

WASHBURN COUNTY FOREST COMPREHENSIVE LAND USE PLAN

CHAPTER 600 – PROTECTION

TABLE OF CONTENTS

**600**    [PROTECTION](#)..... 600-3

**605**    [FIRE CONTROL](#).....600-3

    605.1    [COOPERATION WITH DEPARTMENT OF NATURAL RESOURCES](#)..... 600-3

        605.1.1 [Personnel](#)..... 600-3

        605.1.2 [Equipment](#)..... 600-4

        605.1.3 [Fire Detection](#)..... 600-4

        605.1.4 [Forest Fire Prevention](#)..... 600-4

    605.2    [DEBRIS BURNING](#)..... 600-4

    605.3    [CAMP FIRES](#)..... 600-4

    605.4    [PRESCRIBED BURNING](#)..... 600-5

    605.5    [COUNTY FOREST FIRE HAZARD AREAS](#)..... 600-5

    605.6    [VEGETATIVE FUEL BREAKS AND FIRE PLANNING ZONES](#)..... 600-5

**610**    [CONTROL OF PESTS AND PATHOGENS](#)..... 600-6

    610.1    [DETECTION](#)..... 600-6

    610.2    [PEST SURVEYS](#)..... 600-6

    610.3    [SPECIFIC PESTS AND PATHOGENS](#)..... 600-6

        610.3.1 [Jack Pine Budworm](#)..... 600-7

        610.3.2 [Oak Wilt](#)..... 600-8

        610.3.3 [Forest Tent Caterpillar](#)..... 600-9

        610.3.4 [Two-Lined Chestnut Borer](#)..... 600-10

        610.3.5 [Emerald Ash Borer](#)..... 600-10

        610.3.6 [HRD](#)..... 600-12

        610.3.7 [Red Pine Pocket Mortality](#)..... 600-13

        610.3.8 [Gypsy Moth](#)..... 600-13

    610.4    [DEER BROWSE](#)..... 600-14

    610.5    [INVASIVE SPECIES](#)..... 600-15

610.5.1	<a href="#"><u>Funding and Partnerships</u></a>	600-15
610.5.2	<a href="#"><u>Best Management Practices</u></a>	600-15
610.5.3	<a href="#"><u>Invasive Plants of Concern to the Washburn County Forest</u></a>	600-16
610.5.3.1	<a href="#"><u>Buckthorn</u></a>	600-16
610.5.3.2	<a href="#"><u>Honeysuckle</u></a>	600-17
610.5.3.3	<a href="#"><u>Garlic Mustard</u></a>	600-18
610.5.3.4	<a href="#"><u>Spotted Knapweed</u></a>	600-18
610.5.3.5	<a href="#"><u>Japanese Knotweed</u></a>	600-18
610.5.3.6	<a href="#"><u>Japanese Barberry</u></a>	600-19
610.5.3.7	<a href="#"><u>Purple Loosestrife</u></a>	600-19
610.5.3.8	<a href="#"><u>Eurasian Milfoil</u></a>	600-20
610.5.3.9	<a href="#"><u>Other Invasive Species of Concern</u></a>	600-20
610.5.4	<a href="#"><u>Recommendations</u></a>	600-21
<b>615</b>	<a href="#"><b><u>TIMBER THEFT</u></b></a>	600-21
615.1	<a href="#"><u>TIMBER THEFT INVESTIGATION</u></a>	600-21
<b>620</b>	<a href="#"><b><u>ENCROACHMENTS</u></b></a>	600-22
<b>625</b>	<a href="#"><b><u>ORDINANCE ENFORCEMENT</u></b></a>	600-23

*Approved by Washburn County Board of Supervisors October 19, 2021*

*No Revisions*

## **600 PROTECTION**

It is the goal of Washburn County to protect and manage the resources of the forest from preventable losses resulting from fire, disease and other destructive elements, including those caused by people.

The DNR may provide technical guidance on certain protection issues that can be used to guide local decisions.

## **605 FIRE CONTROL**

Uncontrolled fire can have devastating impacts on the forest. Loss of resource values caused by fire can be minimized by organized prevention, detection and suppression of wildfire. Maintaining a healthy forest is one of the keys to avoiding wildfire impacts.

The DNR is responsible for all matters relating to prevention, detection and suppression of forest fires outside the limits of incorporated villages and cities, as stated in s.26.11(1), Wis. Stats. The DNR works cooperatively with local fire departments in certain fire control efforts. Washburn County is part of the Spooner Dispatch Group, Intensive Forest Fire Protection Area. The Fire Management Handbook No. 4325.1 and the Area Operations Plan shall serve as 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., the Washburn County Code of Ordinances, and the Washburn County/DNR Fire Control Memorandum of Understanding, the County is authorized to cooperate with the Department of Natural Resources in the interest of fire prevention, detection and suppression both on the County Forest and in the DNR Area. This is accomplished through agreements authorizing the Department of Natural Resources to use County Forest land or to utilize County personnel and equipment for fire control activities.

