

19. Forest-related planning and assessment

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Forest management plans, whether on public or private lands, provide the opportunity for a forest to be measured and analyzed, for the long-term objectives of the owner to be stated, and for sustainable management to be developed. A plan may also serve as a proxy to measure how well a forest is managed. Typically a plan includes involvement of natural resources professionals to determine future forest management needed to meet certain ecological standards. As more forest lands become third-party certified, management plans are being reviewed and monitored on a regular schedule.

A good public land planning process conducted in the public arena involves diverse stakeholders, analyzes alternative actions and incorporates ecosystem management principles. By stating what public land plans exist and how they are implemented, this indicator compares planning processes and evaluates their effectiveness. Assessments are critical to the planning process to provide the data necessary to analyze past practices and determine appropriate future projects.

This indicator will describe the various types of assessments and evaluate planning conducted by different types of landowners at different landscape scales and for different purposes. At a statewide level, the DNR conducts several types of statewide assessments and develops strategies to address various concerns such as communities at risk for wildfire, disease and insects. At a regional level, public land managers such as the U.S. Forest Service and County Forests develop plans for timber production, recreation and ecosystem services. Many private forest landowners such as forest products companies and family forest owners have detailed plans for their landholdings. This indicator reports on the number of known plans and addresses the issue of non-industrial land planning.

The following descriptions are organized by:

1. Assessments

- A. Statewide (forest health, private forest lands, urban and community forests, statewide forest resource)
- B. Public forests and Tribal lands (National, State, County, tribal)
- C. Community based (urban and community forests, Communities at Risk from Wildfire)
- D. Private forests (family owned non-MFL, family owned and industrial MFL, FCL)

2. Planning

- A. Statewide (DNR and partners)
- B. Public and Tribal lands (National, State, County, tribal)
- C. Community based (urban and community forests, Firewise, Community Wildfire Protection Plan)
- D. Private forests (family owned non-MFL, family owned and industrial MFL, FCL, Forest Legacy and other easements)

1. Assessments:

A. Statewide

At the statewide level, the DNR conducts the majority of assessments. Historically, the DNR has conducted assessments on forest health, private forest lands, urban forests, wildfire risk, and a

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statewide assessment of the general condition of all forest resources. One of the oldest statewide assessments on record was from 1962.

Over the years, the format of DNR assessments has changed. The first assessments focused on timber growth and removals. With each successive assessment, more comprehensive, ecosystem-based data was collected. In 2000, the Millennium Assessment analyzed the forest resource based on its ecological, economic, and social components, realizing the inter-connections and importance of all three.

As new technologies emerge, better resource data is available. Foresters and technicians now inventory with GPS units which facilitate the documentation and sharing of information. Although ecological data continues to grow, social data tends to be more difficult to obtain.

This statewide assessment (2010) is using a criteria and indicators framework based on the Montreal Process (<http://www.rinya.maff.go.jp/mpci/>). This is a very data intensive assessment. For a description of the process Wisconsin used to develop the criteria and indicators, see the introduction. This assessment utilizes a wider and more varied set of data than previous assessments.

Statewide Assessments cover a range of topics. Below are some of the main topic areas and assessments that address them.

- **Forest health:** The Department regularly conducts forest health risk assessments (see Criterion 3). Forest health reports are provided on-line at: <http://dnr.wi.gov/forestry/Fh/>.
- **Private forest lands:** In 2008, in accordance with a Forest Service State & Private Forestry requirement, the Department assessed spatially where private forest land is of greatest importance to protect resources such as water and where it is at greatest risk from land use changes like fragmentation and development. A GIS weighted overlay analysis was used to analyze 15 different values and risks to determine these areas (see Criterion 6).
- **Urban & community forests:** In 2004, the Forest Service and DNR conducted a statewide assessment of urban and community forests (see Criterion 1).
- **Statewide forest resource:** The DNR conducts statewide forest resource assessments, such as this Statewide Forest Assessment, every ten years. These decennial assessments include private and public lands, both rural and urban.

B. Public forests and tribal lands:

Assessments are conducted at the property level for public forest land and forests on Native American reservations. National, state, county, tribal, and municipal forests have detailed assessments as part of the long term planning process. Typical components of these assessments include describing and measuring forest characteristics, health concerns, recreation supply and capacity, threatened and endangered species and communities, conservation areas and the health

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of the regional forest products industry. Yearly, many properties conduct more detailed inventories to continually update data.

C. Community based:

- **Urban and community forestry inventories:** Local governments around the state conduct inventories and assessments of various kinds to support their individual strategic and operational planning. These include street and park tree inventories, tree risk assessments, insect and disease surveys, storm damage assessments, urban tree canopy analyses and environmental services analyses. Table 19.a shows the trends in community tree inventories since 1992

Table 19.a: Percent of communities with tree inventories

<i>Tree inventories</i>	<i>1992</i>	<i>1999</i>	<i>2008</i>
Yes	12	22	33
No	88	78	63

(DNR Community Forestry Survey data, 2008)

While there was a steady increase in communities with urban forest inventories between 1992-2008, two-thirds of Wisconsin communities still lack an inventory of their resource.

- **Communities at risk from wildfire:** An increased human presence in the wildland-urban interface presents a major challenge for protecting life, property and natural resources from destructive wildfires. As development expands into forested areas, there is an increase in wildfire risk due to human factors, particularly in parts of the state which have high fire potential. Since the majority of wildfires in Wisconsin are caused by humans, more people living and recreating in forested areas of the state will likely lead to a corresponding increase in the number of wildfires occurring in these areas. Some developments require additional services like police and fire protection that cost communities more than they receive from increased tax revenues.

