Wisconsin's Forest Legacy Program

Forest Assessment of Need (AON)

Final Report November 2000

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Executive Summary

Wisconsin enjoys a diversity of forest types and large expanses of private forestland. Private lands support diverse and productive forests. Some of this private forest is being lost to development. The Forest Legacy Program of the USDA Forest Service is designed to prevent the irreplaceable loss of productive private forests. This document, the Forest Legacy Program Assessment of Need, is intended to identify those areas in the state where this loss is most likely to occur.

The intent of this Assessment of Need is to provide the background information in the form of a natural resource primer that supports, reveals, or highlights areas that could or should be protected. This document provides justification for focusing protection efforts on those areas identified as environmentally important, threatened by conversion and having the most long-term benefits from being protected. The ultimate goal of the document is to delineate Forest Legacy Areas for approval by the Secretary of Agriculture. These Forest Legacy Areas must meet the eligibility requirements outlined by the USDA Forest Service and the State of Wisconsin. An associated long-term goal is to begin the process of identifying where we, the Wisconsin Department of Natural Resources (WDNR), as a public natural resource conservation agency, should begin focusing our time and resources on private forestlands management. Public comment in this process will help us determine where, and to some extent, at what level, we should be involved in management of the private forestlands of Wisconsin.

Introduction to the Forest Legacy Program - Federal and State

The Federal Forest Legacy Program

The Forest Legacy Program (FLP) is designed to identify and protect environmentally important private forestlands threatened by conversion to non-forest uses. The FLP was established under the authority of the Cooperative Forestry Assistance Act (CFAA) of 1978, as amended in the 1990 Farm Bill (Food, Agriculture Improvement and Reform Act, [16 U.S.C.2103c et.seq.]).

As defined by statute, environmentally important forestlands must possess one or more of the following:
Ecological values

- Opportunities for continuing traditional forest uses
- Fish and wildlife habitat
- Threatened and endangered species
- Riparian areas
- Public recreation opportunities
- Cultural resources
- Scenic resources

The Secretary of Agriculture is authorized to provide financial, technical, educational, and related assistance to state, community, and private forest landowners, and is authorized upon request to make a grant to the state to carry out the FLP in the state, including the acquisition by the state of lands and interests in lands. The goal of the program is to identify and protect important forest areas and aid in conservation through the purchase of conservation easements. No more than seventy-five percent of total payments can be paid by the Federal government for the Forest Legacy Program. State, local, and private interests must come up with the remainder.

Easements purchased may include a variety of property rights, but most often restrict development and subdividing. Any restrictions placed on the land are carried over in the event of sale. A state cannot use eminent domain to acquire lands. All landowners that join must volunteer. Federal appraisal standards and acquisition rules must be followed for the acquisition of lands or interests in lands.

Interests in lands primarily consist of donated or purchased easements which allow landowners to continue using their forests in traditional ways while preventing the conversion of these forests to agriculture, residential areas, or commercial developments. While easements established under the Forest Legacy Program may not require public access, a landowner may allow public recreation on his or her land as long as it does not conflict with the Forest Legacy Program goals and management objectives for the property.

Conservation easements and the Forest Legacy Program offer an alternative to outright government ownership of land while protecting private forestland from conversion to non-forest uses. Under FLP, environmentally important forestlands are identified and easements used to retain and maintain these forests. Under the State Grant Option, the State or its designated representatives shall transact all Forest Legacy Program acquisitions. When a conservation easement is purchased using Forest Legacy funding, the state or its designated local unit of government must hold the easement. Landowner participation will be entirely voluntary. Forest Legacy Funds may be used to support eligible conservation organizations for activities related to donations of conservation easements. When a conservation easement is donated on behalf of the Forest Legacy Program (to receive credit as a match) to an eligible non-governmental conservation organization, that organization may hold the easement.

This Assessment of Need (AON) is intended to identify the important forestlands threatened by conversion for non-forest uses. Public review of these Forest Legacy Areas enables the FLP to designate them as Forest Legacy Areas (FLAs). Federal Forest Legacy funds may be used to purchase conservation easements within the Forest Legacy Areas.

The Forest Legacy Areas must meet the National Eligibility Criteria in order to qualify for participation in the Program. To be eligible for the Forest Legacy Program, the proposed area must meet the following National criterion:

- "Be an environmentally important forest area that is threatened by conversion to the non-forest uses." (Individual States are responsible for determining their definition of 'threatened' and the definition of 'environmentally' important forest areas.)
- "Environmentally important forest areas shall contain one or more of the following important public : values, as defined by the States:
  - Scenic resources;
  - Public recreation opportunities;
  - Riparian areas;
  - Fish and wildlife habitat;
  - Known threatened and endangered species,
  - Known cultural resources;
  - Other ecological values; and/or

  Provide opportunities for the continuation of traditional forest uses, such as forest management, timber harvesting, other commodity use, and outdoor recreation, as defined in the AON."

In addition, since many tracts may qualify for the FLP, states are requested to establish additional criteria to prioritize acquisition proposals. These criteria have been developed for Wisconsin and are included later in this document.

This Assessment of Need evaluates the forest resources of Wisconsin in view of the National Eligibility Criteria to fit Wisconsin's needs. In the process we have defined "environmentally important", "traditional forest uses" and "threats" to Wisconsin's important forests.

The Forest Legacy Program in Wisconsin

In 1991, Governor Tommy Thompson designated the Wisconsin Department of Natural Resource's Division of Forestry as the Lead Agency to implement a Forest Stewardship Program for the state with State Forester, Charlie Higgs, acting as the official state representative. In 1998 the Forest Stewardship Committee studied and discussed participating in the Forest Legacy Program. Current State Forester, Gene Francisco, recommended that Wisconsin proceed with the application process to participate in the Forest Legacy Program.

The Forest Stewardship Committee created a Forest Legacy Subcommittee in July 1998 to evaluate the potential benefits for Wisconsin of participating in the Forest Legacy Program.

The sub-committee met on a regular basis to share information. They gathered information from the USFS, other states, other agencies and other bureaus relating to the FLP. They also held a meeting on December 8, 1998, inviting others administering land easement programs to attend and discuss their programs. Mary Jean Huston of The Nature Conservancy and Tracey Teodecki, from the WDNR Bureau of Facilities and Lands presented on their easement programs.

In May of 1999, Governor Thompson requested that the Wisconsin DNR, Division of Forestry, be designated as the lead agency to conduct activities related to the establishing and developing of a Forest Legacy Program in Wisconsin. The USDA Forest Service granted the State funds to complete an Assessment of Need for the FLP.

As appropriate, periodic review and revision of this assessment will be made to meet the future needs of the forest resources on behalf of the citizens of Wisconsin. The Wisconsin Forest Stewardship Program and its coordinator will advise the federal government of the on-going activities during the implementation of the Forest Legacy Program in the State.

Wisconsin will utilize the statewide AON to highlight environmentally important forestland in danger of being converted to non-forest uses in the next decade. The intent is to focus the combined resources of groups that regularly acquire interests in land on the problems of forest fragmentation and forest loss in Wisconsin. The Forest Stewardship Committee will provide oversight by helping to establish the priority of individual tracts of land and by providing overall philosophical guidance. Prioritization will be accomplished through the adoption of the ranking system described in this document.

The State Forest Stewardship Committee intends that any area identified in the Assessment of Need warrants conservation work. It is not necessary that these lands be designated as Forest Legacy Areas for conservation work to begin. It is the intent of the Committee that this Assessment will be used by the Department and other resource conservation groups to direct limited resources to areas defined by the public as in need of protection with or without Forest Legacy Funds. However, the Committee will direct resources for acquiring conservation easements obtained through the Forest Legacy Program only to those areas designated as Forest Legacy Areas.

The Forest Legacy Subcommittee developed the following mission statement, approved by the full Committee, as its guidance for developing the Forest Legacy Program in Wisconsin:

The Goal of the Forest Legacy Program in Wisconsin

To minimize fragmentation and conversion of significant forested areas to non-forest uses, through the wise administration of conservation easements, that focus on the sustainable use of forest resources.

Wisconsin's Abiotic Forest Resources

Landforms

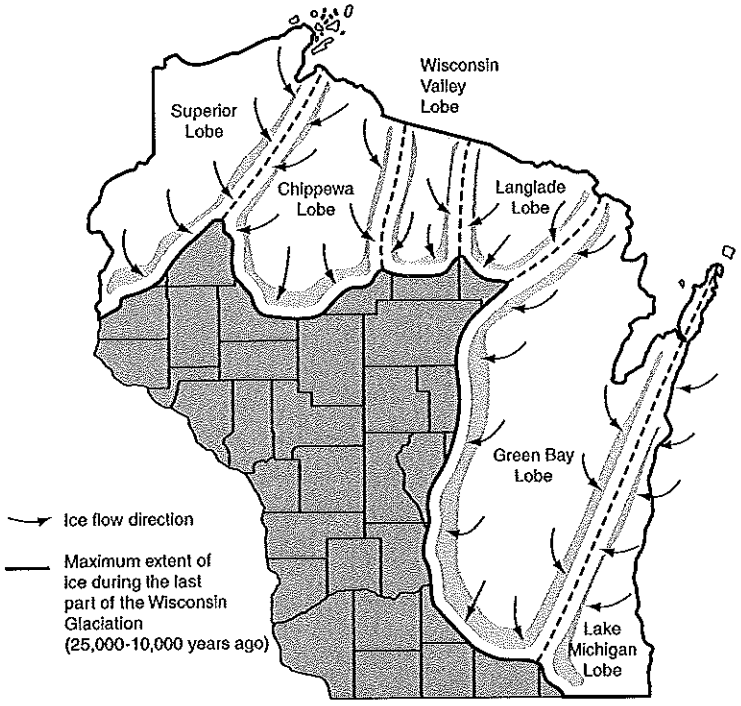
Wisconsin is unusual because it contains large areas of pre-cambrian bedrock outcrops that are aged at 1,640 million years. Their unique structure, which has been preserved by erosion resistant caprock has drawn scientists from around the world.

Prominent bedrock features of Wisconsin are the Gogebic Range, Baraboo Range, Barron Hills, Rib Mountain, McCaslin Mountain Silurian "Niagara" escarpment in the east, Blue Mounds, and the dolomite escarpment that forms Military Ridge in the southwest. Bedrock affects mineral composition of soils locally and the eight major soil regions of Wisconsin relate closely to land forms and geologic materials.

Glaciation has largely determined the surface and topography of the state. Glaciers repeatedly advanced into and retreated from the area that is now Wisconsin between 2.4 million years ago. About 11000 years ago about two-thirds of the state was covered by glacial ice.

When the most recent glaciers melted, they left a rolling terrain covered in layers of glacial till and outwash. Among the characteristic landforms left behind by the glaciers are moraines, till plains, drumlins, outwash plains, eskers, kames, and lacustrine plains. During glacial retreat, loess was deposited by wind on the surface of many adjoining areas, whether recently glaciated or not. The profusion of lakes, spring ponds, headwater streams, and wetlands found throughout the northern portion of the state are the result of glacial action, which interrupted the normally dendridic drainage pattern of streams.

Figure 1 — Glacial Lobes of the Wisconsin Glaciation



Though glacial deposits covered most of the bedrock in the eastern portion of the state, outcrops of dolomite, limestone, sandstone, basalt, granite, quartzite, and serpentine also occur. Such outcrops can be biologically significant, because they provide a substrate for a number of plants including some that are rare.

Another geographic region of interest is the driftless portion of the Central Plain, also known as the Central Sands. Many processes contributed to its topography. One formative agent was Glacial Lake Wisconsin.

Within the Driftless Area of the Western Upland, the primary geomorphic processes are fluvial erosion (erosion by flowing water); mass-wasting (weathering of bedrock in place), and karst formation (the dissolution and deposition of carbonates). Karst landforms include caves.

An important forest will have unique landforms and enhance their associated biologic communities.

Mineral Resources

Mining for metals such as copper, lead, iron and zinc shaped the history of several regions of Wisconsin beginning with the Old Copper Culture, 4000 to 1000 BC, to the lead mining activities of the early European settlers. The first permanent European settlers in Wisconsin were lead prospectors and miners who sought out deposits of lead and zinc in the southwestern part of the state in Grant, Iowa and Lafayette counties. Mineral Point, located just west of Madison, was an early mining town.

Other important mineral mining activity occurs, and has occurred, around the rest of the state. Iron ore is found in Jackson County. There are some large deposits in Ashland and Iron counties. Zinc deposits are found in northern Wisconsin, also. Sulfide deposits containing large amounts of copper and zinc are found in Forest, Oneida and Rusk counties. The sulfide deposits at Crandon in Forest County are believed to include one of the five largest supplies of zinc ever discovered in North America.

In addition to minerals, stone, gravel, basalt, clay, peat, quartzite, sandstone, sand, silica sand, shale, peat, and rich soils are mined in Wisconsin. Stone, such as dolomite and granite is also a valuable resource in Wisconsin. Dolomite is found mainly in the southern part of the state and granite in the central and northern areas. Red granite became the state

rock in 1971. Red granite was selected because of its beauty, economic value as a construction material, historical significance, and because it is unique to the state of Wisconsin.

Because of the gravel bound up in the great ice sheets, the continental glaciers, which moved across Wisconsin, almost all of the counties of Wisconsin have sand and gravel deposits. The Southwest corner of the state has the smallest gravel resource. As the glacial ice melted the sand and gravel were released in streams of outwash, the material was sorted by stream action. These outwash plains are rich sources of sand and gravel and have been mined since the days of early settlement. The sand and gravel was important to settlers and loggers during the early years of road construction.

Mining has shaped the landscape in some parts of the State and continues to do so at the present. Where mining could present an impact on the sustainability of the forest within a legacy tract, easement language and management plan recommendations will reflect the need to protect and sustain the forest systems first and foremost. In some cases, where a high potential for conversion to active surface mining exists in a proposed legacy tract, the purchase on mineral rights will be part of the conservation easement.

Soil and Water Values

The conservation of soils and water resources is key to sustainable forest management. These factors profoundly effect the forest. One method that is used by Wisconsin resource managers, foresters, and private individuals to protect soil and water is the implementation of *best management practices.* These proven successful techniques are currently used to protect Wisconsin's private forestland and will be integrated into the implementation of management on Forest Legacy Program Tracts.

Monitoring of randomly selected timber sales harvested between 1994 and 1996 has shown that statewide, forestry BMPs were applied correctly where needed 85% of the time, indicating that Wisconsin's forestry BMP program has had a very successful start. In addition, monitoring of the effectiveness of forestry BMPs has shown that when BMPs are applied correctly, they are effective in protecting water quality in 99% of cases. The use of voluntary *best management practices* (BMPs) has been a practical and cost effective way to assure that forestry operations do not adversely impact water quality and thus worth adopting into Wisconsin's Forest Legacy Program.

Sediment from soil erosion is the primary pollutant associated with forestry activities. Forest floor vegetation and the litter layer of leaves and twigs protect forest soils from the erosive action of raindrops and water runoff. Forest management activities, such as skidding on wet soils, can remove this protection. This can lead to soil erosion, especially on steep slopes and erodible soils. Other water quality damage that forestry activities can generate include: excessive organic debris from slash in streams; excessive levels of nutrients attached to soil that wash into streams and lakes; high stream temperatures due to the removal of stream-side vegetation; and chemicals from equipment oil/hydraulic fluids and pesticides.

Riparian Management Zones (RMZs) are one important tool for protecting water quality. Forested riparian areas help stabilize lakeshores and stream banks and help filter sediment and nutrients in runoff. Riparian areas are also valuable as corridors for wildlife. Plants, mammals, birds, reptiles, and amphibians all travel and disperse along streams and lakes. In Wisconsin, the recommended RMZ along lakes and navigable perennial streams is 100 feet. Studies show that 70-100% of all the water quality and wildlife benefits provided by riparian areas occur within the first 100 feet. BMPs for Riparian Management Zones include:

- Do not operate wheeled or tracked harvesting equipment within 50 feet of the ordinary high-water mark except on roads or at stream crossings.
- Use selective harvesting and promote long-lived tree species appropriate to the site. Long-lived tree species include: (1) hardwoods such as sugar and red maple, white and black ash, elms, and oaks; and (2) conifers such as eastern hemlock, white pine, red pine, and white-cedar.
- Harvesting intervals should be a minimum of 10 years.
- Harvesting plans should leave at least 60 square feet of basal area per acre in trees 5 inches DBH (diameter breast height) and larger, evenly distributed.

Other BMPs provide guidelines on protecting water quality when constructing or maintaining forest roads. Forest roads that are poorly located, constructed, or maintained are the largest source of non-point source pollution from forest management activities. Roads over steep slopes, erodible soils, or stream crossings hold the greatest potential for degrading water quality. BMPs for forest roads provide guidelines on the proper installation of stream crossings, proper road construction and drainage, and soil stabilization.

BMPs for wetlands are also extremely important in protecting water quality. These BMPs help minimize changes to the surface and below-surface water movement in wetlands. Changing water flow in a wetland can affect its flood protection function as well as the health of the wetland ecosystem, which provides habitat for many rare and endangered plants and animals. BMPs for wetlands include:

- Construct upland road approaches to wetlands so that surface runoff is diverted a way from the road so the runoff does not enter the wetland.
- Whenever possible, forest management activities in wetlands should occur on frozen ground during the winter to minimize rutting.

Currently, Wisconsin has excellent compliance and results through the voluntary adoption of BMPs. The Forest Legacy Program will support these efforts by requiring that all management plans for Forest Legacy Tracts include reference to these guidelines as standards to be used during any harvesting activities.

Wisconsin's Biological Forest Resources

The climate, soils, glacial and geologic history of Wisconsin combine to provide examples of a great many forest types. To facilitate discussion of Wisconsin's biological forest communities, we can divide the state into two large regions, one on each side of the *Tension Zone.* We will refer to these two forest regions throughout the Assessment of Need as the *northern mixed forest* and the *southern broadleaf forest.*

These two forest regions are further divided into forest types. The dominant species or mixed species in Wisconsin are classified as maple, basswood, aspen, oak-hickory, pine, spruce, northern white-cedar, and tamarack (Schmidt, 1997). We have data from forest surveys and inventories from 1898, 1936, 1956, 1963, 1983, and 1996 that is used to classify and assess changes in the forest types. Other studies, such as Finley's description of pre-settlement vegetation based on early surveyors' records and Curtis' historical studies of Wisconsin's vegetation provide data that go back to at least the 1850's. The most numerous species based on the count is considered the dominant one. There are usually many other species represented in these dominant groupings, typically in a predictable manner. For example, the maple-basswood forest type, also, usually nurture many individual aspen trees (Schmidt, 1997).

Tension Zone

Stretching across Wisconsin from northwest to southeast is an S-shaped area called the Tension Zone. The Tension Zone represents the northernmost or southernmost boundary of adaptation by plants and animals. The Tension Zone divides the state into two major ecological regions. The southern ecological region is warmer and is generally considered closer, ecologically, to the forests of Ohio and Indiana. The northern ecological region is more closely related to the forests of northeastern Minnesota, northern Michigan, southern Ontario, and New England. The Tension Zone is a fascinating area, where representative plant and animal species from both the northern mixed forest and the southern broadleaf forest types can be found, and a significant shift in vegetation type is apparent (Curtis, 1959).

Ecosystem Diversity

Both the species composition and relative proportion of presettlement forest types have been greatly altered by humans. The mixed coniferous-deciduous forests have, with few exceptions (e.g. the Menominee Indian Reservation), lost their coniferous component. Hemlock occurs sporadically in second-growth hardwood stands, but white pine is virtually absent in many areas.

