly held by Timberland Investment Management Organizations (TIMO) and Real Estate Investment Trusts (REIT). These ownership types typically sell portions of their land base to maintain higher returns on investment than timber management can provide. Forest industry and investor groups now hold 756,626 acres in Wisconsin’s Forest Tax Law programs. Only 3.2% of that land is closed to public access.

To help maintain the integrity and traditional uses of industrial and other private forestlands, the federal Forest Legacy Program and the Wisconsin Forest Stewardship Fund identify and protect environmentally important private forestlands threatened by conversion and promote the use of conservation easements to maintain outdoor recreation opportunities, wood products and wildlife habitat.

Conservation easements acquired in 2011, 2012, and 2013 through The Forest Legacy Program and Wisconsin Stewardship Fund protected 74,239 acres of industrial forestlands, which include the Chippewa Flowage Forest, Brule-St. Croix Legacy Forest Part 1, Beaugard Lake, Central Sands Pine, and Central Sands Recovery Lands. This brings the program's total to 205,545 protected acres with another approximately 39,200 acres scheduled for new conservation easements in 2015. Also in 2012, the 18,179-acre Chippewa Flowage Forest received the Habitat Management and Partnership Award from Wings Across the Americas, a program of the US Forest Service, which recognized the project's collaborative efforts to protect critical habitat for butterfly and bird species.

Demographics of Wisconsin Individual Private Forest Landowners

Family forest landowners are older than the general population. With a large share of forest landowners retired, it follows that 43 percent are 65 years of age or older, whereas only 14 percent of the general population is 65 or older. Forest landowners less than 45 years of age make up only 5 percent of all owners.

Forty-five percent of Wisconsin's family forest landowners reported household incomes lower than the state's general population. The median household income in Wisconsin (2011) was \$52,374. In 2011 (the year of the survey), 36 percent of the family forest landowners who answered the survey question about income had annual incomes between \$50,000 and \$99,000 and 19 percent had incomes greater than \$100,000.

Family forest owners tend to be well educated. Thirty percent have a bachelor's degree or higher with additional 8% having associates degrees and an additional 25% with some college education.

Reasons for Owning Forestland

More than 80 percent of all individual owners ranked aesthetic enjoyment and protecting or improving wildlife habitat as important or very important reasons they owned forest land. Only 12 percent of all individual owners hold forestland primarily for timber production. However, those holding forestland for timber production own over 2.7 million acres of forestland.

Timber Harvesting

Although many individual owners hold forestland for uses other than producing forest products, almost three-quarters of family forest owners have harvested or removed timber from their land sometime during their ownership. Over half have done so within the last five years. About 50 percent of family forest owners intend to harvest or remove trees for sale in the next five years.

Forest Management Advice and Sources

Fifteen percent of family forest owners have received professional forestry advice in managing their forestland in the last 5 years. Seeking assistance seems to be related to and influenced by tract size.

The average size of holding increases 2 to 3 times for owners who receive advice compared to owners who did not receive advice. Nearly 64 percent of those who received advice utilized the state forestry agency. An almost equal number of family forest owners received advice from private consultants (28%) and family member or friend (29%). Seventeen percent received advice from another landowner and seven percent received advice from others. The preferred method of receiving advice is from written materials, such as brochures or publications, followed by internet, talking to someone and a visit on their land. Fifteen percent of all family forest owners feel they do not need or want advice.

Approximately one-quarter of family forest owners who harvested timber consulted with a forester on the harvest. Similar to management advice received by all family forest owners, consulting with a forester on a timber harvest is strongly related to the size of the forest holding. The average size of a tract increased by 2 to 3 times for those that consulted a forester compared to those who did not. Due to the increasing number of family forest landowners, there will likely be an increasing need for forest management assistance. In 2013 and 2014, DNR and Cooperating Foresters made more than 6,500 initial (new) forest assistance calls.

Private Forest Management Assistance 2013 and 2014	DNR Foresters	Cooperating Foresters
Comprehensive Managed Forest Law or Stewardship Plans		
Number:	358	4,632
Acres:	22,431	248,049
Number of Initial (New) Contacts	4,339	2,897
Total Technical Service Contacts	15,852	10,60

University of Wisconsin Extension and non-profit educational organizations including Wisconsin Woodland Owners Association, Wisconsin Tree Farm Committee and Wisconsin Family Forests provide a variety of learning opportunities for private forest owners and others interested in managing Wisconsin’s woodlands. Through field days, meetings, workshops and various partnerships these organizations help foster and encourage the wise use and management of Wisconsin's woodlands.

Concerns for Their Forests

The top five topics that family forest owners are most concerned about for their woodlands are damage from animals, development, global climate change, damage or noise from off-road vehicles and drought or lack of water. The topic of high property tax ranked next to last just above other miscellaneous concerns.