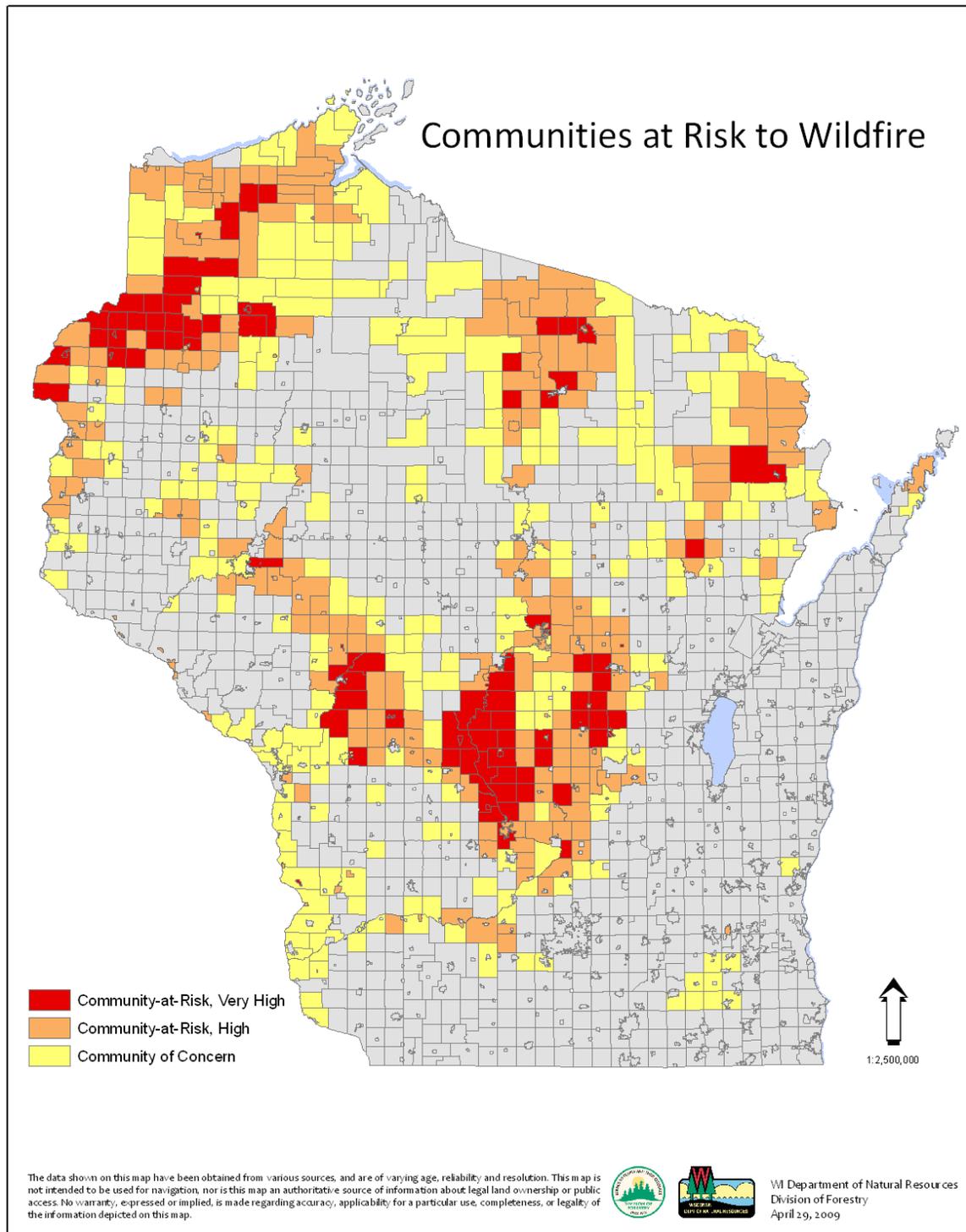
In 2008, the DNR completed a statewide assessment of Communities at Risk (CAR) to wildfire (see Map 19.a). The purpose of the CAR project was to identify areas of the state with relatively high risk to multiple structure loss due to wildfire. Communities at Risk were determined at the municipal civil division. Each of Wisconsin's 1,864 towns, villages, and cities were defined as a "community." Three hundred thirty-seven communities met the requirements for being "at risk." An additional 237 communities were named as Communities of Concern (CoCo). This category includes communities that may not be of high fire danger overall, rather they have a localized area of acute fire danger of at least 2 contiguous square miles. The break down of communities is as follows:

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Table 19.b: Communities at Risk and Communities of Concern						
Risk Level	Number	% of all WI communities	# cities	# villages	# towns	% of WI land area
Very high	93	5	2	12	79	6
High	244	13	10	47	187	16
Concern (CoCo)	237	13	8	6	223	20
Totals	574	31%	20	65	489	42%

Source: DNR, 2009

The CAR assessment is used for subsequent wildfire prevention and preparedness activities. Communities with a very high, high, or concern rating are given additional planning and mitigation opportunities through Firewise Communities recognition, Community Wildfire Protection Plan creation, and education and hazardous fuels mitigation project funding through Forestry's Hazard Mitigation program.



Map 19.a: Communities-at-Risk (DNR, 2009)

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D. Private forests

Private forest owners, whether industrial or family owned, assess their forests prior to long-term planning. Industrial lands conduct yearly assessments. A more formal process for industry lands is typical, whereas family forest owners may informally “cruise” or take stock of their property. Certification standards require certain types of assessments be conducted as a condition of their standard.

2. Planning:

A. Region and Statewide:

At a regional level, the Northeastern Area, State & Private Forestry (NA S&PF) unit collects data on the twenty northeastern area states. In 2007, data was collected following a criteria and indicators framework similar to this report. It provides a view of the whole region, and facilitates a comparison between the Great Lakes states.