Early logging in the north focused on white pine, and to a lesser extent, red. The white pine seed source was dramatically reduced, and the slash left on the ground after logging fueled intense fires, eliminating what little regeneration there was. Most of the area that was white pine forests before the intense harvests of the late 19th century is today covered in

red oak, red maple, white birch, and/or aspen. Until recently, white pine regeneration was severely limited. However, there is currently evidence to suggest that white pine may be recovering to some extent.

Hemlock was harvested in a second wave of logging to provide the tanning industry with bark for processing hides. Much of the hemlock component was removed from the northern forests, and now only occurs sporadically in second growth hardwood stands.

In addition to the pine and hemlock, hardwoods were also removed during the cutover era. Although clearcutting and high-grading were practiced, hardwood seeds' germination requirements are less demanding than conifers', and they were able to regenerate more successfully. Many hardwood species also have the ability to sprout new growth from their roots, unlike the conifers.

The relative importance of hardwood species has also changed significantly in many stands. While sugar maple has retained its dominant position, yellow birch is much less common than it once was. On the other hand, basswood and white ash are now the most important associates of sugar maple, although they were seldom listed as such by early land surveyors.

Seral stage distribution has also been significantly altered by human impact. Seral stage refers to the stages of development of an ecosystem, from very early pioneer plant and animals communities to older, later successional communities. For example, aspen, an early successional species, currently covers over 18% of the forestland in the state, most of which is in the north. In early surveyors' work, it is scarcely mentioned. The seral stage of an ecosystem has a profound influence on the type of habitat it provides, separate from species composition. If we want to maintain the diversity of plant and animal habitat within Wisconsin, disturbances of some type are necessary. Disturbance will have to be part of the Forest Legacy Tract management in many instances where early successional stage habitat is the desired condition.

Plant Diversity

The vegetation of northern Wisconsin is a primary source of the state's biodiversity. Of the state's estimated 2300 vascular plants, about 1800 occur in the northern forest region. Statewide, approximately 22% of plant species are introduced exotics. Thus, there are about 1400 native plant species that occur in the northern forest region. Important plant families in the north include lilies, sedges, composites, roses and cherries, buttercups, honeysuckles, orchids, ferns, and grasses (DNR, 1995).

Trees, being the dominant life form of any forest, are crucial to the forest's biodiversity. There are approximately 30 tree species that occur in the northern forests of Wisconsin, although no more than about 10 are found together in any given ecological community.

Animal Diversity

Of the 327 vertebrate species present in Northern Wisconsin, over 273 are believed to have secure futures in the state; fifty-four are believed to require management to protect and preserve them into the future (DNR, 2000). Most of the danger to vertebrate species comes with loss of habitat. Animals evolved to fit particular niches within particular ecosystems. When those niches are less abundant, the animals that filled them also become less abundant.

Rare Species and Communities

Human activities since Euro-American settlement have dramatically altered the distribution and abundance of many species. As of 1998, there were 241 species listed on the state's endangered or threatened list, and 15 on the federal endangered or threatened list (11 species appear on both lists). At least 28% of the plant species listed are forest species. All of the listed mammals are forest species, at least 50% of listed bird species are forest species, and 40% of listed reptiles and amphibians are forest species.

Two species were hunted to extinction — the passenger pigeon and the Carolina parakeet. Other species were extirpated from the state. Some remain extirpated — bison, wolverine, woodland caribou, Eskimo curlew, and whooping crane. Six have been reintroduced with varying degrees of success — elk, fisher, American marten, trumpeter swan,

peregrine falcon, and wild turkey. Two species, moose and timber wolf, have returned to Wisconsin of their own volition. There have also been a few sitings of cougar in northern Wisconsin, although it is thought these animals are probably escapees from domestication.

There are also those species that have increased in number and influence on Wisconsin's forests. With the increased fragmentation of the forests as well as an overall younger forest as compared to pre-European settlement, there is more edge and early succession habitat. Many invasive or exotic plants have gained a foothold in the state because of this increased habitat. Some animal populations have also increased dramatically, sometimes to a level that may compromise the ability of other species to compete.

There are estimated to be about 2300 species of vascular plants in the state of Wisconsin. There are 59 plants in the northern forest region that are endangered, threatened, or species of concern. These plants will likely require some management attention in order to preserve them within Wisconsin.

About 1800 of these are native to the state, 22% are believed to be introduced exotics. About 40 distinct Wisconsin terrestrial communities were described by John Curtis in the 1950's (Curtis, 1959). Most of these are intact. However, savanna and barrens have experienced striking decline. Both savanna and barrens communities are listed on the globally recognized Nature Conservancy's list of most threatened ecosystems.

Pine and oak barrens are easily damaged through fire suppression, agriculture and conversion to other intensive uses. The fragmentation and isolation of remaining pieces has also led to losses of biological diversity.

Old forest is also increasingly rare. In 1995, Frelich estimated that 58,500 acres, less than .4%, of Wisconsin's forests had not experienced severe human disturbance since European settlement. Seventy-nine percent of this area is white-cedar forests; another 10% are black spruce-tamarack forest.

Other Life

Although there is near universal acknowledgment of their importance, non-vascular plants, fungi, bacteria, and other small species have been largely overlooked in most of the research and planning regarding biodiversity. It is estimated that fungi alone may account for 12 - 30 thousand species in Wisconsin, few of which have been described. Fungi are extremely important in recycling nutrient matter in a forest and it is just beginning to be understood how important the mutualistic symbioses they form with roots in the soil are to ecosystem functioning.

Except for pest species, little research has been directed at forest invertebrates. Lack of knowledge in this area is a serious concern since invertebrates are a very diverse group and perform important ecosystem functions, such as the breakdown of dead vegetation, soil formation, and predator-prey interactions. There has been even less research directed toward non-vascular plants and protozoa.

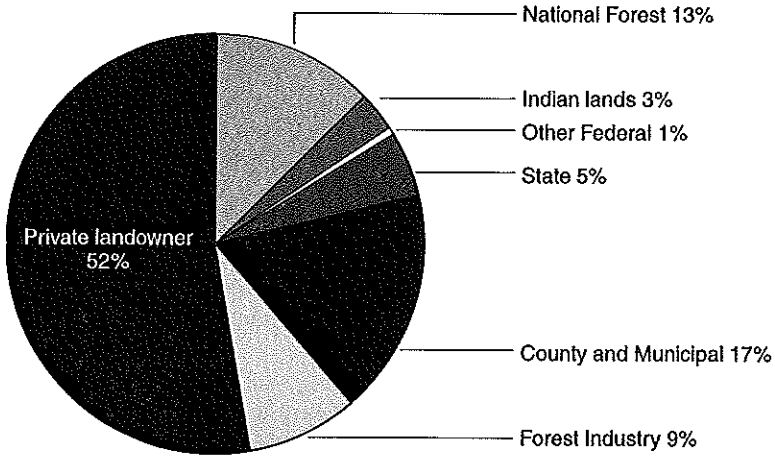
It is hoped that by preserving ecosystems, plants, and animal species, that these associated less known and understood organisms will also be preserved. However, it is clear that more research is needed to better understand the diversity and function of these organisms in Wisconsin's forests. Protecting large blocks of intact forest is one of the best ways we have to protect these species we know so little about.

Wisconsin's Forests

Of Wisconsin's 35 million acres of land, almost 16 million acres are forested. Currently the area of forestland in Wisconsin represents 46% of the total land area of the state. Fifty-two percent of the forests are privately owned. Once forest industry and Indian forestlands are added, 64% percent of Wisconsin's forestland, or 12.5 million acres, potentially could be eligible for the Forest Legacy Program.

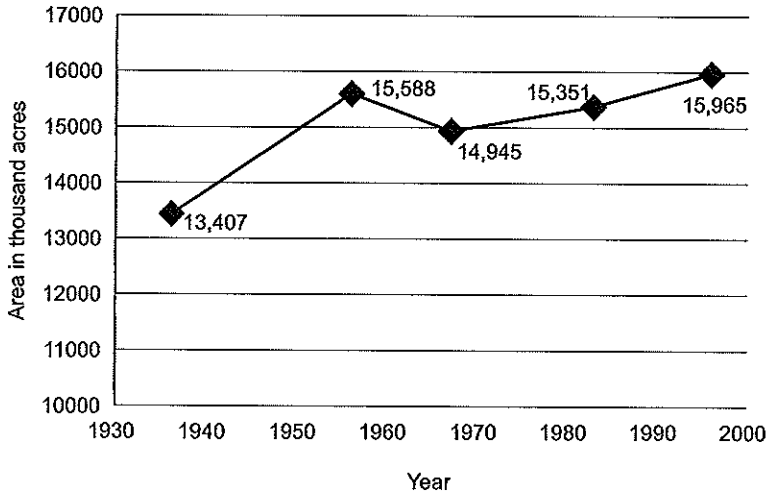
The total area of forested land in Wisconsin has been steadily increasing since 1935, mostly due to the conversion of marginal agricultural land back to forests (See Figure 1). The greatest increase in forestland took place in the northeast part of the state, where about 74% of the land is now forested.

Figure 2 — Ownership of Wisconsin's Forests, 1996



Area of various forest types has changed significantly over time. Most of the increase in area of forestland between 1983 and 1996 occurred in 20 - 80 year old forests. Aspen-birch forests have decreased, maple, basswood, and oak-hickory forests increased, and conifer forests remained roughly the same.

Figure 3 — Wisconsin Forest Area Over Time



The most abundant forest type in the state is the maple-basswood type, with 5.3 million acres. Aspen and oak-hickory also cover large areas, almost 2.9 million acres each. While 84% of Wisconsin's forests are hardwood types, there are significant conifer forests with larger acreages including red pine, jack pine, black spruce, northern white-cedar, and tamarack types (Schmidt, 1997).

Northern Mixed Forest

Glacial activity dramatically influenced the ecology of much of Wisconsin, and the entire Northern Mixed Forest region. Most of the northern area of Wisconsin is a gently rolling plain, punctuated by steeper glacial features and a few ancient pre-glacial escarpments. Tim's Hill and Rib Mountain, the highest points in the state, occur in the northern region. Much of the surface hydrology of the Northern Mixed Forest results from glacial activity.

Northern Wisconsin has one of the highest concentrations of freshwater in the world. The Ojibwe word "wisconsin" actually means "gathering place of waters". Many of the copious lakes and ponds are kettle lakes, or the result of damned glacial outwash streams. Glacial scouring action also created the Great Lakes.

The soils of the north developed from the glacial till overlying the bedrock. They developed under forest vegetation, and tend to be lighter colored than soils further south. Most are loams or silts, fairly fertile, and support complex, well-developed maple-hemlock forests.

Both conifer and broadleaf species characterize the northern mixed forest. Most all of the fairly common native tree species can be found in the region. However, there are usually only a few primary species in any given locale. As the primary species determine the forest type of an area, the typing of an area does not clearly indicate the true diversity.

Fewer people live in northern than southern Wisconsin. Consequently, much of the north remains forested because there is less pressure for agricultural and urban development. Over 70 %of Wisconsin's forests occur in the north, on only a little over 50% of the total land area. Over half of the Northern Mixed Forest region is forested.

Wisconsin's Northern Mixed Forest is owned by a wide array of individuals and organizations. Although there is significant public ownership in the northern forests, the most common ownership class, both in terms of numbers and acres, is non-industrial private owner. County and municipal ownership is also important in the Northern Mixed Forest. Many of these forests were once bankrupt farms that returned to county ownership after the cutover period in the early part of the 1900s. Third largest, in terms of acreage, is national forest land. The Chequamegon-Nicolet National Forest is composed of a number of large tracts located across Wisconsin's northern regions. Forest industry owns 9% of the northern forest, providing wood primarily for the paper industry. Wisconsin is the number one paper-making state in the nation. The State of Wisconsin owns about 5% of the northern forestland — mostly in the state forest system. Indian lands account for about 3 % of the total forestland in the north.

Pine Forest Type

Seven percent (802,000 acres) of the Northern Mixed Forest in Wisconsin is pine forest type. Red pine, eastern white pine, and jack pine are the common pine species that occur in Wisconsin. Forest character can vary from jack pine barrens, to red pine plantations, to thick stands of young white pine, to rare old growth stands with pines hundreds of years old. Other than pines, common associates of pine forests are quaking aspen, paper birch, balsam fir, red maple, white spruce, northern pine oak, and northern red oak.

Savannas

A *savanna* is an ecosystem that is transitional between the eastern forests and the western prairies, having a mosaic of plant communities that represent a continuum from prairie to forest. Grasses and other forbs share dominance with scattered trees. Wisconsin savannas have been called, among other names, oak openings, oak barrens, and oak woodland. Currently there are approximately 500 acres of good quality oak savanna remaining in the state, with some other areas having potential for restoration (Hoffman, 1999). According to the Wisconsin's Natural Heritage Inventory, oak savanna is among the most threatened ecosystems in the world (Noss, LaRoe and Scott, 1997). Important tree species in oak savanna are burr, black, red, and white oak (Curtis, 1959).

The Forest Legacy Program could be an important tool for protecting, maintaining and restoring this important and threatened forest ecosystem.

Oak and Pine Barrens

Smaller areas of sandy, infertile, and droughty soils are very important ecologically. Some support pine barrens, an increasingly rare ecological community although other pine forests, as well as some broadleaf forests, also occur on these sandy soils. Pine barren once covered 2.3 million acres of Wisconsin prior to European settlement. Currently, only about 7% of the presettlement barrens exist (Borgerding, 1995). In the past, oak and pine barrens were often ignored in discussions of Wisconsin's forests, and sometimes considered non-productive areas. However, today they are receiving increased attention as unique and vanishing ecosystems.

Barrens are plant communities that occur on sandy soils and are dominated by grasses, low shrubs, small trees, and scattered large trees. These areas tend to be more susceptible to fire as there is little moisture contained in both the soil and vegetation. In fact, the pine species that grow in these areas have adapted to these unique conditions, fire and all. Oak and pine barrens occur mostly in the northern region of Wisconsin, although there is a significant patch in the central sands area, within and south of the tension zone.

Barrens have experienced a dramatic collapse since intense Euro-American settlement began. Ecologists believe this is in large part due to decreased presence of fire. Much of the central sands area of the state was once periodically covered in jack pine forest and barrens. These tree-dominated vegetation types intermingled and alternated with grass and forb dominated openings that were maintained by fire. Openings succeeded to jack pine dominated communities, lasted for a few decades, only to be subject again to the regressive effects of fire.

Most barrens exist in isolated fragments on protected state or federal land. According to the Natural Heritage Inventory, there are currently about 8,578 acres of pine barrens at 65 sites throughout the state. This may be a slightly low estimate. There are about 1,400 acres of oak barrens in the southern part of the state. Wisconsin's Natural Heritage Inventory lists barrens communities as globally imperiled.

As with the savanna communities, there is an opportunity within the Forest Legacy Program to maintain, protect and restore these ecologically imperiled ecosystems.

Cultural Heritage of Wisconsin's Forests

Cultural resources for a tangible portion of out past. Our knowledge of them enhances our understanding of shared human experience and the accomplishments of our ancestors. The two main categories of cultural resources are archaeological sites and historic structures. An archaeological site is a place with evidence of past human activity. Sites in Wisconsin range in age from 11,500 B.C. to the early 20th century. Types include campsites, villages, garden beds/corn hills, individual burials, cemeteries, mounds, lithic workshops, sugar bushes, tool caches, sacred springs, rock art sites, trading posts, logging camps, homesteads, stone quarries, lead mines, lime kilns, military forts, and shipwrecks. Historic structures, which must be at least 50 years old, include buildings, towers, bridges, tunnels, stone walls, staircases, and stone fireplaces.

The State Historic Society of Wisconsin (SHSW) maintains inventories of cultural resources that have been reported to them over the last hundred years or so by institutions and private individuals. However, since thousands of archaeological sites and historic structures have yet to be reported to the SHSW, these inventories are incomplete. The Archaeological Site Inventory currently lists about 29,500 archaeological sites and cemeteries in the state.

Relatively few of the archaeological sites recorded in this inventory are located in forested areas. This is not because few sites exist. The problem is that sites are more difficult to discover in forested areas than in plowed fields, where artifacts often lie exposed below the surface. Except for submerged sites such as shipwrecks, virtually any type of archaeological site may exist in a forested setting. The types most likely to be listed in SHSW files are: (1) those that are visible without excavation, such as mounds, rock art, marked graves, logging camps, homesteads, quarries/mines, or kilns, and (2) those that are recorded on the basis of historic records and oral traditions such as graves, sugar bushes, trading posts, and nineteenth century Native American campsites.

Some of each type of sites are significant. To be considered archaeologically significant, a site must retain some site integrity and have the potential to offer important information about the past. While forested sites may be difficult to identify, they tend to be much better preserved than sites located elsewhere. In such sites artifacts and cultural features generally retain much of their original context, and it is this context that helps the archaeologist ascertain the history of what has transpired there.

Regardless of archaeological significance, some sites may be significant sacred places. This is particularly true of burial sites (including mounds), rock art sites, certain springs, villages names in tribal histories, and landforms tied to oral traditions. While mounds and rock art sites are relatively easy to identify as cultural resources, other sacred sites are less apparent and the locations may be kept secret unless development threatens.

In evaluating properties under consideration for participation in the Forest Legacy Program, the Department of Natural Resources will take into account the presence of potentially significant cultural resources. Measures to identify such resources will include a check of the Archaeological Site Inventory, an interview with the property owner, tribal notification under 36 CFR 800.3, and a walkover by a forester trained in the recognition of cultural features. In addition, consideration will be given to the property's proximity to waterways that were important routes of travel, where unrecorded archaeological sites are likely to exist.

Aesthetics

Wisconsin's forests are, without a doubt, breathtaking. Anyone who has experienced a Northwoods autumn or strolled through an oak forest can attest to that. We are coming more and more to realize the value that this aesthetic quality has for us. Although it is difficult to assign a specific dollar amount to aesthetics, we know that the natural grace and splendor of our forests is a treasure of inestimable value. We know that we play an integral role in the forest community, and that knowledge also has worth. There is a certain rightness of things to be felt when experiencing a healthy forest. This elusive sensation is valued by many. The relationship we have with the trees, animals, and plants surrounding us imparts a unique appreciation for nature.

Many people value the forest just for existing. Although this is often difficult to express just so, this value has been identified in surveys of Wisconsinites. We like to think of the forest outside of our homes and office buildings and schools and know that it is there, and will continue to offer its bounty to the people of this state for generations to come.

Wisconsin's forests are diverse, productive, extensive, and beautiful. They have helped to define the state's history and will continue to influence it's future. The future forest will also be influenced by the trends already evident in relation to the state's forests. These trends and the current forest conditions define some important issues that will be important to the state.

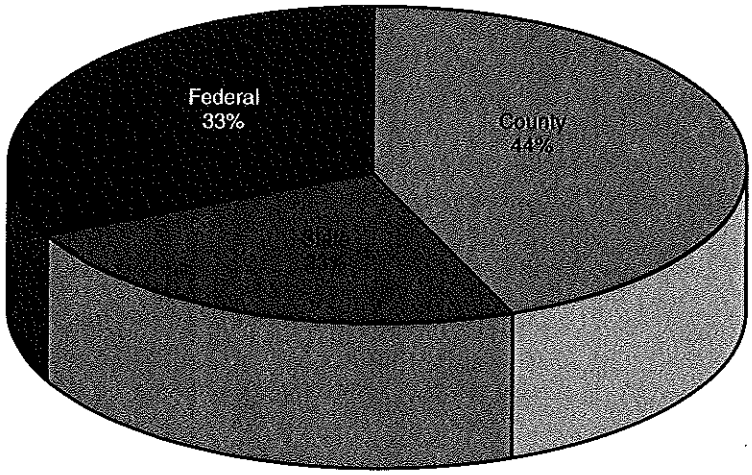
Aesthetics are currently being maintained in the state, so this will not be a priority for the Forest Legacy Program. It is the intent of the Forest Legacy Program to continue practices that balance forest harvesting and aesthetics.