5. Success of incentives to stimulate the development of forest resources

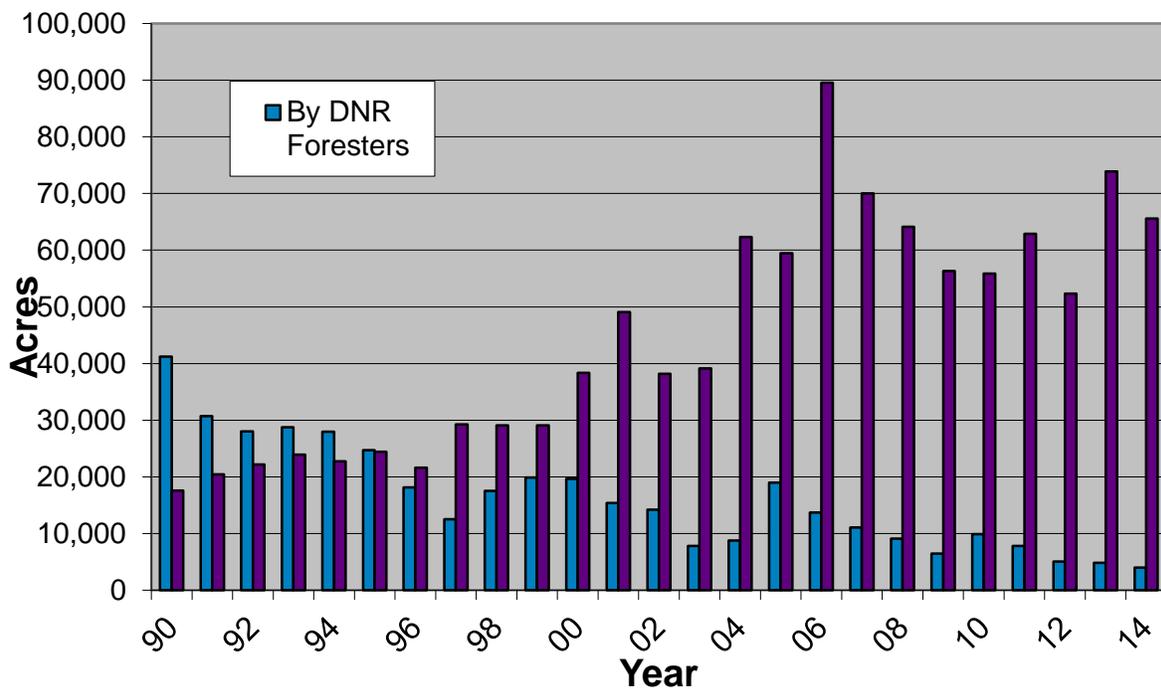
Technical Assistance

Wisconsin Department of Natural Resources foresters are located in nearly every county of the state to motivate and guide landowners to practice sustainable forestry. The free knowledge and assistance

they provide can be the motivation for a landowner to sustainably manage their woods. The majority of WDNR foresters' workload is administration of incentive programs, though DNR foresters do conduct outreach to landowners who do not receive professional assistance in an effort to increase the amount of private land that is sustainably managed. WDNR foresters only establish sales if private consulting foresters decline to provide the service.

In 2014 there were over 250 private consulting foresters and industrial foresters from 183 firms who offer services to private landowners in Wisconsin. Consulting foresters are independent contractors who make their living by charging a fee for the work they do. The WDNR Division of Forestry began the Cooperating Forester program in 1989. Private consulting foresters and industrial foresters voluntarily apply to participate. Cooperating Foresters are listed in a directory and receive referrals from WDNR foresters. In return, Cooperating Foresters must comply with WDNR standards and rules when giving forest management advice. Cooperating Foresters must also attend continuing education courses and file periodic reports with the WDNR. In 2013 and 2014, over 90% of all timber sales were either established by Cooperating foresters or established by others and then approved by WDNR foresters.

Acres Timber Sales Established 1990-2014



Forest Tax Law Programs

Private forest landowners are encouraged to sustainably manage their woodlands through two incentive programs, the Managed Forest Law (MFL) and the Forest Crop Law (FCL). The FCL program closed to new enrollments in 1985 after the Wisconsin State Legislature enacted the MFL program.

The MFL program is widely recognized as a model program for addressing landowners' interests while promoting the public benefits of sustainable forestry. The MFL program provides landowners with a significant property tax reduction and technical forestry assistance. Lands entered under MFL are required to have written management plans that landowners must follow.

Management plans address harvesting and thinning timber, tree planting, erosion control, and wildlife and aesthetic management. These plans must be prepared either by a certified plan writer or a WDNR Forester. The certified plan writer (CPW) program has been very successful since its inception with 199 CPWs in 2014.

The MFL program continues to grow at a rate of about 2% each year. As of 2014, the program includes 49,183 MFL entries covering 3,280,645 acres. Of those lands, 33% (1,091,625 acres) are open to public access. Enrollment in the FCL program is 1,003 entries with 153,523 acres. All lands in FCL are open to public hunting and fishing. FCL renewal is not permitted, however landowners may enroll their lands into the MFL program.

On January 1 annually, additional acres of new mandatory practices become available for loggers and contractors. These mandatory practices are largely commercial timber harvests and thinnings; however they may also include tree planting, release, site preparation and other practices to ensure that trees are healthy and actively growing. DNR and Cooperating Foresters, loggers, and landowners work together to complete management practices.

Table showing the number of mandatory practices and acreage by year and the date the practice was originally scheduled for completion.