The Washburn County Forest/DNR Fire Control MOU is included in Chapter 1000.

#### **605.1.1 Personnel**

Upon request of DNR, County forest personnel shall be made available for forest fire control efforts as defined within any established memorandum of understanding

(MOU) or other agreement. The current fire control cooperating agreement is appended to this Plan. The DNR is responsible for training and directing the activities of County personnel in accordance with the rules identified in the Fire Management Handbook No. 4325.1 or any other manuals or plans, including the daily operations plan.

#### 605.1.2 Equipment

County Forest equipment, upon request and as identified in the MOU, shall be made available for forest fire suppression. During periods of high fire danger, all suitable County Forest vehicles and/or crews should be equipped with back cans, axes, shovels, personal protective equipment, mobile radio, slip on water tanks with pumps and other equipment deemed necessary by the MOU. Hand tools shall be made available from and maintained by the DNR.

#### 605.1.3 Fire Detection

Fire detection is the responsibility of the DNR. County Forest personnel may assist and report any wild fires to the 911, Sheriff's Department Dispatch or Spooner DNR 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 recreational and forestry operations on the forest in a manner designed to prevent forest fires. Certain uses may be restricted on the forest during period of high fire danger. These restrictions may include timber harvesting, camping and motor vehicle use.

#### 605.2 DEBRIS BURNING

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

#### 605.3 CAMP FIRES

Adequate fire rings have been provided at designated recreation sites. During periods of high fire danger, use of campfires may be restricted. Those camping outside of designated

camping areas, as allowed by permit, must adhere to all fire restrictions. The use of campfires will strictly follow rules stated on camping permits and comply with the Washburn County Municipal Code.

#### 605.4 PRESCRIBED BURNING

The County and DNR will jointly develop burn plans and secure special burning permits for any prescribed burning on County Forest lands. The County will also follow DNR recommendations and comply with DNR permits in order to minimize risk of wildfire. See Prescribed Burn Handbook No. 4360.5 for details. Refer to Chapter 800 for prescribed burning for forest management.

#### 605.5 COUNTY FOREST FIRE HAZARD AREAS

Primary emphasis will be placed on fire control efforts in sand/pine areas, generally within the towns of Minong, Chicog, Casey and Springbrook. Maps of these areas are available at the local DNR field office. The County will coordinate with DNR Fire Control in providing for firebreaks or access roads. Existing access roads, firebreaks and water access points will be maintained as deemed necessary. Secondary emphasis will be placed on hardwood areas with minimal firebreaks developed or maintained.

#### 605.6 VEGETATIVE FUEL BREAKS AND FIRE PLANNING ZONES

A system of managed fire breaks, making use of natural vegetative fuel zones has been constructed in high fire hazard areas. These natural fuel breaks are maintained in forest types with a lower risk of crown fire, such as aspen or hardwood. Each fuel break is generally oriented in a north-south direction and one-quarter mile in width with a maintained firelane along the east side. The intent of these breaks is to create areas where crown fires would run out of fuel and set back on the ground. These could provide the opportunity to contain a major forest fire.

These fuel breaks are located along Gull Creek and Casey Creek in the Town of Springbrook. They are also located along McKenzie Creek and Casey Creek in the Towns of Casey and Chicog.

A fire planning zone is located in Section 18 of Springbrook. Fire suppression opportunities are considered when managing this section. Firelane maintenance, a 100 foot fuel break along the town road and other techniques will be considered in this zone.

This Plan recommends that County staff consult with the DNR Liaison Forester and local DNR Forest Rangers to analyze existing fuel management zones to determine potential effectiveness. Alternative strategies may also be developed. This Plan also recommends developing a comprehensive plan for radio equipment and shared radio frequencies with DNR.

## **610 CONTROL OF PESTS AND PATHOGENS**

### **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. 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 forest health specialist. The County may cooperate by providing personnel and equipment to assist in these operations.

### **610.3 SPECIFIC PESTS AND PATHOGENS OF CONCERN**

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

*“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.”*

Integrated pest management control and methodology shall be determined jointly by the Forest Administrator, and DNR Liaison Forester in consultation with the DNR Forest Health Specialist. Suppression of forest pests may include the following:

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

Washburn County will make reasonable efforts to secure funding through outside grants and funding sources. County funding for control activities will be budgeted through the County Forest Land Developed (250.56100) and Forestry Aid (250.56930) accounts if other funding sources are not available. The County may also cooperate with other agencies in forest pest control and research

Washburn County has a very good working relationship with the DNR Forest Health Specialist. Efforts will be made to assure that this collaborative working relationship continues.

