

# Private Forest Management





A close-up photograph of tree bark, showing a complex, layered, and cracked texture in various shades of brown and tan. The bark is the background for the text.

The actions you  
take on your  
land can help  
support broader  
goals for forests  
in your region.





## Professional forestry advice.

**A little advice goes a long way!**

The DNR, Soil & Water Conservation Districts, consulting foresters, industry foresters and other natural resource professionals can design a plan to help manage your forest for now and for the future.

There are many programs that have funds to not only assist with forest stewardship planning, but can also pay for conservation easement or provide tax incentives to land managed for forestry purposes.

## Resources:

Check out [MyMinnesotaWoods.org](http://MyMinnesotaWoods.org). It is a great source for info for all woodland owners.

Join the Minnesota Forestry Association  
[minnesotaforestry.org](http://minnesotaforestry.org).

Look into reading the DNR's "[\*\*Woodlands of Minnesota Landowner Handbook\*\*](#)," which is a wonderful resource for property owners. Go to [dnr.state.mn.us](http://dnr.state.mn.us) and search by typing, "Woodlands of Minnesota Handbook."



# Streams and sourcewater

## Forests and stream stability

Land use/land cover changes in a watershed can affect stream stability, which is the ability of a stream to maintain (over time) its dimension, pattern, and profile so that it neither aggrades or degrades and is able to transport the flows and detritus of its watershed without adverse effect. According to retired U.S. Forest Service Hydrologist Sandy Verry, when more than 60% of a watershed is permanently converted to open areas, it will have 2-3 times the amount of bankfull volume, which will have a dramatic effect on stream stability.

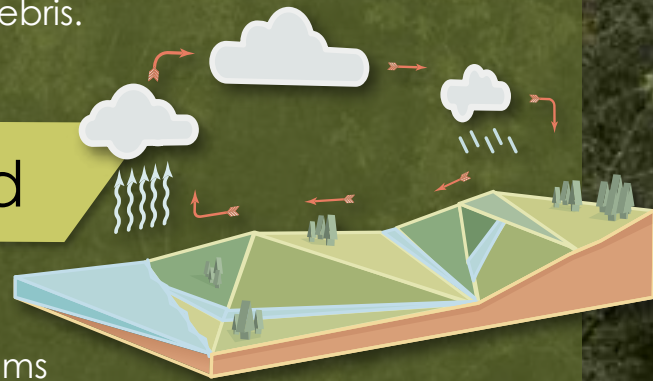
Other actions that can affect stream stability include: lowering of a larger older channel, cutting off meander bends, straightening channels to pass floods more quickly, blocking or using too much of the floodplain, (such as road fills with culverts that are too small) or the excessive removal of coarse, woody debris.

## Forests in the watershed

A watershed is the total area of land surrounding a body of water that drains water into that body. We think of ponds, streams and rivers as connected to watersheds, but it's important to realize that the forests and land surfaces are also connected to our watersheds.

Crow Wing County has 125 minor watersheds and is part of 5 major watersheds. A map of each of these watersheds can be found in the 2013-2023 Water Plan.

Forests play important roles in absorbing and filtering water and preventing erosion through soil stabilization. As a consequence, changes in forested landscapes impact water quality. As land use changes shrink forest cover, especially along shorelines, contaminated runoff is less filtered before reaching down-stream bodies of water.



“ Water, in all its uses and permutations, is by far the most valuable commodity that comes from the forest land that we manage, assist others to manage, and/or regulate. ”

- Policy Statement, National Assn of State Foresters





# Managing for better forests

Forest change is inevitable. In the past, these changes occurred naturally as a result of wind and fire. Now, forest managers utilize best management practices when conducting forest management activities to emulate these natural disturbances in a controlled, less-destructive manner. By applying site-level management guidelines, active forest management can help create healthy, resilient, and productive forests in a shorter period of time with more predictable results than natural processes.

A healthy forest has properly managed components that include: riparian areas, visual quality, water quality and wetlands, wildlife habitat, and cultural resources. Important site specific guidelines to consider:

- 1 Limit seasons of operability to avoid unnecessary impacts to the site & to reduce the costs of moving equipment (i.e. frozen ground harvest).
- 2 Conduct on-site meetings with the logger, landowner, & resource manager prior to moving equipment.
- 3 Leave standing dead trees ("snags") & at least 2 to 5 pieces of coarse woody debris per-acre on the forest floor for use by cavity nesting birds, mammals & insects.
- 4 Increase visual quality seen from sensitive corridors into harvested areas by creating appropriate activity design.
- 5 Establish riparian management zones with a closed-canopy forested condition & limit soil exposure to less than 5%.
- 6 Leave live reserve trees in patches of at least 5% or 6-12 individual trees per-acre for wildlife habitat & seed benefits.
- 7 Avoid destructive disturbances at water crossings such as ruts, soil compaction, & excessive fill/clearing.
- 8 Create forested reserve strips between timber harvest entries to create or enhance wildlife travel corridors.

