



# Monitoring ALUS Tree & Shrub Projects

How to Monitor Tree & Shrub Projects in  
ALUS' Eastern Hub

AN ALUS GUIDEBOOK



# When, Why and How to Monitor your Projects

**Congratulations on establishing an ALUS tree and shrub project on your farm! This project will provide numerous benefits for the environment, your family and your community, including cleaner air, cleaner water, soil retention and more habitat for pollinators and wildlife.**

As an ALUS participant, you are responsible for maintaining your ALUS projects in good working order, producing ecosystem services that benefit the land, the community and the planet. In recognition of the investment of time and effort required to manage your projects, ALUS will provide an annual, per-acre payment.

It is recommended that you incorporate the monitoring practices described in this ALUS Guidebook. Regularly inspecting ALUS projects will help identify any areas of concern and trigger the appropriate management and maintenance activities. The early detection of any problems is key to ensuring projects remain fully functional for years to come: Timely interventions will help prevent small problems from growing and requiring major maintenance work in the future.

As a bonus, regular monitoring will also allow you to witness biodiversity increasing on your farm, as you spot new evidence of interesting native plants, birds, mammals and insects in and around your ALUS project. Many participants find great satisfaction in witnessing the increase in wildlife on their properties after an ALUS project has been established.

If you note any issues with your ALUS projects, or if you have any questions, please contact your ALUS Program Coordinator.

## About this Guide

This booklet is part of the ALUS Guidebook series, illustrating the types of ALUS projects available to participating farmers and ranchers.

The ALUS program provides planning advice and technical expertise for the design and implementation of each project through its local ALUS Partnership Advisory Committees. ALUS participants receive an annual, per-acre payment to manage and maintain their ALUS projects over the duration of their contract. ALUS projects are also independently monitored, verified and audited to ensure they are producing ecosystem services for the community.

For more information, please contact your closest ALUS Program Coordinator. See [ALUS.ca](http://ALUS.ca) for contact details.

© ALUS 2021. All rights reserved.

## Monitoring Basics



Monitoring is best conducted during the growing season. Walk the perimeter and interior of your project, looking for:

- Evidence of animal damage, such as deer browsing or rodent girdling.
- Visible discoloration of trees, including bark, needles and leaves.
- The number of different native species present.

Pay special attention to:

- Native plant growth (see “Desirable Plants,” page 4).
- Invasive plant species (see “Undesirable Plants,” page 5).
- Evidence of wildlife activity (See “Wildlife Monitoring,” page 6).

If you find any areas of concern, you should visually mark the area with flags or stakes and contact your ALUS Program Coordinator for guidance.

Your ALUS Program Coordinator is here to help. They can meet you on site to inspect the areas of concern, provide helpful resources such as the “Success with ALUS Tree & Shrub Projects” guidebook, and connect you with third-party contractors that are available to help with any major maintenance tasks.

Your Program Coordinator may also connect you with an ALUS Farmer Liaison, an active farmer participant with knowledge of both farming practices and ALUS projects. ALUS Farmer Liaisons can give you particular advice about project management, such as what type of equipment to use for certain maintenance tasks, or when to conduct certain maintenance tasks, based on your farming operation and the type of ALUS projects you have.

## Monitoring your Tree & Shrub project

ALUS tree and shrub projects come in various shapes and sizes, including:

- Block Reforestations
- Windbreaks/Shelterbelts
- Riparian Buffers
- Pollinator Hedgerows

There are many different types of projects, but monitoring practices will be similar for all of them. You should walk through your projects in spring, summer and fall. Some problems, such as rodent damage, will be easier to spot in early spring before the undergrowth and trees start to grow, while others, such as undesirable plants, may be easier to detect in the summer growing months.



A block reforestation ALUS project with the trees planted in rows. Scatter plantings are also common.



An ALUS tree- and shrub-planting project makes an effective windbreak in Ontario.



An ALUS riparian buffer project in Ontario including native trees and shrubs.