Recreational Land and Uses

Wisconsin forests provide a vast array of recreational opportunities. Some, like hunting and wildlife study, have had a place in Wisconsin since the very first humans arrived. Others, like mountain biking and snowmobiling, are relatively recent phenomena. A large majority of Wisconsin residents participate in outdoor recreation. Wisconsin is a state of hardy outdoor enthusiasts, active throughout the year.

Just as the activities that Wisconsin forest recreationists choose to participate in are wide in range, so too are the land and facilities that are used. All classes of ownership, region, and amenity level are represented in the land used for recreation.

Figure 4 — Public Conservation and Recreation Land Wisconsin, 1998



Ownership of recreational land varies from small county parks to the national forests, from large tracts of paper company land to small private woodlots. Ownership often determines the accessibility of the land for recreation.

Activities

The land people use for recreation varies by recreational activity. Non-consumptive users tend to recreate on state land, and overall, state parks are the most popular recreation sites. Hunters tend to hunt on non-industrial private land. Motorized users are also more likely to use private land. However, all groups use a variety of land, and many individuals use more than one site for recreation.

Table 1 — Wisconsin Forest-based Recreation by Activity and Percent Participation 1998

Activity	Percent	Activity	Percent
Fishing	34.26	Hiking	13.22
Wildlife viewing	27.61	Canoeing	8.56
Camping (tent)	26.93	Cross country skiing	5.37
Picnicking	26.69	Backpacking	5.52
Nature study	21.17	Mt. biking, off road	4.76
Hunting with firearm	19.21	Horseback riding	4.61
Bird watching	18.41	Snowshoeing	1.41
Nature photography	17.03		

Wisconsin forest-based recreation by activity and percent participation (Based on data from the 1998-99 State Comprehensive Outdoor Recreation Plan)

This table indicates the most popular, wholly forest-based, non-developed, recreational activities. In addition to those listed, other activities often take place in or are enhanced by, forests. For many people, much of the appeal of pleasure driving, exercise walking, and jogging comes from being in or near forests.

In general, there are significant, non-developed, forest-based recreational opportunities in the state. These activities include hunting, fishing, hiking, sight-seeing and cross-country skiing. The Forest Legacy Program in Wisconsin will promote the continuation of these low-impact recreational uses. Although the Wisconsin Forest Legacy Program will not require public access, the willingness of the owner to allow public access will be a factor in prioritizing potential purchases in areas where non-developed recreational opportunities are limited or lacking,

Uses of Wisconsin's Forests

Traditional Forest Uses Defined

The State Forest Stewardship Committee recognizes the many traditional uses of the forests. While no one site can support all uses, the idea of multiple compatible uses taking place in a single forest is a valid management framework. This point of view is also appropriate for the Forest Legacy Program.

Traditional uses are uses that have a history of sustaining communities or industries, or uses customary to an area. They include the maintenance of forest ecosystems and their biological resources in order to sustain their full array of species. These include: maintaining fish, game, and nongame wildlife, and plant populations; providing wood products; providing habitats for endangered, threatened or rare species; providing quality outdoor recreational experiences; improving and protecting soil productivity; providing protection of water quality and quantity; and enhancing the biological diversity and aesthetic quality of the landscape.

Past and Recent Uses

Wisconsin's forests are storehouses of vast biologic, cultural, aesthetic and economic treasures. Through Wisconsin's history, forests have played a primary role in supporting her people. The forests of Wisconsin are dynamic, living systems that change with the human demands placed on them as well as through natural occurrences such as succession and severe weather events. People have shaped and defined the location, density, diversity and abundance of flora and fauna in the area since the diminishing of the last glaciers.

In Wisconsin the forests have sustained communities and industries through forest products and associated industries. Specifically these include: harvesting timber for firewood, pulp, veneer, lumber and specialty products; gathering of materials and foods, such as honey, maple syrup, nuts, berries, and other plant parts such as boughs and roots; and pursuing recreational activities such as hunting, fishing, sight-seeing, nature study, photography, cross-country skiing, hiking and camping. Some well-regulated motorized recreation, such as snowmobiles on established trails and providing sites for scientific research can be included as well.

As mentioned earlier, many of the past uses have been disruptive and destructive on a large-scale These include the massive land-clearing and burning for agriculture establishment and the intense lumbering of the early 1900's. Other uses, such as maple syrup production, and Christmas tree production have had local influence in the habitat.

Before European settlement, native people used forests for many of their day to day needs. As new ethnic groups settled Wisconsin, they too, incorporated the forest into their culture.We now enjoy many cultural benefits from the forests of our state. Enjoying festivals centered on our forest communities, food created from forest products, even naming our towns and landmarks after forest features all contribute to building the culture of Wisconsin.

Forests are an especially potent force in many Native American cultures. Many native cultures developed around harvesting plants and animals and living among the forests. Wisconsin hosts a number of Native American communities. The Bad River Ojibwe, Lac du Flambeau, Potawatami, Mole Lake, Lac Courte Oreilles, St. Croix, Stockbridge-Munsee, Oneida, Ho-Chunk, Red Cliff, and Menominee all have long-standing historical ties to Wisconsin's forests. Forest resources continue to play an important role in maintaining the peoples' cultures and spirituality.

A trend that is having a major effect on forest recreation is the increasing use of motorized vehicles. Snowmobiles, ATVs, 4x4 trucks, and motorbikes are seen in Wisconsin forests increasingly often. From 1990 to 1997, snowmobile licenses in the state increased 33%, and ATV licenses increased 50%. Although these participants comprise a relatively small portion of all forest recreationists, their growing number has an impact throughout the forest. The detrimental impacts of motorized vehicles in the forest may include soil erosion and compacting, damage to regeneration and other plant life, destruction of sensitive species, and degradation of habitat.

Landowner Demographics

Wisconsin has an estimated 9.1 million acres of non-industrial private landowners (NIPF) land and approximately 218,000 NIPF landowners. Although countless management decisions are being made daily on these lands yearly that could affect the flora, fauna, water and soil productivity of these lands relatively few landowners seek professional advice. For example, the Department of Natural Resources estimates that only 15-20% of those landowners who ever harvest timber ever consult a natural resource professional for management advice or assistance. According to research published in 1994, only 5% of the private landowners have a written management plan (Birch, 1994).

In general, most people either own forested land for recreation or as part of a residence (Birch, 1994). In Wisconsin, nearly one-third of all private timberland is held by owners who have fewer than 50 acres (Leatherberry, 2000). This creates concerns about timber production because, in general, these smaller tracts cannot be managed effectively as sustainable timber-producing units.

Overall, individual forest landowners are employed in a variety of occupations with 21% employed as white-collar workers; 18% blue-collar workers; and 13% farmers. Retirees account for over one-fourth of the individual landowners, and as a group, they hold nearly one-fourth of the privately owned timberland in Wisconsin (Leatherberrry, 2000). It follows that then that one-fourth of Wisconsin's timberland will be changing hands in the next 10-20 years with accompanying changes in management goals.

Dominate vegetation, parcel size, and primary use all differ from north to south across the state. Most of the forest exists in the northern 1/3 of Wisconsin where largely unbroken tracts of forest dominate the landscape. Land ownership in the northwest averages 45 acres per landowner while in the northeast the average is 66 acres per NIPF landowner (Leatherberry, 2000).

Most of Wisconsin's Managed Forest Law (MFL) lands are found in the north. The MFL is a landowner incentive program designed to encourage sustainable forestry on private woodlands in Wisconsin through offering property tax reduction in exchange for forest management and public access to the land. The public benefits are forest products and recreation. This program requires that landowners who enter into the program have a majority (80%) of their land classified as "productive" forest, have a comprehensive multi-resource management developed, will harvest as deemed necessary by the DNR forester, will keep open their land to non-developed public recreation, and pay the state a portion of the returns from timber sales.

In southern Wisconsin the landscape matrix is much more open, dominated by farms with patches of forest stands. Ownerships are typically much smaller in size. The average parcel size for the southeastern portion of the state is 17 acres (Leatherberry, 2000). Most lands are or were farms, and true habitat type is largely masked by repeated disturbances to the forest.

Forest industry owns another 7% of the forests in Wisconsin (Figure 2). This land is largely in the north or west-central region and is focused on timber production and is held in larger tracts. However, recent pressures are causing the large industrial blocks to go on the market (see the next section on changes in ownership and the section on threats for more information). As these lands are being sold in the regions they are being sub-divided in to smaller units, mostly for second homes. Information compiled from the USFS shows the highest percentage of second homes in the northern and central regions (see Map 3).

Changes in Ownership

Over 90% of the industrial lands have changed ownership in the last few years. In recent history these have represented significant land blocks of private land and have been diverse in location, soils, topography and habitat. This trend is resulting in an increase of development, particularly where these lands have lakes or streams, and a decrease in the area of continuous forest. Even in instances where one industry has sold to another, management changes significantly and the companies often are forced to sell the most desirable portions for recreation or home development. Another result is that these acres, formerly open to the public for hunting and recreation, are closed. The following are examples of sales in just the last few years:

Goodman Forest Industries sold 1000 acres in Silver Cliff - Marinette County, in Fall 1998.
It has since been subdivided in 80-acre parcels.
Tigerton Lumber Company sold 54593 acres in the summer of 1998.**
Champion International sold 9,952 acres in June 2000.
Lake Superior Land Company sold 67,362acres in June 2000.
Consolidated Papers sold 322,979 acres in September 2000.*
Four States Timber Ventures sold 158,587 acres (approximate breakdown):
80,000 acres Tomahawk Timberlands (to be managed)
26,000 acres Tomahawk Highlands (to be sold)
14,000 acres to various investors in above firms
30,000 acres to Wachovia Bank (held in 4 separate ownership accounts)
30,000 acres State of Wisconsin (The Great Addition)
The Timber Co may sell 228,097.89 acres, announced summer 2000***

* - Consolidated has just sold off 9,000 acres to various individual bidders.
** - Still known as Tigerton Lumber Co management has changed. 1440 acres w/drawn for a hunting preserve, and outlying lands listed with various real estate agencies.
*** - Not official as of this printing

Landowners as well are changing. New landowners tend to be younger, better educated, and earn more than a decade ago (Birch, 1994). This trend has been interpreted to mean that these landowners may be less interested in harvesting because they do not need the income and the increased education has raised their environmental concerns about harvesting (Marcin and Skog, 1984).

As indicated on Map 3, second homes are having a significant impact on the forests in the northern and central parts of the state. This trend is expected to increase, creating more fragmentation and parcellization in these areas as city residents purchase vacation homes in Wisconsin's Northwoods.

Recreation pressures are also increasing as many new landowners choose to close their land to the public. Industrial lands once under MFL or former tax law programs allowed access for hunting, fishing and non-motorized recreation. As these lands are sub-divided and not longer eligible for the state tax programs, the public access is being lost as well.

Finally, the current tax assessment formulas tax recreational and forest land the heaviest. In the year 2000 when agricultural land assessments went down, forest land and wetland assessments went up 26% and 13% respectively. High property taxes are one of the leading reasons landowners sell their land.

Economic Impacts

In many parts of the state, forests are a base of the economic activity. Both tourism and timber production contribute significantly to the state's overall economy. Other, less quantifiable, economic returns of forests include environmental benefits like carbon sequestration, erosion control, and heat mitigation. Forests also have an impact on land values and business recruitment.

Estimating the economic impacts of forest use raises a complex set of issues that are only partially addressed through traditional means. The reasons for this are many. Two primary difficulties specific to forest resources include the simple facts that: 1) forests provide the raw material for a substantial amount of economic activity but they are not the sole input into the production process; and 2) many of the values we associate with forests are of a non-market value.

In analyzing the contributions of forest resources and activities to economic growth, it has been argued that a more accurate view of the situation could be achieved through a more 'green' accounting structure that integrates the level and quality of resource stocks into regional economic models. Unfortunately, models integrating these ideas have not yet been developed.

However, analyzing two clearly forest-based economic activities, it was found that in 1994, roughly 12% of the Gross State Product and 18% of the jobs in Wisconsin are somehow tied to either wood-based industries or tourism sensitive sectors.

A simple measure of the resource stock can be inferred from the ratio of growth to removals of timber. A value greater than one indicates a growing resource base, less than one indicates a shrinking base. Statewide, Wisconsin's growth to removals ratio is above one. Therefore we know that the forest resource base is expanding in the state as a whole.

Whatever method is used to calculate the exact contribution of forest-based economic activity, it cannot be denied that forests provide the primary means of support for many families in Wisconsin. Forest-based activities have a dramatic effect on the viability of regional households in both rural forested regions and in regions where wood-based manufacturing is prevalent. The employee compensation (wages paid to workers) portion of value added accounted for approximately 25% of total wood products output and 35% of tourism-sensitive output. Average jobs in tourism-sensitive sectors earned almost $11,000 per year while wood-based industries paid approximately $36,800 per year. These figures are compared to average statewide earnings per job of almost $25,000 per year.

Regional Differences

The forest that these economic activities rely on is extremely varied in extent and character throughout the state. It follows that there are significant regional differences in both the extent and character of timber related activity and tourism, as well.

For example, even though much of the reconstituted wood products sector (paper-making) is focused on the southeastern region, wood-products and tourism sensitive sectors account for only about 10% of this region's output. In northeast Wisconsin, on the other hand, almost 30% of the regional output is somehow tied to wood products and tourism.

Indeed the central and northern parts of the state are much more reliant upon wood products and tourism sensitive firms for regional economic activity when compared to the southeastern portion of the state.

Wood-based Industries

Traditionally, forest-based economics has referred to the wood-based industries. Logging and papermaking are intertwined with the state's economic and cultural history. What is now termed the "wood-based industries" - timber production, primary and secondary wood processing and reconstituted wood products production - is still a very important portion of Wisconsin's economy.

Timber production is the growth of trees, the annual output of which is reflected in the stumpage values of removals. (Stumpage value is a measure of the pre-harvest value of standing timber. It is the value of the timber to the owner.) Primary wood processing begins with timber harvesting (logging) and includes sawmills and other primary log processors. Secondary wood processing includes the value-added sectors of turning dimensional timber into final use products such as wooden cabinets or furniture. Finally, reconstituted wood products include those industries that reconstitute wood fibers into final products, examples of which include fiberboard manufacturing and the pulp/paper industry.

Table 2 — Selected economic characteristics for wood-based sectors(State of Wisconsin, 1994)

	Industry output (MM$)	Employee compensation (MM$)	Employment (# of jobs)
Wood-based sectors			
Timber production	209.001	34.303	3152
Primary wood processing	956.862	152.635	7346
Secondary wood processing	3412.918	954.96	37925
Reconstituted wood products	10346.688	2510.89	50895
Total in wood- based sectors	**14925.469**	**3652.788**	**99318**
Total (all sectors)	**242,514.17**	**76201.309**	**3070532**

In 1994, timber production provided a partial basis for primary, secondary and reconstituted wood products sector activity that accounted for approximately 6% of Wisconsin's gross state product (roughly $15 billion of $242 billion). The bulk of timber production appears to occur on non-industrial private forest lands with a surprising amount of sawtimber value being realized in the southwestern part of the state.

The market value of timber is influenced by the species or type of tree harvested the size or product class, and the harvest costs. In general, hardwood species are more valuable than softwoods. Some of the more valuable species include red and white oak, walnut and hard maple. Less valuable hardwoods include aspens, birch, and soft maples. Softwood species (conifers) tend not to vary as much in value from species to species.

Table 3 — Value of annual timber removals in Wisconsin in millions of 1996 dollars

Ownership type and product class	NW	NE	CTRL	SW	SE	Total
Public forests, federal						
sawtimber	3.063	10.829	0.459	0	0	14.351
pulpwood	2.216	2.426	0.38	0	0.059	5.081
Public forests, state						
sawtimber	0.974	0.648	1.539	0.548	0	3.709
pulpwood	0.225	0.406	0.528	0.009	0	1.168
Public forests, county						
sawtimber	3.707	1.666	2.376	0.004	0	7.753
pulpwood	1.829	2.436	1.715	0.06	0	6.04
Private forests, industrial						
sawtimber	2.76	8.481	0.195	0	0	11.436
pulpwood	1.435	1.5	0.144	0	0	3.079
Private forests, non-industrial						
sawtimber	11.754	18.828	50.226	51.21	8.369	140.385
pulpwood	4.847	4.457	5.239	1.745	0.701	16.989
Total	**32.81**	**51.677**	**62.801**	**53.57**	**9.129**	**209.991**

Size of harvested trees is another important feature as it determines what uses the timber is suited for. The larger and more valuable size class is called sawtimber, and timber that meets the sawtimber size requirements is used for veneer and dimensional uses. Pulpwood, or poletimber, is the other, less valuable, size class. Pulpwood is used in reconstituted wood products and paper-making.

The cost associated with harvest and marketing is the third element determining timber's value. Generally, transportation cost is the largest determinant in the cost of harvest. This is directly influenced by how far away the timber is harvested from its destination.

With respect to tourism sensitive sectors, tourism retail sectors dominate with almost $10 billion of output and roughly 350,000 jobs. To be sure, the jobs in tourism retail are not the same types of jobs offered by the reconstituted wood products sector. In general, tourism retail jobs are more apt to be seasonal, part-time and pay relatively lower wages than manufacturing jobs.

Recognizing the connectivity of forest-based tourism and the wood-based industries can help managers and planners understand more fully the many economic benefits of the forests. Because both activities rely on the same resource base it will become more and more important to coordinate activities in a way that will allow many uses of the forest.

Environmental Values of Wisconsin's Forest

The Forest Legacy Program requires that the states define both "environmentally important forest" as well as each of the environmental values listed on page 3. The term "environmental values" used by the USFS was thought to be too limiting a term. The Forest Legacy Sub-committee saw that the values listed under this heading played much larger roles than the term conveyed and decided to use an expanded term, recognizing the social and economic contributions of these values as well as the environmental. The following is the agreed upon definition developed by the Forest Legacy Sub-committee and adopted for public review by the Forest Stewardship Committee. These definitions were critical in identifying the Forest Legacy Areas outlined in this document.

Definition of "Environmentally Important Forest"

Environmentally important forest lands in Wisconsin are those areas having large forested blocks, including industrial forest blocks, that offer opportunities for the continuation of traditional forest uses such as timber harvesting and undeveloped recreation. Other contributing factors include protecting rare species of plants, animals and communities, carbon sequestering, wildlife habitation, stream/lake buffering, and conserving habitat diversity. These lands sustain productive, high-quality forest ecosystems, which can support the commercial forest industries, and other traditional economic enterprises or which contain forest resources deserving of protection. Such ecosystems and uses can best be sustained within large blocks of forest cover, which are reasonably intact. These large blocks often consist of multiple ownerships. The Forest Stewardship Committee is most concerned that these large blocks continue to remain as intact forest systems and are not converted to non-forest uses.