## The native plant community

Management of forests is focused on providing benefits to humans and natural resources in a way that connects soil, trees, and plants that are best adapted to the forest.

Knowing which native plant communities are on your property can help you better understand your land's potential. The presence of certain plants can give you clues about the soil and climate in a particular patch of woods. This can help you plan which timber species might be most productive there, what non-timber forest products you might find or be able to grow, and what sort of wildlife might be present.

The native plant community system describes an area's specific land types or ecosystems. Natural resource professionals classify land into native plant communities based on native vegetation, landforms, soils and other local conditions.



# Identify goals for your woodland, then begin to develop a strategy.

## Setting goals for your forest

Think about your reasons for owning woodland and the benefits that you want from that land.

The Minnesota DNR has identified 3 major goals that many people have for their woodland property... wildlife habitat, recreation and income. There are both similarities and differences in the ways you will manage your forests for each of these goals. The best way to get to know your forest, and begin to form goals, is to get out and explore it!

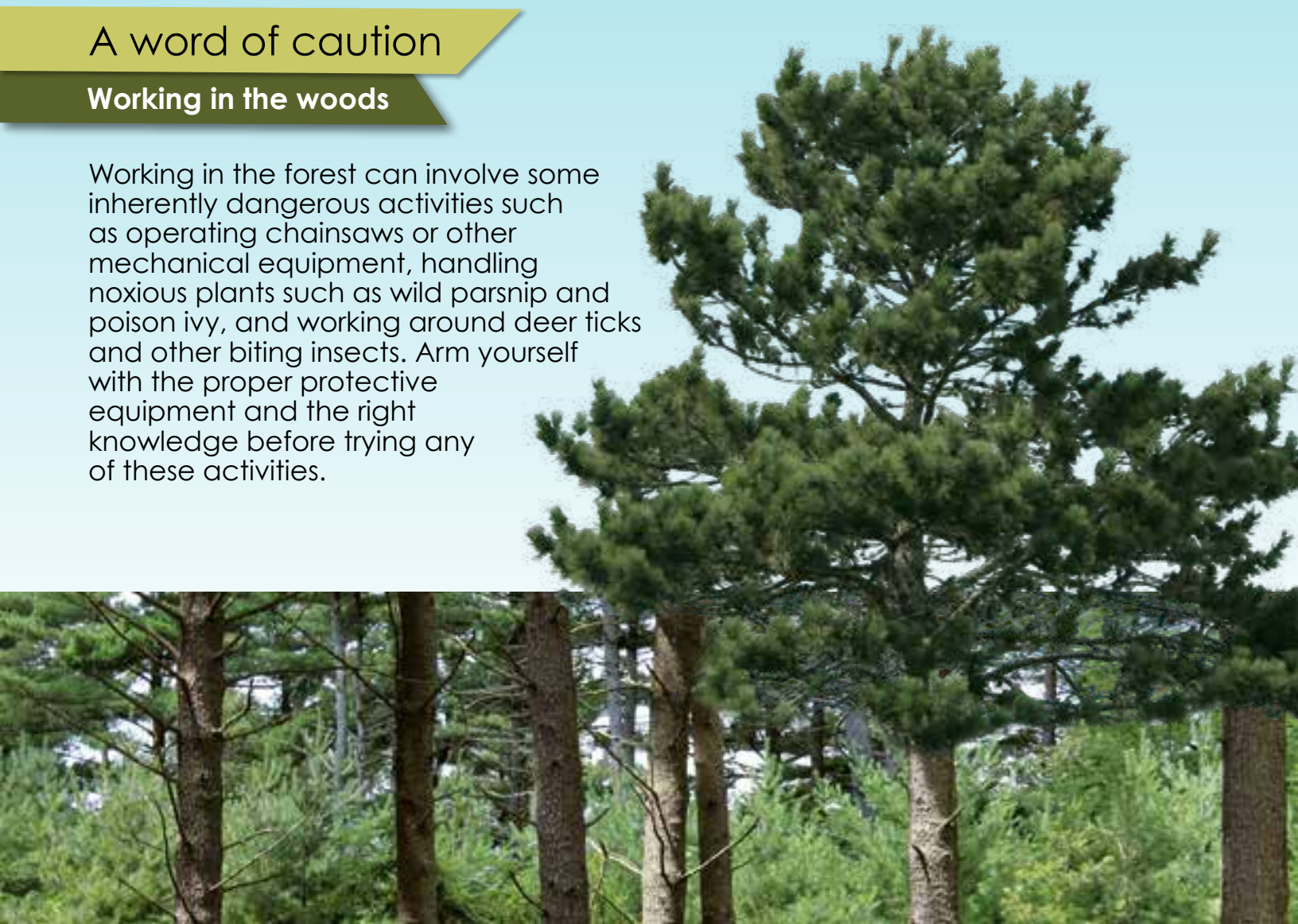
## Forming a strategy

With goals in place you can begin to form a strategy or path for accomplishing your goals. This is the ideal time to contact us at Crow Wing County for assistance. Outside of our own Land Services department, we can put you in direct contact with groups like the DNR, your soil and water district, the University of Minnesota, and Minnesota Forestry Association, and others that can help you at each stage of your forest management endeavors.

## A word of caution

### Working in the woods

Working in the forest can involve some inherently dangerous activities such as operating chainsaws or other mechanical equipment, handling noxious plants such as wild parsnip and poison ivy, and working around deer ticks and other biting insects. Arm yourself with the proper protective equipment and the right knowledge before trying any of these activities.



## Goal: Wildlife Habitat

To provide habitat for any type of creature, your land must deliver 4 basic needs: food, water, shelter, and space. If your goal is to enhance habitat for any particular type of species, your strategy will need to include a plan to supply the types of basic needs that species require to thrive. Trees and shrubs that produce nuts and soft fruits are an important source of wildlife food for many species. Acorns are especially popular among deer, squirrels, and some birds. Small native trees and shrubs, such as dogwood, serviceberry and blueberry are native plants that produce soft fruits, which are eaten by many creatures. Some landowners also choose to develop wildlife openings to attract wildlife.

Dead trees—or snags—provide shelter and food for a variety of wildlife species. Brush piles and understory trees and shrubs can provide protected areas for birds and small mammals.

