

COUNTY FOREST COMPREHENSIVE LAND USE PLAN

TABLE OF CONTENTS

CHAPTER 600

PROTECTION

<u>Section</u>	<u>Subject</u>	<u>Page</u>
600	PROTECTION	3
605	FIRE CONTROL	3
605.1	COOPERATION WITH THE DEPARTMENT OF NATURAL RESOURCES	3
605.1.1	Personnel.....	3
605.1.2	Equipment.....	4
605.1.3	Fire Detection	4
605.1.4	Forest Fire Prevention	4
605.2	SLASH DISPOSAL	4
605.3	DEBRIS BURNING 4	
605.4	CAMPING FIRES 4	
605.5	PRESCRIBED BURNING	5
605.6	COUNTY FOREST FIRE HAZARD AREAS	5
605.7	UNCONTROLLED FIRE	5
610	CONTROL OF FOREST PEST & PATHOGEN	5
610.1	DETECTION.....	5
610.2	PEST SURVEYS.....	5
610.3	INTEGRATED PEST MANAGEMENT	6
610.3.1	Specific Pest & Pathogen of Interest	6
610.3.1.1	Gypsy Moth Strategy.....	6
610.3.1.2	Jack Pine Budworm.....	7
610.3.1.3	Oak Wilt.....	8
610.3.1.4	Forest Tent Caterpillar.....	8
610.3.1.5	Two-lined Chestnut Borer	9
610.3.1.5	Emerald Ash Borer	9

	610.3.2	Funding.....	9
	610.3.3	Legal Obligations.....	10
	610.3.4	Special Projects.....	10
615	TIMBER THEFT		10
	615.1	TIMBER THEFT INVESTIGATIONS	10
620	ENCROACHMENTS		10

600 PROTECTION

OBJECTIVE

To protect and manage the resources of the forest from preventable losses resulting from fire, insects, diseases and other destructive elements including those caused by people . Protective methods shall include proper silvicultural methods.

605 FIRE CONTROL

Damage to the forest caused by uncontrolled fire can create an important challenge in the management of the forest. Loss of resource values caused by fire will be minimized through organized prevention, detection and suppression methods. Maintaining a healthy forest is key to fire management. The DNR is responsible for all matters relating to the prevention, detection and suppression of forest fires outside the limits of incorporated villages and cities. (s.26.11(1), Wis.Stats). The DNR works cooperatively with local fire departments in all fire control efforts. Oconto County Forest is located in both intensive and extensive forest fire protection area's. The Fire Prevention Handbook No. 4310.5, Fire Presuppression Handbook No. 4320.5, the Fire Management Handbook No. 4325.1 and the Area Fire Plan shall serve as the guidelines for fire control activities.

605.1 COOPERATION WITH THE DEPARTMENT OF NATURAL RESOURCES

Pursuant to s. 26.11(4) and s. 28.11(4)(f), Wis. Stats., and of the Oconto County Forest Ordinance, the county may cooperate with the DNR in the interest of fire prevention, detection and suppression on the County Forest. This is accomplished through agreements authorizing the DNR to use County Forest land or to utilize county personnel and equipment for fire protection activities.

605.1.1 Personnel

County Forest personnel, upon request from the DNR, shall be made available for forest fire control efforts within the county in accordance with an established memorandum of understanding (MOU). The DNR is responsible for training and directing the activities of county personnel in accordance with the rules identified in the Area Fire Action Plan. This MOU is currently being drafted and considered.

605.1.2 Equipment

County Forest equipment, upon request and as identified in the MOU, shall be available for forest fire control suppression. During periods of high fire hazard, all County Forest vehicles and/or crews should be equipped with one or more back pack cans, axes or shovels, appropriate personal protective equipment, mobile communication and any other equipment deemed essential by the MOU. All hand tools shall be maintained and provided by the DNR.

605.1.3 Fire Detection

Fire detection is the responsibility of the DNR. County Forestry personnel shall assist and report any wild fires to the DNR, local Fire Department or 911 Dispatch.

605.1.4 Forest Fire Prevention

DNR fire control personnel are authorized by the county to place fire prevention signs at recreational areas and other strategic locations within the forest. The County conducts and controls all operations (including harvesting) on the forest in a manner designed to prevent forest fires. The use of the county forest during high fire danger periods may be restricted. These restrictions will include, but not be limited to, recreation and logging.

605.2 SLASH DISPOSAL

Timber sale contracts will be designed to meet or exceed the requirements of the Slash Disposal Law, s. 26.12, Wis. Stats. Additional requirements may be imposed as necessary.