Early statewide plans were focused on developing actions for the DNR to implement. Today, statewide plans are developed with the input and collaboration of partners and stakeholders with the recognition that not just one entity can singularly accomplish all actions. However, this can be time intensive and challenging to come to consensus on issues. Statewide plans are not interchangeable with property-based plans. Their strength is in determining the greatest issues across the state. These large scale issues often need the synergy of multiple partners to be successful. A good example is the Council on Forestry’s Initiatives. New rules and guidelines have been developed due to their support and advancement of issues. BMP’s for invasive species, biomass guidelines, shared research agenda, and the Sustainability Framework all were initiated or developed by the Council.

DNR programs supported by NA S&PF were previously required to have statewide plans. With the 2008 Farm Bill institutionalizing a redesigned S&PF, these programs (urban and community forestry, forest health, stewardship, fire, utilization and marketing) no longer have separate plans but are brought together in the Statewide Forest Strategies. Other broad advisory organizations such as the Urban Forestry Council have statewide plans focused on policy.

B. Public forests and tribal lands

• National, State, County, Tribal Forests

Forest plans for public lands define how the land will be managed, used, and developed well into the future. Forest plans include a vision for the property, goals and objectives that strive to reach a future desired condition based on the ecological opportunities and limitations of the landscape, economic and social factors. Public forest plans are highly participatory, encouraging public input. Up-to-date planning efforts across the state ensure that societal needs are considered in a timely manner, the best available science is guiding management decisions, and the most effective methods are being used for sustainable forest management.

There are two types of forestry planning on tribal lands. Federal regulations mandating Forest Management Planning (25 USC 3103) are administered by the Bureau of Indian Affairs. Tribes are also encouraged to undergo Integrated Resource Management Planning (IRMP), and IRMP creation is a tribal decision. Tribes may unilaterally determine the planning process, and at tribal

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discretion seek outside assistance to complete the plan. Tribal creation and use of their IRMP to develop and regulate land management facilitates self-governance and assures sovereign control of assets. (Moriarity, etal, 2006) Status of forestry planning on tribal lands is shown in Table 19.g.

The major public forest landowners in Wisconsin are the Chequamegon-Nicolet National Forest (CNNF) (1.5 million acres) Wisconsin County Forests (2.4 million acres), Department of Natural Resources (1.7 million acres) and tribal lands (350,000 acres). Over seventy percent of the public forest lands have forest reconnaissance data updated in the last 15 years, the typical planning timeframe for forest planning. The status of forest management planning for public lands follows.

National Forest

The Chequamegon-Nicolet National Forest (CNNF) is located in Wisconsin's northwoods, covering over a million and a half acres. Both forests were established by Presidential proclamation in 1933, and in 1993 the two Forests were administratively joined.

In April 2004, the CNNF released the Land and Resource Management Plan (Forest Plan), which was a revision and combination of the Chequamegon Forest Plan and Nicolet Forest Plan, both released in 1986. There were several issues managers and the public wanted to address in this plan. A priority was to plan for how to accomplish ecosystem restoration to bring the forest back to a more natural state as it was prior to the Cutover. This includes combating the spread of non-native invasive species and providing forest products sustainably. Another major goal was to plan for how to protect communities from wildfires, including fire suppression, fuels reduction, and prescribed burning. Unauthorized off-road travel needed to be addressed as well.

The Forest Plan provides guidance for all resource management activities on the CNNF. The plan establishes:

- forestwide multiple-use goals and implementing objectives
- forestwide management requirements (known as Forestwide Standards and Guidelines)
- Management Area direction, including area-specific standards and guidelines, desired future conditions and management practices
- identification of lands suited/unsuited for timber management
- monitoring and evaluation requirements
- recommendations to Congress for additional Wilderness.

State – Department of Natural Resources

The Department manages approximately 1.7 million acres scattered across the state. There are 10 statutorily designated State Forests totaling approximately 517,000 acres, and the remaining lands are wildlife, parks, natural areas and fisheries properties. Each property is required to have a property "master plan" that establishes goals and objectives and identifies how it will be managed and developed. These plans are designed to clearly communicate to the public how the property will look and what benefits it will provide.

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A master plan for a property or group of properties includes the following:

- general property description
- general goals and objectives for management and use, and a description of how the property's statutory and other purposes and benefits will be realized
- management, acquisition, development and use plans, with appropriate maps showing the land management classifications
- supporting data and information, including:
 - summary of the property's resource capabilities and inventories
 - summary of the regional analysis for the property, and the issues considered; and
 - summary of background information on the property, including management and use history
- when appropriate, a communication plan describing any steps to be taken to periodically inform affected or interested parties about completed or proposed management activities
- master plans may include an environmental analysis as required by s. 1.11, Stats., and ch. NR 150.

In general, 50% of DNR lands have a master plan less than 15 years old. The remaining acres, mostly wildlife and fisheries properties and heavily developed parks either have a plan developed in the 1980's or have no plan at all.

Decade Plan Approved	Acres with Plans	Acres - No Plan
No Plan	-	385,190
1960s	1,730	
1970s	116,142	
1980s	511,698	
1990s	78,765	
2000s	393,039	
Total	1,101,374	385,190

Source: DNR, 2009

DNR is currently working under a fifteen year program to have all property master plans updated or completed by 2024. To facilitate completing and updating property master plans to comply with standards in Chapter NR 44, Wisconsin Administrative Code, DNR assigned each of its properties to one of three master planning tiers:

Tier 1	56 properties	943,579 acres (includes State Forests)
Tier 2	430 properties	511,540 acres
Tier 3	936 properties	230,716 acres

Tier 1 plans are prepared individually for relatively large, complex properties. Tier 2 properties are intermediate in size and are grouped within DNR regions to share plans. Tier 3 properties are relatively small and typically receive a simpler management schedule. Even in the absence of full plans, property management objectives and broad program goals are listed for all properties on the DNR Master Planning Internet. Monitoring is also done annually to identify if any program objectives are not being met.

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County Forests

Wisconsin's County Forests are managed by professional forestry staff of the counties with assistance from DNR foresters. Currently, there are county forests in 29 of Wisconsin's 72 counties, totaling more than 2.35 million acres.

