Wildlife in Your Woodlot

Definitions

Landscape Management

It is a combination of habitat patches or ecosystems within a defined ecological unit on the landscape with similar ecological characteristics such climate, soils, geology, forest types, wildlife, etc. that are managed with a common objective

For a woodlot owner:

What role does my woodlot play within the context of its surrounding landscape?

It is important to think of your woodlot and its role in the surrounding landscape

Coleman property
115 acres

ECOSYSTEM

"Specific communities of living things interacting with one another"

An ecosystem can be:

- a northern spruce forest
- a beaver pond within the spruce forest
- the shoreline of the beaver pond
- a decaying log on the shoreline.

It's all about scale. Your woodlot could be considered an ecosystem or you could have several small ecosystems in your woodlot.

Biodiversity

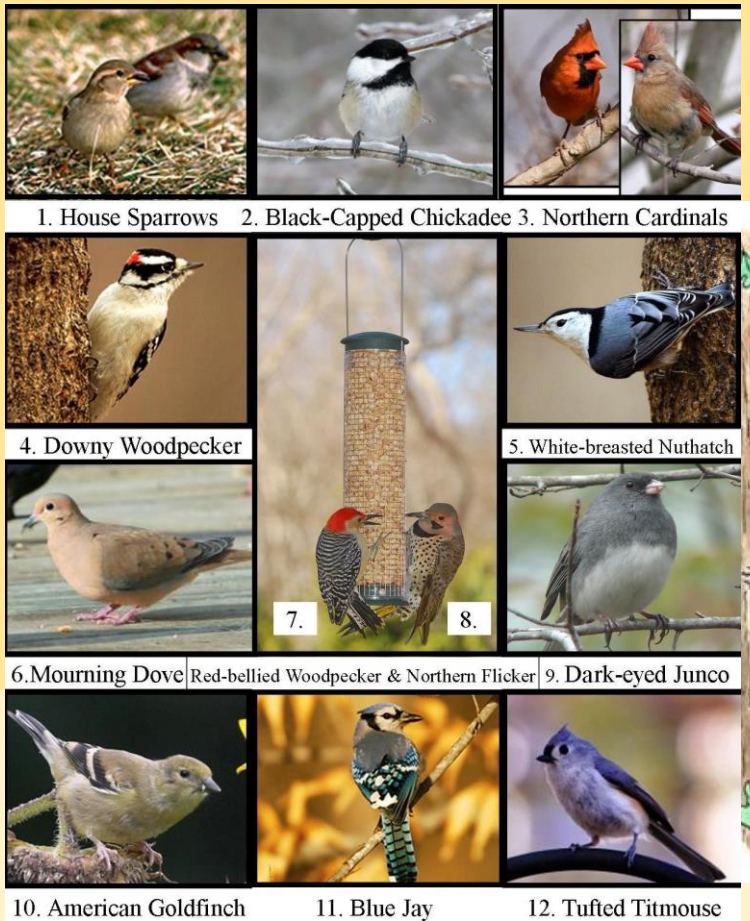
It is the number or “diversity” of species within a defined area.

Again it is a matter of scale, for example:

- **a site district**
- **a landscape**
- **an ecosystem**

Or

Your woodlot



Ontario Tree Marking Guidelines for Biodiversity

- Underrepresented trees
- Stick nests, especially those you know are active (hawks and owls)
- Winter cover (e.g. for deer; hemlock, white cedar – at least 70% canopy closure
- Old growth or old growth characteristics
- Downed woody debris
- Vernal woodland pools
- Species at risk
- Cavity trees - 3 to 9 per ha (2.5 acres)
- Mast trees
- Supercanopy trees
- Diversity of habitat types