Ecological, Social, and Economic Values

The foundation of Wisconsin's forest industry, other forest-dependent enterprises, and the biological health of the state's wildlife, fish, and environment depend on ecologically healthy forest lands. Thus, the ecological values of these forests sustain all other economic and social values. While Wisconsin's forests are healthier than a century ago, they could be compromised by unrestrained development and poor management. This could be prevented through the use of easements and forward-thinking policies.

Wisconsin's forests are diverse, productive and beautiful. Hundreds of thousands of individuals rely indirectly or directly for their livelihoods on these forests, and many more seek solitude, recreation, sport, and relaxation within the forest boundaries. This rich legacy is currently threatened in many areas of the State and deserves protection before permanent conversion to other uses occurs. The Forest Legacy Program will be used to identify at-risk lands that meet the criteria established and contain at least two or more of the values discussed below.

The following values are defined and addressed within these environmentally important areas:

Opportunities for Traditional Forest Uses - large expanses of forested areas, rich in diversity of species, habitat and topography, capable of supporting high-quality timber, recreational opportunities, hunting and wildlife viewing, and gathering of forest products.

Known Rare Species - large expanses of forested areas diverse in species habitats and topography, thus increasing the chances of offering the habitat requirements for rare species or, forests that contain known occurrences of State or Federally listed threatened, endangered or rare species.

Known Cultural Resources - large expanses of forested areas rich in diversity, encompassing historical human migration routes such as rivers and old trails or forests that contain known cultural resources.

Fish and Wildlife Habitat - large expanses of forested areas rich in diversity that are capable of supporting diverse populations of wide-ranging mammals, forest interior bird species, and a variety of forested habitats.

Riparian Areas - large expanses of forested areas rich in diversity that offer the opportunity to buffer and protect the numerous inland lakes and streams of the area.

Scenic Values - large expanses of forested areas rich in visual diversity and topography that contain a corridor for viewing, such as a scenic byway, road, river, or lake.

Public Recreational Opportunities - large expanses of forested areas offering the opportunity for water-based recreation such as lakes and streams that encompass regionally important trails or for which a trail system is planned.

Threats to Wisconsin's Environmentally Important Forests

In discussing the definition of Wisconsin's environmentally important forests, it was clear that considering both internal and external threats to the sustainability of these forests was integral to their identification and protection. These threats are impacting the lands within the selected Forest Legacy Areas. The threats that contribute wholly, or in part, to the fragmentation and loss of the contiguous blocks of forest system include:

Homes and residential development within the forest. There is excessive development pressure in the forested portions of the state, particularly where the presence of lakes and streams increase the recreational potential of these lands.

High property taxes. Forestlands are being assessed on the highest value use of that land rather than current use. The high property taxes are forcing many private and industrial landowners to sell their land to developers.

Rapid turnover of property. Items mentioned above are leading to a more rapid turnover of property ownership than in the past. This, in turn, results in owners who have no long-term connection to the property and who are less interested in sustainable forestry practices and principles.

Forest industry restructuring. Forest industries have been a major property owner in many areas of the State, particularly in the north. Companies are trending towards less land ownership and selling off their land holdings. This may further fragment forest ownership and forest cover.

Urban sprawl. The metropolitan areas are expanding into Wisconsin's forests. These bring homes, utilities, shopping and other amenities, further fragmenting the forest cover.

Easy access from metropolitan areas. The metropolitan population finds easy access to recreation in Wisconsin's forests. This recreation includes summer homes as well as other developed forms of creation. Such activities contribute to the fragmentation of Wisconsin's forests.

Changes in State on-site waste disposal codes. Recent changes will make the construction of disposal systems in many important forests possible. This, in turn, encourages development within the forest leading to more parcellization and fragmentation.

Deer populations. When forest fragmentation occurs, the accompanying openings and landscaping, creates ideal the situation for deer populations to rise to abnormally high levels. This negatively impacts forest regeneration. Favorite woody species that white-tailed deer consume include northern white cedar, hemlock, basswood, white pine, yellow birch, sugar maple, red maple, aspen, oaks, white ash, and shrubs such as Canada yew, brambles, mountain maples, dogwood, viburnums, and hazel. Those species which are known to be very sensitive to deer browse include northern

white cedar, hemlock, yellow birch and yew. Deer also eat many herbs. These include at least 70 plant genera, not counting the most popular - grasses and sedges (Christoffel, 1998 and Vander Zouwen et. al., 1995).

Wisconsin's Forest Legacy Areas (FLAs)

The Forest Legacy Areas must meet the National Eligibility Criteria in order to qualify for participation in the Program. Wisconsin selected and defined the Forest Legacy Areas (FLAs) in the state by applying the national criteria, listed on page 2, and then refining them further to meet the state's requirements. The areas must meet the above mentioned definition of being an environmentally important forest, contain two or more of the environmental values detailed above, and be threatened by one or more of the above listed threats.

Additional Criteria for Selecting Forest Legacy Areas

Meeting the national criteria was used as a starting point for selecting Wisconsin's Forest Legacy Areas. The FLP Sub-Committee chose to refine the selection even more in order to better target efforts and dollars where they would have the most positive impacts. Therefore, the FLP Sub-committee then imposed the following selection criteria to further refine and define the areas to be included in the Forest Legacy Areas.

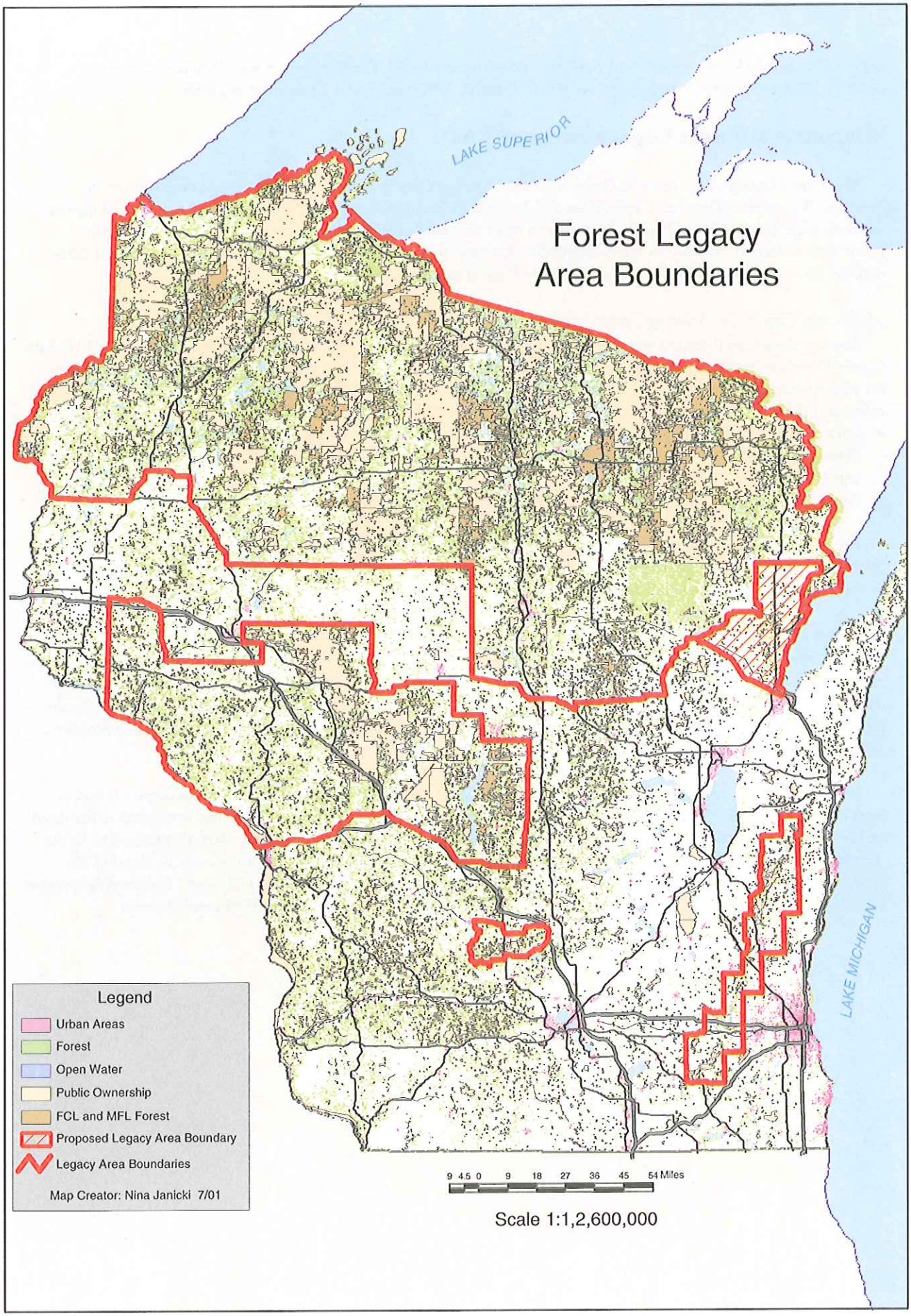
- Large blocks of forest land being defined as those that are regionally or nationally significant or able to support diverse populations of wide-ranging mammals, forest interior bird species, a diversity of communities and/ or a variety of forest habitats.
- Areas that meet the above criteria and are deemed threatened by conversion at a regional level.

Proposed areas were evaluated against all the above mentioned criteria with the more of the criteria that were met, the higher the importance of that area. After much discussion and public involvement, the following areas were selected as meeting the above criteria and should be considered as Forest Legacy Areas.

Summary of Issues

Generally, Wisconsin's forests are healthier and more productive than they were 100 or even fifty years ago. However, the pressures to develop, fragment and parcelize continue to increase even as the demand for wood products increases and the appreciation of protecting intact systems grows. The best way to meet the present and future demands for the products and amenities that private forests provide is to maintain the forests in large enough blocks to make economic and biological sense.

In selecting areas, this assessment focused on the ecological values and opportunities for economic uses found in large contiguous forest blocks. These forests form the foundation of the timber industry and the ecological values listed earlier – product-producing forests, birds and other wildlife, fish, diversity, and clean water. They also needed to fit our description of environmentally important forests and be viewed as threatened according to our criteria listed in the earlier section. Map 1 shows the proposed Forest Legacy Areas for Wisconsin, while Maps 2, 5, and 6 show enlargements of the individual legacy areas.reation. Such activities contribute to the fragmentation of Wisconsin's forests.


LAKE SUPERIOR
Forest Legacy
Area Boundaries
LAKE MICHIGAN
Legend
Urban Areas
Forest
Open Water
Public Ownership
FCL and MFL Forest
Proposed Legacy Area Boundary
Legacy Area Boundaries
Map Creator: Nina Janicki 7/01
9 4.5 0 9 18 27 36 45 54 Miles
Scale 1:1,2,600,000

Overall Goals of the Forest Legacy Areas

Within these areas the goal of the Forest Legacy Areas is to protect those values and attributes that led us to designate the area as environmentally important. Specifically, these goals include:

- Maintain the ability of the forest to produce forest products on a sustainable basis.
- Maintain other traditional and non-destructive uses, protect important fish and wildlife habitat.
- Protect existing cultural resources, protect or enhance rare or unique habitats and their associated species, protect watershed, increase the amounts of continuous forest by maintaining or creating large blocks of forest protected from fragmentation.
- Create public use opportunities where appropriate.
- Reduce forest fragmentation by retaining large blocks of forest or by connecting to existing protected lands.

Protection and Maintenance of Goals

Protection and maintenance of these areas are central to the success of the program. Therefore, tracts be protected and maintained. In addition, the following standards will be applied when working in any of the FLAs.

- Acquisition of conservation easements is preferred to full-fee acquisition. However, in situations where a conservation easement is not appropriate or possible the Forest Stewardship Committee will consider recommending full-fee acquisition.
- Acquisition will be held by the State under the FLP State grant option.
- Acquire development rights on all tracts. This would include the rights to subdivide, construct buildings, control utility right-of-way locations, and development of permanent access roads.
- No disposal of waste or hazardous materials will be allowed.
- Restrict the development of mining, drilling of mineral, sand, and gravel pits to sole use by the property owner, and to locations, and sizes, where such mining or drilling would not damage or impair water quality or other protected resource values.
- Public access is preferred for most tracts, but will not be required, especially in cases where there are rare communities or species which could be damaged by public access. Where public is desirable, the FSP Committee will make applicants aware that landowners who will allow non-motorized public access will receive a higher ranking than landowners who restrict their land from public access.
- All tracts where either conservation easement or fee-purchase is used will have a comprehensive, multi- source management plan developed and used. These will be approved by the State Forester or her/his designee.
- The management plan will identify and address all property values of significance on the property and will be updated at least every ten-years.
- All plans will contain a monitoring plan which identifies the monitoring agency, parameters to be measured and frequency of monitoring.
- Any timber or forest products harvesting will be subject to a harvesting plan approved by the State Forester or his designee.
- Water quality best management practices (BMP's) will be applied to all practices initiated in the property.

The North
Forest Legacy
Area Boundaries
LAKE MICHIGAN
LAKE SUPERIOR
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Urban Areas
Forest
Open Water
Public Ownership
FCL and MFL Forest
Proposed Legacy Area Boundary
Legacy Area Boundaries
Map Creator: Nina Janicki 7/01
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Scale 1:2,200,000

The Forest Legacy Areas

1. The Northern Forest Legacy Area. Although this area includes much of the northern part of the state, measured against Wisconsin's criteria, the forestland here meets the definitions of environmentally important and threatened. As shown in Map 2, it includes tribal lands, industrial forest blocks, federal (Nicolet), state and county forest blocks. Appendix B contains a list of all the counties and townships contained within this area This region offers the full array of northern forest species and communities north of the tension zone. The lake shore supports unique communities and species; the rich interior supports mixed northern ardwoods, while the sandier western portions are prime habitat for pine and oak. Within this area the following forest communities can be found: Northern wet forest, northern mesic forest, boreal forest, northern dry mesic forest, northern dry forest, and pine barrens.

This area meets all the federal and state criteria plus the additional criteria developed by the FLP Sub-committee. Purchases in this area could tie together significant portions of public and private land. It also meets the criteria of being under threat of conversion, contains regionally and globally important habitat, a diversity of communities, and supports a vast array of species including interior forest birds.

The large acreages of Managed Forest Law (MFL) land contained in this area, both industrial and non-industrial, are under tremendous development pressure for homes and recreation in this portion of the state. But this is only a 25 – 50 year agreement. Once the land is subdivided and developed it is no longer eligible for this program.

Map 3 is based on recent USDA Forest Service data and shows the predominance of second homes in this region. The forest and predominance of lakes and streams recreates an attractive vacation home setting. Many large landowners are feeling pressured to sell parts of their larger blocks as they get taxed at increasingly higher rates.

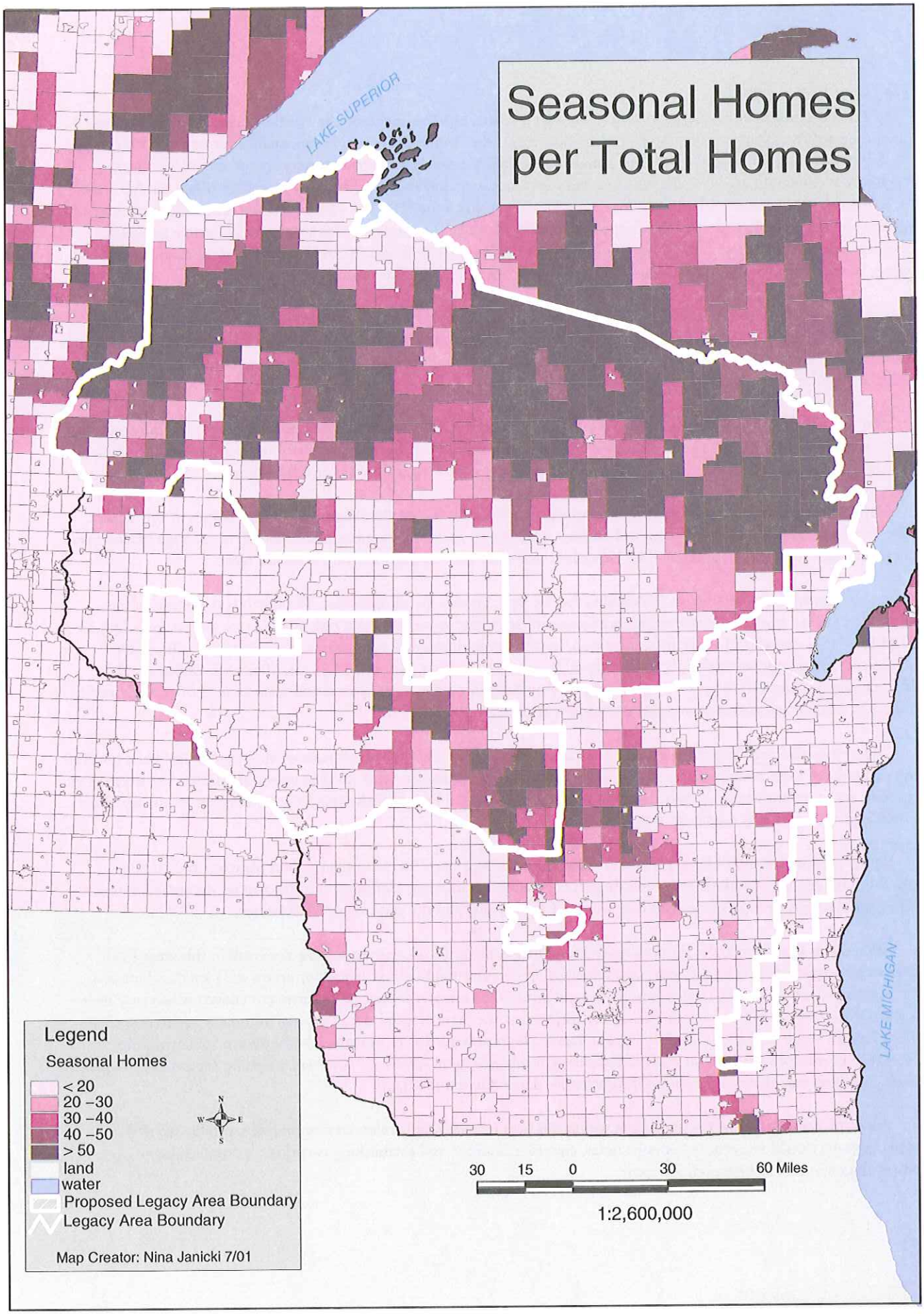
As mentioned in the section on Wisconsin's forests, pine barrens are globally rare. The northwest portion of this FLA contains the greatest concentration this ecosystem anywhere as well as some unique indicator species including 15 herpitile species considered to be at the northern, northeastern, or northwestern fringe of their habitat. Other pine barren restoration opportunities occur with the FLA as well in Oneida, Lincoln, Florence, Marinette, Oconto, and Menominee counties (See Map 4). Research shows that landscape scale management and maintenance of connections is critical to maintaining and restoring this community (Borgerding, et al. 1995).

This area is also part of the largest bird-breeding center in the U.S. The large forests of this region have been listed as important habitat for breeding song-bird populations while the numerous lakes provide important habitat for bald eagles, ospreys, and common loons (Albert, 1994). The State and National Forest lands within the boundaries are managed for both large mammals and migratory songbirds.

Public support for the FLP in this region came from the Northern Rivers Initiative, local planning and zoning officials and individual landowners responding. It is consistent with areas identified as important by the public in two other forest assessment processes, the Forest Land Legacy study and the state Forest Assessment.

