Alberta Conservation Association

2024/25 Project Summary Report

Project Name: Biophysical Inventories and Monitoring

Land Management Program Manager: Robert Anderson

Project Leader: Robert Anderson

Primary ACA Staff on Project: Robert Anderson, Meagan Butler, Mandy Couve, Taylor Dickson, Marco Fontana, John Hallett, Tyler Johns, Nikita Lebedynski, Garret McKen, Stephen Nadworny, Terri Perron, Roy Schmelzeisen, Lenore Seward, Dan Sturgess, Clayton Temple, and Erin VanderMarel

Partnerships

Alberta Land Trust Grant Program
Alberta Wildlife Federation
Environment and Climate Change Canada - Nature Smart Climate Solutions Fund
Government of Alberta
TransAlta

Key Findings

- We commissioned four contracted baseline biophysical inventories on newly acquired conservation sites. Field data provided a general assessment of habitat characteristics, habitat condition, habitat capacity, and suitability to support valued species and recreation opportunities.
- We conducted four in-house baseline biophysical inventories on conservation sites that Alberta Conservation Association (ACA) assumed the lead management role for in recent years. Field data helped fill information gaps to strengthen and tailor site management.
- We conducted pre-enhancement monitoring surveys for the Wabamun/Whitewood expansion area. Over 80 wildlife species, including 14 species at risk, were detected in an area being considered for the federal ecological gifts program.

Details

ACA's land management efforts prioritize conserving and enhancing habitat for harvestable and vulnerable species and providing sustainable recreational opportunities. A variety of information sources are available to identify site-specific habitat characteristics and management needs. The Biophysical Inventories and Monitoring project aims to coordinate data gathering (detailed desktop review, field reconnaissance, targeted field studies) and reporting efforts to strengthen site management planning, to provide feedback on success or failure of intended habitat enhancement goals, or to monitor program-level targets and objectives.

In 2024/25, we contracted baseline biophysical inventories for four newly acquired conservation sites: Side Family, Wilfort, Wabamun/Whitewood Expansion 1, and Wabamun/Whitewood Expansion 2. These inventories included: detailing and mapping plant communities and habitat types; measuring tree stand characteristics; documenting anthropogenic features; identifying and mapping listed weed species; assessing riparian health; establishing photo reference points; quantifying stored soil organic carbon; and collecting incidental wildlife observations. Findings informed development of management action items and fulfilled ACA's obligations to funding partners.

To fill knowledge gaps, we conducted in-house baseline biophysical inventories on four conservation sites that ACA inherited site management responsibilities for in recent years. These properties included Caroline-Shell, Steinbrenner, Letourneau, and Sheep River. Our scope of work was similar to that of contracted baselines, with the addition of high-definition drone imagery.

ACA manages the Wabamun/Whitewood Conservation Site adjacent to TransAlta's former Whitewood Coal Mine. In 2024/25, we conducted a variety of surveys in an area that would expand this conservation site. Over 80 different wildlife species were detected. Results will be used in acquiring the land, developing a management plan, and monitoring habitat change over time. Thus far, we are encouraged by the wildlife species richness in the area, which includes barn swallow (federally *Threatened*), bank swallow (federally *Threatened*), several bat species of conservation concern, and abundant ungulate species presence.

Photos

Photo 1. ACA staff member Mandy Couve conducting vegetation baseline surveys on the Caroline-Shell property. Photo: Erin VanderMarel

Photo 2. Drone imagery of the Caroline-Shell property captured during the in-house baseline survey. Photo: ACA

Photo 3. ACA staff member John Hallett assessing forest stand characteristics on the Sheep River property. Photo: Erin VanderMarel

Photo 4. Fen habitat inventoried on the Letourneau property. Photo: Meagan Butler

Photo 5. *Drosera rotundifolia* sundew observed during vegetation baseline surveys on the Letourneau property. Photo: Meagan Butler

Photo 6. ACA staff member Terri Perron conducting wildlife surveys for the Wabamun/Whitewood Expansion project. Photo: Meagan Butler

Photo 7. Riparian health assessment as part of the contracted baseline biophysical inventory on the Side Family property. Photo: CCI

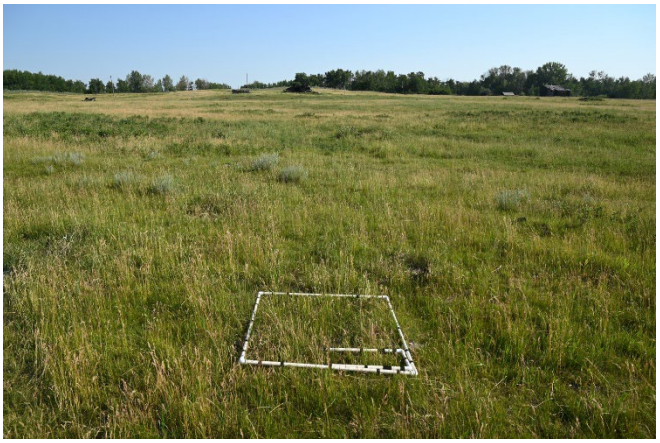

Photo 8. Vegetation assessment plot as part of the contracted baseline biophysical inventory on the Wilfort property. Photo: Longview Ecological

Photo 9. Boreal forest habitat inventoried on the Steinbrenner property. Photo: Clayton Temple