	Beginning Practices and Acreage		Remaining Practices and Acreage in 2014	
	Number	Acreage	Number	Acreage
Pre-2002*	1,353	21,059	20	256
2002*	369	5,072	5	104
2003*	685	9,846	3	16
2004*	1,053	14,918	13	151
2005*	1,479	21,487	44	900
2006*	2,931	29,731	33	608
2007	1769	27,389	58	844
2008	3321	49,772	106	1,649
2009	2210	31,502	154	2,548
2010	6236	98,283	656	10,763
2011	3023	50,459	490	8,151
2012	4009	58,180	1175	19,945
2013	4312	65,344	1931	31,267
2014	4428	69,043	3826	63,152
2015**	7130	117,810		

*Mandatory practices as of January 1, 2006.

**Mandatory practices coming due as of January 1, 2015.

The number of mandatory practices continues to rise as more lands are enrolled in the Managed Forest Law (MFL) program, yet the number and acreage of practices that are older than 3 years (i.e. backlogged) has remained stable during the same time period as shown in Figures 1 and 2.

Figure 1: Number of scheduled mandatory practices as of 2014.

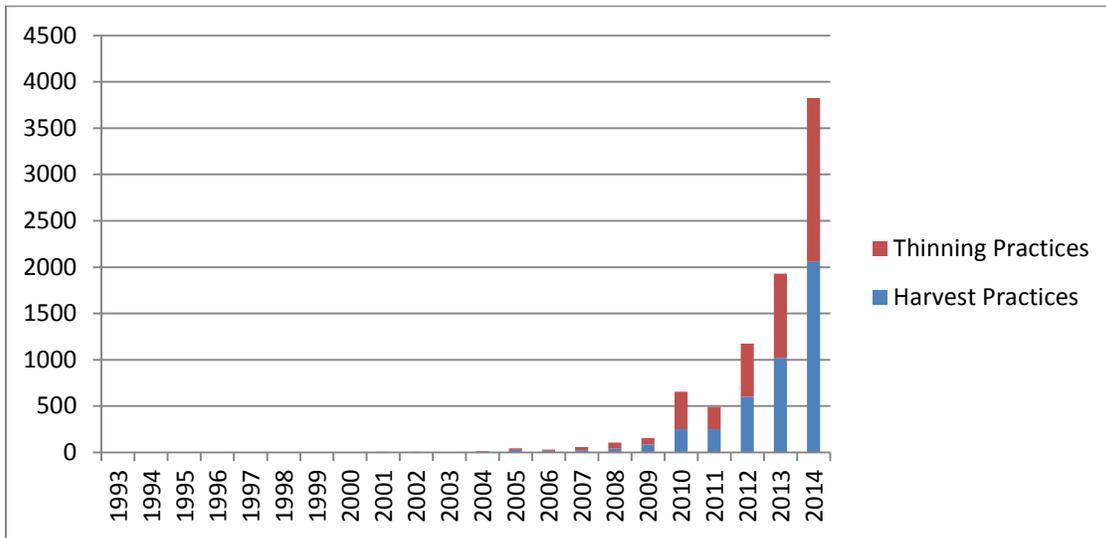
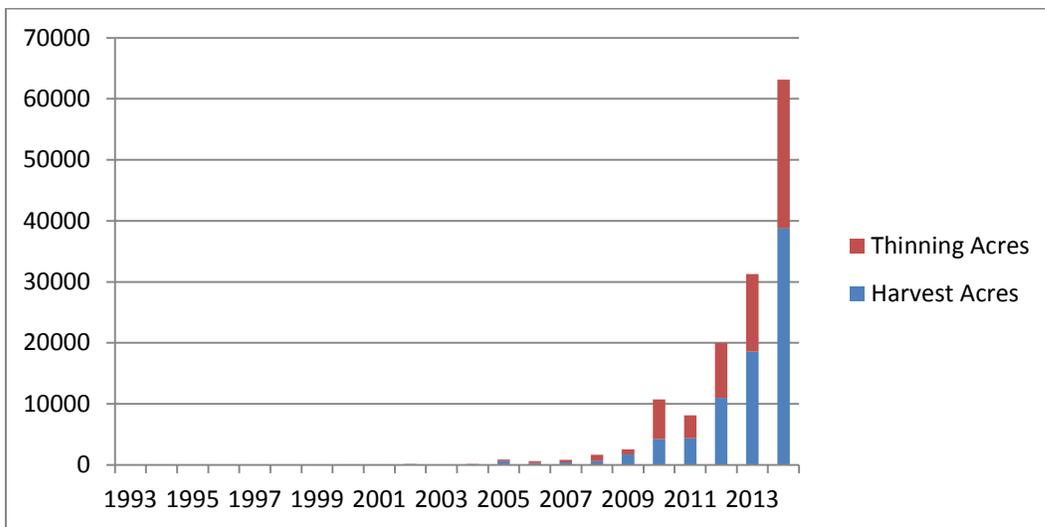


Figure 2: Acreage of scheduled mandatory practices as of 2014.



Wisconsin Forest Landowner Grant Program

Wisconsin Forest Landowner Grant Program provides up to 50% cost-share for the preparation of management plans and the implementation of designated practices. The allotment for 2013 and 2014 was \$1.087 million each year for this state-run program. Maximum cost share is \$10,000 per year. Almost 3000 practices (plan preparation, tree planting, timber stand improvement and forest health) were funded in 2013 and 2014. An additional \$82,500 of funding was provided from the Turkey Stamp Grant program and awarded to landowners implementing practices to establish or maintain oak in the southern two-thirds of the state.