Wisconsin's county forests are governed by the County Forest Law, which requires management in a sustainable manner for multiple uses, including timber production, recreation, wildlife habitat, and watershed protection. The county forests are required to update their forest plans every 15 years, a process that includes approval both by each forest's county board and the DNR. Currently, all 29 county forests have approved management plans which guide management for the years from 2006 to 2020.

Tribal

On Tribal lands, forest management inventory and planning include the following activities:

- scientific measurement of forest stocking
- determination of growth
- assessment of stand condition
- documentation of forest trends
- calculation of sustainable harvests
- vegetative mapping and forest acreage update
- determination of local issues and desirable management policy
- assessment of environmental and economic impacts on the reservation and surrounding communities.

Ninety-one percent of all trust lands are covered by a Forest Management Plan (FMP) and/or an Integrated Resource Management Plans (IRMP).

Table 19.d: Tribe management plans

Tribe	Type of Plan	Status
Bad River	IRMP	Approved 2001
Lac Courte Oreilles	IRMP	Approved 2000
Lac du Flambeau	IRMP	Approved 2008
Sokaogon (Mole Lake)	IRMP	In draft
Oneida	IRMP	Funded
Forest County Potawatomi	FMP	Approved 2000
Red Cliff	IRMP	Approved 2006
Stockbridge-Munsee	FMP	Approved 1996 (being updated)
St. Croix	IRMP	In draft
Ho-Chunk	Unknown	Unknown

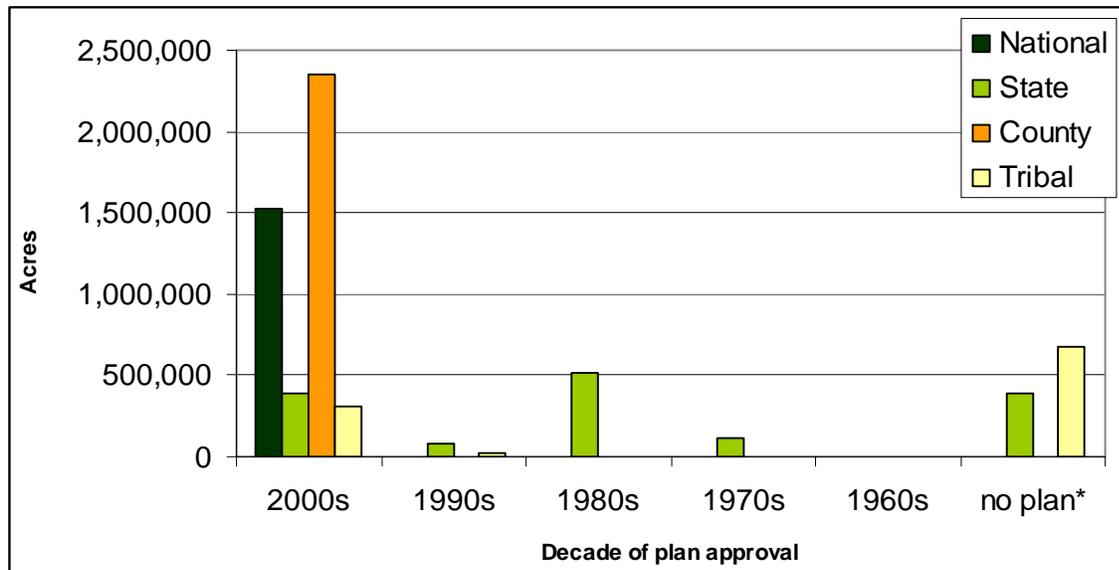
Source: BIA, 2009

The management of public lands is very important to Native American tribes because they have specific off-reservation treaty rights on public lands. As well, state and local natural resource policy directly effects animal and plant populations tribes have an interest in (e.g. deer harvest goals). The process of consultation between tribes and other governments has evolved over the years and will continue to evolve. The effectiveness of these consultations and satisfaction of each party has not been measured. A concern with tribes and others is the trend of more MFL

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lands being entered as closed to public access; this directly affects the amount of land for tribe members to access.

When looking at the status of planning efforts across all land-holding agencies in Wisconsin, over 4.5 million acres (72%) of the over 6.3 million acres of public forest land have management plans developed in the 2000s (Figure 19.a). This positive accomplishment shows a majority of public lands within the state have up-to-date plans guiding future management.



* For tribal lands, plans identified as “funded”, “in draft”, or “unknown” were grouped into the ‘no plan’ category. It was not known whether the funded or in draft plans were updates to previous plans or first iterations for those tribes.

Figure 19.a: Decade of management plan approval by owner and number of acres managed
Sources: DNR, BIA

C. Community based:

• Urban and community forestry plans

Local governments develop a variety of plans to manage urban forests. Table 19.e shows the trends in urban forestry plans since 1992 and Table 19.f shows the kinds of plans communities currently have.

Table 19.e: Percent of communities with tree management plans

<i>Tree Plans</i>	<i>1992</i>	<i>1999</i>	<i>2008</i>
Yes	26	22	32
No	74	78	68

(2008 DNR Community Forestry Survey data)

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Table 19.f: Frequency of urban forest plan types

Plan Type	Communities with this plan	Communities developing this plan
Tree/urban forest management	88	11
Urban forest strategic	20	7
Emerald ash borer readiness	22	35
Land use management	57	9
Other: _____)	6	0

(2008 DNR Community Forestry Survey data)

The number of communities with some type of urban forestry plan increased somewhat since 1992, however this still represents less than one-third of Wisconsin communities. Operations-oriented plans are the most common and there is a dramatic increase in emerald ash borer planning, which reflects the potential catastrophic impact EAB will have on community forests.