A pollinator hedgerow ALUS project featuring native trees, shrubs and flowering plants.

# Desirable Plants in ALUS Tree & Shrub Projects

Your ALUS tree and shrub project will function most effectively when the appropriate vegetation is growing in and around the project. Below are several desirable tree and shrub species that you may observe in your ALUS projects. Your project may also have native grasses or wildflowers planted as a groundcover: for information on those plants, please refer to the “Monitoring ALUS Grassland Projects” guidebook.



White Oak (*Quercus alba*)



Bur Oak (*Quercus macrocarpa*)



Chokecherry (*Prunus virginiana*)



Black Cherry (*Prunus serotina*)



Shagbark Hickory (*Carya ovata*)



Tulip Tree (*Liriodendron tulipifera*)



Eastern White Pine (*Pinus strobus*)



Eastern White Cedar (*Thuja occidentalis*)



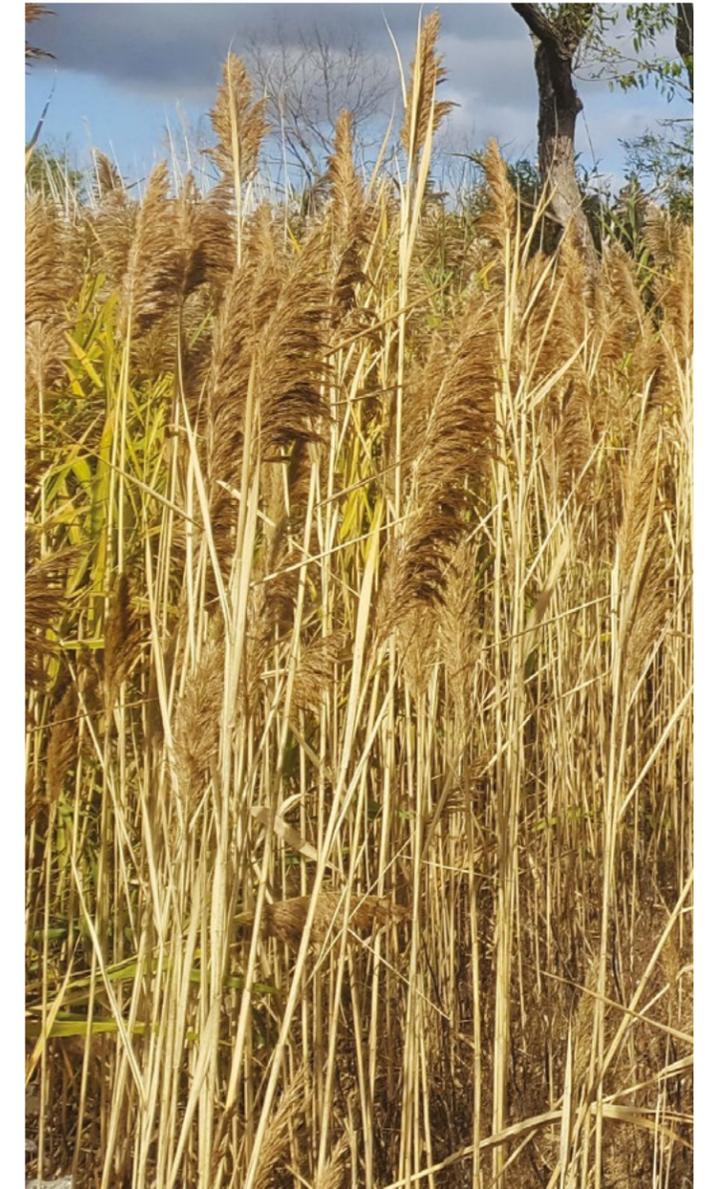
Tamarack (*Larix laricina*)

# Undesirable Plants in ALUS Tree & Shrub Projects

Invasive, non-native plant species are undesirable in ALUS tree and shrub projects. Controlling invasive species is critical to the success of your project. Common annual weeds may be present, but it is important to look out for aggressive and invasive species such as the plants featured below. If you see these species, contact your local ALUS Program Coordinator for information on how to remove them from your project.