Wisconsin Forest Landowner Grant Program				
Number of grants and dollars encumbered by practice for fiscal years 2013 and 2014. (Dollars are based on the estimated cost for the practice at the time the application was approved.)				
Group Title	2013		2014	
	Grants	Dollars	Grants	Dollars
Stewardship plans and revisions	756	\$388,606	535	\$275,714
Undesirable species control	301	\$299,671	277	\$371,422
Tree plantings	234	\$225,798	175	\$232,774
Site preparations	229	\$274,116	227	\$243,821
Crop tree release	42	\$42,534	43	\$47,496
Pruning projects	14	\$8,688	15	\$5,610
Vine removal	13	\$9,460	13	\$9,588
Seedling protection	7	\$4,170	16	\$6,652
Direct seeding	6	\$1,255	5	\$1,784
Fencing practices	4	\$1,645	6	\$6,825
Shrub plantings	1	\$2,000	4	\$2,003
Removals: insect & disease control			1	\$250
Seedling release			24	\$11,680
Soil & water protection			6	\$2,453
Grand Total	1607	\$1,257,943	1347	\$1,218,071

Environmental Quality Incentive Program (EQIP)

Environmental Quality Incentive Program, a federal program administered by the Natural Resources Conservation Service (NRCS) with NRCS and the WDNR Division of Forestry as technical agencies, provides up to 75% cost share and can cover practices to be implemented over a 10 year period. Cost sharing is available for forestry practices such as conservation activity plans, tree planting, forest stand improvement, forest trails and landings and erosion control.

EQIP practices in 2011 and 2012 on forest land in Wisconsin		
EQIP Practices	2013	2014
	# units	# units
Tree/Shrub Site Preparation (ac)	400	532
Tree/Shrub Establishment (ac)	277	407
Forest Stand Improvement (ac)	1,627	507
Tree/Shrub Pruning (ac)	105	5
Access Control (ac)	90	1
Access Road (ft)	4,050	4,070
Forest Trails and Landings (ft)	6,210	28,806
Forest Management Plans (no)	47	16
Fence (ft)	2,733	2,800

Conservation Reserve Program

The Conservation Reserve Program (CRP) is a voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water. It is administered by the Farm Services Agency (FSA) with Natural Resources Conservation Service (NRCS) and WDNR providing technical expertise. This annual payment program is based on bids submitted by the landowner. The program provides 50% cost-share for cover establishment.

CRP contracts require a 10- to 15-year commitment to keep lands out of agricultural production. CRP provides payments to participants who offer eligible land. A federal annual rental rate, including an FSA state committee-determined maintenance incentive payment, is offered, plus cost-share of up to 50 percent of the eligible costs to install the practice. As contracts expire FSA has provided for opportunities to re-enroll the acreage and maintain the practice initially installed if requirements are met.

Currently there are 40,430 acres of conifers and/or hardwood trees newly established or re-enrolled (maintained) under CRP; 4,368 of these acres were enrolled in 2014.

Urban Forestry Grants

The urban forestry grant program provides 50-50 cost-share funds to Wisconsin cities, villages, towns, counties, tribal governments, and 501(c) (3) nonprofit organizations to improve their ability to manage the community urban forest resource. A total of \$1,177,526 was awarded for priority projects in 2013 and 2014. Priorities in 2013 and 2014 included consideration of a canopy approach, directing efforts to both public and private trees, and emerald ash borer (EAB) preparation (conducting inventories, assessing community impact of EAB, developing EAB readiness plans, removing high risk ash, planting a diversity of non-ash species and providing EAB staff training or public outreach).

Urban Forestry grant program was oversubscribed in both of the last two years; a total of \$653,389, approximately 36% of eligible requests, went unmet in 2013 and 2014. This unmet request would be higher without the addition of performance-based, federal grant funds that were passed through in both years to supplement the typical annual allotment of state funds, \$524,600.

Grant funds are strategically disseminated based on levels of need. Applicants self-select for Regular or Start Up funding. The Regular grant (maximum \$25,000 award) assists communities in advancing their urban forestry management. The Start Up grant (maximum \$5,000 award) targets new or less developed urban forestry programs. Of the 132 proposed projects submitted in the last two years, the department awarded 29 Start Up grants and 74 Regular grants.

The first two years of implementation for the Division of Forestry's Strategic Direction were 2013 and 2014. An extensive multi-year grant redesign effort began in 2014 that will realign the grant program with priorities outlined in Strategic Direction. Improvements in efficiency, like electronic application procedures and front-loading customer service with web-based seminars, are another result of the redesign process.

The Urban Forestry Catastrophic Storm emergency response grant program allows rapid deployment of urban forestry grant funds without a required match to communities that have suffered storm damage in a Governor-declared state of emergency. This special application of grant funds was utilized in response to a series of damaging statewide winter storms in 2013 and a string of powerful summer storms that went through Grant, Dane and Green Counties in June 2014. While the single 2013 request was fully funded,

demand far outpaced availability in 2014, as we were only able to fund 19% of grant funds requested. A total of \$127,288 was awarded to seven municipalities to remove and replace trees damaged in catastrophic storms in 2013-2014.