In addition to federal and state laws and rules, urban and community forests are regulated by local tree ordinances. These ordinances have developed as communities have planned for urban forests. Table 19.g shows types of provisions contained in community tree ordinances. Provisions relating to public safety are the most common. Provisions relating to sustainable management are much less common.

Table 19.g: Provisions included in community tree ordinances

Ordinance Provision	Number of local ordinances with this provision
Regulation of removal of dead or diseased trees	193
Abatement of hazardous or public nuisances	170
Regulation of species which may or may not be planted on the street	160
Definition of who performs tree maintenance	143
Insect/disease control	122
Street trees in new subdivisions	85
Permit system for tree work on public property	74
Replacement of all publicly owned trees that are removed	69
Regulation of species which may or may not be planted on private property	68
Preservation of trees during development	63
Noise or sight abatement around parking lots	29
Identification of formula for determining monetary value	18
Licensing of private tree care firms	11

(2008 DNR Community Forestry Survey data)

• Firewise

“Firewise” is a proactive community approach to wildfire readiness. In this approach, wildland fire control personnel and natural resource managers provide technical assistance through advice and recommendations. During a wildfire, they will provide emergency response when possible.

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Yet ultimately, Firewise puts the primary responsibility for wildfire readiness on individual citizens and community infrastructure.

Individual homeowners are best situated to prepare their property for wildfire before one strikes. Firewise Communities USA is a recognition program for communities at the homeowner association level that work together to mitigate their collective wildfire hazards. The first step in achieving Firewise Communities USA recognition status is for an association to notify Firewise or the DNR Firewise liaison of their interest in enrolling in the program. Fire-prone communities can earn Firewise Communities USA status by meeting the following criteria:

1. DNR forestry staff and local fire department personnel complete a community assessment.
2. The community members appoint a Firewise Board to oversee the Firewise Communities USA process.
3. Based on the assessment, the Firewise Board creates an Action Plan that identifies agreed-upon achievable solutions to be implemented by the community.
4. Complete a local Firewise project each year.
5. Invest a minimum of \$2.00 per capita annually in local Firewise projects. (Work by community members or other volunteers can be included, as can grants dedicated to that purpose.)
6. Submit an annual renewal form to Firewise that documents continuing compliance with the program.

Wisconsin's first Firewise Community was recognized in May 2004. As of April 2009, there were 17 recognized Firewise Communities in the state with numerous more working toward recognition status. To begin this process or to learn more about Firewise, community members are encouraged to visit www.firewise.org or contact their local DNR Forestry office.

• **Community Wildfire Protection Plans**

With the expanding wildland-urban interface and increased fire danger to people and property, many local governments are reacting by implementing zoning ordinances and creating plans that address wildfire issues. Zoning ordinances address concerns related to outdoor burning, outdoor wood furnaces, fireworks, emergency vehicle access, fire-resistant construction and roofing standards, signage, and vegetation management. A comprehensive guide to designing zoning standards, *Protecting Life and Property from Wildfire: An Introduction to Designing Zoning and Building Standards for Local Officials*, was created by the Great Lakes Forest Fire Compact and is a recommended reference document for communities in fire-prone areas that are considering creating wildfire-related ordinances.

There are planning documents that address wildfire hazards in whole or in part: County All Hazards Plans, Comprehensive Land Use Plans, and Community Wildfire Protection Plans (CWPP). The WDNR leads the facilitation of CWPPs for communities listed on the state's Communities at Risk list. There are currently 19 CWPPs in the state and more in development. A CWPP is created by a core team that includes the town government, local fire department, and DNR. Federal partners are included when federal land is in a community. Other "interested parties" may also be involved in the planning, such as representatives from emergency management, local homeowners associations, industrial forest owners, county forest managers,

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utilities, etc. CWPPs address things such as wildfire response, hazard mitigation, community preparedness, and structure protection. The creation of a plan helps a community organize projects for mitigating hazards, including timeframes for projects and who will be responsible for managing each project. Plans give fire-prone communities an incentive to develop and implement wildfire preparedness and hazardous fuels reduction projects; the USFS is giving funding priorities to communities that develop CWPPs.

Each year in Wisconsin, dozens of structures are destroyed by wildfires and hundreds more are threatened. Between 2000 and 2008, an average of 58 structures were lost to wildfire each year; during that same time, an average of 400 additional structures were threatened, yet ultimately saved (Table 19.h). The reality that structures will be threatened and possibly lost during wildfires has resulted in a WDNR initiative to map structure locations in high hazard areas.

Structure zone maps are an emergency response tool the WDNR creates for wildland-urban interface fires. The maps are generally organized at the county level and include the mapping of roads, water sources, and approximate housing locations at a minimum. The maps are used primarily by fire departments that protect structures during wildfires. Groups of houses are enveloped in named zones and firefighters are assigned to specific zones during the course of a wildfire. The maps have multiple benefits for emergency response as valuable tools for evacuation and recovery during other stochastic events, such as tornadoes. Structure zone map books can quickly become outdated. It is recommended map books be updated approximately every 5 years, areas with greater development may need to be updated sooner.

Year	Structures Lost	Structures Saved
2000	75	445
2001	25	148
2002	21	108
2003	44	576
2004	37	179
2005	157	832
2006	66	497
2007	62	595
2008	31	219
Totals	518	3,599
Average	58	400

Source: WDNR Fire Report

D. Private forests

• Family owned forests (non-tax law)

'Forest Stewardship' plans, as described here, are the plans private landowners have to manage their property or specifically in order to access aid such as cost-share. The Forest Stewardship plans discussed have federally required elements. Private landowners may have a management plan, generically called a stewardship plan, but these may not have the complete required elements. Forest Stewardship plans lay out strategies for achieving unique landowner objectives

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and sustaining forest health and vigor. Forest Stewardship plans motivate landowners to become more active in planning and managing their forests, greatly increasing the likelihood that their forests will remain intact, productive and healthy, and that the social, economic and environmental benefits of these lands will be sustained for future generations.