Since this is a large area, the Forest Legacy Program will identify and activate smaller areas within this large FLA based on targeting efforts by the State, opportunities (large industrial holdings being put up for sale) and local interest. Activation will only occur in areas where public and local DNR support is strong. Government entities which may have management responsibilities include the county forests and the State Natural Areas. Non-government agencies such as The Nature Conservancy, The Trust for Public Land, The Northern Rivers Initiative, the Northern Initiatives, the Northern Governor's Council on Natural Resources, local Society of American Foresters chapters, Trout Unlimited, and forest industry, may share in the monitoring activities depending on the tract.

Values of central interest for protection within this area include rare habitats or communities, productive timber lands, non-developed recreational opportunities, cultural resources, and establishing corridors or connections of forest where fragmentation is beginning to occur.


Seasonal Homes per Total Homes
LAKE SUPERIOR
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Proposed Legacy Area Boundary
Legacy Area Boundary
Map Creator: Nina Janicki 7/01
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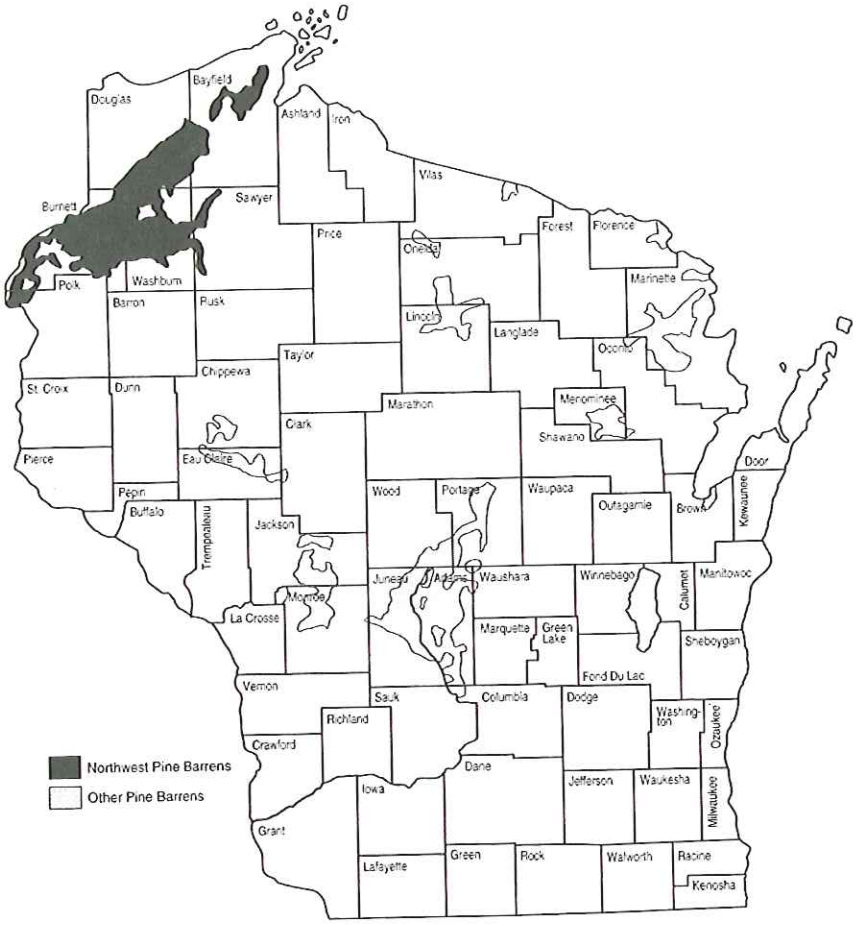
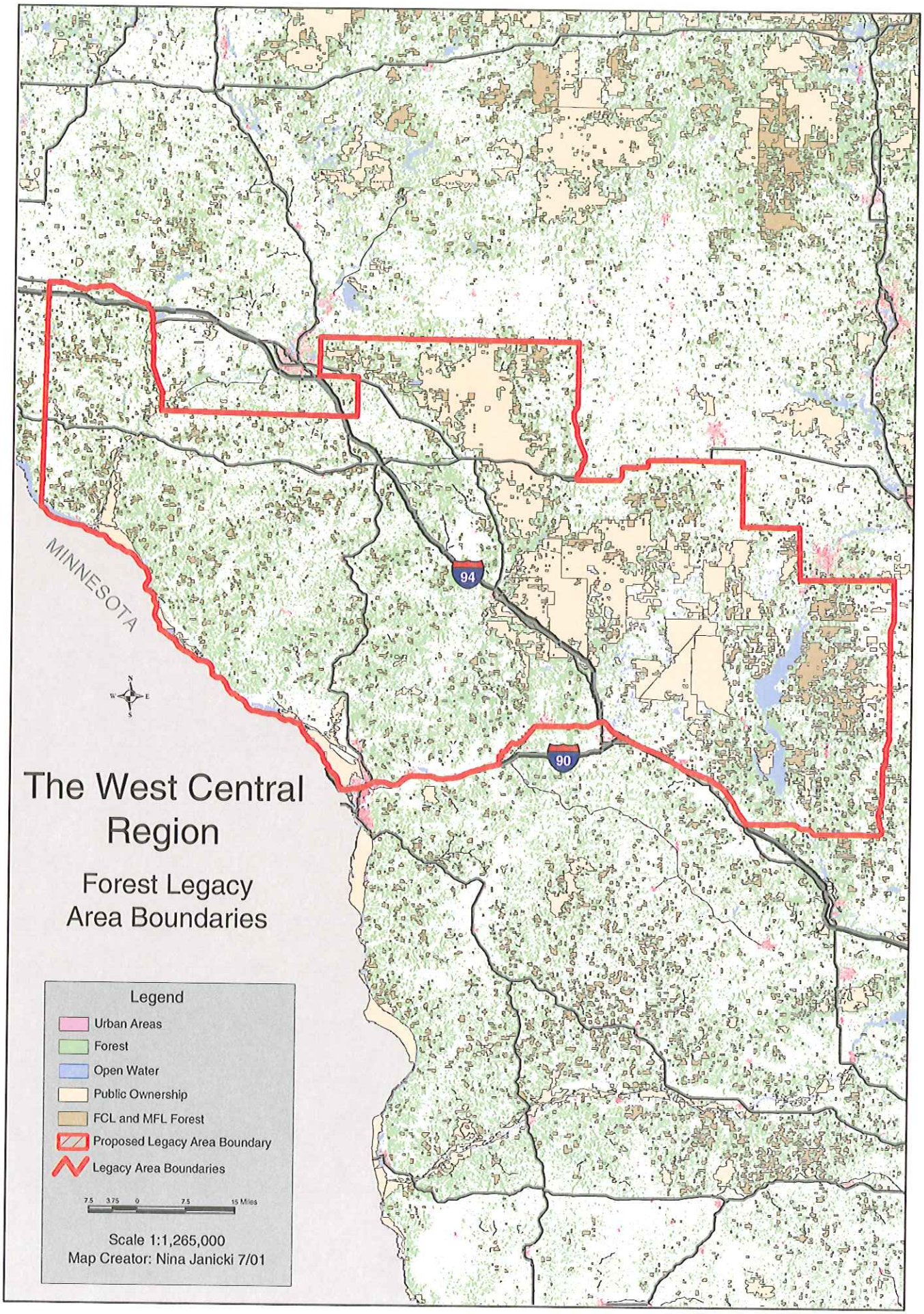
Figure 5. — HISTORICAL PINE BARRENS IN WISCONSIN




MINNESOTA
94
90
The West Central Region
Forest Legacy Area Boundaries
Legend
Urban Areas
Forest
Open Water
Public Ownership
FCL and MFL Forest
Proposed Legacy Area Boundary
Legacy Area Boundaries
7.5 3.75 0 7.5 15 Miles
Scale 1:1,265,000
Map Creator: Nina Janicki 7/01

2. The West Central and Central Sands Forest Legacy Area. This also meets all the criteria for inclusion as a Forest Legacy area. Map 4 shows the boundary locations while Appendix B provides a listing of the counties and townships contained within this unit. Large blocks of industrial, non-industrial and public lands dominate the eastern sands portion of this area, while prime central hardwood forests and the unique landforms of the Driftless Areas characterize the western portion. The topography is steep in the west, featuring loess-capped plateaus and bluffs dissected by river valleys.

While many of the same forested communities may be found in this region, the boreal forest drops out and there are some additional communities. The northern mesic forest – Driftless Area is a relatively rare community found here and in the Baraboo Hills. It is may be dominated by tall hemlock and has a mixture of both northern and southern species in the understory.

Additional uncommon forest communities that may occur here are the northern wet-mesic – white pine forest and the pine relict. Unlike the wet mesic forests of the north (cedar swamp), the wet-mesic – white pine forests are composed primarily of white pine and red maple. The pine relict is dominated by white pine, red and even jack pine, occurring only in the Driftless Area. Also appearing, but far more common are the southern mesic forest, the southern dry forest, and the southern dry mesic.

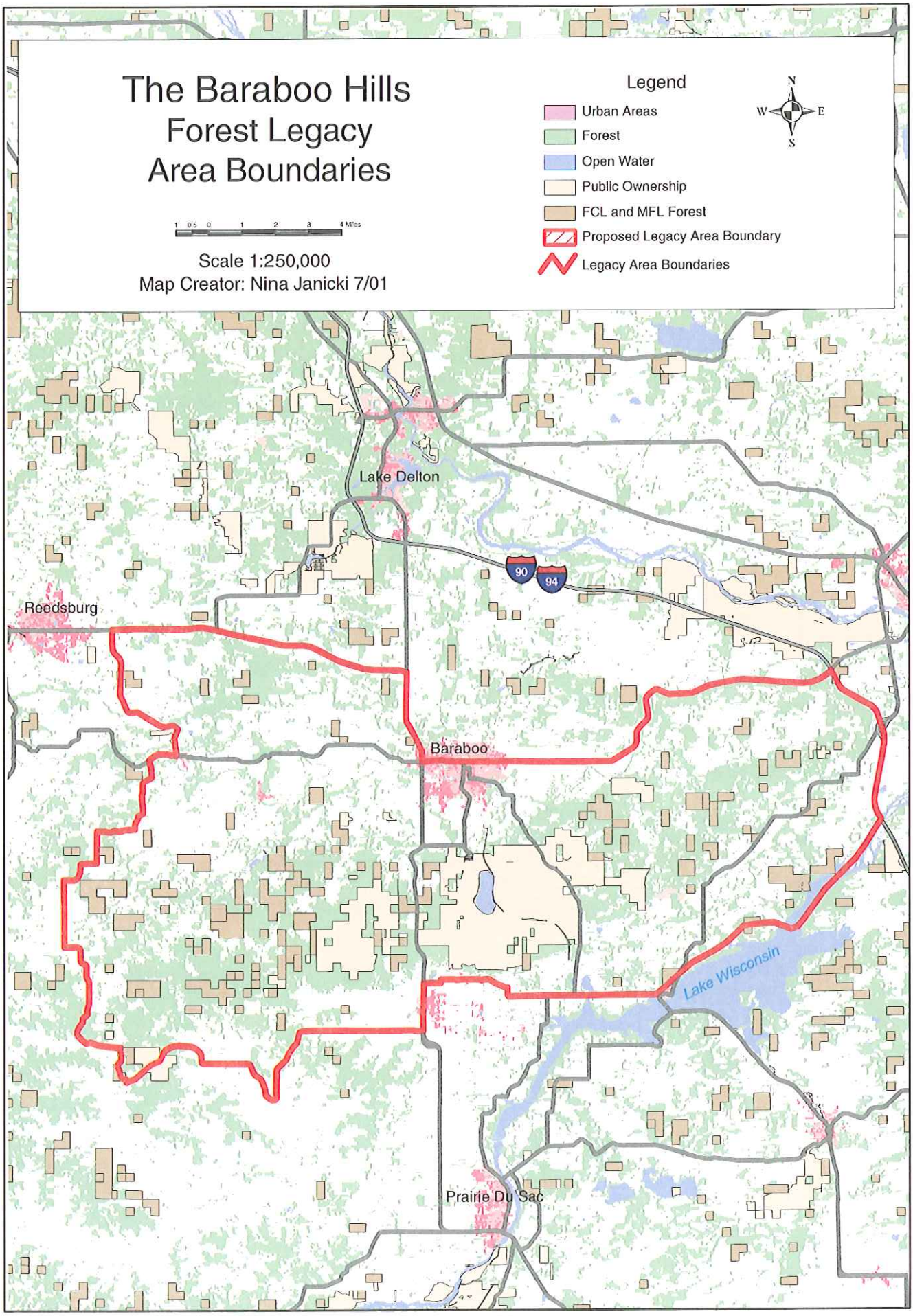
Conversion pressures are present from all sides of this area. The major and minor river, streams and lakes are important water resources for this state and others and are the focus of intense recreational and development pressures. Large wetlands, some of which still remain in natural vegetation, are threatened as well.

This FLA also contains remnants of pine and oak barrens, although with slightly different characteristics and associated species than the NW pine barren. The barrens breeding-bird populations are combinations of species that are characteristic of dry prairies, hardwood and conifer forest edges. Many species reach their greatest statewide abundance in these barrens (Borgerding, et al. 1995). River barrens, an oak barren unique to this FLA and the state, occur on sandy terraces along the lower Chippewa River and occasionally along the Mississippi River.

Other rare communities can be found within area as well with accompanying rare flora and fauna. A rare natural community, algific talus slope, is found only along the tributaries of the Mississippi River in the region. Rare prairies and savannas, once common on the ridge tops, persist locally. Examples of these include bluff prairies, dry oak savannas and dry prairies (Albert, 1995).

The Forest Legacy Program will target and activate areas within this large area based on targeting efforts by the State, opportunities (large industrial holdings being put up for sale) and local interest. Only areas where public and local DNR support is strong will be activated. Government entities, which may have management responsibilities, include the county forests and State Natural Areas. The Nature Conservancy, The Trust for Public Land, local Society of American Foresters chapters, Trout Unlimited, and forest industry, are among the non-governmental agencies.

The values to focus on in this area include rare habitats or communities, rare species, productive timber lands, non-developed recreational opportunities, establishing corridors or connections of forest where fragmentation is beginning to occur and water quality.


The Baraboo Hills
Forest Legacy
Area Boundaries
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Scale 1:250,000
Map Creator: Nina Janicki 7/01
Legend
Urban Areas
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Open Water
Public Ownership
FCL and MFL Forest
Proposed Legacy Area Boundary
Legacy Area Boundaries
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Baraboo
Lake Wisconsin
Prairie Du Sac

3. The Baraboo Hills Forest Legacy Area. This area meets all of the established criteria. Athough individual tracts are smaller than in the northern portions of the State, the term "large" is relative; tracts are large for this region. The tracts within this area are significant in the role they play for flora and fauna, the underlying structure of the area is unique, and past work of conservation groups as established connectivity with the area that FLP can augment. The area has national and even global significance, established private landowner programs and conservation groups in the area and contains some unique habitats for this part of the state. Map 5 shows this area.

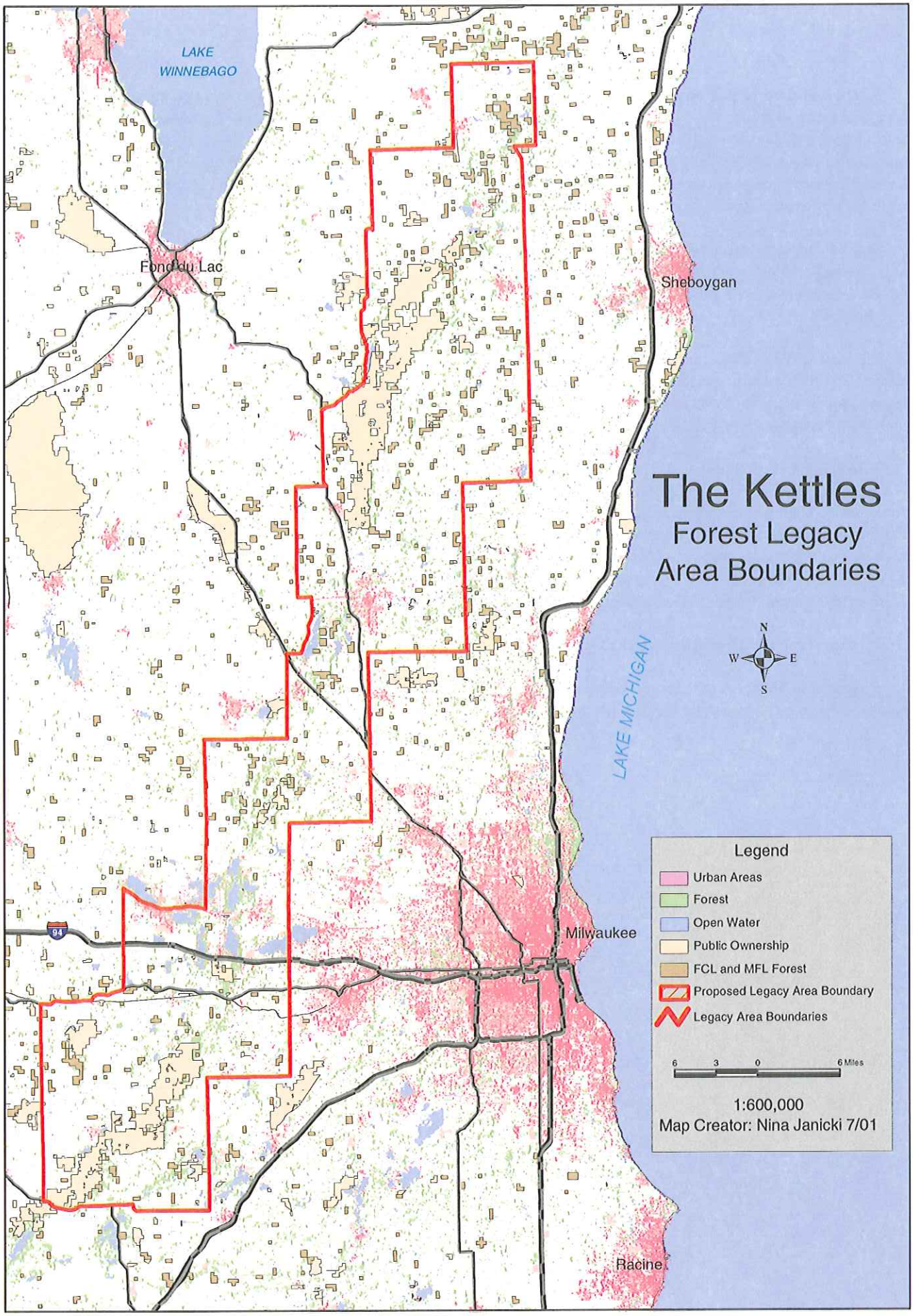
The Baraboo Hills area encompasses 144,000 acres in an elliptical shape. It is approximately 27 miles long and 14 miles wide. The Bluffs, within the area, are a remnant of a very old monadnock or outcropping of quartzite. The Bluffs are the largest surface deposit of quartzite in the Midwest, and thus as both a landform and mineral perspective, have significance.

This area contains 27 distinct plant communities, 15 of which are rare in the state. There are 915 native vascular plant species, 307 non-vascular species, 171 aquatic invertebrate species, 135 breeding bird species, 50 fish species, 39 mammal species, and 29 amphibian and reptile species. The relatively large, non-fragmented forests of the Bluffs provide vitally important habitat for forest-interior songbirds for nesting and breeding (Jellinek, 1995).