605.3 DEBRIS BURNING

Unauthorized burning of debris will not be permitted on County Forest Lands pursuant to s. 26.12(5), Wis. Stats.

605.4 CAMP FIRES

Adequate fireplaces will be provided at designated recreation sites. During periods of high fire danger, use of campfires may be restricted.

605.5 PRESCRIBED BURNING

All prescribed burning on County Forest lands will follow the DNR recommendations. See Prescribed Burn Handbook No. 4360.5 for details. Prescribed fire may be an effective management tool on the County Forest.

605.6 COUNTY FOREST FIRE HAZARD AREAS

Primary emphasis will be placed on fire control efforts in pine areas. Maps of these areas are available at the local DNR field office (Fire Management Hbk. #4325.5, Section 3030). Firebreaks or access ways will be established in new plantations in accordance with Manual Code 2421. Existing access roads, firebreaks and water access points will be maintained as deemed necessary. Secondary emphasis will be placed on hardwood areas with no firebreaks developed or maintained. However, access roads will be maintained as defined in Chapter 700 of this plan.

605.7 UNCONTROLLED FIRE

Any uncontrolled or non-prescribed fires on the County Forest will be suppressed as soon as possible.

610 CONTROL OF FOREST PEST & PATHOGEN

610.1 DETECTION

Damage to the forest caused by insects, other pests and diseases can adversely affect management of the forest resources. Losses to resource values impacted by forest pests will be minimized through integrated pest management methods, with emphasis on silvicultural prescriptions (timber sales). The detection and control of pest problems will be accomplished by county and DNR personnel in cooperation with other agencies.

610.2 PEST SURVEYS

Pest surveys are conducted under the direction of the DNR's regional entomologist. The DNR works in cooperation with the Wisconsin Department of Agriculture Trade and Consumer Protection (DATCP) in monitoring the spread of gypsy moths. The County may cooperate by providing personnel and equipment to assist in these operations.

610.3 INTEGRATED PEST MANAGEMENT

Integrated pest management for the purpose of this Plan, is defined as follows:

“The maintenance of destructive agents, including insects, at tolerable levels, by the planned use of a variety of preventive, suppressive, or regulatory tactics and strategies that are ecologically and economically efficient and socially acceptable.”

The integrated pest management control and methodology shall be determined jointly by the county forest administrator, and DNR liaison forester in consultation with the DNR regional entomologist and regional forester. Suppression of forest pests may include the following:

- 1) Silvicultural prescriptions, including timber sales.
- 2) Biological control.
- 3) Chemical control.

610.3.1 Specific Pests and Pathogens of Interest.

- 1) Gypsy Moth
- 2) Jack Pine Budworm
- 3) Oak Wilt
- 4) Forest Tent Caterpillar
- 5) Two-lined Chestnut Borer
- 6) Emerald Ash Borer
- 7) Pine Shoot Beetle

610.3.1.1 Gypsy Moth Strategy

This introduced pest has progressed westward from the northeastern United States since the early 1900's. It reached eastern Wisconsin and has been widespread in some counties since 1988. Despite efforts to slow-the-spread and suppress outbreaks, it is progressing westerly through Wisconsin. The Oconto County Forest's strategy to combat this defoliating insect will focus on using silvicultural techniques to maintain and improve forest vigor, so as to decrease the likelihood and severity of defoliation. In addition, suppression spraying with approved insecticides may be considered in high use recreation areas and stands containing a high percentage of susceptible, high valued timber. Biological controls may also be available for introduction to help reduce

outbreak frequency.

The presence or discovery of threatened or endangered species in these areas may impact both the type of treatment and the decision to apply suppression tactics. Current insecticides for gypsy moth control include a bacterial insecticide (Btk) and a commercial formulation of a naturally-occurring virus (Gypchek). The Gypchek virus, specific to gypsy moth larvae, is only available through the federal suppression program administered by the DNR. The intent in combating this insect is not to eradicate, but rather to reduce populations so that tree mortality is maintained at tolerable levels. The DNR's local gypsy moth coordinator and entomologist will be available for consultation on control tactics and possible quarantine procedures. DATCP is the agency responsible for quarantine procedures for wood products from infested counties.

Oconto County Forest's threshold levels for suppression will be as follows:

- Oconto County will general manage for gypsy moth by maintaining a healthy forest.
- 500 egg masses per acre based on 1/40th acre (18.6 ft. radius) plots
- Located in intensive recreation areas or Aesthetic Zone A (See Chapter 900 for Aesthetic Zone Maps)
- Allow suppression on 150 ft. buffer strips adjacent to private property being sprayed upon request. See compartments when County Forest borders private property (Chapter 900).