All Woodlands Provide Habitat for Wildlife

However many wildlife have special needs

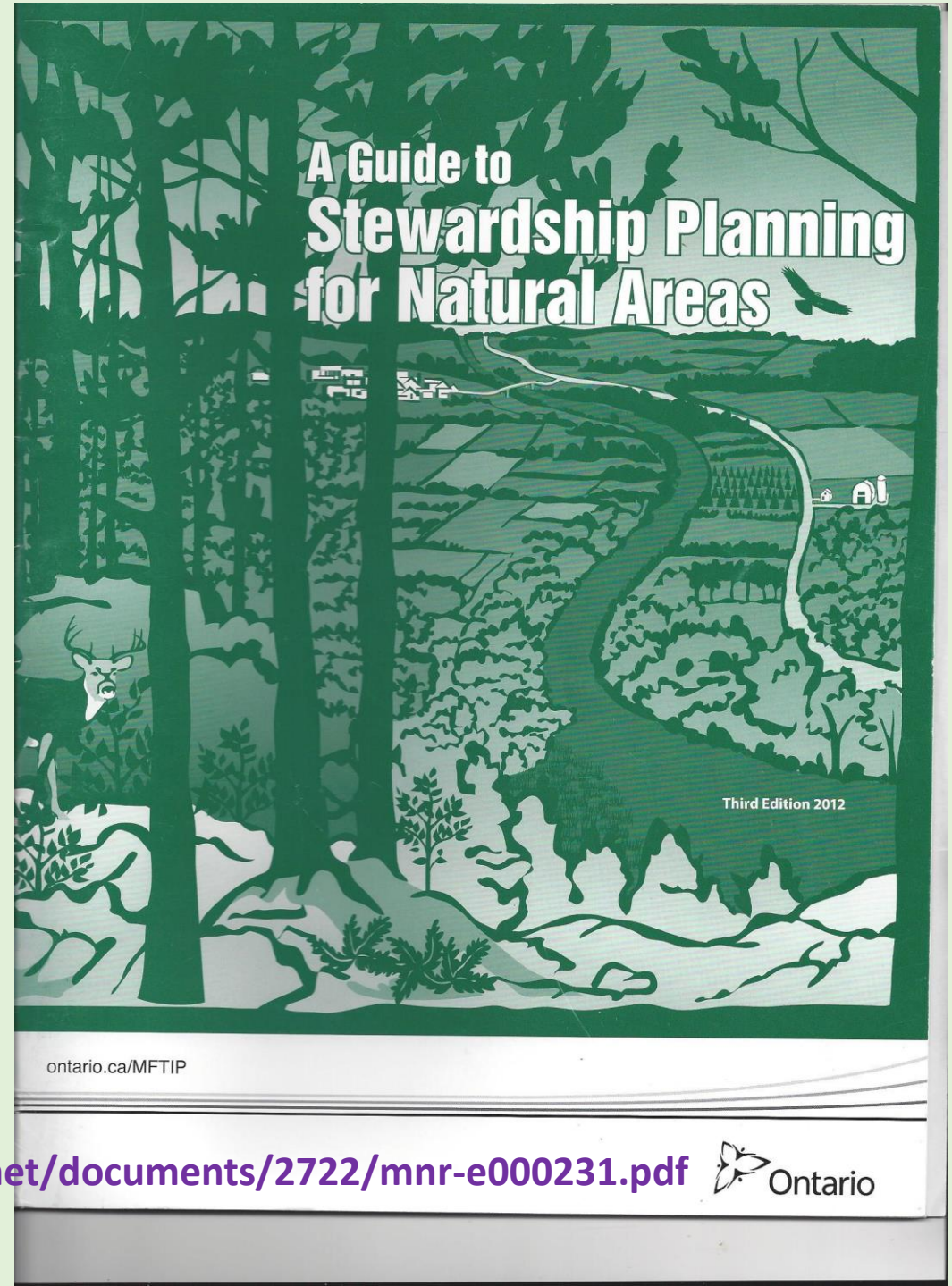
- Some are generalists and can use a variety of habitat types, e.g. raccoons, eastern coyote and deer – very adaptable

- Some are specialists and have very specific habitat needs – not very adaptable;
  e.g.
  - cerulean warblers and scarlet tanagers prefer forest interior
  - forest amphibians need vernal pools
  - many wildlife need tree cavities
  - many wildlife need wetlands
  - some wildlife have to have certain types of grasslands
  - although deer are generalists, they need food and cover both summer and winter

Inventory

- List of trees and habitats
- Age class of trees; i.e. saplings, pole-sized, mature
- Structure (eg. DWD)
- Water
- Cavity trees, stick nests etc.

https://dr6j45jk9xcmk.cloudfront.net/documents/2722/mnr-e000231.pdf



More Detail on Wildlife Habitat

You can add more detail for species you are especially interested in
For example,

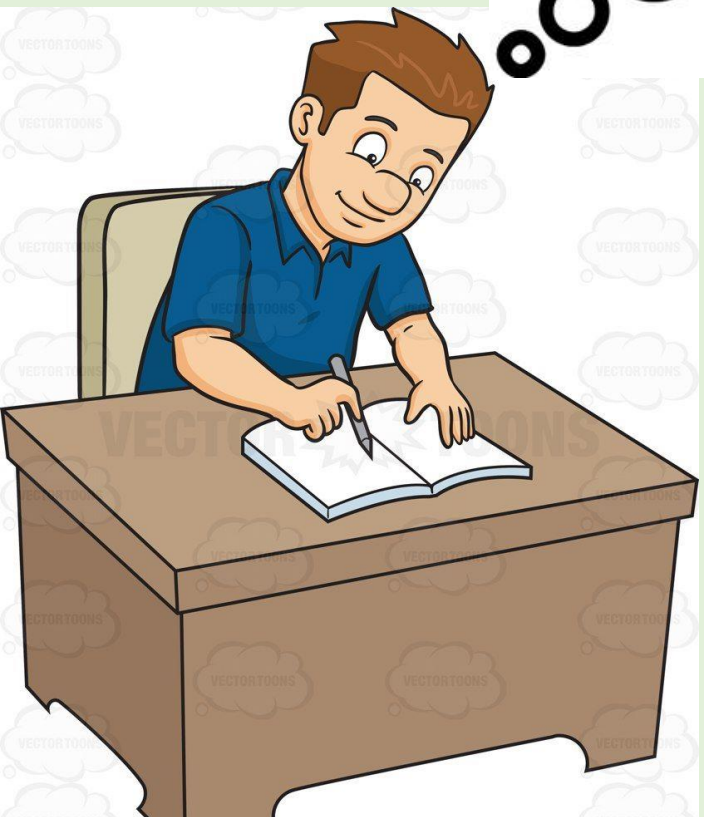
- **Ruffed Grouse**
  - **is there aspen in all age classes?**
  - **is there conifer cover near the aspen for winter?**
  - **are there other food sources; e.g. ironwood, acorns?**
  - **are there small openings and/or areas with low brushy cover (brood habitat)?**

More Detail on Wildlife Habitat

- Deer - is there a food supply in summer; open areas and areas with low shrubby cover and in fall e.g. acorns
  - is there conifer cover for winter?
  - is there winter browse?

- Wild Turkey - open areas with a summer food source
  - winter roosting trees and food supply

- Woodland Amphibians – are there vernal pools?



Wildlife Management Objectives

What do you want?