## Goal: Recreation

Hunt, hike, snowmobile, ATV or otherwise recreate? Your strategy should include access points to key places on your property. Thinning your woods where trees have over-grown can facilitate travel and improve the health, quality and growth of the remaining trees. Building trails creates accessibility in your woodland for you, and sometimes larger game. For example; expanding hiking trails over existing deer paths can benefit both humans and critters alike.

Managing your forest for hunting game will require both recreation and wildlife habitat strategies. You will not only want to create the best possible environment for your game, but you will want to consider how you can best use the forest for your hunting recreation.

## Goal: Income

Your woodland is a natural resource. If managed properly, a forest can be a great source of perpetual revenue... providing economic returns for generations to come.

### Timber stand improvements

The most obvious opportunity your woodlands offer is through timber harvest. To ensure you are maximizing your woodland's timber-producing capability, you want to conduct timber stand improvement activities. Timber stand improvement helps your forest grow faster and become healthier, meaning you will be able to profit from harvest sooner and much more frequently.



## Did you know?

In addition to these income sources, you might be able to defray your land ownership costs through enrollment in a woodland cost-share, tax-relief, or incentive payment program. Forests provide many public benefits, and there are public funds available to assist you with paying for some of the costs you incur from improving your woods.

### Invasive tag-alongs that travel with your firewood

Emerald ash borer, or EAB, is a small, brilliant-green beetle. The insect causes damage and eventually kills ash trees. Adult beetles lay their eggs on the bark of ash trees. The young hatch and meander undetected below the bark's surface eating the living tissue of the tree.

The gypsy moth is an invasive forest pest from Europe that is one of the most damaging tree defoliators currently in the U.S. Gypsy moth caterpillars feed on leaves of deciduous trees, primarily oak and aspen, and are present in early to mid-summer.



Image: Kent Loeffler @ Cornell University

**Have questions? Visit [www.MyMinnesotaWoods.org](http://www.MyMinnesotaWoods.org) or scan the QR code and Crow Wing County staff will help direct you to the right professional.**





# The 4 most important steps

**While there are many things you can do to help maintain your woodland, the most important steps are as follows:**

**1**

## **Get professional forestry advice!**

The DNR, Soil & Water Conservation Districts, consulting foresters, industry foresters and other natural resource professionals can design a plan to help manage your woodlands for now and for the future. There are many programs that have funds to not only assist with forest stewardship planning, but can also pay for conservation easements or provide tax incentives to land managed for forestry purposes.