Wisconsin contributes a large portion of lands with an active Forest Stewardship plan in the northeastern United States (27%) and across the nation (15%). The majority of Wisconsin's Forest Stewardship plans are written for lands enrolled in the Managed Forest Law Program. Wisconsin's Managed Forest Law (MFL) tax incentive program requires a written management plan for program enrollment. MFL plans meet and exceed the federal requirements for a Forest Stewardship plan. Approximately 575,000 acres are owned by 9,100 landowners who have Forest Stewardship Plans, but are not in the MFL program. (Nadeau and Pingrey, 2008) The Division of Forestry is developing a GIS based inventory system to track both MFL and non-MFL Stewardship plans.

Changes in the number of Forest Stewardship plans written for a given year closely reflect fluctuations in MFL enrollment. MFL enrollment is driven by numerous factors. The strongest may be the landowner's incentive to join the program; often based on property tax values and property assessment values. The MFL program has undergone key changes in recent years which have affected the program's appeal to many landowners. These changes will continue to affect program enrollment for the next few years.

In 2011 the first wave of landowners enrolled in MFL for 25 years will be up for renewal. All landowners wishing to reenroll in the program will need to get a new management plan. This may lead to a dramatic increase in the number of Forest Stewardship plans written over the next 10 years. It is unclear at this point how many landowners will reenroll in the program and how many will get a new Forest Stewardship Plan.

Reenrollment to the program will hinge on many factors, including program incentives, landowner program satisfaction, availability of funds to cost-share management plans and other factors personal to each landowner. In 2007, the Wisconsin Forest Landowner Grant Program (WFLGP) received an additional \$400,000 to help offset the increased costs due to privatization of MFL plan preparation. With this increase in funds and a reduction in the cost-share amount from 65% to 50%, the number of management plans and other practices funded by WFLGP increased dramatically. Budget cuts instituted in FY2010, however, will reduce available funds for the program to a level similar to 2001.

• **Industrial and family forests in the Wisconsin Forest Tax Laws:**

Forest management planning for privately owned lands is done as a condition of entry into Wisconsin's forest tax laws. The forest tax laws consist of the Forest Crop Law (FCL) and the Managed Forest Law (MFL).

Forest Crop Law (FCL)

Forest Crop Law was the first forest tax law, originating in 1927. The FCL program allows landowners to pay a reduced property tax while trees are growing and to pay the deferred property taxes at the time of harvest in the form of a severance tax. The severance tax is based on

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the species, size, and quantity of trees harvested from the property. Landowners must allow public access for hunting and fishing, and manage their lands for the production of timber.

Industrial ownership comprised the majority of lands enrolled under FCL. By the early 1980's approximately 1.2 million acres of industrial land were enrolled in FCL. Non-industrial private (NIPF) landowners added approximately 300,000 more acres.

Management planning on these lands was minimal in the early years since a management plan was not a requirement for lands to be enrolled in the program. A landowner filled out an application for entry and a map of the land was developed (often by DNR foresters) indicating the timber types. Harvests were largely established by industrial forestry staff for industrial lands and DNR foresters on NIPF lands.

In the 1980s, the DNR developed "harvest schedules" for all NIPF lands enrolled under the FCL program. A harvest schedule listed the dates in which harvest activities would occur for the remainder of the FCL contract, and it often included an inventory of current stand conditions. The backlog of FCL harvest scheduling was completed by 1990. Some of these harvest schedules are still in effect today.

Managed Forest Law (MFL)

In 1987, the Managed Forest Law (MFL) was created and land could no longer be enrolled into the FCL program. MFL required a management plan be developed before lands could be enrolled. The landowner had the choice of "open" or "closed" option under MFL. Open land allows public access for hiking, site seeing, and cross-country skiing, in addition to the hunting and fishing allowed on FCL lands. Or landowners can close their land to the public subject to an acreage limit depending on the year the land was entered. The MFL allows for management objectives compatible with timber production such as wildlife habitat enhancement, watershed protection, and aesthetics making it a multiple use program, but forest production must always be addressed.

On NIPF lands, DNR foresters developed management plans for each property. Management plan components have evolved over time, but generally include an inventory of the property showing current stand conditions, NHI occurrences, BMP issues, and often invasive species. Plans included both mandatory and non-mandatory practices. Mandatory practices include: harvesting of mature timber, thinning stands for merchantable products, releasing seedlings from competing vegetation, reforestation to meet minimum stocking levels, pre- or post- harvest site preparation to insure adequate regeneration and soil conservation practices necessary to control any soil erosion that may result from department approved forestry practices. Non-mandatory practices cover a wide range of proposed activities to help meet the landowner's objectives or improve some aspect of the forest resource (e.g., timber and wildlife habitat).

In 2004, MFL was amended to require landowners to hire certified plan writers (CPWs) to develop a management plan for enrollment in MFL. CPWs are private forestry consultants who have received training and displayed proficiency in developing management plans that meet the Department's minimum standards. In 2009, almost all management plans developed for lands

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entering into the MFL program were developed by CPW's and reviewed and approved by DNR staff.

The MFL presented a different set of issues when dealing with the large acreages of land enrolled by industrial landowners.

Wisconsin Administrative Code provides different management plan requirements for industrial landowners who met certain requirements. Landowners requesting to be treated as an industrial landowner must own more than 1,000 acres in two or more counties of the state and have access to competent professional forestry staff or consulting services. The landowner must have a management commitment that describes an underlying management plan (including resource inventories, harvest strategies, regeneration strategies, etc.) and the procedure used to update it. The management commitment is kept on file with the Department. The management plan can be reviewed or audited at the Department's request.