Make A Plan

Specific goals

Measureable results

Achievable – don’t take on too much

Reasonable – results oriented

Time bound – set up a schedule

Make a Topographic Map
https://www.ontario.ca/page/topographic-maps

Coleman Property

Forest Compartments

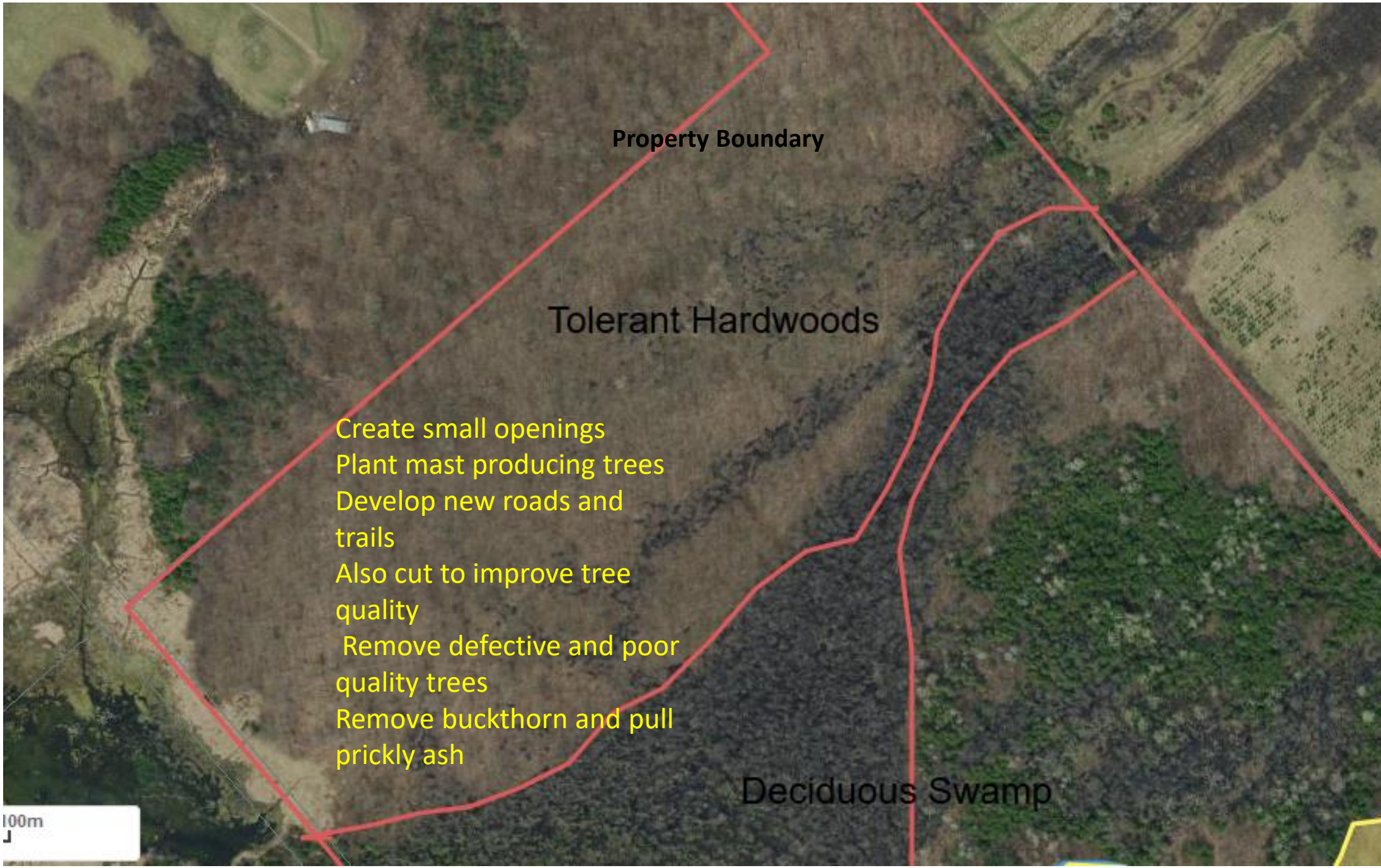
Property Management Objectives

<u>Tolerant Hardwoods</u>

- **manage for high quality hardwoods**
- **increase diversity of mast trees**
- **eliminate buckthorn and reduce prickly ash**