#### 610.3.1 Jack Pine Budworm

Jack pine budworm, *Choristoneura pinus*, is a native needle-feeding caterpillar that is generally considered the most significant pest of jack pine. Vigorous, young jack pine stands are less likely to be damaged during outbreaks. The most vigorous stands are well stocked, evenly spaced, fairly uniform in height, and less than 45 years old. Well stocked stands are also more resistant to, and recover more quickly from tip weevil damage. Stands older than 45 years old 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. In addition, stressed stands are more susceptible to attack by Ips bark beetle. Mortality from Ips can occur for 2-4 years after the jack pine budworm, outbreak collapses. This mortality and top-kill can create fuel for intense wildfires.

It will be Washburn County's strategy to harvest jack pine before tree vigor is reduced or lost. Management will include the goal of maintaining high stand densities (without overcrowding) and using good site selection for jack pine. This effort should minimize budworm caused tree mortality while still providing suitable conditions for jack pine regeneration. Prompt salvage following outbreaks will also help reduce the possibility of wildfire. Aesthetic strips, reserve trees or tree retention is not recommended on jack pine harvests as they can create budworm breeding areas. The use of insecticides is not warranted in combatting this naturally occurring pest.

Washburn County will also review annual DNR monitoring efforts on budworm to help develop adaptive management strategies.

### 610.3.2 Oak Wilt

Oak Wilt, *Ceratocytis fagacearum*, is a destructive disease of oak trees. It causes the death of thousands of oak trees in forests, woodlots and home landscapes each year. Oak Wilt is a fungus that invades and impairs the tree's water conducting system, resulting in branch wilting and tree death. Trees in both the red and white oak groups 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.

Oak Wilt is fairly new to Washburn County, but over the last several years, infestations have cropped up in nearly every Town in the County. The County Forest has also suffered numerous infestations that have been treated.

Oak Wilt can transmit both overland and also underground. Wounded oak trees will attract beetles feeding on exposed sap. These beetles can transmit the fungus overland from tree to tree during the period of the year when the fungus is active and sap is running. Oak are prone to root grafting between trees and infections will spread underground and across grafted root systems. Because of this, it is important to avoid damage to oak trees during the susceptible time of the year. In general, Washburn County will utilize the Oak Harvesting Guidelines established by the Department of Natural Resources to reduce the risk of infection.

Washburn County Forestry's Oak Wilt policy includes:

- Restriction of harvest activity in stands with 15 or more basal area of oak between April 1 and July 15.
- No mowing, pruning or other activities that may damage oak trees on forest roads, trails, or facilities between April 1 and July 15.
- Annual detection flights to search for new Oak Wilt pockets (sponsored/funded by County if necessary).
- Drone technology to spot check suspected Oak Wilt infestations.
- At the time of this Plan drafting, known pockets of Oak Wilt are aggressively treated with the "frill-girdle" technique and infected trees are removed from the



site, chipped, buried, or burned. Other methods of treating oak wilt will be evaluated as new techniques and technologies develop.

- The County may assist adjoining landowners with oak wilt treatments but only in cases where they are directly adjacent, or in close proximity to the County Forest
- Pre-salvage of northern pin oak stands and conversion to other forest type is a legitimate stand prescription to avoid loss due to oak wilt.
- Prescribing intermediate thinnings as soon as practical will reduce stand densities and could reduce root grafting potential. Stand prescriptions within oak should also contain provisions for retention of non-oak tree species to be scattered throughout.
- Marking guidelines should contain provisions to remove as much mechanical defect from oak stands during intermediate treatments as possible. This should reduce risk of damaged trees during susceptible seasons.

This Plan recommends consideration of the following for future policy:

- Develop a wood removal policy for infected trees. This policy should include a cost/benefit analysis to determine how much risk a potential spore producing tree (PSPT) poses to other oak trees in area once the tree is cut and dropped. Trees that are killed within the buffer areas of an infected tree are generally not a risk.
- Develop criteria/prohibition for firewood collection within oak wilt areas
- Conduct trials on “rapid response” techniques that include girdling only the infected tree, complete tree/stump removal, and other methods. These trials will likely only be effective in cases of rapid detection.
- Analyze if habitat and soil type differences result in varying treatment techniques

Washburn County will continue to monitor new treatment methods and techniques as they become available. New methods will be tested, evaluated and included in an oak wilt policy if they are effective and efficient.