610.3.1.2 Jack Pine Budworm

Jack pine budworm, *Choristoneura pinus pinus Freeman*, is a native needle-feeding caterpillar that is generally considered the most significant pest of jack pine. Vigorous young jack pine stands are rarely damaged during outbreaks. The most vigorous stands are well stocked, evenly spaced, fairly uniform in height, and less than 45 years old. Stands older than 45 years that are growing on very sandy sites and suffering from drought or other stresses are very vulnerable to damage. Tree mortality and top-kill are more likely to occur in these stands. This mortality and top-kill create fuel for intense wildfires. It will be Oconto County's strategy to harvest at the appropriate rotation age, maintain high stand densities (without overcrowding), and use good site selection for jack pine. This will be an effort to help avoid budworm-caused tree mortality and reduce the threat of damaging wildfires while

still providing suitable conditions for jack pine regeneration. Prompt salvage following an outbreak will also help reduce the possibility of wildfire. Use of insecticides is not warranted in combating this forest pest on the County Forest.

610.3.1.3 Oak Wilt

Oak wilt, *Ceratocystis fagacearum* (Bretz) Hunt, is a destructive disease of oak trees. It is responsible for the death of thousands of oak trees in forests, woodlots, and home landscapes each year. Oak wilt is caused by a fungus that invades and impairs the tree's water conducting system, resulting in branch wilting and tree death. Trees in both the red oak group and white oak group are affected. There is no known cure once a tree has oak wilt. Prevention of new oak wilt infection centers is the best management option and involves avoiding injury to healthy trees and removing dead or diseased trees. Healthy trees should not be pruned during the growing season as this attracts beetles that may carry the oak wilt fungus. If pruning is necessary or damage is incurred during the growing season, e.g. through construction activities or storms, the wounds should be painted immediately with a wound paint.

It will be Oconto County's policy to remove infected trees and debark or chip them when located in a high intensive use area. Once chipped or debarked, the materials shall be covered with plastic for a period of six months to kill the fungus and any insects in the material. A vibratory plow, or similar implement, will also be used to sever root grafts on isolated pockets where feasible. Timber harvest of oak will be restricted between April 15 and July 1.

610.3.1.4 Forest Tent Caterpillar

Forest tent caterpillar, *Malacosoma disstria* Hubner, can be found throughout the United States and Canada wherever hardwoods grow. The favored hosts in Wisconsin are aspen and oak. This native insect causes region-wide outbreaks at intervals from 10 to 15 years; outbreaks usually last 2 - 5 years in the Lake States. Severe and repeated defoliation can lead to dieback and/or reduced growth of affected trees, which in some instances may be significant. Populations are often controlled by natural enemies, helping the population crash. Aerial spraying of insecticides can be an option for control

as well. It will be Oconto County's strategy to employ sound silvicultural practices to combat this cyclic pest.

610.3.1.5 Two-lined Chestnut Borer

The twolined chestnut borer, *Agrilus bilineatus* (Weber), is a common secondary pest in trees which have been severely defoliated several years in a row. Oaks that have been defoliated by insects such as gypsy moth (*Lymantria dispar*), fall cankerworm (*Alsophila pometaria*), and forest tent caterpillar (*Malacosoma disstria*) can be attacked and killed by the two-lined chestnut borer. Prevention of two-lined chestnut borer is the best management option. Oconto County will strive to maintain healthy trees through sound silvicultural practices to discourage infestation. Infestations will be salvaged promptly.

610.3.1.6 Emerald Ash Borer

The emerald ash borer, *Agrilus planipennis*, was introduced from Asia and has taken hold in lower Michigan. In Michigan it has resulted in widespread mortality specific to ash including green, white, black and several horticultural varieties. Although not currently present in Wisconsin, it is a severe threat to ash in the State. Ash comprises a significant component in the northern hardwood timber type and can be found in nearly pure stands in some lowland areas. Adult beetles feed on foliage however, it is the larvae that cause mortality by feeding on the phloem and outer sapwood of the ash trees. Oconto County will cooperate with ongoing trapping and survey efforts. Sound silvicultural practices will continue to be used to maintain forest health. Should an infestation occur Oconto County will work with DNR Forest Health staff in applying measures to minimize spread, including aggressive salvage trees.