A large number of private trust and conservancy organizations have a history of cooperating in the area with public recognition, management, and support efforts. These include the private land trusts, Baraboo Range Preservation Association, The Riverland Conservancy, and the Ice Age Trail. Government programs are working in the Wisconsin DNR's Devil's Lake State Park, State Natural Area Program to enhance management and protection of this area. There is also a new special designation applied to the area created to minimize the forest fragmentation resulting from the re-construction of US Highway 12. As a part of the Highway 12 agreement, Sauk County has also established a Purchase of Development Rights program to provide some assistance in protecting the Baraboo Hills forests.

We expect any and all of the above listed organizations to be active in the monitoring of the FLA.

Values within this FLA of primary concern are rare or unique communities, cultural resources, water quality, fish and wildlife habitat, rare species and recreational opportunities.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Public Ownership
FCL and MFL Forest
Proposed Legacy Area Boundary
Legacy Area Boundaries
6 3 0 6 Miles
1:600,000
Map Creator: Nina Janicki 7/01
94
Milwaukee
Racine

4. The Kettle Moraines Forest Legacy Area. Although this area is largely developed and populated compared to other parts of the state's proposed FLA's, it is the only contiguous forested area of any size in the area. It still meets the criteria for consideration plus had the most vocal local support of the proposed FLAs. This area is under tremendous pressure for both recreation and development, it has regional significance, and there are a number of land trust organizations active in the area.

The glacial features of this area are internationally significant. It is a band of ice-disintegration topography formed as an interlobe area between the Green Bay and Lake Michigan lobes of the Wisconsin Glaciation. The landform features numerous kettle lakes on steep ridges of fluvial sand and gravel.

There are currently over 50,000 acres of state, county and municipal owned land in the Kettle Moraine. These acres of forest contains over 20 state natural areas and a Nature Conservancy Preserve. Within these areas fens, prairies, and oak dominated uplands are the objects of protection.

This block of forest is important habitat to rare and endangered neotropical song birds. The area is considered critical landscape for many uncommon or rare species characteristic of southern Wisconsin, especially vertebrates, but also invertebrates, plants and aquatic organisms. This is the most intact landscape remaining in SE Wisconsin (Albert, 1995).

The Wisconsin DNR is attempting to form a partnership/coalition of municipalities and non profit conservation organizations to work together to protect the Kettle Moraine area in Washington and Waukesha County. The public input from this area underscored the political support for including this area as one of Wisconsin's FLAs.

The Wisconsin Assembly passed Joint Resolution 48 in 1997 which states "that the Wisconsin Legislature recognizes the importance of the Kettle Moraine State Forest in protecting the features of our glacial landscape, providing open space and recreational opportunity and maintain and enhancing natural communities; and, be it further resolved the Wisconsin Legislature encourages the efforts of the Wisconsin Department of Natural Resources, in cooperation with private citizens, conservation organizations and local governments, to protect the Kettle Moraine lands linking the Northern and Southern Units of the Kettle Moraine State Forest and provide a route for the Ice Age Trail". The Ice Age trail, an important recreational feature, runs through the heart of the forest.

Additionally, the Wisconsin Academy of Science Arts and Letters: "Report of the Kettle Moraine Task Force" urges that this forest area of Wisconsin receive special protection.

Values to be emphasized for protection include rare or unique habitat and communities, cultural resources, rare species, wildlife habitat, water quality and non-developed recreational opportunities.

Public Involvement Process

The public involvement process was accomplished via four different avenues. Indirect input issues central to the development of the Forest Legacy Program, such as important values and location, was obtained through the Statewide Forest Assessment effort the Land Legacy 2050 state land planning effort. Direct input on the program was solicited through news releases, articles and news features, and through direct mailing to counties and organizations.

Prior to the start of this project the State began an assessment of the forest resources on the State based on the forest inventory data. During the compilation of this Forest Assessment public input was gathered on what the public valued in the forestlands of Wisconsin. While this effort focused on the forests, in general, much of the material documentation and public awareness was essential in the production of this document.

At roughly the same time, the State also began a planning process for public lands called, ironically enough, the Land Legacy study. The purpose of this study was to set the direction for the WDNR's land acquisition program for the next 50 years. Meetings were and are being held to gather information on the characteristics of the land that are important to consider when the Department purchases land for conservation and recreational use. Eventually, the team in charge of this project will develop criteria to be used to identify lands for acquisition. Because the aims of this study was so similar to the Forest Legacy Subcommittee's efforts (although this project will not be completed in the same time-frame), two of the member of the Land Legacy Team also served on the Forest Legacy Subcommittee. The FLP Subcommittee was thus able to have access to data and information gained from the Land Legacy effort.

Because the Forest Assessment and the Land Legacy projects involved public meetings and both names and purposes were close to what the FLP was doing, our communications specialist advised against having yet more public meetings with a similar name and purpose. Instead, we used the information from the other groups meetings, which pertained, and enhanced the public input with additional feedback mechanisms. We sent out a state-wide news article which many of the services picked up, soliciting input on defining what were environmentally important forests in Wisconsin. A letter was also sent directly to all county planning and zoning officials, environmental groups and landowner organizations. Copies of the letter, news release and a summary of responses can be seen in Appendix C.

Once draft definitions of the goals, environmentally important forest definitions and associated values, and threats to these forests were developed, this information was shared internally and with the FSP Committee for comment and sharing with the organizations they represent. The definitions and criteria for FLAs were discussed and modified numerous times before being accepted as part of Wisconsin's AON.

A draft of this document was then prepared and sent to all DNR private lands foresters, all counties governments, all groups who responded to the first input process, all consulting foresters, all FSP committee members, the Governor's Council on Forestry, as well as individual landowners and associations. Responses were incorporated into this final document.

Forest Legacy Tracts

Forest Legacy Tracts refer to the actual property(ies) being considered for purchase. Only lands within a Forest Legacy Area may be considered for purchase. Thus, all proposed tracts will have met the criteria established for forest legacy lands at the national and state level. In addition, we anticipate that numerous tracts may be offered concurrently and there will be a need to prioritize the requests sent in for consideration by the U.S. Forest Service.

Criteria for Selecting Forest Legacy Tracts

The following criteria will be applied to tracts being considered for purchase. The more of the criteria that applies to a tract, the higher it will rank in priority. Additionally, the Forest Stewardship Committee may develop ranking sheets to use in the evaluation process that awards points to the criteria. Actual points may be applied for each criterion or the FSP Committee may choose to merely weight the criteria.

All proposed parcels must meet the three or more of the following criteria:

- Large tracts or block(s) of environmentally important forest of significance within an area, or tracts with the capability of adding to existing blocks in significant ways that maintain or add to the continuity of the forest area.
- Tracts having the ability, or potential, to produce forest resource products in perpetuity.
- Tracts contributing towards maintaining or improving the water quality of the area.
- Tracts providing additional variety of natural resource benefits such as fish, wildlife, and recreation opportunities.
- Tracts containing significant attributes beyond the economic contribution, such as public access that are at risk of being closed or lost if not protected by FLP.
- Tracks with existing land trust or other agencies that are willing and able to monitor the property are present.
- Tracts that could connect existing protected areas of public or private ownership. Tracts that contain rare forest communities within them or have the potential of supporting these communities.
- Tracts that are deemed eminently threatened or at risk of being converted in the region, as described in the section on threats.
- Tracts that landowners are willing to donate all or some of the property or property rights to the program.

All Forest Legacy Tracts will be required to have a long-range, multiple resource, or forest stewardship, management plan prepared that is updated at least every ten years, or when ownership changes, to reflect changing goals and management techniques. They will meet the current Forest Stewardship Program standards for management plans. Easements will require landowners to maintain the health of the forest through utilizing principles of sustainable forestry. Any harvesting that occurs on Forest Legacy Tracts must follow an approved cutting plan and will apply water quality BMP's.The State Forester, or his designee, will be responsible for approving all management plans.

Application and Ranking of Requests

Once an area within FLA is targeted and "activated", local public notices will be distributed and meetings will be held to inform the landowners in the targeted areas of the FLP and the opportunities to participate. Organizations willing and able to participate in the monitoring of properties will be contacted. If the public support and monitoring organizations exist, applications will be accepted.

Appendix D contains examples of the application which uses questions reflecting the rating criteria set in this document. This will be distributed to the interested landowners. Landowners will be expected to complete the applications with the assistance of the local DNR forester, or other knowledgeable professional to insure that the information is complete and correct. Applications will go to the Forest Stewardship Committee for review and discussions.

Points will be awarded to the applications for the number of above criteria met. Actual point amounts for each criterion will be determined by FSP Committee and adjusted to reflect the importance of each attribute in the FLA and target area.

Since site visits and inspection of the actual property will be necessary for properties being considered, an inspection consent agreement will also be completed at the time of landowner application.

Applicants will be notified of how their application was scored once the FSP has completed their assessment and made recommendations to the State Forester.

Monitoring

Since the process favors tracts where existing land trust or conservation groups are active, the monitoring responsibilities will be shifted to local organizations, local governments, and/or agencies where possible. These organizations will need to determine that harvests are done according to the approved plan, the management plan is updated at least every 10 years, BMP's for water quality are employed where necessary, and the conditions and terms of the easement are met. Enforcement will be the sole responsibility of the easement holder.

In some instances it may be determined that the DNR needs to conduct some or all of the monitoring. This would be applicable when the tract has species, habitat, or qualities of particular interest to the Department, or when the area, as part of its management plan, is being used to increase the knowledge-base of the Department.

Although all areas designated as Forest Legacy Areas have active local organizations, local governments, conservation groups and trusts interested in the Program, because of the vastness of the areas and the limited funds available for the program, Wisconsin has decided to identify and involve local groups for monitoring as needed. As an area is targeted for a purchase(s), the area is "activated" and local public input solicited. It is during this process that potential monitoring groups will be identified based on the property or properties targeted, interest of the group, and interest of the WDNR. Because individual purchases will have elements of specialized interests to certain groups (i.e.: prairie enthusiasts, The Nature Conservancy, Trout Unlimited, etc.) monitoring groups will be matched to the appropriate property and characteristics.

The conservation easement is the cornerstone for protecting these Forest Legacy tracts. Forest Stewardship or multi-resource management plans will be required on the easement to guide forest management activities. Monitoring will be conducted for a two-fold purpose. First to determine that the management plan/easement is managed according to contract, and second, to assess whether the management recommended is meeting the intended objectives.

Monitoring efforts will be recorded and reported to the Forest Stewardship Committee on an annual basis.

Appendix A

History of Wisconsin's Forests

Forests at the Time of European Settlement

At the time of European settlement forests covered almost eighty-six percent of the area that would become the State of Wisconsin. Between 22 million and 30 million acres were covered with forests. A complex variety of habitats support wildlife, plants, and humans.

Before the Euro-American settlement, Wisconsin's forests included two major forest divisions, the southern broad-leaf forest and the northern mixed forest, with several ecosystems represented (Wisconsin Department of Natural Resources [WDNR], 1995) (see Wisconsin Forest Types), in the southern part of the state, the broadleaf forests included the oak-hickory and maple-beech forests. The southern and western parts of the state supported oak savanna and prairie habitats. Moving north, the native vegetation became more cold tolerant and the northern mixed forest prevailed. Pines, spruce and tamarack became more abundant. The forests of northern Wisconsin were composed of sugar maple, hemlock and yellow birch. Pine was, also, an important tree. Acid bogs were a significant ecosystem in the northern Wisconsin forest Forested and non-forested wetlands were found throughout the state (Finley, 1976).

The last glaciers receded out of northern Wisconsin between 12,000 and 10,000 years ago. Their departure opened up the area for colonization by plants, animals, and humans. There is evidence of human presence in Wisconsin as early as 11,000 years ago. Thus we know that the post-glacial ecology of Wisconsin was influenced by humans from its very beginning (WDNR, 1995).

Before European colonization, Wisconsin was the home of a variety of American Indian nations. They included the Winnebago, Ojibwe, Menominee, Dakota, Illinois, and Cheyenne. However, some of these tribes have stories of migrating from other areas into Wisconsin. For example, the Ojibwe tell of their migration in the 1400's from the eastern ocean, a time that corresponds to a significant cooling of the North American climate (Sultzman, 1998). Many eastern tribes migrated to Wisconsin to escape a variety of conflicts. These conflicts included encounters with Europeans armed with steel weapons and gunpowder. The other factors which encouraged Native American migration were European's diseases, the fur trade, and dependence on trade goods. These factors created tensions in the Great Lakes area, and produced several decades of war, epidemic and human starvation in Wisconsin's forests (Sultzman, 1998).

Forests Since Settlement

Forests are significantly different today than they were before European settlement, and are likely to continue to evolve. A variety of historical reasons can account for the difference. In 1634, Frenchman Jean Nicolet landed on the southern shore of Green Bay, with the express goal of contacting and establishing fur trading with the Winnebago. This was the first direct European influence felt on the land that would become the state of Wisconsin (Sultznan, 1998). However, for two hundred years, the forests remained sparsely settled and provided a setting for the lucrative fur trade and continued to support native peoples (Wisconsin Conservation Department [WCD], 1955).

Various treaties in the early 1800's, which either removed or confined native populations, opened up Wisconsin to intensive Euro-American settlement (Sultzman, 1998). With the dramatic increase in human population came increasing demands on resources. Much of the southern part of the state was cleared for agriculture. The fertile soil in this area, including much that was previously forested, became the base for some of the most successful farms in the growing nation. During this process, southern forests were cut and burned to aid in clearing the land and to create, nutrient-rich ash to fertilize crops. Timber was not a major economic contributor until the 1870's (WCD, 1955).

After the Civil War in the late 1860's, logging became an important component in Wisconsin's economy. By 1899 Wisconsin had reached its logging zenith and was a world leader in lumber production with over 3.5 billion board feet produced. Pulpwood consumption was about 216,000 board feet. Sawmills sprang up everywhere along Wisconsin's many rivers. The rivers transported logs to the mill and transported the finished products to the growing cities to the south and west.

In 1898 the federal government conducted a survey of Wisconsin's forest resources. At this time, the first wave of cutting was well underway, and the second cutting was beginning. B. E. Fernow, estimates that the original red and white pine volume was 130 billion board feet. By 1898, all but 17 billion board feet had been removed, and cutting was continuing at a rate of 2 billion feet per year (Fernow, 1898).

By the 1930's, most of the valuable timber was removed or destroyed by fire from the northern area of the state. This harvest occurred in two waves. The first wave included valuable pines, large oaks and other extremely valuable trees. The other, less economically desirable trees were cut second.

Harvest techniques varied in cutover lands. Some were clear-cut, but most were high-graded In this practice the largest and most valuable trees are removed, leaving those species less suited to the site, deformed and stunted trees to re-seed an area. In 1936, there were approximately 16 million acres of forest in the state. However, this forest was actually young, early succession second growth (WCD, 1955).

This harvest led to a variety of problems, challenges during this era. Not least among the challenges was the wave of forest fires that destroyed millions of acres of forests and took thousands of human lives. The fuel for these fires was the dead waste material from logging operations, called slash, and it burned easily and quickly. Fires spread unchecked over large areas. (Held, 1994).

Another result of the extensive removal of timber in the Northwoods during this time period was the land boom of the early 1900's. In northern Wisconsin, logging companies sold cut over land to speculators who purchased sizable tracts and then sold smaller farms to the immigrant population who came to Wisconsin enticed by the promise of land. Farmers diligently removed stumps left in the cleared areas, sometimes disposing of them through fire, further contributing to the frequent and intense forest fires of the era (Held, 1994).

Finally, in the late 1920's and 1930's, professional foresters and conservationists evaluated their goals for the remaining forests. Most of the forests were in the northern part of the state. During this same period many northern farmers realized that the land and climate were not well suited to agriculture. Many of them abandoned their land and were bankrupt. A new concern for conservation and an understanding that the forest resource is finite formed the backbone of a conservation movement for Wisconsin forests.

The State Constitution was amended in 1924 to allow state funds to go toward acquisition, development, and preservation of forest resources. The Northern Highland State Forest, still the largest state forest, was the first created under the new amendment. The Forest Crop Law, a precursor to our current Managed Forest Law, was passed in 1927, making it easier for landowners to conserve forest resources for future use. In 1928 the first national forest land was purchased, creating the Nicolet and Chequamegon National Forests. County forests became preserves as a result of the tax delinquency of failing farms (Held, 1994).

In the 1930's and early 1940's, a notable influence on Wisconsin's forests was the Civilian Conservation Corps. As in other areas, the "CCC boys" planted trees, built park buildings, and worked on other conservation projects. Reforestation efforts commenced, with the hope that one day Wisconsin's majestic forest beauty and productivity would be renewed (WCD, 1955).

The harvesting in the early part of the century dramatically changed the composition, structure, and function of the forests. The extensive clearing and large fires caused species like aspen and paper birch to become prevalent encouraging large populations of white tail deer and other wildlife that thrive in the early successional habitat. Foresters began managing for specific timber species like red pine or, managed the habitat for a favored wildlife species like grouse (WDNR, 1995).

A forest inventory of Wisconsin was conducted in 1938. It revealed a very young forest, with aspen-birch as the most prevalent forest type. Aspen-birch were 40% of the mix followed by northern hardwoods at 20%, oak at 13% with small percentages for other types.

For decades, very little timber was harvested in Wisconsin. Many communities that had relied on the lumber companies for their existence were stranded in a wasteland of stumps and unemployment. Many years passed before the forests recovered sufficiently to offer a harvest for loggers. Fortunately, by this time there was a better understanding of the need to conserve forest resources and employ sound forest management. In many instances, professional foresters from lumber companies and government agencies worked together to better manage the growing forests. (WCD, 1955).

Forests are gaining ground and increasing in age. The timber industry is thriving, Timber companies are managing their forests with an eye to future productivity. They are employing many of the local residents. Since 1925, Wisconsin's forests have recovered dramatically and are steadily increasing in volume and average size.