In 1996, the legislature developed rules to allow lands enrolled in FCL to be converted to MFL without penalty. DNR foresters were required to develop a management plan within three years of conversion for all NIPF landowners. All industrial owners were required to develop a management commitment approved by the Department if they didn't already have one. Owners were required to follow their management commitment on file. Although conversions continue, the majority of conversions occurred within the first three years. A breakdown of acres by ownership currently enrolled in either FCL or MFL is presented in Table 19.i. The table shows that of the 1.5 million acres of FCL in 1986, only 229,000 acres remain today. It also shows the majority of acres are enrolled under the MFL program with associated management plans and management commitments.

Owner Type	FCL	MFL	
		Open Access	Closed Access
NIPF	125,513	418,634	1,858,804
Industrial	103,671	735,599	26,113

Source: DNR, 2009

Current Challenges for Wisconsin's Managed Forest Law & Planning

Many challenges face Wisconsin's forest tax law programs and management of private forested lands. With over 40,000 landowners encompassing more than 3 million acres of land, trying to balance the interests of the landowner with the interests of the citizens of the State of Wisconsin will invariably involve conflict. Some of the challenges facing Wisconsin are also evident throughout the United States.

Ownership of industrial lands is decreasing. Much of the industrial land was once owned by companies in the business of using raw forest resources to manufacture a product. Many of these companies have sold the land and the buyers have increasingly been organizations such as Timber Investment Management Organizations (TIMO's) or Real estate Investment Trusts (REITS). These investment owners look to the sale of land into smaller parcels as a means to maximize their returns on investment. This has accelerated parcelization at a faster than historic

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pace. Figure 19.b shows the trend in amount of acres enrolled under the Wisconsin forest tax laws by industry from 1999 until 2007. Much of this reduction is due to the sale of lands to private non-industrial landowners.

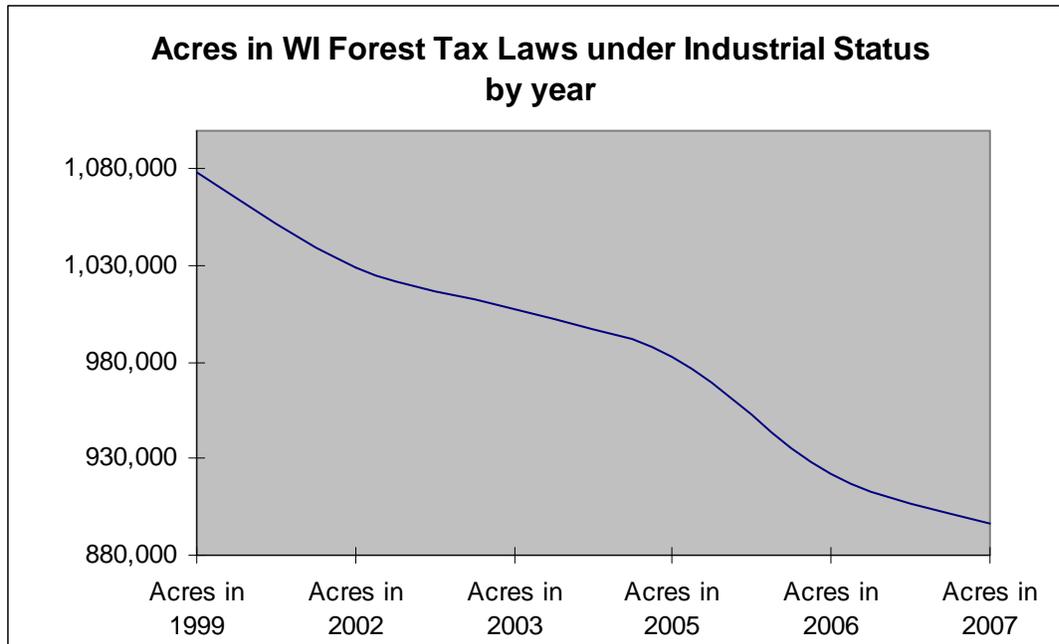


Figure 19.b: Acres in WI Forest Tax Laws under industrial status 1999 - 2007

Number of NIPF management plans is increasing. The sale of land once owned by industry to NIPF landowners has increased the number of DNR prepared management plans for new woodland owners. Since industrial lands do not have site specific management plans but management commitments, DNR foresters must develop the site specific management plan in order to guide landowners in implementing sound forest management practices.

Number of updated or new management commitments is increasing. Portions of larger industrial ownerships have been sold to new forestry investment groups. These groups have sought industrial status creating a need for development, review and approval of new management commitments. In 1999 roughly 69 owners were classified as industrial owners, in 2007 there were over 107 ownerships with that classification.

The number of parcels expiring from FCL and MFL is increasing. Lands enrolled in FCL or MFL are enrolled for 25 or 50 years. Landowners are given the opportunity to re-enroll lands into the MFL program at the expiration of their FCL contract or MFL order. A new management plan must be developed if the owner applies to re-enroll.

MFL was launched 1985, and so a stream of properties with 25-year agreements will be needing new management plans in the coming years. Figure 19.c shows the amount of acres of MFL that will expire by year. Many of these landowners will choose to re-enroll at least a portion of their properties and create a demand for development of new management plans. To help handle

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anticipated planning demand, DNR devised a computer-assisted management planning template that should be fully functional via an Internet-based data application in 2011.

A statute change in 2005 that ended free management planning assistance DNR foresters had provided for decades could also have a significant bearing on the re-enrollment rate of expiring MFL agreements. Although the average cost of about \$1,000 per plan can be quickly recovered through property tax savings, the initial hurdle of paying a private plan writer could deter some landowners. Family forest organizations are concerned there will be a breakdown in long-term relationships between landowners and DNR foresters who prepared plans and assisted with plan implementation in concert with wildlife biologists and other agency specialists.