6. Possible economic opportunities that may result from improved forest-product marketing and increased business dealing in or use of forest products

Improved forest products marketing and increased business dealing of forest products in Wisconsin could have significant economic opportunities. Bio-refining remains the most promising of new markets for the pulp and paper manufacturing segment in the state. Closer examination of these former waste streams suggests opportunities for useful chemical and fiber byproducts. Incorporating process improvement strategies into the wood manufacturing culture of Wisconsin wood users is also promising. Strategies such as LEAN manufacturing have been shown to increase efficiency and effectiveness for some mills.

Marketing Wisconsin's forests as certifiably sustainable stands to differentiate Wisconsin wood in both domestic and international markets. Promotional efforts to showcase the unique attributes of Wisconsin's wood resource are needed to position our value added wood products into wider markets. These qualities also stand to attract new businesses looking for stable and quality raw material resources for the products they produce.

New product opportunities continue to present themselves as viable options. Cross laminated timber and nanocrystalline cellulose are two products currently receiving wide attention. Special care should be provided, however, to ensure that important traditional products such as pallet manufacture continue and even grow where roundwood is underutilized.

Perhaps the largest opportunity for market growth and business expansion resides in the global market landscape. Continued efforts by WDNR staff are needed to assist wood products producers to navigate the exporting process. This has been successful in past years and should continue to gain more momentum in the foreseeable future. The WDNR Forest Products Services Program provides direct assistance to interested companies in this regard.

7. Recommendations for increasing the economic development of the forestry industry and employment in the forestry industry

Global markets have allowed many Wisconsin wood products producers to survive the recent economic downturn and recovering housing market. The scale of these markets and the diversity of products demanded plays well to Wisconsin wood products. Continued efforts to assist industry with exporting needs and business plans is highly recommended.

To stay competitive, Wisconsin wood products producers must now become more creative than ever to create and capture markets. Mass customization of products is one way to accomplish this. Developing new and novel products and technology is the second. With growth in new markets such as cross laminated timber or bio-refining should come more jobs. Market expansion of pre-fabricated homes into regional areas such as gas mining (housing needs) areas in the Dakotas could provide additional employment and manufacturing.

It is important to continue Wisconsin's solid reputation as a climate to succeed in business. New ventures seeking sustainable and quality material inputs will find the state to be desirable for a host of reasons including tax and assistance attributes. It is further important to strengthen the wood supply and value chains. Linking producers and users with solid transportation options including rail, trucking, and shipping is vital.

8. The effect of state and local governmental laws and policy on forest management and the location of markets for forest products

2013-2014 Legislation

<http://www.legis.state.wi.us/>

Below is a summary of 12 bills passed into law during the 2013-2014 Legislative Session that will have an impact on forestry in Wisconsin or employees within the Wisconsin Department of Natural Resources – Division of Forestry. A list of bills that did not pass is also included below.

ASSEMBLY

The Assembly considered 928 bills during this session, 18 of which impacted forestry in Wisconsin or the Division of Forestry. Of those, six had companion bills that passed into law in the Senate. The following six were passed into law in the Assembly:

AB258 – Wisconsin [Act 231](#). Makes several changes to the DOT administered permit system for the maintenance and removal by sign owners of vegetation obstructing the view of signs. Rather than planting replacement vegetation, a permittee must compensate the DOT \$200, adjusted annually for inflation, for each tree cut with a diameter of two inches or more at dbh. The bill also specifies that a permit for the trimming or removal of vegetation applies to a sign intended to be viewed by those traveling on the opposite side of the highway (known as a “cross-vista” sign)

AB282 - Wisconsin [Act 99](#). Under current law, no person may operate on a highway any single vehicle with an overall length in excess of 45 feet or any combination of two vehicles (vehicle combination) with an overall length in excess of 70 feet. This act recreates the exception: A semitrailer operated as part of a vehicle combination if the semitrailer did not exceed 53 feet, its kingpin-to-axle length did not exceed 43 feet, and it was operated on a highway designated by the Department of Transportation (DOT) as a long truck route or operated for not more than 15 miles on a highway providing access to a long truck route or to certain services.

AB284 – Wisconsin [Act 220](#). Increases, from 75 feet to 97 feet, the length limit on certain highways for vehicle combinations, operated without a permit, involving two or three towed vehicles being transported by the drive-away method in saddle-mount combination. The increased length limit of 97 feet applies to these vehicle combinations when operating on a highway designated by DOT as a long truck route or designated by DOT as part of the national system of interstate and defense highways, but the current length limit of 75 feet applies to these vehicle combinations when operating on any other highway.

AB355 – Wisconsin [Act 48](#). 2013 Act 48 modifies the authority for vehicles operating under a Michigan border permit in the following ways. The Act:

- Provides that a vehicle operating under the second through fourth circumstances described above may transport, instead of the products listed under current law, raw forest products, lumber, and forestry biomass.
- Eliminates the requirement under the second circumstance described above that the vehicle must travel between Wisconsin and Michigan.
- Provides that a vehicle operating under the first three circumstances described above may not violate Michigan law.
- Authorizes vehicles operating under Michigan border permits to operate on additional segments of U.S. Highway 8.
- Provides that a vehicle operating under a Michigan border permit may operate unladen when returning from the delivery of a load, or operating to or from a point of fueling, servicing, or purchase or sale of the vehicle.
- Specifies that a Michigan border permit may not authorize the operation of any vehicle or vehicle combination with a maximum gross weight in excess of 164,000 pounds.