Appendix B

Forest Legacy Descriptions

Counties and Townships Included in the Proposed Forest Legacy Areas

North - County Name
Ashland
Barron
Bayfield
Burnett
Chippewa
Douglas
Florence
Forest
Iron
Langlade
Lincoln
Marathon
Marinette
Menominee
Oconto
Oneida
Polk
Portage
Price
Rusk
Sawyer
Shawano
Taylor
Vilas
Washburn
Waupaca
Wood

North - Township Name
Ackley
Agenda
Ainsworth
Alban
Almena
Almon
Alvin
Amberg
Amherst
Amherst Junction
Amnicon
Anderson
Aniwa
Antigo
Apple River
Arbor Vitae
Argonne
Armstrong
Armstrong Creek
Arthur
Ashland
Athelstane
Atlanta
Auburn
Auburndale
Aurora
Bagley
Balsam Lake
Barksdale
Barnes
Barronett
Bartelme
Bashaw
Bass Lake
Bayfield
Bayview
Bear Creek
Bear Lake
Beaver
Beaver Brook
Beecher
Bell
Belle Plaine
Bennett
Bergen
Berlin
Bern
Bevent
Big Bend
Big Falls
Birch
Birch Creek
Birchwood
Birnamwood
Blackwell
Blaine
Bloomer
Bone Lake
Boulder Junction
Bowler
Bradley
Brazeau
Breed
Brokaw
Brooklyn
Browning
Bruce
Brule
Butternut
Cable
Cameron
Carey
Carson
Casey
Cassel
Cassian
Caswell
Catawba
Cecil
Cedar Lake
Cedar Rapids
Centuria
Chelsea
Chetek
Chicog
Chippewa
Clam Falls
Cleveland
Clintonville
Clover
Cloverland
Colburn
Commonwealth
Conover
Conrath
Cornell
Corning
Couderay
Couderay
Crandon
Crandon
Crescent
Crivitz
Crystal
Crystal Lake
Cumberland
Dairyland
Daniels
Day
Day
Deer Creek
Delta
Dewey
Doty
Dovre
Doyle
Draper
Drummond
Dunbar
Dupont
Eagle Point
Eagle River
Easton
Eau Pleine
Edgar
Edgewater
Eileen
Eisenstein
Eland
Elcho
Elderon
Elk
Embarrass
Emery
Emmet
Enterprise
Estella
Eureka
Evergreen
Exeland
Fairbanks
Fence
Fern
Fifield
Florence
Ford
Franzen
Frederic
Freedom
Frog Creek
Georgetown
Germainia
Gillett
Gilman
Gingles
Glen Flora
Goodman
Goodrich

Gordon
Grand View
Grant
Grantsburg
Green Valley
Greenwood
Gresham
Grover
Grow
Guenther
Gull Lake
Gurney
Hackett
Halsey
Hamburg
Hammel
Harding
Harmony
Harrison
Hatley
Haugen
Hawkins
Hawthorne
Hayward
Hazelhurst
Helvetia
Herman
Hewitt
Highland
Hiles
Hill
Holway
Homestead
How
Hubbard
Hughes
Hull
Hunter
Hurley
Hurley
Hutchins
Ingram
Iola
Iron River
Jackson
Jacobs
Johnstown
Jump River
Junction City
Kelly
Kennan
Keystone
Kimball
King
Knight
Knowlton
Knox
Kronenwetter
La Follette
Lac Du Flambeau
Ladysmith
Lake
Lake Holcombe
Lake Nebagamon
Lake Tomahawk
Lakeland
Lakeside
Laketown
Lakewood
Land O'lakes
Langlade
Laona
Larrabee
Lawrence
Lenroot
Lincoln
Linwood
Little Black
Little Rice
Little River
Long Lake
Long Lake
Lorain
Luck
Lynne
Madge
Maine
Manitowish Waters
Maple
Maple Plain
Maple Valley
Maplehurst
Marathon
Marathon City
Marengo
Marinette
Marion
Marshall
Mason
Matteson
Mattoon
Mckinley
Meadowbrook
Medford
Meenon
Mellen
Menominee
Mercer
Merrill
Meteor
Middle Inlet
Milladore
Milltown
Minocqua
Minong
Molitor
Monico
Montreal
Morris
Morse
Mosinee
Murry
Namakagon
Nashville
Nelsonville
Neva
New Auburn
New Hope
Newbold
Niagara
Nokomis
Norrie
Norwood
Oak Grove
Oakland
Oconto
Oconto Falls
Ogema
Ojibwa
Oliver
Oma
Orienta
Oulu
Park Falls
Park Ridge
Parkland
Parrish
Peck
Peeksville
Pelican
Pella
Pembine
Pence
Pershing
Peshtigo
Phelps
Phillips
Piehl
Pilsen
Pine Lake
Pine River
Plover
Plum Lake
Polar
Poplar
Popple River
Port Wing
Porterfield
Pound
Prairie Lake
Prentice
Presque Isle
Price
Radisson
Red Springs
Reid
Rhinelander
Rib Falls
Rib Lake
Rib Mountain
Rice Lake
Richland
Richmond
Rietbrock
Ringle
Riverview
Rock Falls
Rolling
Roosevelt
Rosholt
Ross
Rothschild
Round Lake
Ruby
Rusk
Russell
Sampson
Sanborn
Sand Lake
Sarona
Saxon
Scandinavia
Schley
Schoepke

Schofield
Scott
Seneca
Shanagolden
Sharon
Shawano
Sheldon
Shell Lake
Sherman
Silver Cliff
Siren
Skanawan
Solon Springs
Somo
South Fork
Spider Lake
Spirit
Spooner
Springbrook
Spruce
St Croix Falls
St. Germain
Stanfold
Stanley
Stella
Stephenson
Sterling
Stettin
Stevens Point
Stinnett
Stockton
Stone Lake
Strickland
Stubbs
Sugar Camp
Summit
Sumner
Superior
Suring
Swiss
Taft
Texas
Thornapple
Three Lakes
Tigerton
Tipler
Tomahawk
Tony
Townsend
Trade Lake
Trego
Tripp
True
Turtle Lake
Underhill
Union
Upham
Vilas
Wabeno
Wagner
Wascott
Washburn
Washington
Waukechon
Wausau
Wausaukee
Webb Lake
Webster
Weirgor
Wescott
West Marshland
West Sweden
Westboro
Weston
Weyerhaeuser
White Lake
White River
Wien
Wilkinson
Willard
Wilson
Wilson
Winchester
Winter
Wittenberg
Wolf River
Wood River
Woodboro
Woodmohr
Woodruff
Worcester
Wyoming

West Central - County Name

Adams
Buffalo
Chippewa
Clark
Dunn
Eau Claire
Jackson
Juneau
La Crosse
Monroe
Pepin
Pierce
Portage
St Croix
Trempealeau
Wood

West Central - Township Name

Adams
Albany
Albion
Alma
Alma Center
Angelo
Arcadia
Armenia
Augusta
Baldwin
Bangor
Bear Bluff
Belvidere
Big Flats
Black River Falls
Blair
Bridge Creek
Brockway
Brunswick
Buffalo
Burns
Burnside
Butler
Byron
Cady
Caledonia
Camp Douglas
Campbell
Canton
Cary
Chimney Rock
City Point
Clear Creek
Clearfield
Cleveland
Cochrane
Colburn
Cranmoor
Cross
Curran
Cutler
Dewhurst
Dexter
Dodge
Dover
Drammen
Dunn
Durand
Easton
Eaton
Eau Claire
Eau Galle
Edson
El Paso
Eleva
Elmwood
Ettrick
Fairchild
Fall Creek
Farmington
Finley
Foster
Fountain City
Frankfort
Franklin
Fremont
Friendship
Gale
Galesville
Garden Valley
Garfield
Germantown
Gilmanton
Glencoe
Grant
Greenfield
Greenwood
Hale
Hallie
Hamilton
Hansen
Hendren
Hewett
Hiles
Hixton
Holland
Holmen
Independence
Irving
Jackson

Kingston
Knapp
Knapp
Komensky
La Crosse
La Grange
Lafayette
Lemonweir
Leola
Levis
Lima
Lincoln
Lindina
Lisbon
Little Falls
Longwood
Lucas
Ludington
Lynn
Maiden Rock
Manchester
Marion
Marshfield
Mauston
Maxville
Mead
Medary
Melrose
Menomonie
Mentor
Merrillan
Millston
Milton
Modena
Mondovi
Monroe
Montana
Naples
Necedah
Neillsville
Nekoosa
Nelson
New Chester
New Lisbon
New Lyme
North Bend
Northfield
Oakdale
Onalaska
Orange
Osseo
Otter Creek
Pepin
Peru
Pigeon
Pigeon Falls
Pine Grove
Pine Valley
Pittsville
Pleasant Valley
Plum City
Port Edwards
Preston
Quincy
Remington
Reseburg
Richfield
Rock
Rock Creek
Rock Elm
Rockland
Rome
Salem
Saratoga
Scott
Seif
Seneca
Seymour
Sherwood
Sigel
Sparta
Spring Lake
Spring Valley
Springfield
Stanton
Stockholm
Strongs Prairie
Strum
Sumner
Taylor
Tomah
Trempealeau
Union
Unity
Warner
Warrens
Washburn
Washington
Waterville
Waubeek
Waumandee
West Salem
Weston
Whitehall
Wilson
Wood
Worden
Wyeville

Baraboo - County Name
Columbia
Sauk

Baraboo - Township Name
Baraboo
Caledonia
Dekorra
Delton
Excelsior
Fairfield
Freedom
Greenfield
Honey Creek
Merrimac
North Freedom
Reedsburg
Rock Springs
Sumpter
West Baraboo
Westfield

Kettles - County Name
Calumet
Dodge
Fond Du Lac
Jefferson
Ozaukee
Ozaukee
Ozaukee
Ozaukee
Ozaukee
Ozaukee
Manitowoc
Sheboygan
Walworth
Washington
Waukesha

Kettles- Township Name
Addison
Adell
Ashippun
Auburn
Barton
Cascade
Chenequa
Cold Spring
Concord
Delafield
Dousman
Eagle
East Troy
Elkhart Lake
Erin
Farmington
Forest
Fredonia
Genesee
Germantown
Glenbeulah
Greenbush
Hartford
Hebron
Herman
Ixonia
Jackson
Kewaskum
Kiel
La Grange
Lisbon
Lyndon
Marshfield
Meeme
Merton
Mitchell
Mukwonago
Nashotah
New Holstein
Newburg
North Prairie
Oconomowoc
Oconomowoc Lake
Osceola
Ottawa
Palmyra
Plymouth
Polk
Random Lake
Rhine
Richfield
Russell
Saukville
Schleswig
Scott

Sherman
Slinger
St. Cloud
Sullivan
Summit
Trenton
Troy
Waldo
Wales
Waukesha
Wayne
West Bend
Whitewater

Proposed - County Name
Brown
Marinette
Oconto
Outagamie
Shawano

Proposed - Township Name
Abrams
Angelica
Beaver
Brazeau
Chase
Gillett
Green Valley
Grover
Hartland
Hobart
Lena
Little River
Little Suamico
Maple Grove
Morgan
Oconto
Oconto Falls
Oneida
Pensaukee
Peshtigo
Pittsfield
Pound
Spruce
Stiles
Suamico
Washington
Waukechon
Wescott

Appendix C

Public Involvement Process and Comments

Report from the Forest Legacy Sub-committee, January, 1999

Background: At the July, 1998, Forest Stewardship Advisory Committee meeting, it was decided that a sub-committee of the whole be assigned to research and assess the USDA Forest Legacy Program (FLP) to determine whether it was a program we wished to implement in Wisconsin.

The subcommittee, consisting of Felipe Avila, WDNR-Forestry; Miles Benson, Governor's Council on Forestry; Dave Ferris, WLWCA; Mary Jean Huston, The Nature Conservancy and Linda DePaul, WDNR-Forestry, met formally twice and informally through e-mail and phone conversations to share information. The sub-committee gathered information from the USFS, other States, other agencies and other Bureaus relating to the FLP. They also held a meeting inviting others groups administering land easement programs to attend and discuss their programs.

The sub-committee recommends that Wisconsin start the process of becoming eligible for application into the Forest Legacy Program. by preparing a State-wide assessment of need as required by the USFS They further recommend that:

a) the Forest Stewardship Advisory Committee adopt the following goal,
b) consider the other recommendations outlined, and
c) expand the sub-committee to include others, as needed, to bring in additional expertise to begin designing the format of the Assessment of Need (AON).

The Sub-committee recognizes that the potential benefits of the program for preventing forest fragmentation are essential in to the forest protection of Wisconsin's private forest land and have developed the following goal statement for the Program.

Goal of the Wisconsin Forest Legacy Program:

To minimize fragmentation of significant forest areas through wise administration of conservation which focus on the sustainable use of forest resources.

Opportunities and Challenges

The group developed a working list of opportunities and challenges they anticipate through Wisconsin's involvement in the Forest Legacy Program. These are some areas the sub-committee feels are potential advantages of implementing a FLP and some challenges to be addressed during the process. In addition to preventing forest fragmentation on private lands the FLP will provide the following benefits:

Issues:

- potential for local partnerships
- local/private implementation
- Can enhance existing programs at a landscape scale
- potential to define and target areas as significant
- permanent method to hold land in forest
- a tool to address potential threats to the forest
- a tool to help insure forest resources for future uses
- to encourage sound forest management practices
- encourages landowners to think about long-term role of their forest
- ability to use this program to address and incorporate all forest amenities into a single program

The next list of "challenges" are worth recognizing early in the development process and should not deter the overall focus of the program on private forests and forestry issues:

* brings in federal program with some unknown "strings"
* extra program costs in administration promotion, selection, monitoring and enforcement.
* need to first have an assessment completed and may need extra funding to accomplish 'this
* challenge to keep program focused on the goal with some many outside interests trying to influence the program direction
* difficult to set up criteria for selecting regions and sites for participation

Recommendations to the Forest Stewardship Advisory Committee:

1. Advise the Forest Stewardship Committee to move forward with the program
2. Enhance core subcommittee by adding representation from selected fields.
3. Start assessment process.
4. Explore other avenues to move towards overall program objective.
5. Look for additional federal guidance.
6. Select some general site criteria.

Depaul, Linda C

From: Manwall, Robert J
Sent: Thursday, October 26, 2000 1:52 PM
To: Depaul, Linda C
Subject: RE: Looking for a DNR newsrelease

State asks citizens for help in identifying and protecting forest lands

MADISON -State forestry officials are asking the public to help draw up guidelines for a federally funded program that will protect environmentally important forest lands from development and conversion to other-than-forest land uses.

The Forest Legacy Program provides grants to states to assist in the direct purchase and purchase of conservation easements on private forest land. The Legacy program was established as part of the 1990 Farm Bill. It would complement the existing Farmland Protection Program and provide public benefit by placing large blocks of private forestland into perpetual conservation easements.

Wisconsin would be the 18th state to establish eligibility for this program, according to Linda DePaul, Department of Natural Resources forester. As part of the application process, all states joining the program must prepare a plan that identifies environmentally important forests in the state that are threatened by conversion to some other use.

"We're asking the public to help us draw up the criteria that would go into the plan. The Forest Legacy Program is designed exclusively for private forest landowners who wish to ensure that their properties will always remain in forest," DePaul said.

States are allowed considerable freedom in establishing criteria for their Forest Legacy areas and in preparing the conservation easements. In addition to maintaining large blocks of forested land, Forest Legacy seeks to protect water quality, rare plant communities, areas of scenic or historical value and critical wildlife habitat.

"We want to complete Wisconsin's assessment by August 2000," DePaul said. "States are allowed to draw up their own guidelines based on a combination of public input and that of our professional foresters. For the plan we must develop criteria for what lands can be enrolled, what types of access or recreation would be required or allowed on enrolled lands, and size requirements. How Wisconsin sets up its program is up to the citizens of Wisconsin."

Anyone with ideas on how the state should do this may contact DePaul at (608) 266-2388; write to Forest Legacy, Wisconsin DNR, PO Box 7921, 101 S. Webster, Madison, 53707; or contact DePaul by email at depaul@dnr.state.wi.us.

Willing owners who are accepted into the program can sell all or part of their ownership rights. The government will pay for these rights at full fair market value. The owner keeps any remaining property rights and may continue to live on the land.

"Requirements to enroll in the Legacy Program are minimal," according to DePaul. "The only right that must be sold is the right to develop the land and there must be a land management plan. The whole purpose of the program is to protect forests from conversion to non-forest uses."

Selling development rights to their property does not mean landowners can't harvest timber from the land. A management plan including periodic timber harvests is allowable, as is a plan that prohibits harvest - as long as the land remains in forest.

"Forest Legacy gives private landowners a way to conserve the special values of their land for future generations," said Gene Francisco, DNR chief of forestry. "Owners can sell their remaining property rights to other buyers at any time but the development rights are reserved by the government for all time."

Forest Legacy Program Update

Linda DePaul

The first period for public comment for the Forest Legacy Program has ended and I am in the process of summarizing the results. However, I wanted to take this opportunity to remind all DNR employees that you can send me your comments any time. Although the Forest Legacy Program is technically a USFS program administered through the states, please do not think about this as a program for now., This assessment process is to develop a working document that will be useful far beyond the scope of any single federal or state program because it addresses the priorities for protecting our private forest lands. For those of you who work with private landowners, it is like trying to decide which property has more value to the public than another. This is a very tough call, but unless we start looking at the state as a whole and what our private lands contribute. we'll be taking. a 'shotgun approach and may never a impact with our dollars.

The Forest Legacy Program is asking us to assess the private forest lands in the state and prioritize where we would spend money to ensure that they remain as working forests for perpetuity. The thought process that goes into developing this guidance could be useful in looking at any type of prioritizing for cost-share dollars, additional program or even personnel in the future, for instance. It is also giving the public a chance to look at the same tradeoffs that we as agencies, are always forced to make in providing services to the public with li3nitecl resources. Do we want to provide essentially "first-come-first-serve' customer assistance, prioritize requests, group requests until we reach some geographical size, or some other approach? Is the urban-forest interface of paramount importance to protect from sprawl into forest, or perhaps the riparian corridors because of their use for recreation, fish, animals and water quality are of primary concern?

There are no right answers, but I am interested in hearing your thoughts. If you, or another group you work with, would like to comment, send your comments to me at: Bureau of Forestry, FR/4, 101 S. Webster, P.O. Box 7921, Madison, WI 53707-7921;e-maflworksiustaswell.

Published May 2000 in The Timberline Newsletter

Wisconsin Preparing to Enter the Forest Legacy Program

Linda DePaul

The Wisconsin Department of Natural Resources is seeking approval to enter the National Forest Legacy Program. Wisconsin is in the preliminary eligibility review phase of the process. The Forest Legacy Program (FLP) funds grants to states to assist in the purchase of conservation easements on private forest land. The purpose of this program is to protect private forest land from conversion to non-forest uses.

This program was developed in response to a growing national concern about the loss of our nation's productive private land base. Established as part of the1990 Farm Bill in the Forestry Initiative, it is an entirely voluntary program both for the states and the landowners. It complements the existing Farmland Protection Program and provides public benefit by placing large blocks of private forest land into perpetual conservation easements.

To date over 90,000 acres of forest land in thirteen states have been placed in conservation easements -under this program. While forest legacy is a national program in scope, states are allowed considerable freedom in establishing criteria for their Forest Legacy areas and in preparing the conservation easements. In addition to maintaining large blocks of forested land, forest legacy areas are also established with the additional goals of protecting water Communities, areas of scenic or historical value and critical wildlife habitat. The working forest concept is encouraged, where appropriate. Long term management plans are required on all easement acquisitions.

Wisconsin will be the eighteenth state to establish eligibility for this program. All states joining the Forest Legacy Program must prepare a plan, referred to as an "assessment of need"(AON). This plan identifies the threat of land use conversion facing environmentally important forests in the state. Program objectives are spelled out, areas identified, and the criteria for ranking acquisitions within these areas are determined during the process of developing and preparing the AON.

Public involvement is needed in the development of the AON. Currently, DNR Forestry is the lead agency for this program in Wisconsin and is compiling a list of agency contacts, organizations and individuals who would like to be notified of the progress on Wisconsin's "assessment of need-. Contact Linda DePaul, Forest Legacy Coordinator, if you or an organization you work with would like to be included on the Forest Legacy program mailing list.

Published December 1999 in The Timberline Newsletter

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor
Darrell Bazzell, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
FAX 608-267-3579
TTY 608-267-6897

February 7, 2000

County Administrators
Govemor's Council on Natural Resources in Northern Wisconsin Wisconsin
Woodlands Owner's Association
Wisconsin Land & Water Conservation Association

Subject: Forest Legacy Program for Private Forest Landowners

Dear Local Official:

We are in the process of developing a new program for Wiscons'm's private forest landowners aimed at insuring working forests in the future. The program called the Forest Legacy Program, is a federal program created to protect private forestland for future generations while ensurinc, that their property rights are secure. We are requesting your input in establishing the direction this program should take in Wisconsin. Specifily, whether you feel this program would be of value in your area and in how we defme "envirorunentally importanf'forests.