### 610.3.3 Forest Tent Caterpillar

Forest tent caterpillar, *Malacosoma disstria*, 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 and outbreaks generally last 2 to 5 years. Severe and repeated defoliation can lead to

dieback and/or reduced growth of affected trees. Mortality is not common unless other stresses are associated with the outbreak and secondary pathogens are involved. Populations are controlled by natural enemies, helping the population crash.

Impacts to the Washburn County Forest are generally minimal and the only adaptive measure necessary is keeping stands healthy and vigorous. In particular, it is important not to maintain over mature aspen stands on the landscape. Heavy defoliation may require salvage of certain stands. It is also important to provide new aspen harvest data to the DNR Forest Health specialists. These sites are important to help determine population projections.

#### 610.3.4 Two-lined Chestnut Borer

Two-lined chestnut borer, *Agrilus bilineatus*, is a common secondary pest in trees which have been severely defoliated several years in a row. Oaks that are under stress from drought and/or defoliation by insects such as gypsy moth (*Lymantira dispar*), fall cankerworm (*Alsophila pometaria*), and forest tent caterpillar (*Malacosoma disstria*) can be infested and killed by two-lined chestnut borer. Tree mortality is usually associated with drought and is normally isolated to individual trees or small pockets. Prevention of two-lined chestnut borer outbreaks is the best management option. Postponing management activities in stressed stands for two years after drought and/or defoliation will provide time for trees to recover and reduce risk of mortality or damage. Washburn County will strive to maintain healthy trees through sound silvicultural practices to discourage infestations.

#### 610.3.5 Emerald Ash Borer

Emerald ash borer, *Agrilus planipennis*, was accidentally introduced to North America from Asia in 2002. Emerald ash borer (EAB) infestations in Wisconsin have resulted in widespread mortality to ash species including green, white and black. Adult EAB beetles feed on foliage but it is the larvae that causes mortality by feeding on the phloem and outer sapwood of ash trees.

As of 2020, EAB has not been found in Washburn County, but infested ash trees were found in the City of Superior. Beetles were found in central Sawyer County and southern Chippewa County.

On the Washburn County Forest, swamp hardwood stands comprise over 4% of the County Forest acreage and most of these types are dominated by black ash. Northern hardwood stands account for 10% of the forest acreage and white ash occurs as a component in many of these stands. While ash is a fairly significant component of these upland sites, it is not as high a percentage as other parts of the State or the Midwest.

The Department of Natural Resources [Emerald Ash Borer Silvicultural Guidelines](https://dnr.wi.gov/topic/ForestHealth/documents/EABWIManagementGuidelines.pdf) are available to help resource managers make informed stand level decisions to manage forests not yet infested by EAB, as well as implement salvage harvests and rehabilitation of stands that have already been impacted by EAB. Washburn County will practice adaptive management in regard to Emerald Ash Borer. Techniques will be developed as we learn more about how the insect will impact forests in Washburn County.

<https://dnr.wi.gov/topic/ForestHealth/documents/EABWIManagementGuidelines.pdf>

Washburn County Forestry strategy for EAB management/mitigation is as follows:

#### Lowland Sites / Swamp Hardwood

Many of the swamp hardwood sites within the Washburn County Forest contain ash of poor quality and vigor, primarily from fluctuating water levels associated with drought and wet cycles, along with beaver activity. Management of these sites is important since a complete mortality of ash in these stands will likely result in the “swamping” of the areas and subsequent conversion to alder. Given these characters, the following strategies will be utilized:

- Consider pre-salvage of black ash sites containing any commercially viable ash sawlog components.
- Look for opportunities to promote and enhance swamp species other than ash, including red maple, yellow birch, elm and swamp conifer species. Generally reserve non-ash species as part of all swamp hardwood management prescriptions.
- Participate in, and conduct silvicultural trials to study methods of conversion away from black ash as a primary component.

- Given the difficulties operating in these sites and the problems with marketing swamp hardwood timber sales, the County may be forced to allow EAB to impact these sites without subsequent salvage or other management efforts.

#### Upland Sites / Northern Hardwood

Upland northern hardwood sites contain varying components of white ash within the forest stands, although densities of ash are generally lower than in other regions. While EAB is likely to kill a majority of ash within these stands, research does suggest some level of resistance to infestation. Given these characters, the following strategies will be utilized in upland sites:

- When establishing northern hardwood intermediate treatments or all aged regeneration harvests, look for opportunities to harvest sawlog sized ash with economic value as part of the order of removal.
- Ash poletimber and small sawlogs may be left if needed for spacing and if they are otherwise healthy and vigorous. If it is determined that resistance is possible, it will be important to retain some component of white ash in these stands provided the individual trees are not of high economic value. This is especially important in cases where removal of ash will result in losing all of the dominant and co-dominant trees, leaving only suppressed and intermediates to occupy the site.
- Timber sales will NOT include any objective of harvesting all ash trees. This strategy may change once EAB starts impacting the local landscape. Management goals to remove more ash than described in this section are to be at the directive of the Forest Administrator, NOT field marking staff.