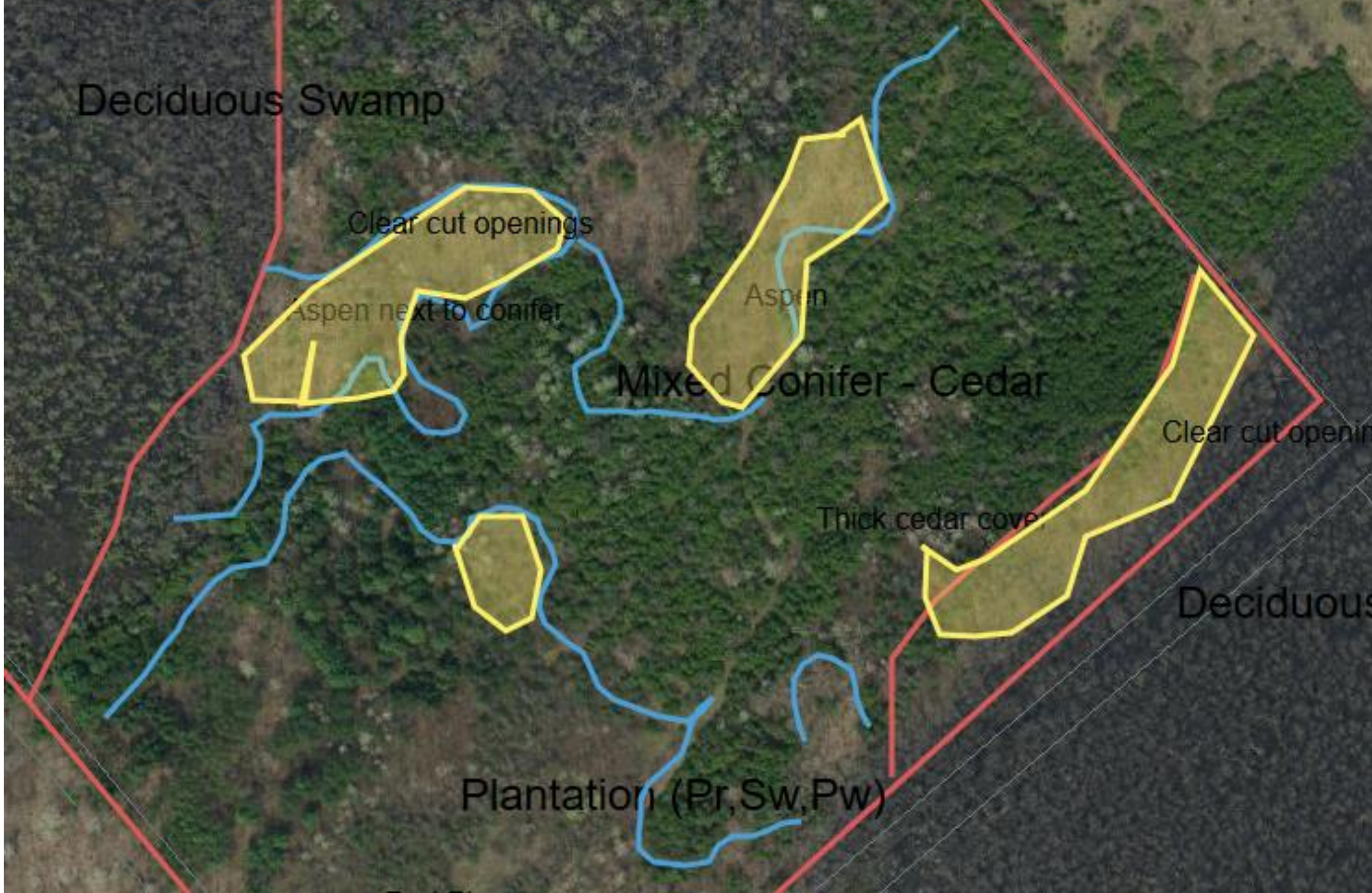
<u>Mixed Conifer – Cedar</u>

- **manage for wildlife (deer and grouse)**
- **retain cover and increase food supply**
- **increase mast tree diversity and promote early succession growth**


Property Boundary
Tolerant Hardwoods
Create small openings
Plant mast producing trees
Develop new roads and trails
Also cut to improve tree quality
Remove defective and poor quality trees
Remove buckthorn and pull prickly ash
Deciduous Swamp
100m

Areas to be managed for grouse and deer

Early Succession



Downed Woody Debris

The forest floor is where recycling occurs, fungi, insects, bacteria, and earthworms are among the many organisms that break down waste materials and ready them for recycling.

A rotting log is often habitat for a variety of insects, including carpenter ants, bugs, centipedes, beetles and crickets. A larger rotting log may be home to smaller animals as well, including squirrels, raccoons, skunks woodpeckers, owls, snakes and bears

What if …..

your woodlot lacks downed woody debris?

Plantation

Sapling or polewood forest

Even felling a few trees and leaving them on the ground will add structure.

Focus on trees you may not want to use; e.g. poor quality or defective plantation trees, basswood …

Brush Pile

- About 3 layers of logs
- Coarse and then fine branches on top

Cavity Trees

- Over 50 species of wildlife use tree cavities
- Live trees better than dead trees
- Variety of cavity sizes, shapes and heights in the trees
- Some wildlife make their own

What if …..

your woodlot lacks trees cavities?

Plantation

Immature – sapling or polewood forest

You can build and erect nest boxes.

Remember over 50 species of birds and mammals use cavities.

Plans for nest boxes are easy to find on the internet.

Mast Trees

- Need a variety, they don't all produce seed annually
- Both hard and soft mast
- Very important for wildlife as they prepare for winter

Red Oak

Black Cherry

Beech

Bitternut Hickory

*Table 4.1 Selected wildlife species that consume mast. Symbols reflect the % of diet comprised by the mast species: + = < 2%, * = 2 to 5%, ** = 5 to 10%, *** = > 10% (data from Martin et al. 1951).*

Wildlife	Oak	Beech	Cherry	Hickory	Basswood	Walnut	Ironwood
Deer	***	+		+			
Black bear	***	***	***	+			
Raccoon	***		*	+			
Red squirrel	**	**	*	***	+	*	+
Grey squirrel	***	**	+	***	+	*	
Chipmunk	**	**	*	**	**		
Mice	**	+	+	+	+		+
Wood duck	***	*		**			
Ruffed grouse	***	**	**				
Wild turkey	***	*	+	*			
Dow ny w oodpecker	+	+					+
Rose-breasted grosbeak	+	*	**	*			+
Cedar w axw ing			***				
White-breasted nuthatch	***	+		+			
Blue jay	***	*	+	+			

What if ….

your woodlot lacks mast producing trees?

You can create small openings when cutting firewood and plant mast producers in the openings. Some mast producers; e.g. red oak can tolerate some shade.

Shagbark Hickory

Red Oak

Manage existing mast trees

Thinning

- Increase growth
- Create fuller crowns
- Increase mast production
- Facilitate regeneration

Vernal (Ephemeral)Woodland Pools

These are pools that are wet for a couple of months in the spring.