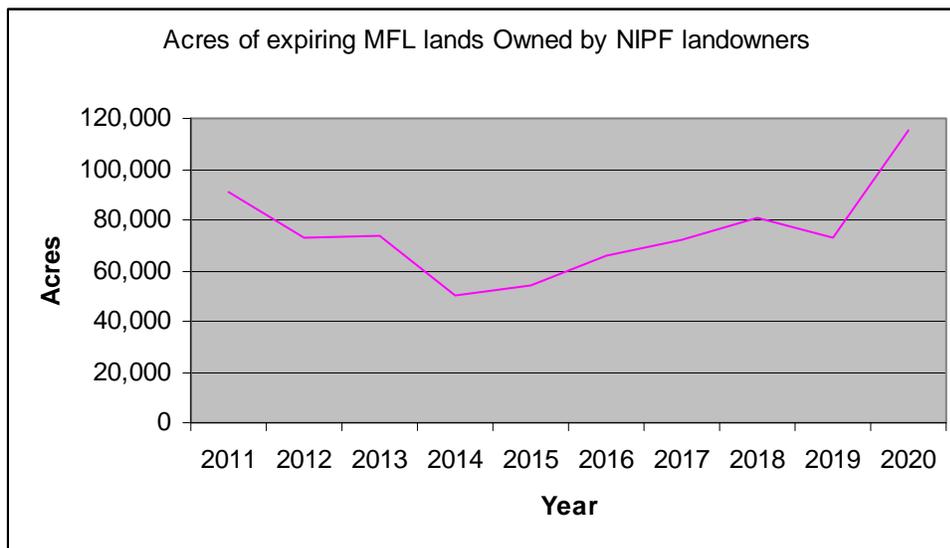


Figure 19.c: Acres of expiring NIPF lands enrolled under the MFL program by year of expiration.

Source: DNR, 2009

Information sharing and technology improvement is increasing. Because of the privatization of industrial lands, coupled with the expected increase in tax law management plan renewals, it is expected management planning needs will remain high in the coming years. The increasing use of CPWs has created a need to improve management planning consistency and efficiency both in plan writing and reviewing.

Difficulties in providing public access to MFL lands is increasing. One of the principle intents of both the MFL and FCL programs was to encourage more lands available to the public for recreation. Despite the intent, the amount of land open under MFL has not increased, but instead decreased. There are a multitude of reasons for the decline, but the commercialization of hunting in Wisconsin, the declining acreage under industrial ownership (most of which was open), and ever increasing land values have all played a role. Hunting traditions have also changed in ways that require closed lands. For example, there is more stationary hunting as compared to family drives, more quality deer management for trophy bucks, and more baiting. Some industrial owners are also closing land because they do not want to deal with road maintenance issues, vandalism, littering and other conflicts that come from public use.

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In 2007 the Wisconsin Legislature amended the MFL program to prohibit leasing of MFL land for commercial recreation. It is unclear what affect this prohibition will have on future enrollments or re-enrollments, but it appears that the legislature's intent was to remove the financial incentive to close lands to the public and lease it. Figure 19.d shows the amount of land that is open vs. closed enrolled under the Managed Forest Law from 1997 to 2008.

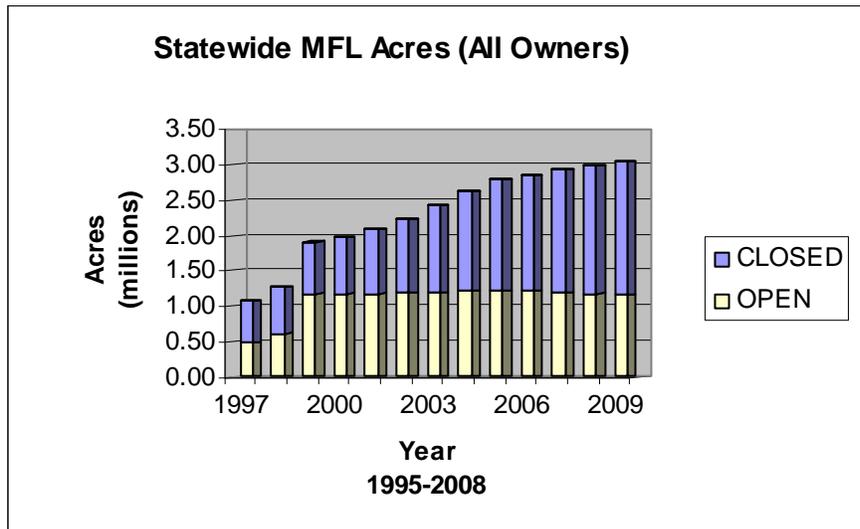


Figure 19.d: Acres of MFL open and closed from 1997 to 2008 for all ownership groups.
Source: DNR, 2009

Landowners who close MFL land pay the Department of Natural Resources an annual closed acreage fee per acre. The 2007 change in MFL created a grant program for the Department to award money to governmental and non-governmental units to purchase or lease lands for public recreation. The grant program could be funded by the MFL closed acreage fees. The new grant program has not been funded to date due to state budget shortfalls resulting from the 2008-2009 economic recession.

Interest in global warming and carbon sequestration is increasing. Landowners are becoming aware of the emerging markets in buying and selling carbon credits. Providing information to landowners on selling carbon credits and insuring that landowners remain in compliance with the forest tax law programs may require some adjustments to be made to MFL management plans and policies, however the impacts of the carbon credit market is not fully understood at this time.

Use of renewable fuel and harvesting of biomass is increasing. The desire to harvest biomass from Wisconsin's forest will pose operational and policy challenges. The DNR and forestry partners recently completed the development of statewide biomass harvesting guidelines. These guidelines are scheduled for phased-in implementation for all landowners under the FCL and MFL program in 2010. Determining severance and yield tax rates for harvesting fine woody material is a challenge the forestry community must work through.

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Purchase and sale of conservation easements, development rights, and other rights is increasing.

The concept of ownership is changing in Wisconsin as timber, development, and recreational and mineral rights are bought and sold separately in ever increasing amounts. This split in who owns individual rights and how they interact with each other will complicate the management planning process.