AB359 – Wisconsin [Act 82](#). Authorizes the DNR to lease state forest land to the Boulder Junction Shooting Range for terms not exceeding 30 years.

AB506 – Wisconsin [Act 358](#). Makes various changes relating to the practice of professional land surveying. Amendment 5 added an exception allowing DNR orders under the managed forest law to be recorded without a signature and seal of a professional land surveyor.

Assembly bills that did not pass:

1. AB241 – (Companion to SB203) Requiring the payment of health insurance premiums, and establishing a loan program, for survivors of a law enforcement officer, emergency medical technician, or fire fighter who dies, or has died, in the line of duty
2. AB254 – Free admission to state parks and trails for veterans
3. AB369 - Regulation of off-highway vehicles and creating an off-highway vehicle council
4. AB469 - Vehicle admission receipts issued to certain members of the U.S. armed forces and to certain members of the national guard
5. AB700 - (Companion to SB543) MFL Revisions related to eligibility requirements, access to closed lands, adding, leasing, sales and transfers of land in MFL, withdrawals, assessment and distribution of withdrawal and yield taxes
6. AB732 - (Companion to SB575) Payments to counties for designated county forest lands and distribution of amounts paid to municipalities by owners of closed managed forest lands

SENATE

The Senate considered 699 bills during this session, 16 of which impacted forestry in Wisconsin or the Division of Forestry. Of those, six had companion bills that passed into law in the Assembly. The following six were passed into law in the Senate:

SB29 – Wisconsin [Act 16](#). Creates an off-road vehicle council in the Department of Natural Resources (DNR), consisting of seven members appointed by the governor for three-year terms. The bill requires that each member of the council represent the interests of an all-terrain vehicle (ATV) or utility terrain vehicle (UTV) user's group and that each member be knowledgeable about outdoor recreation issues and about trails used by ATV and UTV operators. The off-road vehicle council must provide advice and make recommendations to DNR, the Department of Transportation, the governor, and the legislature on matters relating to ATV trails and routes and must make recommendations to DNR concerning requests for state funding for certain ATV and UTV projects.

SB119 – Wisconsin [Act 97](#). Ratifies a compact between several states and provinces of Canada that would provide for the possibility of mutual assistance in managing an emergency or disaster. Currently, the compact is being considered by Illinois, Indiana, Ohio, Michigan, Minnesota, Montana, North Dakota, Pennsylvania, New York, and Wisconsin and the Canadian provinces of Alberta, Manitoba, Ontario, and Saskatchewan. The compact allows other states and provinces to ratify the compact.

SB135 – Wisconsin [Act 34](#). Adds Florence County to the list of places a vehicle operating under a Wisconsin-Michigan border permit may operate if engaged in transportation exclusively peeled or unpeeled forest products cut crosswise, wood chips, or forestry biomass anywhere upon U.S. Highway 2 in Iron County, Ashland County, and certain parts of Bayfield County if the vehicle is traveling between Wisconsin and Michigan and does not violate length or weight limitations established, as of April 28, 2004, under Michigan law,. The Act also removes the reference to April 28, 2004, so a vehicle may qualify for the exception so long as it does not violate whatever length or weight limitations are then in effect under Michigan law.

SB253 – Wisconsin [Act 54](#). Formally eliminates the woodland tax law program. The program ceased acceptance of new applications as of January 1, 1986.

SB278 – Wisconsin [Act 81](#). Exempts from the requirement that recreational activities be allowed on MFL that is designated as open if the MFL is within a site for which a mining company has notified DNR that it intends to file an application for an iron mining permit (proposed mining site). Instead, the mining company and DNR may enter into an agreement to allow any or all of the recreational activities on all or part of the MFL during the entire year or during certain times of the year. However, the owner must make the closed acreage payment for each acre that is located within the proposed mining site and that is closed to any of the recreational activities during any time during the previous calendar year. Also requires DNR to post on its website information regarding recreational activities that are allowed under agreements that are entered into between a mining company and DNR.

SB373 – Wisconsin [Act 214](#). Separates the training standards into three distinct categories: 1) the standards for law enforcement officers and tribal law enforcement officers; 2) the standards for jail officers; and 3) the standards for juvenile detention officers. Under the bill, constables and marshals who are given law enforcement duties are subject to the same training standards as law enforcement officers and tribal law enforcement officers.

It makes several changes to the training and education standards, including setting forth a training and education protocol for law enforcement students, recruits, and temporary or probationary employees. Under act, law enforcement officer students and tribal law enforcement officer students are required to

submit fingerprints and undergo a criminal background check. Any person who has been convicted of a felony or of a misdemeanor related to domestic violence may not participate in a student training program for becoming a law enforcement officer or a tribal law enforcement officer. Under the act, under most circumstances a recruit or a temporary or probationary employee must complete his or her training program within the original period of his or her temporary or probationary employment, not to exceed 12 months, except that the board may extend that period if the recruit or employer shows good cause for the board to do so.

It eliminates specific hour requirements for training and education and allows the board to determine the specific outcome criteria and training curricula, including the required subjects, number of hours, objectives, and measures of performance for the training and education protocol for each category of officer. It requires the board to develop model standards for use by law enforcement agencies to show handgun proficiency and to include handgun proficiency in the preparatory program and recertification training. The act allows the board more flexibility than exists under current law for determining how law enforcement agencies are reimbursed for expenses related to training and educating officers.