Autumn Olive (*Elaeagnus umbellata*)



European Common Reed (*Phragmites australis*)

# Wildlife Monitoring

One of the many benefits of ALUS tree and shrub projects is that they increase and improve wildlife habitat on your land. Many ALUS participants enjoy discovering what animals start visiting their ALUS project once it is established. You may enjoy setting up a trail camera to catch photos of the wildlife visiting your ALUS project. Your local ALUS Program Coordinator is always interested to see photos and evidence of wildlife in and around projects, and can help you identify the animals based on the signs you have found.



**Tracks**—Wet soil is the perfect place to check for any animal or bird tracks. In the Eastern Hub, you are most likely see tracks left by deer, turkeys, coyotes, raccoons and squirrels.



**Nests**—Many bird species use ALUS projects. Nests are usually well-camouflaged, but you may be lucky enough to find one in the spring, or in fall when the vegetation has died back. Look to see if there are shell fragments that may help identify the type of nest.



**Fur & Feathers**—Wildlife may lose fur and feathers as they move through your ALUS project. Some birds have distinctive feathers that make it easy to identify the species.

# Pests & Diseases

Trees and shrubs are susceptible to damage from several diseases and various pest species. Common problems to look out for are described below. If you notice signs of pests and diseases, contact your local ALUS Program Coordinator for information on how to remove them from your project.

## Rodent Damage

Young hardwood trees are particularly susceptible to rodent damage, especially over the winter.

## European Gypsy Moth

Introduced from Europe, the European gypsy moth (*Lymantria dispar*) lays large egg masses on trees. The caterpillars are capable of eating all the leaves from a tree. They plague more than 500 tree species, but prefer poplar and oak.

## White Pine Blister Rust

An invasive fungus that affects White Pine trees. Infected trees often have entire branches with yellow, red or brown needles. Cankers that release a lot of tree resin will be easy to spot on the bark, often with white or yellow blisters in spring.



## Ecosystem Services Produced by ALUS Tree & Shrub Projects

**Cleaner Air** Through photosynthesis, trees produce the oxygen we breathe. ALUS tree and shrub projects also sequester (store) carbon in their plant structures and the soil. Trees also remove certain air pollutants, such as sulfur dioxide, nitrogen oxides and particulates, by absorbing them through the leaves.

**Cleaner Water** ALUS tree and shrub projects help to keep streams, rivers and lakes clean by reducing soil runoff caused by wind and water erosion. Windbreaks and shelterbelts help prevent soil from being blown into waterways, where it would cause sedimentation

and nutrient buildup. Trees are also useful in riparian buffers to help stabilize riverbanks and provide shade for fish habitat.

**More Biodiversity** ALUS tree and shrub projects support numerous wildlife species across Canada. Large block plantings provide habitat for wildlife, including rare and endangered mammals and birds, while flowering trees and shrubs provide food sources for insect and bird pollinators. Windbreaks, hedgerows and shelterbelts create travel corridors for animals by connecting to adjacent habitats across the working landscape.

# Monitoring ALUS Tree & Shrub Projects

## How to monitor tree & shrub projects in ALUS' Eastern Hub

The ALUS program helps farmers and ranchers produce cleaner air, cleaner water, and more habitat for wildlife and pollinators in their communities. Brought to you by ALUS—a recognized leader in sustainability that is

revolutionizing the way Canadians support the environment—ALUS makes it easy for agriculture to be part of the solution, by producing ecosystem services to benefit us all. Learn more at [ALUS.ca](http://ALUS.ca).

**ALUS.ca**

The ALUS Guidebook Series is made possible by funding from an Ontario Trillium Foundation Grow Grant.



An agency of the Government of Ontario  
Un organisme du gouvernement de l'Ontario