Blue spotted salamander
Yellow spotted salamander
Red backed salamander
Wood frog
Spring Peeper
Insects
Wood duck

What if .....

your woodlot lacks vernal pools
you want more?

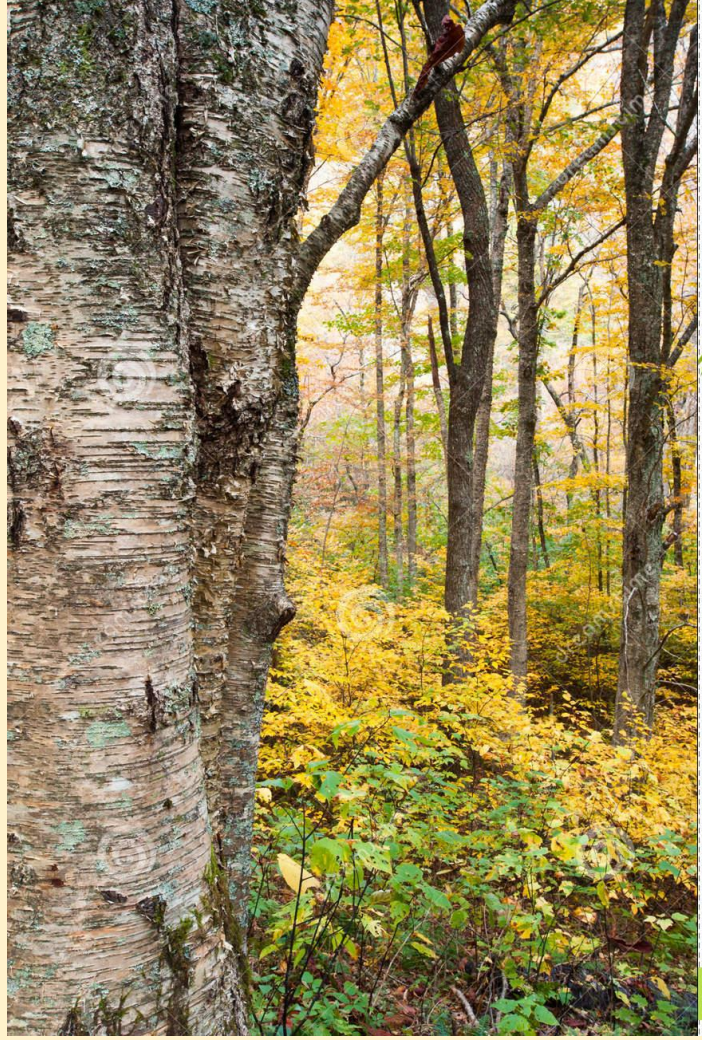
Vernal Pool Excavation

Small depressions designed to hold melt water and spring rains

Underrepresented Trees

Examples:

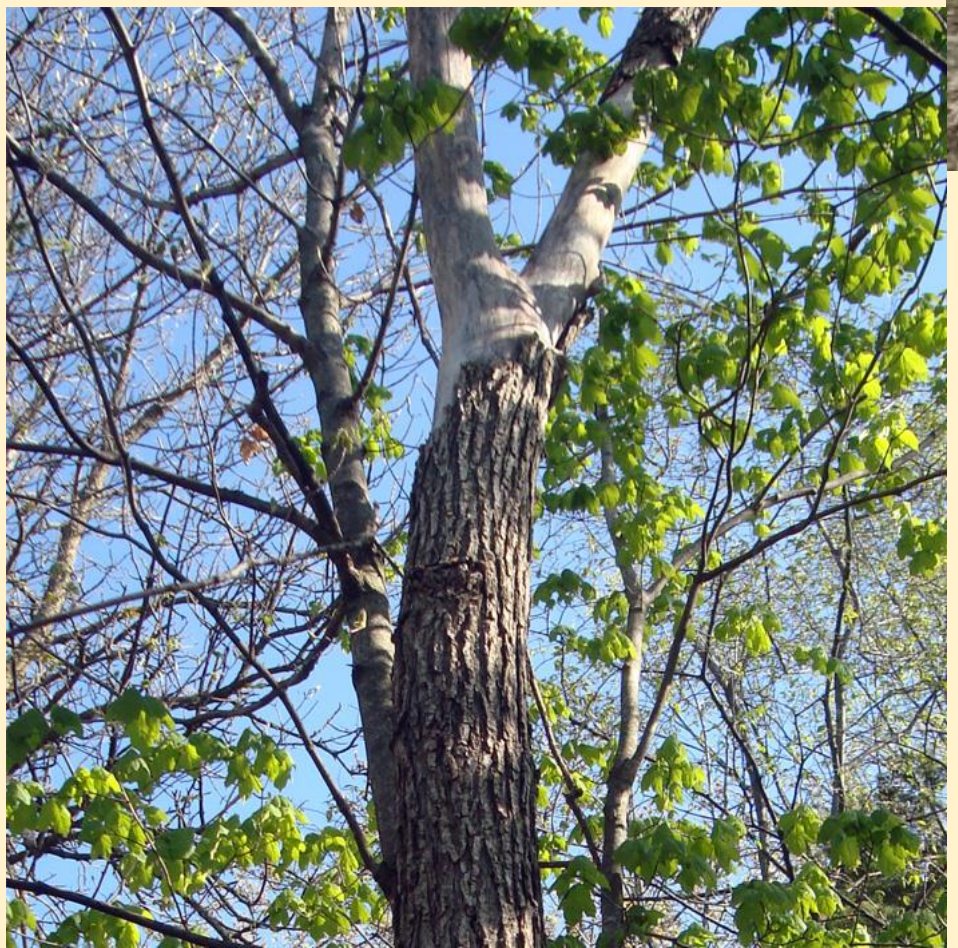
In my woodlot –
yellow birch



Could be a ..
patch of conifer cover in a deciduous forest

Past disturbances can affect forest composition

Cattle grazing can eliminate hard maple regeneration and result in more ironwood



Diseases and insect pests can reduce or eliminate some tree species, eg. elm, ash, butternut

Increasing tree diversity in the forest

Retain what you have

Planting

What if …….

you want early succession habitat?