**2**

## **Get equipped and get engaged!**

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**3**

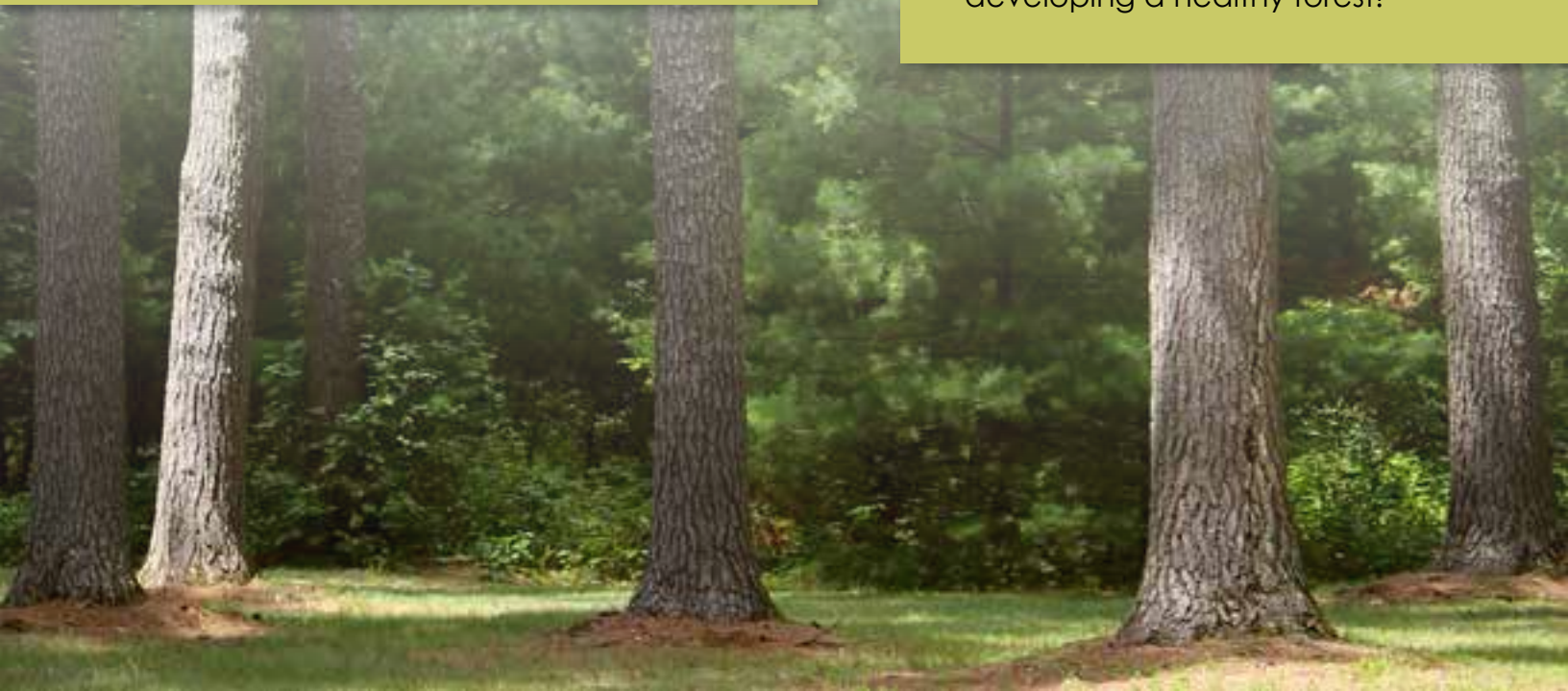
## **Get to work.**

Whether you are creating wildlife habitat, controlling invasive species such as buckthorn in your forest, harvesting firewood, planting trees, doing timber stand improvement or doing a lakeshore protection/restoration project... just dig in!

**4**

## **Talk to your neighbors**

The entire landscape, including wildlife and water resources, benefits by having neighboring landowners work together on forest management projects. Be part of developing a healthy forest!





# **MANAGE OUR FORESTS!**

**YOU CAN HELP**

Call 218-824-1010 to speak with one of our specialists.  
We're ready to help you.

[www.crowwing.us](http://www.crowwing.us)

Crow Wing County is committed to being a leader among Minnesota counties in providing best in class professional natural resource management that support local economies, protects water and wildlife resources, and provides diverse recreational opportunities.



Scan for more info