Senate bills that did not pass:

1. SB115 - Telecommunications systems installed on tower sites under the management and control of the DNR
2. SB203 - (Companion to AB241) Requiring the payment of health insurance premiums, and establishing a loan program, for survivors of a law enforcement officer, emergency medical technician, or fire fighter who dies, or has died, in the line of duty
3. SB543 – (Companion to AB700) MFL Revisions related to eligibility requirements, access to closed lands, adding, leasing, sales and transfers of land in MFL, withdrawals, assessment and distribution of withdrawal and yield taxes
4. SB575 - (Companion to AB732) Payments to counties for designated county forest lands and distribution of amounts paid to municipalities by owners of closed managed forest lands

9. Recommendations as to staffing and funding needs for forestry programs to support and enhance the development of forest resources

Forest Health Program

Federal forest health grant for core activities and forest health monitoring contributes significantly to the ability of the Wisconsin forest health program to provide services for forest managers to reduce or prevent impacts of pests, diseases and terrestrial invasive plants. This federal grant supports damage surveys, pest population monitoring and predicting, and control technology transfer among other functions that help industrial, private and public landowners sustain productivity of their forests. Maintaining federal support at current levels is crucial to maintaining these services to forest landowners and the forest industry.

Emerald Ash Borer

In 2013 and 2014 APHIS trapped in areas predicted to be at high risk of introduction and establishment of EAB in non-quarantined counties of the state. DATCP placed traps in counties not trapped by APHIS but at a lower density. DNR set traps at state properties near infestations or in areas considered to be at high risk of establishment. Populations of EAB are increasing in the southeastern part of the state and along the Mississippi River. The DNR forest health program is responding with increased outreach and education to communities and forest landowners to make them aware of methods to detect and monitor for this pest, and also recommendations on methods to manage ash mortality and other impacts on

communities and forests. No additional staffing or funding is necessary at this time to achieve these goals, only maintenance at current support levels and staffing. The DNR forest health program is also actively introducing natural enemies of EAB which we receive from APHIS rearing facilities. Our ability to make these introductions is dependent on the federal government maintaining support for this rearing program at current levels.

Forestry Budget Initiatives

These are FY2015-17 forestry budgetary initiatives supported by the Natural Resources Board. Additional explanation for the request can be found in the Department of Natural Resources 2015-17 Biennial Budget Proposal on pages 11-15.

Maintaining Base Forestry Operations

The Department requests annual funding of \$200,500 to fund base operations costs associated with operating a facility or maintaining infrastructure. In the case of the Division of Forestry, these base costs include utilities (water, heat, electric), rent, and LTE funding. Additional base operations funding are being sought to support the continued work of the Division. The request is comprised of the following 5 components:

1. \$15,000 in operations funding for increased rent payments.
2. \$88,000 to support operational cost increases related to energy rate increases for current and new facilities.
3. \$52,500 to support annual operating costs for seven mechanic shops.
4. \$30,000 to support annual communication equipment upgrades in forest fire suppression equipment. This funding will provide suppression equipment to be updated with mobile repeaters and cell phone boosters as engines are built or are refurbished, maintaining remote area operability.
5. \$15,000 to support cover credit card point of sale merchant fees.

Forestry Field Data Recorders - Master Lease

The Department requests one-time funding of \$76,900 in both FY 2016 and FY 2017 to support a 4-year master lease for the purchase of field data recorders that Forestry staff would use to gather data electronically and input into existing databases. This will fund the purchase of about 180 units with associated compatible software at an estimated price of \$1,500 per unit, for a total estimated purchase price of \$270,000.

Forestry Equipment - Master Lease

The Department requests one-time funding of \$33,300 per year in FY 2016 and FY 2017 for years one and two of a 4-year master lease for the purchase of 26 ruggedized computers to replace existing devices. These replacements will cost approximately \$4,500 per unit, for a total expenditure of \$117,000.

2015-17 Statutory Language Proposals

Additional explanation for the request can be found in the Department of Natural Resources 2015-17 Biennial Budget Proposal on pages 32-25.

1. Forestry Grant Appropriations

The Department requests conversion of Wisconsin Forest Landowner (WFLGP), Urban Forestry and Fire Suppression grants to continuing appropriations to allow for flexibility in funding projects that may cross fiscal years and fully utilize available funding for these purposes.

2. Timber Sale Reporting Requirements

The Department requests modification of s.28.11 of the statutes related to submitting a report of merchantable wood products cut on a county forest. The current requirement is that a report be submitted within 90 days of completion, but no more than two years after filing the cutting notice. It would be amended to require transmission of a report within 90 days of completion, but no more than five years after filing the cutting notice. This change from two years to five years for filing the cutting notice more closely reflects currently accepted timber sale contract lengths and reduces unnecessary county and department workload.

3. Timber Direct Sale Limit Increase

The Department requests modification of ss.28.05, 28.11 and 28.22 of the statutes to increase the direct sale - sales without a competitive bidding process--amount for timber sales on public lands from \$3,000 to \$10,000 to better align them with current price structures. This direct sales limit was last revised in 1999. The intent for these three statutes is to mandate that an open and fair competitive bidding process be applied on our public land timber sales. The direct sale limit, currently \$3,000 of appraised value, allows managers to sell smaller amounts of timber directly to a contractor without advertising. In certain instances, being able to quickly work with a contractor is advantageous. They may have the availability or type of equipment that is a perfect match for a smaller timber sale, allowing timber to be sold when in other circumstances it may be less possible.