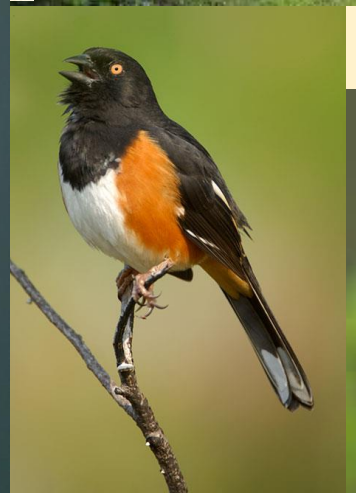
- Pollinators
  - Bees
  - Butterflies
  - Bats
  - Other Insects
  - Hummingbirds

- Extremely Important for Food Sources
- Helpful to our Native and Ornamental Gardens










Early Succession Habitat

For Example, what if ….

You would like more Ruffed Grouse in your woodlot?

Ruffed Grouse prefer early forest succession (poplar (aspen), birch, cherry, oaks, wild raisin, nannyberry, ..)

Optimum ruffed grouse habitat should include openings, young aspen stands, mature aspen stands with an understory of hazel or ironwood, and dense sapling aspen stands.

Oak, conifers, and lowland brush and trees are an option when aspen is absent.

Up to 116 species are found in an aspen dominated forest

Aspen will grow readily from root cuttings

Root sprouting results in many genetically identical trees, in aggregate called a "clone".

If your woodlot has aspen …

· Clearcut adjacent to the existing aspen

· Recommendation is for openings no less than 2.0 ha (5 ac), but work with what you have.

. Aspen needs full sunlight

. Best to cut late fall or winter

What if …

you want more deer in your woodlot?

Do you have deer now? Spring, summer, fall and/or winter?

Winter

- Deer tend to use the same winter cover year after year
- Although no minimum size it is recommended the “yard” should be at least 10 ha (25 ac)
- At least 50- 60% conifer, typically white cedar or hemlock (snow holding)
- Canopy closure 60-80% (overlapping branches)
- Stand height ~ 10 m (32 ft) with ave. dbh of at least 18 cm (7 in)
- Ideal if there is a network of connected patches
- Must be a food source (browse) near the cover

- Deer typically are forced to “yard” when snow depth exceeds 50 cm (20 in)
- Climate change – we have many years when deer are not “forced” to yard

Winter Cover for Deer
“Deer Yard”

- Usually white cedar or hemlock, good snow holding
- At least 70% canopy closure
- Need adjacent food source (browse)
- Linked patches of conifer

Winter Cover

If you don’t have cover now it would be a long term project to create winter cover with no guarantee of success

You can plant white cedar to expand an existing deer yard.

However deer can heavily browse the cedar

Winter Food

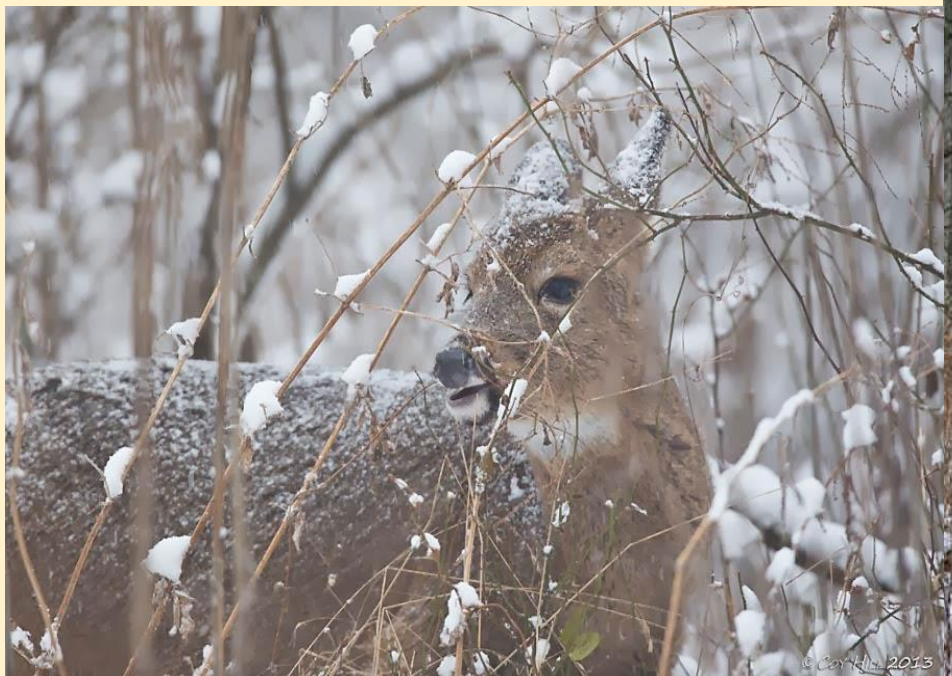
Deer feed on woody browse in winter. Ideally the browse should be close to conifer cover.