#### 610.3.6 HRD

Heterobasidion root disease (HRD, previously called annosum root rot), is caused by the fungus *Heterobasidion irregulare*. It is a disease that causes pine and spruce mortality in Wisconsin, but over 200 woody species have been reported as hosts. Red and white pine trees are most commonly affected in plantation-grown stands subjected to thinning. The disease was first confirmed in Wisconsin in 1993 and has since been found in a number of counties throughout the state. Currently there are no curative treatments to eliminate HRD from a stand once it is infected, so preventing the disease's introduction is the best approach.

As of 2020, HRD has not been detected in Washburn County and the nearest known locations are in Taylor and Dunn Counties. It is not known if the disease is spreading northward, but should it present a threat to forests in the area, Washburn County will comply with guidelines published by the Wisconsin Department of Natural Resources for reducing introduction and spread of the disease. In general, prevention requires all cut conifer stumps to be sprayed with a fungicide when thinning or harvesting in pine stands.

If HRD is found within the region, Washburn County will comply with the accepted guidance established for treatment.

#### 610.3.7 Red Pine Pocket Mortality

Pocket Mortality is a disease caused by the fungus *Leptographium sp.* Once a tree is infected, the fungus impedes the tree's ability to take up and move water, or make defensive compounds effectively. Stressed trees attract stem feeding beetles, particularly red turpentine beetle, which ultimately kill the tree. The fungus is generally spread by insects feeding on freshly cut stumps, which spread the disease to other stumps and into adjacent trees that are root grafted with each other.

The disease does spread fairly slowly once it has established in the stand (one-half chain in 5 to 7 years). Treatment options on the Washburn County Forest will include harvesting infected trees, as well as a buffer area of healthy trees. Harvesting dead and declining trees will also reduce the risk of bark beetle population spikes.

This disease is not fully understood at this time. Washburn County will adapt treatment prescriptions as new research develops. Of particular concern is the question of whether the fungus can spread from an infected tree and into a freshly cut stump.

#### 610.3.8 Gypsy Moth

Gypsy moth, *Lymantria dispar*, is an introduced pest that has progressed westward from the northeastern United States in the early 1900's. It reached eastern Wisconsin in 1998. Despite intensive efforts to slow the spread, it has steadily moved westerly across the state and has been found in Washburn County for several years. The insect's primary host is red oak and will also feed secondarily on aspen and maple.

The moth defoliates red oak trees and the best defense is maintaining healthy and vigorous stands of oak. Washburn County began accelerating red oak thinnings in 2005, especially first thinnings, in order to try and maintain healthier stands in advance of gypsy moth arrival.

Washburn County has not noted any significant defoliation, damage or mortality on the County Forest since arrival of the pest. This may be due to accelerated thinning schedules in red oak that the County conducted in the past; the sequence of wet spring and summer weather that have impeded the insect's ability to reproduce; and the DATCAP control efforts.

As of 2020, the Department of Agriculture, Trade and Consumer Protection (DATCAP) is no longer spraying mating disrupters as part of the "Slow the Spread" campaign, although private contracts are available to conduct spraying activities. Egg mass surveys are still being conducted by DATCAP and this Plan recommends monitoring these egg mass surveys to determine any necessary mitigating forest management measures. It may be a consideration to limit red oak thinnings during summer seasons when egg masses numbers are increasing dramatically.

#### 610.4 DEER BROWSE

Forest regeneration and reproduction is critical to sustain both timber production, wildlife habitat and the overall health of the deer herd. Deer can affect forest regeneration, long term forest production and forest sustainability. It is important to try and work towards a balance of deer population levels that allow for adequate forest regeneration and provide a socially acceptable level for the hunting public.

Washburn County will monitor herbivory impacts during forest reconnaissance and will continue to strive to develop effective regeneration methods during periods of high deer populations. These efforts will include silvicultural trials and other research projects. Nuisance deer shooting permits may be considered in areas with extremely high deer numbers.

Washburn County will continue to monitor deer research to determine future management options for minimizing browse damage. We may also consider experimental fencing as demonstration projects to illustrate browse impacts. This Plan includes a recommendation that Washburn County and DNR coordinate on any browse/regeneration surveys to assure that the Forestry Department is aware of research efforts.