4. Timber Sale Advertising Requirements

The Department requests modification of ss.28.05, 28.11 and 28.22 of the statutes to remove the requirement for publishing notice of timber sales in an official newspaper having general circulation in that county that the timber is being sold. The revised statutes would offer an option to post on an official website or publish in a newspaper.

10. Recommendations as to the need to increase the public's knowledge and awareness of forestry issues

During 2013 and 2014, the Wisconsin DNR-Division of Forestry developed an Education & Outreach Strategic Plan that describes how the division will use education and outreach to help implement its strategic direction. In addition to ensuring that the division's education and outreach work is in line with the division's strategic direction, the plan will also ensure that the division's messages are cohesive and delivered in an efficient, integrated and coordinated way across division programs. The plan includes a vision for the division's education and outreach as well as desired outcomes by program.

Considering those ends, along with guidance from the strategic direction, the plan identifies:

- Priority audiences for each division program;
- Audiences and roles for several cross-program efforts;
- Gaps in information that need to be filled; and
- A system for accomplishing education and outreach evaluations and collaboration among division programs.

This new plan is at a strategic level and a new division Forestry Education Leadership Team will be responsible for implementation of the plan.

Other Division of Forestry education and outreach efforts during 2013-2014 included an increased use of social media to reach new audiences, new mobile applications to assist forest recreationists and a new initiative at the field level to reach forest landowners not currently engaged in forest management.

In addition to these division programs, some state funding assists with the following forestry education programs:

LEAF – Wisconsin’s K-12 Forestry Education Program

The mission of the Wisconsin K-12 forestry education program, known as LEAF (Learning, Experiences and Activities in Forestry), is to advance excellence in K-12 forestry education through partnerships that develop, disseminate, implement and evaluate resources and services. Primary funding is provided by the Wisconsin Department of Natural Resources – Division of Forestry. UW-Stevens Point and the Wisconsin Center for Environmental Education provide in-kind contributions for the operation of the program. LEAF generates additional funds through grants and other contracts.

LEAF program services include professional development for both formal and non-formal educators through workshops and graduate courses (both online and face-to-face); the coordination of Wisconsin’s school forest program; dissemination of resources such as the K-12 forestry education lesson guides with supplements, web-based materials and other resources; community connections through statewide presentations and workshops and consulting with school districts regarding forestry education programs and facilities. In 2013, implementation of the national Project Learning Tree program in Wisconsin transitioned from Wisconsin Department of Natural Resources to the LEAF program at the UWSP-Wisconsin Center for Environmental Education.

Read the LEAF annual report and other program news online at:

<http://www.uwsp.edu/cnr-ap/leaf/Pages/default.aspx>

Forest Exploration Center

Under 2005 Act 25, ongoing funding is provided for forestry education work on 67 acres of land that the state purchased from Milwaukee County on the former Milwaukee County grounds. A nonprofit organization – The Forest Exploration Center, Inc. (FEC) – is leading the education efforts on this property with the development and implementation of an interpretive plan and trails plan. FEC is also developing an online forestry learning system that will reward learners aged 13 and above with digital badges. Initiation of this project was made possible by a grant from Wisconsin’s State Implementation Committee of the Sustainable Forestry Initiative.

In July 2014, the Wisconsin DNR entered into an agreement with Wisconsin Department of Transportation allowing use of the non-forested part of the FEC property to support DOT’s nearby Zoo Interchange project. This agreement will reduce taxpayers’ costs for this public infrastructure improvement as DOT will provide improvements to the property in exchange for use of the site. Over the next several years, the state funds will be used to develop a detailed architectural and landscape designed site plan for the property, continue development of trails and interpretive infrastructure in the forest, continue development and presentation of the online forestry digital badges program and interactive educational and community-based programming in the forest, and start a Friends Group to organize local volunteerism to help steward the woodlands.

Learn more about FEC programs at <http://www.forestexplorationcenter.org/>

Natural Resource Educators

The UW-Extension Natural Resource Educators, in partnership with Wisconsin Department of Natural Resources, design and deliver forestry education programs and build local partnerships to promote understanding and stewardship of Wisconsin's natural resources at the watershed and landscape scale. Several of the educators are primarily funded by the state's forestry program. The Natural Resource Educators work primarily with adult audiences and have been instrumental in a number of programs to reach key forestry stakeholders.

Visit these links to learn more about the educators and their forestry work:

- <http://naturalresources.uwex.edu/staff/>
- <http://woodlandinfo.org/>

Grants

State funds are allocated to forestry education projects through three categories of a grant program administered by the Wisconsin Environmental Education Board. Nearly \$100,000 is available for forestry education projects in awards of up to \$10,000. Another approximately \$100,000 is available for school forest education plans and implementation of forestry education initiatives identified in the school forest education plans.

Learn more at <http://www.uwsp.edu/cnr-ap/weeb/Grant-Program/Pages/default.aspx>

In addition to the efforts listed above, many Wisconsin forestry partners offer programs to increase the public's knowledge and awareness of forestry issues. While their collective efforts represent progress in sharing forestry information and reconnecting students, residents and visitors with Wisconsin's forest resources, all are underfunded.