



Monitoring ALUS Wetland & Erosion-Control Projects

How to monitor wetland projects & erosion-control
projects in ALUS' Eastern Hub

AN ALUS GUIDEBOOK



When, Why and How to Monitor your Projects

Congratulations on establishing an ALUS wetland project or erosion-control 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](https://www.alus.ca) for contact details.

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Monitoring Basics



- Walk the perimeter of your project to visually inspect for damage. Pay special attention to the issues mentioned below, as well as:
- 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 Wetland Projects” or “Success with ALUS Erosion-Control Projects” guidebooks, 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 or when to conduct certain maintenance tasks, based on your farming operation and the type of ALUS projects you have.

Dug-out & Ephemeral Wetland Projects

Ephemeral wetlands are depressions in the landscape that temporarily hold water, usually in spring and late fall and during heavy rain events. They will typically dry out in mid-to-late summer. Dug-out wetlands are reservoirs excavated to either expose the groundwater or capture surface water from the surrounding watershed. These

types of ALUS wetland projects should be inspected at least three times a year, every spring, summer and fall. Walk the banks of your wetland and inspect them for any signs of soil movement. Look for evidence of soil build-up in the water.

Impoundment Wetland Projects

Impoundment wetlands are engineered with berms and one or more water outlets (rock chutes, spillways, water-control structures). The entire impoundment wetland project should be monitored seasonally. In addition, the berms should be inspected frequently during the spring melt, as well as after every significant rainfall

event. Monitoring should include any overflow or spillway structures. Walk the banks of your wetland and the berms and inspect them for signs of soil movement and evidence of soil build-up in the water. Also look for holes or cracks in berm, evidence of water leaking through the berm, or loss of vegetation on the berm.

Erosion-Control Projects

ALUS supports erosion-control projects such as grassed waterways, vegetated buffers, water and sediment control basins (WASCOB), as well as exclusion fencing and alternative watering systems to keep cattle out of Canada’s streams and riparian zones. Berms and grassed waterways are often sown with a cool-season grass mix to slow the movement of water and help stabilize the soil. All these types of erosion-control projects should be monitored annually and after any significant rainfall events.

Walk the perimeter of your project and visually inspect for damage, such as:

- Cracks, soil movement or collapse of berms
- Channels created by water moving over the soil
- Loss of vegetation
- Damage to drainpipes or overflow structures
- Soil buildup in grassed waterways
- Exposed soil on berms and grassed waterways



Water and sediment control basin (WASCOB) projects need a little extra monitoring. These projects help decrease soil loss by slowing down water runoff and allowing sediment to settle. This sediment can build up over time, which can decrease effectiveness of your project.



When monitoring WASCOB projects, look for soil build-up around standpipes and sedimentation in control ponds.



Look for channels around the structures of a WASCOB project, indicating that there is a barrier preventing the water from entering. This might be caused by improper land-grading or a buildup of vegetation/soil blocking the flow of water.

Desirable Plants in ALUS Projects

Both ALUS wetland projects and ALUS erosion-control projects will function most effectively when the appropriate vegetation is growing in and around the project. Below are some desirable plant species you may see in and around your ALUS wetland projects and erosion-control projects.



Broadleaf Arrowhead
(*Sagittaria latifolia*)



Blue Vervain
(*Verbana hastata*)



Common Boneset
(*Eupatorium perfoliatum*)



Common Boneset
(*Eupatorium perfoliatum*)



Pale Smartweed
(*Persicaria lapathifolia*)



Straw-coloured Flatsedge
(*Cyperus strigosus*)

Undesirable Plants in ALUS Projects

Invasive, non-native plant species are undesirable in ALUS wetland projects and erosion-control 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 ALUS Program Coordinator for information on how to remove them from your project.



European Common Reed
(*Phragmites australis*)



Purple Loosestrife
(*Lythrum salicaria*)



Reed Canary Grass
(*Phalaris arundinacea*)

Wildlife Monitoring

One of the many benefits of ALUS wetland projects and erosion-control 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 identify the species.



Ecosystem Services Produced by ALUS Projects

Cleaner Water ALUS wetland projects and erosion-control projects help to keep streams, rivers and lakes cleaner by preventing soil from running off fields and into waterways. Erosion-control projects slow the movement of water over the land, while wetlands act as a settling area, where nutrients, sediments and particulates get filtered out before the water leaves your property and flows downstream.

Flood and Drought Regulation Both ALUS wetland projects and erosion-control projects help store water on your land. This prevents a significant volume

of water (from a heavy rainfall or spring snowmelt) from flowing rapidly into rivers to cause extreme floods downstream. It also increases ground-water infiltration, which helps your farm weather times of drought.

More Biodiversity ALUS erosion-control projects support aquatic habitats by reducing sedimentation in streams, creeks, lakes and rivers. ALUS wetland projects support numerous bird, insect, plant and mammal species. Wetlands are one of the most diverse and productive habitats in the world. In dry periods, wetlands slowly release water ensuring continued habitat for aquatic and semi-aquatic species.

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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.

ALUS.ca

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