



KEEPING YOUR WOODS HEALTHY

GETTING TO KNOW YOUR WOODS

UNDERSTANDING YOUR STAND

Healthy forests require a mix of tree species, layers, and ages. A healthy forest will typically have at least three tree species present and will include over and understory species, shrubs of varying heights, herbaceous plants and a ground layer of leaf litter. Ideally, many of these species will also be native to your area. A diverse mix of tree age is also important in your woods. Mixed stands allow for resiliency against diseases, pests and natural damage. For example, young trees are more flexible, and therefore often more resilient to blow down during strong windstorms. Mixing your stand ensures new growth for a healthy forest for the future.

TO LEARN MORE ABOUT MANAGING STANDS IN THE ST. CROIX, REQUEST A WOODLANDS OF MINNESOTA LANDOWNER HANDBOOK.

STAND DENSITY: BURNING, THINNING & DEBRIS

Maintaining a healthy stand density is important to managing healthy woodlands. Selectively thinning your woods will allow young and understory trees and plants to grow, allows sunlight to reach the forest floor improving wildlife habitat, reduces your risk of fire, pests or diseases spreading through your forest, allows you to diversify the age of your stand, and can help to maximize your profit. It is important to plan a thinning responsibly so that you are cutting the right trees at the right time. Getting to know your woods, land, priorities and forester can help you to do this effectively. Prescribed burning can also help to manage the density of your forests. Much like other natural disturbances, fires play a pivotal role in maintaining a healthy ecosystem in many forests. Prescribed burns can allow you to safely mimic these natural cycles. Well planned, monitored and managed, low temperature fires can remove unwanted vegetation, promote new growth and biodiversity, benefit wood and soil quality, reduce risk of unmanaged wildfires, improve wildlife habitats, and control invasive species and pest threats. Working with professionals to





thoroughly plan, prepare your land, gather equipment and complete the needed paperwork will allow you to complete a safe and successful burn on your property. However you choose to manage your stand, it is also important that you plan for the entire process, start to finish. This will include dealing with the stumps and debris left behind. While it is important for soil quality and wildlife habitat to maintain some debris, leaving too much can attract insects and lead to unwanted resprouting, especially of hardwoods. It can also increase your risk of wild fires when left in piles. Cutting and scattering, chipping, safely piling and burning or hauling it away are all useful methods of woody debris management and removal to consider.

UNDERSTANDING YOUR SOIL

Soil is a mixture of minerals, organic materials, water, air, and fungi. The composition of this mixture determines what trees and plants can grow on your land, erosion susceptibility, fertility, and drainage. Soils are often described by their composition, such as sandy, loamy or clay. Burn regimes, management practices, compaction, nutrient additions, and weather can all affect your soils. Testing your soil is generally a simple process and can often be done with a do it yourself kit.

THE IMPORTANCE OF DEAD WOOD

Deadwood in the form of rotting logs or stumps, snags, and brush piles all serve as important components of a healthy forest and wildlife habitat. The decomposition of woody debris enriches the soil and ensures nutrient availability for plant growth. Snags are often a primary perching resource for woodland birds, while other species utilize brush and ground-lying deadwood for shelter. Maintaining a mix of sizes and shapes of logs with varied hollows and leaning angles will attract a mix of wildlife into your woods. Partially burying logs and ensuring shade for deadwood will encourage fungi to grow and attract wildlife. Similarly, logs or trees that occasionally fall into waterways can serve as important shelter and spawning habitat for fish, amphibians and other riparian species.

SPOTTING THREATS TO YOUR WOODS: PESTS, WEEDS & DISEASES

SIGNS OF DISEASES & PESTS

<i>Insects</i>	Ragged leaves, holes in leaves, spots or bumps on leaves, twisted or malformed leaves, red needles, dying branches on one side of the crown
<i>Herbicides & Pollution</i>	Green or brown spots on needles, twisted or malformed leaves, leaves changing colors out of season
<i>Trunk or Root Disease/Damage</i>	Leaves changing colors out of season, peeling bark, holes or breaks in the bark, dying branches on one side of the crown
<i>Stem or Leaf Disease/Damage</i>	Black or brown leaves, twisted or malformed leaves
<i>Other Tree Disease/Damage</i>	Twisted or malformed leaves, branch decay, peeling bark, holes or breaks in the bark, splits in the tree
<i>Fungal Infections</i>	Fungi or mushrooms growing on trees, hollows in the tree, cankers
<i>Water, Wind or Weather Damage</i>	Splits in the tree, hollows in the tree



Photo © Craig Blacklock

MAKING YOUR WOODS A HOME

CREATING & IMPROVING WILDLIFE HABITAT

A rich wildlife presence can be an indicator of a healthy forest, and attracting birds, deer, elk or other animals to your woodland may be important to you for a variety of reasons. Successful planning and management can help you make your land hospitable for an array of species. Ensuring connectivity and gradual edges on your forest can have a huge impact. Maintaining corridors safe from disturbances like roads and other threatening situations such as open, uncovered fields make it easy for birds and other wildlife to move and forage throughout your forest. Effective thinning or prescribed burning allows for rich forage and easy, covered passage for large mammals like deer and elk. Managing for more sparsely planted trees and fruiting bushes along forest edges can help minimize the threats edge habitat poses for some species, while maintaining the transitional habitats that others thrive in. Providing a multistory, multiage forest with ground cover, bushes, understory trees, young forests and mature canopy species is also important for providing habitat for a variety of birds and other wildlife. Considerations for management seasonality, such as avoiding pre-winter foraging and breeding seasons, as well as light use can also make your woodland a hospitable habitat for wildlife. Which tree and plant species present in your woods can also make a big difference. Most wildlife species prefer or rely exclusively on native food substances so encouraging native vegetation that produces fruits, seeds, nuts or other forage will help attract your native wildlife to your land. Thoughtful management of herbicides and pesticides will help to keep these food resources healthy and edible for foraging wildlife. Promoting native plants can also help to control invasive competitors which are often not suitable resources for native wildlife. It is also important to provide wildlife with covered, safe access to water, often through healthy riparian buffers zones.

CONTACT US FOR MORE HABITAT MANAGEMENT INFORMATION OR SPECIES SPECIFIC RECOMMENDATIONS.

WANT TO LEARN MORE? CONTACT US AT
WWW.MYSTCROIXWOODS.ORG OR CALL US AT (715) 483-3300.

SPOTTING THREATS TO YOUR WOODS: PESTS, WEEDS & DISEASES

INVASIVE SPECIES

Invasive plants out-compete native species, and without natural predators, can quickly take over a landscape. Early detection, effective removal and diligent monitoring of invasives are essential to keeping your forests safe and naturally healthy. Contact a local Cooperative Weed Management Area group or county conservation district office if you need help managing an invasive species on your land. Get to know common invasives in your area so you can be prepared:



Common Buckthorn
(left)
Rhamnus cathartica

Photo by E. J. Czarapata



Oriental Bittersweet
(right)
Celastrus orbiculatus

Photo by WI DNR