#### 610.5 INVASIVE PLANT SPECIES

Invasive plants can cause significant impacts to the forest. Invasive species can displace native plants and hinder forest regeneration efforts. Preventing them from dominating habitats is critical to the long-term health of the forest. There are a number of invasive plant species in varying densities on the County Forest. Some warrant immediate and continued treatments efforts while others may be allowed to remain due to extent and costs of treatment. The County will continue to train staff in identification as well as attempt to secure funding sources for control.

##### 610.5.1 Funding and Partnerships

Grant opportunities for invasive species control funding can be found on the Financial Assistance webpage of the Wisconsin Invasive Species Council.

<http://invasivespecies.wi.gov/financial-assistance/>

The number of grants for local governments and county forests is limited, especially for terrestrial invasive plant control. Washburn County currently includes funding for invasive species control within the Forestry Department budgets.

##### 610.5.2 Best Management Practices

In 2009, the Department of Natural Resources and stakeholder groups approved a series of Best management Practices (BMPs) for minimizing the spread of forest invasive plants. The full text of BMPs can be found on the Wisconsin Council on Forestry website:

<https://councilonforestry.wi.gov/Pages/InvasiveSpecies/Forestry.aspx>

Voluntary use of BMPs during forestry activities reduces the spread of invasive plants that can impede forest regeneration. BMPs used before, during and after a harvest promote forest regeneration. Reasonable efforts to clean vehicles, equipment, footwear and other clothing helps reduce the spread of seeds and plant fragments to un-infested forests. Planning the sequence and timing of stewardship activities to reduce contact with invasive plants during forestry operations is another helpful strategy. Similarly, controlling populations of invasive plants before logging reduces the risk of spreads.

### 610.5.3 Invasive Plants of Concern to the Washburn County Forest

There is an extensive list of invasive species that are a threat or concern to Wisconsin's Forests and only a handful impact Washburn County. As of 2020, the following are either known to be on the Washburn County Forest or are likely to be on or near the forest.

#### 610.5.3.1 Buckthorn

Two species of invasive buckthorn impact Wisconsin's forests. Common buckthorn, *Frangula cathartica*, is more often found growing on well-drained soils while glossy buckthorn, *Frangula alnus*, favors wetter soils. Both of these shrub species grow in shade or sun, form dense thickets that shade out understory plants and hinder forest regeneration. Their dark colored fruits are eaten by birds who disperse them over long distances. Both buckthorn species leaf out before native plants and remain green after other native species lose their leaves.

Buckthorn can be controlled by taking advantage of the longer period in which they retain their leaves. Foliar applications of herbicide applied in the fall, when other native species have dropped their leaves, will kill the shrub and minimize impacts to native plants. Other control options include mowing coupled with herbicide, basal bark herbicide, and cut stump herbicide applications.

Buckthorn is found throughout the Washburn County Forest, with many of the infestations assumed to have originated as planted shrubs in old homesteads. As of 2020, buckthorn problem sites include areas north of Olson Road in the Town of Frog Creek; Chippanazie Road area in Stinnett; and the Welsh Lake area in Barronett.



Washburn County's management strategy for controlling buckthorn is as follows:

- Maintain chemical applicators certification for staff
- Staff to carry smaller spray applicators in pickups to allow for spot applications on scattered plants with Triclopyr herbicide
- Larger infestations will be identified, mapped and submitted to the Forest Administrator for inclusion on contract chemical application projects
- For treatment of scattered plants within natural stands, staff or contractor applications of chemical will be prescribed for basal bark or foliar applications by hand
- For heavier infestations in plantations or other sites, boom applications may be prescribed prior to regeneration of the site.
- It is likely necessary to develop a collaborative relationship with other agencies or groups to facilitate treatment of private lands adjacent to County Forest in order to eliminate seed sources.
- Prioritize treatment on stands with heavy buckthorn infestations that are scheduled for harvest. Pre-sale treatment may allow forest regeneration to out compete buckthorn.
- Implement adaptive management as other techniques are found.

#### 610.5.3.2 Honeysuckle

Honeysuckles (*Lonicera spp.*) were introduced from Europe as ornamentals, wildlife cover and wind break shrubs. Honeysuckles replace native forest shrubs and herbaceous plants by inhibiting growth of understory plants due to early leaf-out which shades herbaceous ground cover and depletes soil moisture. Control options include hand pulling, prescribed burning, and chemical treatments.

On the Washburn County Forest, honeysuckle can be found scattered throughout the forest. While it is commonly found, there does not appear to be any extensive areas of dense, thicket like infestations like those found in other parts of the region. Monitoring of honeysuckle will continue during the normal course of forestry activities and any control efforts will be very similar if not identical for control efforts documented for buckthorn.