Preferred browse species are maples, white cedar, dogwoods and viburnums, yellow birch, white pine and aspen (although they prefer aspen leaves in summer)

Browse should be up to 2 m (6’) high

Don’t hesitate to use the firewood

Planting?
Maybe.



Feeding Deer in Winter

MNRF discourages winter feeding

- deer become habituated
- unhealthy foods
- cause road accidents
- increase population beyond carrying capacity
- disease risk

However I did !*

- where I was cutting firewood, they were also feeding on the browse
- small amount
- spread out in several small piles
- very healthy nutritious mix

Summer Food

Deer use early succession habitat with young trees and shrubs, feeding on leaves. They also use small forest openings and fields feeding on a variety of forbs, flowers and grasses.

Forest openings and small fields can be brushhogged to keep them green and promote new growth

Food Plots

Can attract deer summer through fall.

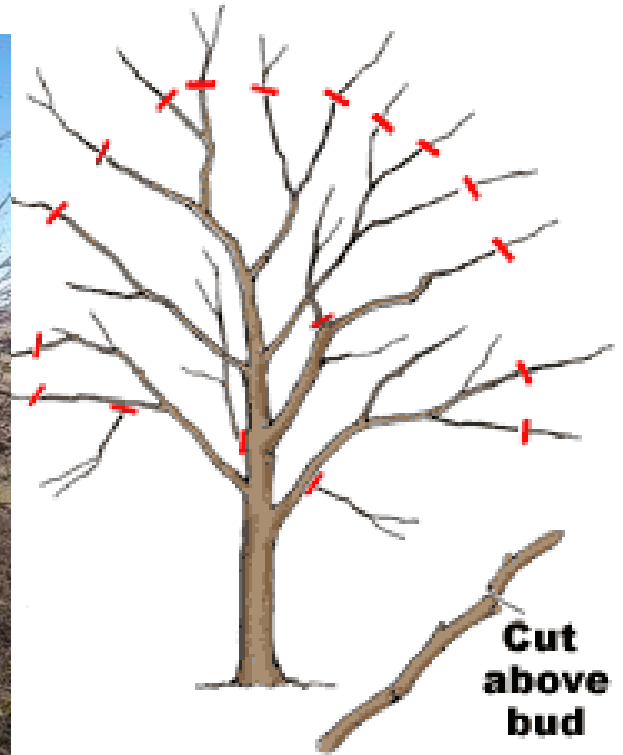
Lots of information on food plots, for example the Quality Deer Management Association

Lands kept open cannot be included in the MFTIP program

Fall Foods

Promote Mast Production

Release and Pruning Wild Apple Trees

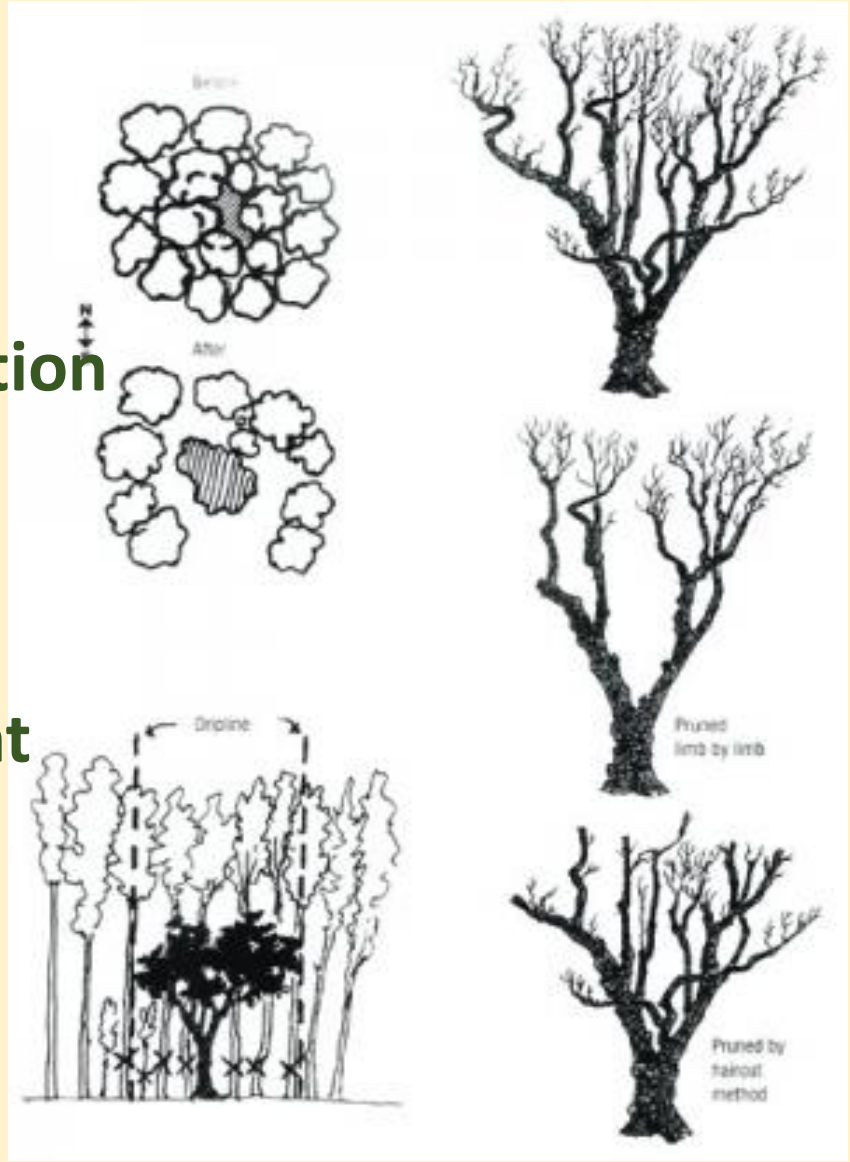


Wild Apple Trees

- Select known producers

- Maximize sunlight by eliminating competition

- Prune
  - dead wood anytime
  - live wood in late winter
  - better to prune a small amount over several years, never more than 20-30%
- Can add nutrients – i.e. manure, fertilizer



What if you want more grassland species?