610.3.1.7 Pine Shoot Beetle

The Pine Shoot Beetle (*Tomicus piniperda*) was discovered near Cleveland, Ohio in July 1992. *Tomicus piniperda* completes one generation per year throughout its native range of Europe and Asia. Overwintering adults initiate flight on the first warm (50-54 degree F) days of spring which probably occurs in February or March in the Lake States in the northeastern United States. Adults quickly colonize either recently cut pine stumps, logs, or, at times, infest the trunks of severely weakened trees. If necessary, adults can fly ½

mile (1 km) or more in search of host material. Pine is the principal host tree. When populations are high, adults may breed in spruce, fir, and larch logs that occur in stands mixed with pine. Various species of blue stain fungi are associated with this bark beetle

Damage – The most severe damage caused by *T. piniperda* is the destruction of shoots during maturation feeding. When shoot feeding is severe, tree height and diameter growth are reduced. Generally, the reproduction phase of this beetle in pine stumps and slash caused little economic damage. However, in China and Poland, *T. piniperda* has attacked and killed apparently healthy pine trees. As of July 1, 2004, nine counties were under quarantine in Wisconsin for common pine shoot beetle (*Tomicus piniperda*). Quarantine counties are Dany, Grant, Green, Jackson, Kenosha, Lafayette, Rock, Sauk, and Walworth. A county is designated as quarantined once a beetle is found. Pine Shoot Beetle has been discovered in a trap in Marinette County. Should Pine Shoot Beetle occur in Oconto County, or lands adjacent to Marinette County, Oconto County will work with DNR Forest Health Staff in applying measure in minimize spread.

610.3.2 Funding

Desired control activities on the County Forest will be funded through the county forestry budget if other sources of funding are not available. In the event costs require additional funding, special appropriations from the Oconto County General Fund will be sought. In addition, state legislation may provide monetary assistance in direct crisis situations where major control operations are undertaken. In case of gypsy moth outbreaks, the county may seek funding from the State of Wisconsin Gypsy Moth Suppression Program.

610.3.3 Legal Obligations

All control operations will comply with regulations as set forth in existing state and federal legislation. Refer to Wisconsin Administrative Code NR80, AG.29, and the Environmental Pesticide Control Act.

610.3.4 Special Projects

The County may cooperate with other agencies in forest pest research. See Chapter 200.

615 TIMBER THEFT

All cases of alleged timber theft on the county forest shall be investigated and resolved promptly. An allegation of theft by cutting and /or removing timber from the county forest does not alleviate the county from payment under s. 28.11 (9) Wis.Stats. The county will collect damages pursuant to s. 26.05 Wis. Stats. and may also pursue criminal charges under s. 943.20 Wis. Stats. and /or seek civil damages.

615.1 TIMBER THEFT INVESTIGATION

The following procedure should be used in all cases of alleged timber theft:

- (1) Determination of Theft
 - (a) Gathering facts - The county, through its sheriff's department and along with assistance of the DNR liaison, rangers and wardens, will ascertain the facts pertinent to the alleged theft, including determination of the damages to the county. Legal counsel representing the county should be involved in all aspects of investigation. Property involved in the alleged theft may be seized pursuant to s. 26.04 Wis. Stats. for use as evidence.
 - (b) Boundary determination -If property boundaries are involved, the county shall conduct a legal survey of the boundary in question.

620 ENCROACHMENTS

The county will actively investigate all suspected cases of encroachments on the County Forest. To insure the integrity and continuity of the County Forest land, all cases will be dealt with promptly and in a consistent manner. The following procedures will be used in all cases of suspected encroachments:

- (1) The county will establish property boundaries; if necessary, a legal survey will be conducted.
- (2) The county will gather all facts.
- (3) The Committee, in consultation with the forest administrator, county legal counsel, and the DNR, will make a decision as to the disposition of the case.
 - (a) All above ground encroachments that are movable will be removed from county property.
 - (b) Permanent type facilities, such as homes, garages, and septic systems

shall be addressed individually and may be removed or handled by a land use agreement. Sale or transfer of the encroachment should remain an option depending on the circumstances involved and the viability of an adverse possession claim (s. 893.29 Wis. Stats.).

(c) Provisions in the land use agreement, if that option is pursued, may include granting the encroacher permission to encroach on the County Forest lands with the following stipulations: no other encroachments will be allowed; the permit is non-transferable; the county must be notified once encroachment is terminated; county continues full ownership and control of property; permittee agrees to waive any rights to any future declaration of ownership or interest in the encroached county property; county reserves the right to cancel the permit and the permit is to be filed in the office of the County Forestry Department and all fees related to the land use permit shall be paid by the permittee.

(d) A copy of sample encroachment permit can be found in Chapter 900.

(4) The committee is recommending to Oconto County Zoning Department to have a 150 ft. building set back from the County Forest to help prevent encroachments. A variance can be granted if deemed necessary by the Board of Adjustments.