#### 610.5.3.3 Garlic Mustard

Garlic mustard, *Alliaria petiolate*, is an herbaceous, biennial, native to Europe. Each plant can produce 100's of tiny seeds and can quickly colonize disturbed forests. It often follows corridors, such as game trails, or man-made roads/paths. As garlic mustard spreads, it quickly displaces native plants and is known to radiate chemicals into the soil that disrupt associations between mycorrhizal fungi and native plants. Small populations can be hand pulled, while larger populations are better controlled with prescribed fire and/or herbicide.

As of 2020, garlic mustards has not been detected on the County Forest. It is highly likely that it is present and will be discovered shortly. Once found on the Washburn County Forest, control efforts shall be prescribed as soon as possible to prevent further spread. Herbicide applications are likely the most viable control option, although prescribed fire may also be considered depending on the specific site conditions.

#### 610.5.3.4 Spotted Knapweed

Spotted Knapweed, *Centaurea stoebe*, is an herbaceous, short-lived perennial native to Eurasia that can grow 2 – 4 feet tall. The plant develops pink-purple flowers on long spreading stems. Knapweed invades dry-upland areas, including disturbed sites. The roots exude an allelopathic chemical which inhibits establishment of other plants. Small populations can be hand pulled provided the entire tap root is removed. Chemical control should be applied directly to plants or broadcast across areas of infestation.

Spotted knapweed is abundant across many areas of the County Forest. It infests open areas and especially along the edges of roads and trails. Given the abundance of this plant and the fact that it rarely invades into forested settings, Washburn County, generally, will not undertake control efforts.

#### 610.5.3.5 Japanese Knotweed

Japanese knotweed, *Fallopia japonica*, or *Polygonum cuspidatum*, are herbaceous perennials that form large colonies of erect, arching stems that resemble bamboo. Knotweed prefers full sunlight and is a particular threat to wetlands and riparian

areas. It can tolerate some shade and can potentially be a threat to forested communities.

There are no known infestations of knotweed in Washburn County. The County will undertake control measures if it is found on the County Forest.

#### 610.5.3.6 Japanese Barberry

Japanese barberry, *Berberis thunbergii*, was introduced from Japan around 1875 and now ranges across most of North America. It is a compact, spiny, deciduous shrub with arching branches of dense foliage. Japanese barberry regenerates by seed, creeping roots and by branches that root freely when they touch the ground, which increases its overall spread. This plant is highly adapted to growing in young forests where it can form thorny thickets that shade out native vegetation. The primary method of control is by hand pulling or digging it up early before seeds set. Larger populations may be controlled by herbicide with a cut stump treatment.

Japanese barberry has not been found on the Washburn County Forest. Eradication will be prescribed immediately if it is found and treatment is likely to be by chemical.

#### 610.5.3.7 Purple Loosestrife

Purple loosestrife, *Lythrum salicaria*, is an aquatic plant native to Europe and Asia. This plant with purple flowers and a stiff, four sided stem grows from two to seven feet in height. It seeds prolifically and invades wetlands, choking out other native plants. Loosestrife is known to be in the Welsh Lake area and surrounding unit, as well as in the Casey Flowage. Tampering at Casey Flowage dam site in 2020 resulted in extremely high water levels (over the maximum rating for the dam structure). It appears that the loosestrife patch has either been destroyed or significantly reduced, likely from the flooding.

Control efforts can include hand pulling, digging, herbicide or biological controls. Washburn County Forestry has been collaborating with the Land Conservation Department in control efforts and will continue to do so.

#### 610.5.3.8 Eurasian Milfoil

Eurasian Milfoil, *Myriophyllum spicatum*, is an aquatic plant native to Europe, Asia and northern Africa. The plant has spaghetti-like stems, feathery leaves that grow underwater, and tiny flowers that poke into the air. Eurasian water milfoil replaces native aquatic plant communities and forms thick underwater beds of tangled stems and mats of vegetation. These dense beds cause loss of plant diversity, degrades habitat and hinders recreational activities.

Eurasian milfoil is present in the Minong Flowage adjacent to Totogatic Park. The Minong Flowage Association has been undertaking control efforts that have included, chemical removal, mechanical removal as well as draw downs on the flowage. The Association is also monitoring invasive species in the water body. Washburn County Forestry assists with funding these efforts and it is a recommendation of this Plan to continue efforts to assist. This Plan also includes a recommendation to continue utilizing the boat launch fee at Totogatic Park and transferring the funds to the Association for control efforts.