Short grasses – regular cutting

Tall grasses and shrubs – periodic cutting with brush hog – rotate areas

What if ……

you want old growth forest?

If you have a young forest – you are out of luck!

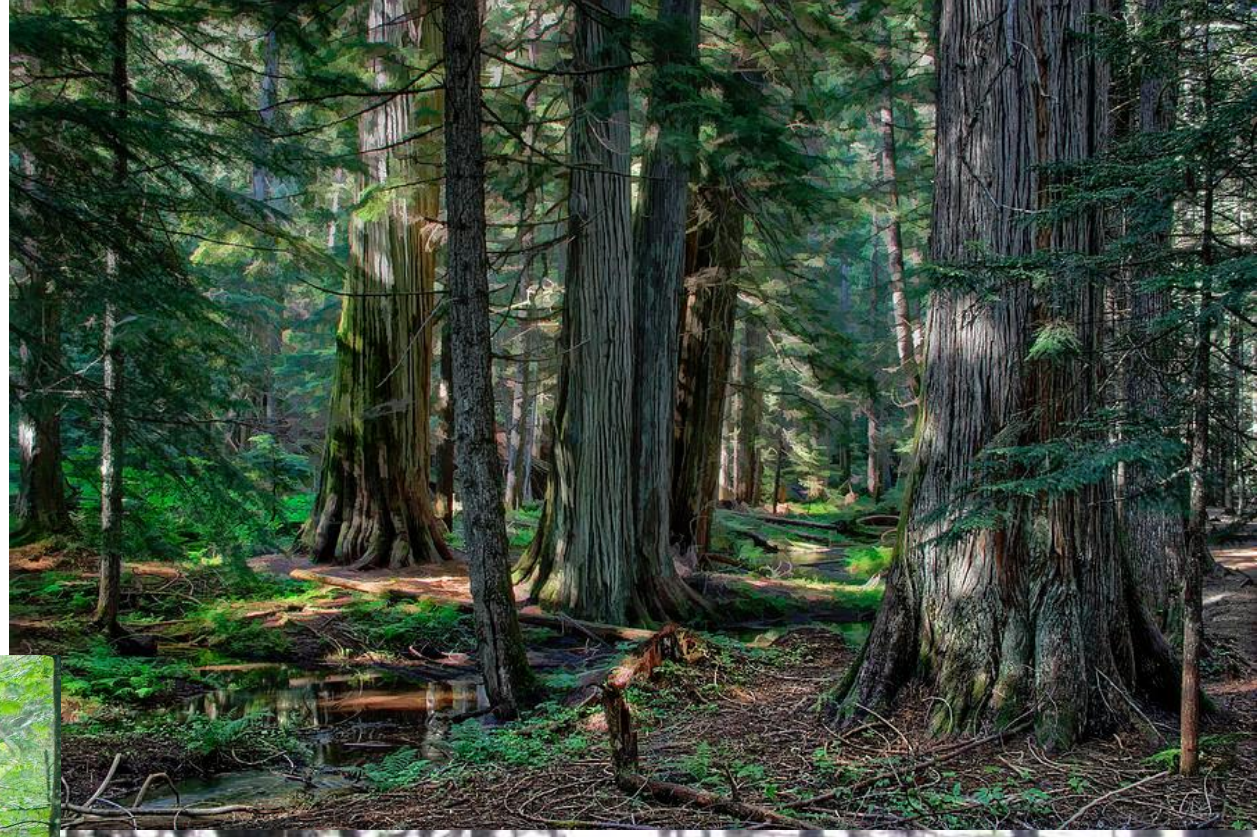
However, if you have a mature woodlot you can allow your woodlot to age gracefully to produce old growth characteristics; such as the gaps in the forest where old trees have fallen, rotted logs on the forest floor that will create the pits and mounds.

You don’t have to cut all of the dead tree

Old Growth Forest

Characteristics

- Old trees
- Dead snags, woody material on the ground – structure
- Pits and mounds
- Canopy gaps



Diversity in Your Woodlot

Stick Nests

Active – broad winged hawk

Active – red shouldered hawk

Active – great horned owl

Inactive

Supercanopy Trees

- Stand above the surrounding canopy
- Often White Pine
- Used by bears and raptors
- Add structure to the forest

Species at Risk

Butternut (E)

Cerulean Warbler (T)

Gray Rat Snake (T)

Wood Thrush (SC)

Whip-poor-will (T)

What if you want more raptors and small mammal predators?

You could trap and transfer mice to your woodlot

Just kidding !!!

Invasive Plant Species

- Some species are extremely invasive
- Can be extremely harmful to wildlife
  - inhibits growth of native plants
  - can be toxic to wildlife e.g. cathartic fruit (buckthorn)
- Do what you can to avoid and get rid of these

Glossy Buckthorn

Common Buckthorn

Garlic Mustard

Dog Strangling Vine

“A conservationist is one who is humbly aware that with each stroke [of the axe or chainsaw] he is writing his signature on the face of the land.”

Aldo Leopold

“There are some who can live without wild things and some who cannot.”

Aldo Leopold


THE END