The enclosed brochure briefly describes the Forest Legacy Program (FLP). Through this program the State can purchase all or some of a property-owners rights, such as the right to develop the land, in order to retain large blocks of private for and and the amenities they provide. In order to qual for the program each state is required to submit an assessment of need describing the private forest resource, threats to the resource, and areas identified for protection or inclusion into program. Within these designated areas, we would then outae the criteria we would use, in selecting properties for easement or fee simple purchase. It would not take property off the tax roles, It is not required that the property be open to the public, although we could add that as a provision at the State level. It does not li:mit nor require timber cutting, although the intent is to retain "wog" forests.

Based on the above information and that provided in the brochure, how would you or your organization like to see "environmuntally important" forests defmed for FLP?

If you would like to provide comments or suggestions, please send them by February 29, 2000, to: Linda De-Paul, Bureau of Forestry, 101 S. Webster, P.O. Box 7921, Madison, WI 53707-7921.

Sincerely,

Gene Francisco
Chief State Forester

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor
Darrell Bazzell, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
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TTY 608-267-6897

September 15, 2000

Subject: Forest Legacy Program for Draft Assessment of Need

Dear Interested Party:

In the past few months you express an interest in the proposed program for protecting important privately-owned forests called the Forest Legacy Program, Briefly, this program matches federal dollars with state funds to purchase the development rights of private forestland that are in danger of being lost to development or other conversion. This program is completely voluntary and allows the landowner an option of offering their property for participation.

The comments you submitted earlier this year helped us complete an assessment of Need f ANO I for the Program. The AON describes what and where the most critical privately-owned forests are located and How wd-Would target federal dollars to purchase the perpetual development rights on significant private forestland. We are asking your assistance again in reviewing the enclosed drat Assessment of Need and providing comments back to our office.

I would like to direct your attention, in particular, to the sections of the document that discuss what are environmentally important forest, what are the threats to these forest, where they are found and criteria for selecting priority properties within the state. There are two maps of the State enclosed as well that represent two versions of the areas, referred to as Forest Legacy Areas, where the most significant forests for this program would be found. The boundaries and locations of these areas are open to comment as well.

While there are still sections to add regarding additional background and status of the state's resources, The important element of the program are captured in the draft. Once we receive your comments they Will be noted and incorporated into documents if possible. The AON then goes to the US. Forest Service For review. If accepted, Wisconsin may participate in Program.

If you would like to provide written comments or suggestions, please send by them by October 6, 2000,to: Linda DePaul, Bureau of Forestry, 101 S. Webster, P.O. Box 7921<Madison, WI 53707-7921.

Sincerely,

Gene Francisco
Chief State Forester

List of Receipecents for Direct Mailing

Assessment of Need Outreach

Company	Address1	Address2	City State Zip
Adams Co. Pl & Zoning Dept.	Courthouse	Po Box 187	Friendship Wi 53934
Ashland Co. Zoning Admin.	Courthouse, Room 109	201 West Main St.	Ashland Wi 54806
Barron Co. Zoning Admin.	Courthouse	Agriculture Building	Barron Wi 54812
Bayfield Co. Courthouse	Post Office Box 58		Washburn Wi 54891
Brown Co. Zoning Office	Post Office Box 23600	305 E. Walnut St.	Green Bay Wi 54305
Buffalo Co. Zoning Dept.	Box 492		Alma Wi 54610
Burnett Co. Zoning Office	County Center	7410 Cth 'K', #102	Siren Wi 54872
Calumet Co. Panning Dept.	Courthouse, Rm 206		Chilton Wi 53014
Chippewa Co. Zoning Dept	Courthouse	711 N. Bridge Street	Chippewa Falls Wi 54729
Clark Co. Planning, Zoning	Courthouse, Rm. 204a	517 Court St.	Neilsville Wi 54456
Columbia Co. Pl. & Zoning	Carl C. Frederick Bldg	Po Box 177	Portage Wi 53901
Crawford Co. Sanit. & Zoning	111 West Dunn Street		Prairie Du Chien Wi 53821
Dane Co. Zoning Office	City County Bldg. 116		Madison Wi 53709
DNR- SCR	Ruthe Badger	3911 Fish Hatchery Rd.	Fitchburg Wi 53711
Environmental Health Division	1202 Northport, Rm 154		Madison Wi 53704
Dodge Co. Pl & Development	County Admin. Building	127 E. Oak Street	Juneau Wi 53039
Door Co. Planning Dept.	Courthouse	421 Nebraska Street	Sturgeon Bay Wi 54235
Sanitation Office	Courthouse	421 Nebraska Street	Sturgeon Bay Wi 54235
Douglas Co. Zoning Office	Courthouse, Rm 206	1313 Belknap St.	Superior Wi 54880
Dunn Co. Zoning	800 Wilson Avenue		Menomonie Wi 54751
Eau Claire Co.Dept Of Planning	Courthouse, Rm 1510	721 Oxford Av	Eau Claire Wi 54703
Florence Co. Pl. & Zoning	501 Lake Ave.	Po Box 627	Florence Wi 54121
Fond Du Lac Co.Code Enforc.	City-County Gov Center	160 South Macy St.	Fond Du Lac Wi 54935
Forest Co. Zoning Office	Courthouse	200 East Madison St.	Crandon Wi 54520
Grant Co. Zoning Dept.	Courthouse Annex	111 South Jefferson	Lancaster Wi 53813
Green Co. Zoning Office	N 3150 Hwy 81	Po Box 358	Monroe Wi 53566
Green Lake Co. Zoning Office	Courthouse	492 Hill Street	Green Lake Wi 54941
Hovind, Ralph	3300 Alt 19, Lot 102		Dunedin Fl 34698
Iowa Co. Zoning Office	Courthouse		Dodgeville Wi 53533
Iron Co. Land & Zoning Office	Courthouse		Hurley Wi 54534
Jackson Co.Env. & Zoning	Courthouse	307 Main Street	Black River Falls Wi 54615
Jefferson Co. Zoning Dept	Courthouse	Room 214	Jefferson Wi 53549
Juneau Co. Pl. And Zoning	250 Oak Street		Mauston Wi 53948
Kenosha Co.Dept Of Planning	Co. Center, 19600 75th	Po Box 520	Bristol Wi 53104
Kewaunee Co. Zoning Office	Courthouse	613 Dodge Street	Kewaunee Wi 54216
Kissinger, James W.	Little Sissabagama Own's Assn	3597 N. Drake Lane	Stone Lake Wi 54876
La Crosse Co. Zoning Dept	Courthouse, Rm 105	400 4th St. N.	Lacrosse Wi 54601
Lafayette Co. Pl. & Zoning	Ag Center	627 Washington St.	Darlington Wi 53530
Langlade Co. Land Rec. Dept	Courthouse	800 Clermont St.	Antigo Wi 54409
Lincoln Co. Zoning Office	Courthouse	1110 East Main St.	Merrill Wi 4452
Loken, Cecelia	3545 Fairfax St.		Eau Claire Wi 54701
Manitowoc Co. Pl. Comm	4319 Expo Drive	Box 610	Manitowoc Wi 54221
Marathon Co. Zoning	210 River Drive		Wausau Wi 54403
Marinette Co. Zoning Dept	Cths, 1926 Hall Av.	Po Box 320	Marinette Wi 54143
Marquette Co. Zoning Dept	Courthouse	Po Box 21	Montello Wi 53949
Menominee Co. Assessor	Courthouse	Po Box 279	Keshena Wi 54135

Milwaukee Co Dept. Of Parks	Susan L. Baldwin, Dir.	Route 2 Box 21a	Sparta Wi 54656
Monroe Co. Zoning Dept	Community Svcs Ctr	301 Washington St.	Oconto Wi 54153
Oconto Co. Zoning Office	Courthouse	Po Box 400	Rhinelander Wi 54501
Oneida Co. Pl. & Zoning	Courthouse		Appleton Wi 54911
Outagamie Co. Pl. & Zoning	410 South Walnut St.	Po Box 994	Port Washington Wi 53074
Ozaukee Co.Env. Health Dept	Meaux, Thomas Admin Crd	Po Box 39	Durand Wi 54736
Pepin Co. Zoning Office	Cthse, 740 7th Av. West	Po Box 647	Ellsworth Wi 54011
Pierce Co. Dept Of Land Mgmt	414 West Main Street	Suite 130	Balsam Lake Wi 54810
Polk Co. Zoning Office	100 Polk County Plaza	1516 Church Street	Stevens Point Wi 54481
Portage Co. Pl. & Zoning Dept	County-City Building		Phillips Wi 54555
Price Co. Zoning Admin.	Normal Bldg., Room 205	14200 Washington Av	Stuartville Wi 53177
Clement, Arnold L., Director	Racine Co. Pl. & Dev. Div		Ft. Atkinson Wi 53538
Reu, Mrs. Earl	N2243 Struck Rd.	181 W Seminary	Rhichland Center Wi 53581
Richland Co. Zoning Office	Courthouse	51 South Main St.	Janesville Wi 53545
Rock Co. Dept. Of Pl. Dev.	Courthouse	311 Miner Ave. East	Ladysmith Wi 54848
Rusk Co. Zoning Office	Courthouse	1101 Carmichael Road	Hudson Wi 54016
St. Croix Co. Zoning Office	St. Croix Govt Center	505 Broadway	Baraboo Wi 53913
Sauk Co. Pl. & Zoning Office	West Square Building		Hayward Wi 54843
Sawyer Co.Zoning Admin.	Po Box 668	311 North Main Street	Shawano Wi 54166
Shawano Co. Pl. And Zoning	Courthouse	615 N. 6th Street	Sheboygan Wi 53081
Sheboygan Co. Pl & Res.	Courthouse	P.O. Box 1607	Waukesha Wi 53187
Se Wi Regional Planning Com	916 N. East Ave.	P.O. Box 88	Baraboo Wi 53913
Smartwood Lake States Prog	Mr. Fred Clark		Medford Wi 54451
Taylor Co. Zoning Office	224 South Second St.	Post Office Box 67	Whitehall Wi 54773
Trempealeau Co. Zoning Dept.	Courthouse		Viroqua Wi 54665
Vernon Co.Sanitation & Zoning	Po Box 306	Po Box 369	Eagle River Wi 54521
Vilas Co. Zoning & Planning	Courthouse	W3929 County Nn	Elkhorn Wi 53121
Walworth Co DLM	Courthouse Annex	Post Office Box 506	Shell Lake Wi 54871
Washburn Co. Zoning Dept.	Courthouse	333 E. Washington St.	West Bend Wi 53095
Mueller, Paul E. Director	Washington Co. Land Use	Room 230	Waukesha Wi 53188
Waukesha Co.Land Use Dept	1320 Pewaukee Road	811 Harding Street	Waupaca Wi 54981
Waupaca Co. Zoning Admin.	Courthouse	Post Office Box 149	Wautoma Wi 54982
Waushara Co. Zoning Office	Courthouse	Post Office Box 2808	Oshkosh Wi 54903
Winnebago Co Pl & Zoning	448 Algoma Blvd.	Po Box 8095	Wisconsin Rapids Wi
Wood Co. Planning & Zoning	Cths, 400 Mkt. St.		
54495			Stevens Point Wi 54481
Wi Woodland Owners Assn.	P.O. Box 285		Hillpoint Wi 53937
Wunnicke, Mr. Gene H.	26460 State Hwy 130		

State of Wisconsin

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: July 18, 2000 FILE RERFLP

TO: Forest Legacy Program Subcommittee

FROM: Linda DePaul

SUBJECT: Summary from the Initial FLP Public Comment Period

A letter out in February from Gene Francisco to all the county planning and zoning officials, as well as other organizations, asking for 'input on defining Wisconsin's environmentally import private forests. In addition to the letter, news releases went out across the state with the same request. Not only is defining these forests paramount to establishing a Forest Legacy 'in Wisconsin, but also it is important for determining where we should put the emphasis for private forest management.

The response from the news releases was great. However, most people, while supportive of the program as they understood it, wanted to enroll, not i e suggestions. The direct mailing was mote give productive although less prolific.

The-following is a summary of the responses by various organizations.

Southeastern Wisconsin Regional Planning Commission frepresentatives from 6 countiesl:
Suggested we use FLP to compliment existing programs in the SE. Lowlands have a number of programs but protection of the woodlands, particularly the upland woodlands Cited report (SEWRPC Planni ing Report#45,Dec. 1997 SEWRPC #42, September 1997 1.

1. Identify specific corridors from the report and protect the woodlands.
2. Focus on woodlands identified for forest 'interior restoration and private woodlands located within natural areas and critical species habitat sites.

(Maps indicating locations were included.)

Ruth Badger, Representing DNR South Central Region:
Expressed a desire and a lo i al argument for 'including the Baraboo Range. She highlighted gic the following: that there be recognition nationally as environmentally u'nportant, the threat to the area from a proposed expansion of US Highway 12 and the existence of a $5 million fund for acquisition, if there is at least $2.5 million in federal matching funds.

Dodge County Planning and Development:
Concerned about remaining forest in the county and wanted to see the smaller, but just as important Southern forests protected. Stated that when defining environmentally important forests we should focus on the function they perform, 'including maintaining rural diversity and character rather than site criteria.

Wisconsin Woodland Owners Association {representing approximately 2000 landowners):

Stated their group had mixed feeling. They expressed the following: 1. While they supported the concept of "working forests", they felt that the federal funding for this program was uncertain , 2. They thought that with MFL another program was not needed; because they may be forced to open t heir land to the public and did not see an advantage if the landowners still had to pay taxes. It was further stated that the few who supported the program suggested these ideas:

- It not be used in urban areas that ate facing high fragmentation and sprawl.
- It work with landowners adjacent to or surrounded by state, county, or Door County.

Ralph Hovind:

Wanted to the following areas 'included in the definition

- land around headwaters
- developable corridors near population centers
- buffet areas surrounding state parks, forests, etc.
- forest lands along ;ma'or highways

Bill Stiegerwaldt representing The Trust For Public Land:

Recommended using USFS guidelines for ranking priorities at the national level. The priorities are for protected adjacent lands, those facing threats of development and development potential.

Specifically,

1. A link to state or federal lands already protected.
2. Those lands threatened by conversion/development
3. Those lands contributing to the attainment of goals and objectives of the State ANO
4. Shows effective management and protection
   - context and connectivity
   - environmental, social and economic values
   - Strong evidence project can be completed

Specific recommendations:

1. Anyd-ling in the Milwaukee area towards Kettle Moraine SF and north to Fond du Lac and Lake Winnebago.
2. Door County
3. Oneida and Vilas Counties
4. Hayword area
5. Wisconsin Dells (or is too Late?)
6. Supenior-ruin or buffer from Superior cast along the Lake

County of Kenosha - Planning and Development:

Concerned that the FLP land will continue to be taxed. Woodlands taxed the highest and this i is difficult for landowners to maintain. Fear that if there is no tax incentive for establishing an easement, and if state can later open the to the public, than not effective program.

Clark Forestry Reprenting Smart Wood Lake States Program:

Would like to work with the sub-conmaittee as criteria is developed.

Others: Several landowners wrote in support They requested more information, when it is available.

Wisconsin Forest Legacy Landowner Application Package

Application Form — Forest Legacy Program

Landowner Information (Please print or type):

1. Name: Daytime Phone:

DRAFT

Mailing Address:

2. Location of parcel:
   County
   Township

Complete the remainder of this form with your local forester or other natural resource professional familiar with this program and the property.

3. Legal Description: T N; R _E/W; Sec... Quarter

4. Parcel Description:

Total Acres Agricultural Acres

Forested Acres

Open Field Acres

5. Are there any permanent improvements such as houses, barns, darns, antennas, all-season **roads,** bridges, etc., on the property. If yes, please identify.

6. Are there any developed recreation areas on the property? If yes, please describe.

7. Are there any active mining operations on the property, including active gravel pits?

8. Why do you want a Forest Legacy easement for this property?

9. Are there any encumbrances or leins on the property including contracts, leases of outstanding rights not of record?

If yes, please describe:

DRAFT

10. Identify the threat of conversion for this property to non-forest uses:

11. Describe any Imown environmental, social or economic values this property has for the follo-ydng: Wood products, public recreation, riparian/wetlands, importantfish or wildlife habitat, rare plants, animals or commu . nities, cultural resources, Or contribute to the water quality of the area.

12. Are you willing to allow non-motorized public access on all or some of this property?

13. Are you willing to committo, following a forest management plan prepared and updated, as appropriate, by a professional forester to manage the forest for timber and the broad range of forest resources and values? Such a commitment would be legal . ly binding and include certification every ten years from a professional forester that the plan is being followed:

14. Are you willing to donate aft or some of -the property to the Forest Legacy Program?

APPENDICES - Attach the following:

a. Location Map
b. Copy of Deed
c. Forest Type Map
d. Other maps or information useful in evaluating this property for inclusion into the Forest Legacy Program.
e. Signed Landowner Inspection Consent Agreement

I hearby certify and attest that the information I have included in this application is, to the best of my Imowledge, correct. I also certify and attest that all landowners of this property's rights are aware of this application and approve of its submission.

Signature

Name (typed or printed)

Date

DRAFT

For Office Use Only
Date Received

State of Wisconsin
Forest Legacy Program
Landowner Inspection Consent Agreement

I, as the landowner or the landowner's authorized agent (proof of authorization must accompany this document) agree to allow inspection, appraisal and survey of my property being offered for consideration under the Forest Legacy Program. I agree to allow members of the Wisconsin Department of Natural Resources, the Wisconsin Forest Stewardship Committee or their designated staff to inspect the property as may be required at any time. I shall be notified in advance of all inspecting visits.

I acknowledge that I understand that a conservation easement on this property will not be purchased if ne otiations do not result in amicable agreement. The Forest Legacy Program depends entirely. on willing seller participation.

Signature of Landowner or Agent

Date

Appendix E

Marketable Title Act

893.29 No adverse possession against the state or political subdivisions. (1) No title to or interest in real property belonging to the gee or a city, village, town, county, school district, sewerage commission, sewerage district or any other unit of government within this state may be obtained by adverse possession, prescription or user under s. 893.25, 893.26, 893.27 or 893.28 unless the adverse possession, prescription or user continues uninterruptedly for more than 20 years and is based upon a continuously maintained fence line which has been mutually agreed upon by the current landowners,

(2m) Subsection (1) does not affect title to or interest in real property obtained by adverse possession, prescription of user under s. 893.25, 893.26, 893.27 or 893.28 before April 29, 1998.

History: 1979 c. 323; 1983 a. 178; 1983 a. 189 s. 329 (16); 1997 a. 108.

Judicial Council Committee's Note, 1979: This section is based on present s. 893. 10 (1), but the period for adverse possession against the state is reduced from 40 to 3 0 [20] years. The previous provision presumably applied to the property of political subdivisions of the state, but this has been made express in this. section. Note that regardless of which of ss. 893.25 to 893.28 apply against a private owner, this section requires 30 [20] years for the obtaining of any rights in public land.

Because of the 30-year [20-yearl period, adverse possession of the kind described in the 20-year statute is sufficient so that recording and good faith affect only the type of possession required and the, amount of land possessed (see s. 893.26 (3) and (4)). Payment of taxes is irrelevant. [Bill 326-A]

Adverse possession provisions have prospective application only. Possession must be taken after the provision goes into effect. Petropoulos v. City of West Aliis, 148 Wis. 2d 762, 436 N.W2d 880 (Ct. App. 1989).

This section does not apply to a railroad, A railroad right-of-way is subject to adverse possession, the same as other lands. Maiers v. Wang, 192 Wis. 2d 11 5, 531 N.W.2d 54 (1995).

PUB-FR-182 2001

Wisconsin Department of Natural Resources
101 S. Webster Street, P.O. Box 7921
Madison, WI 53707-7921

Division of Forestry

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GP7/01