#### 610.5.3.9 Other Invasive Species of Concern to Grasslands and Openings

There are numerous invasive species of concern that are a threat to grasslands and open areas in Wisconsin. For the most part, these do not pose a significant threat to Washburn County Forest lands. They may, however, exist along roadways, trails and within openings. Some of these species are:

- Reed Canary Grass
- Leafy Spurge
- Common Teasel
- Crown Vetch
- Exotic Thistles
- Wild Parsnip

As policy of Washburn County Forestry, care should be taken on any seeding projects on roads, trails and openings, or other areas of the County Forest to ensure

that exotic seed sources are not being used. As areas of infestation are noted, they should be evaluated to determine if any action is necessary or feasible.

#### 610.5.4 Recommendations

Invasive plant species are one of the largest threats to sustainable forest management and it is critical that control and management mechanisms are employed to mitigate their impacts. There will likely be a great deal more awareness of invasives as well as control initiatives statewide throughout this planning period. To that end, this Plan recommends the following actions:

- Develop an inventory and monitoring program for the County Forest that includes staff training on identification and a protocol for evaluating presence and impact of invasives in a comprehensive manner. This effort will likely require internal staff efforts as well as outside consultants and/or contractors
- Develop invasive management plans that include risk/benefit analysis to treatment programs and options. This may require outside consultants to assist with plan drafting
- Work to develop cooperative relationships with entities that can provide services to private parties. There is a significant need to be able to provide treatment options not only on County lands but also on adjacent parcels in order to effectively manage invasives.
- Work to help establish legislative initiatives aimed at management and control of terrestrial invasive species. Wisconsin has done a great job of providing resources for aquatic invasive control and this effort needs to be mirrored for land based exotic/invasive species.

### **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.843.20, Wis. Stats., and/or seek civil damages.

#### 615.1 TIMBER THEFT INVESTIGATION

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

1. Determination of Theft

- a. Gathering facts – The County, through its Sheriff’s Department, and along with the assistance of the DNR Liaison Forester, Forest Rangers and Conservation Wardens will ascertain the facts pertinent to the alleged theft, including determining the damages to the County. Legal counsel representing the County should be involved in all aspects of the investigation. Property involved in the alleged theft may be seized pursuant to s.26.064, 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 unless the line is not contested.
- c. During the investigation, County legal counsel should be consulted for further direction or for assistance in resolving the matter. If deemed necessary by the Committee, the district attorney shall be requested to prosecute violation of s.26.04 Wis. Stats., and a legal action for damages commended. Otherwise, with advice of legal counsel for the County, the County may seek to reach a mutually agreed upon damage payment with the party alleged to have cut or cut and removed the timber without consent of the County.

**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 lands, 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 most often remove, but may be handled by land use agreement in rare situations. For example, when the encroachment will be removed within a short and defined time period.. Sale or transfer of the encroachment

area will be an option only in cases of a viable adverse possession claim (s.893.29 Wis. Stats.).

- c. Provisions in the land use agreement, if that option is pursued, should include granting permission to encroach on County Forest lands with the following stipulations:
  - No other encroachments will be allowed
  - Permit is non-transferable
  - County must be notified once encroachment is terminated
  - County continues full ownership and control of the property
  - Permittee agrees to waive any rights to any future declaration of ownership or interest in the encroached property
  - County reserves the right to cancel the permit
  - Permit is to be filed in the office the Washburn County register of deeds
  - All fees related to the filing of the permit shall be paid by the permittee.
- d. It is the policy of Washburn County that all new developments, including but not limited to homes, septic, out buildings, landscaping, roads, fence, etc., adjacent to County Forest lands should include a legal survey conducted and paid for by the party building the structures. In the absence of a legal survey or line determinations, encroachments should be considered for immediate removal or relocation.

## **625 ORDINANCE ENFORCEMENT**

Chapter 50 of the Washburn County Code of Ordinances governs uses of the Washburn County Forest. A majority of the ordinances adopted by the Washburn County Board are in place for the protection of the resource. To that end, law enforcement and the enforcement of these ordinances, along with pertinent state statutes is considered a vital part of County Forest management and operations.

Washburn County, as of 2020, employs a Recreation Officer position. This position is a credentialed deputy employed by the Washburn County Sheriff's Department and assigned to the Washburn County Forestry Department for enforcement of Chapter 50 as well as ATV, snowmobile and other state laws and regulations.

This Recreation Officer position serves as the point of contact for all County Forest related enforcement and Washburn County and DNR staff will forward all pertinent information on potential enforcement issues to that individual.

It is important to provide training to all staff on the County Forest as a reminder that law enforcement is to be handled by trained law enforcement staff. Non-law enforcement staff are to observe and report. Any additional actions shall be under the request and direction of the Recreation Officer or Forest Administrator.

As time permits, the Recreation Officer may handle outdoor recreational issues that are not directly connected to the County Forest or Chapter 50 of the Washburn County Code. In general, these non-County Forest duties may include addressing trespass complaints, ATV on roadways, accidents, and others.