

Annual Report

2024



Project
Forest

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Land Acknowledgement

| Traditional Territories



Member of Cumberland House Cree Nation (CHCN) at the CHCN Food and Medicine Forest

Project Forest acknowledges that our work is conducted on both Treaty and non-Treaty lands. These lands are the traditional territories of First Nations and Indigenous Peoples. We recognize that our work is intertwined with the deep and diverse histories of Indigenous Peoples. We are grateful for the opportunity to work in these territories and are committed to the recognition and respect of those who live or have lived, travelled, and gathered on these lands for time immemorial.

About Us

| Mission and Values

Rewilding Canada, one forest at a time.

Project Forest is a non-profit organization working in partnership with conservation groups, Indigenous communities and Canadian businesses to make a positive environmental and social impact in our communities through planting forests. The forests we plant clean the air and water, increase biodiversity and contribute to the overall health and well-being of our communities.



Our work is rooted in our values.

Responsibility

We believe it is our responsibility to use our skills, knowledge, and experience to bring about positive change in the world.

Reciprocity

We recognize that we have benefited from the earth's resources and are committed to giving back through careful and thoughtful solutions.

Humility

We are grateful for the opportunity to learn from nature, to contribute to improving our environment, and to make a positive impact in people's lives.

Transparency

We document, monitor, and share our processes and findings with partners and the public—every step of the way, on every project.

Community

We create spaces where people can connect with nature, and each other. We respect every community we are invited into, and work together to make positive change.

Overview

| Letter from our Executive Director



Mike Toffan speaking with Cenovus Energy at Siksika First Nation

The Unintended Positive Outcomes of Project Forest:

I believe there is a sub conscious connection between people and trees and people and nature. This belief has expressed itself time and time again since Project Forest has become a reality. In 2024, more than 400 people joined our corporate planting events, and 166 individuals planted their very first tree. Watching people live this experience has been impactful and has shaped the direction of our story telling and the way we pay attention.

When Project Forest partners with the Canadian business community and is entrusted with their hard-earned capital to make a tangible impact, the result is more than rewilded landscapes. It's the lasting memories for those who plant alongside us. It's the way community members engage with the land they call home. It's the shift in belief that we can all make a difference. Project Forest has grown into something far greater than "just planting a few trees," and that's because of you—our community. For that, I will be forever grateful.

Looking ahead, 2025 will be a milestone year. We will sow our one-millionth seedling, scheduled to be planted at Siksika Nation in the spring of 2026. We are on track to surpass \$10 million in secured funding in Q2 2025, and we're preparing to launch our first eastern Canadian project in Quebec.

This momentum is only possible because of you: the champions, funders, landowners, and supporters who share our vision. Your commitment drives big change and inspires me every day.

Thank you!

A handwritten signature in black ink, appearing to be 'Mike Toffan'.

Mike Toffan
Project Forest Founder & Executive Director

Overview

| 2020 - 2024 Cumulative Review

This is what we've accomplished in four short years—and we're still growing.

13

forests
planted

38

species
planted

320.9

hectares
rewilded

769,495

seedlings planted



72

Funding
Partners

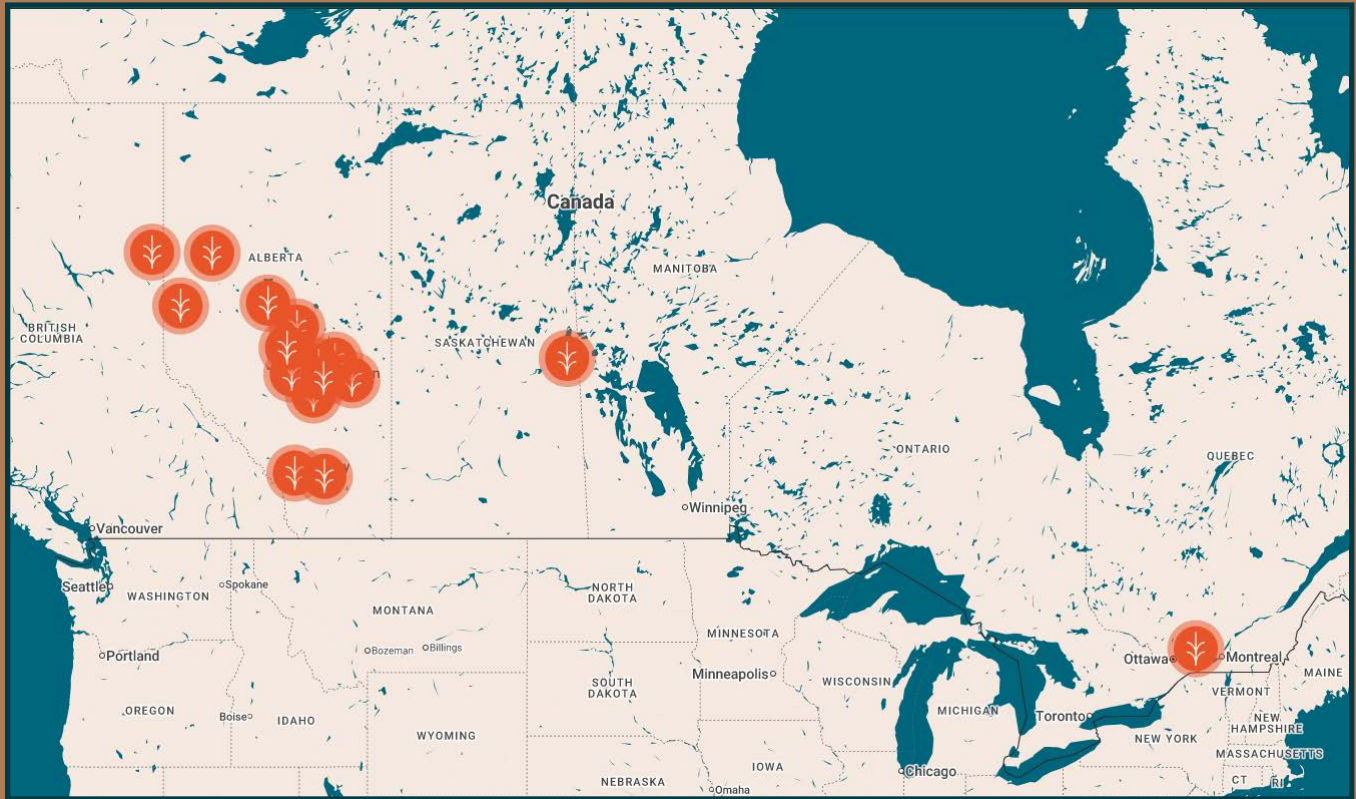
286,999

metric tonnes of CO2 projected to be
removed from the air over 150 years*

*Estimated lifetime of the forest

Overview

| 2020 - 2024 Cumulative Review



750,000 + seedlings planted since 2020.

In our first four years, Project Forest’s work has scaled in scope and depth. Across new and maturing forests, we focused on ecological fit, community partnership, and rigorous monitoring. Key areas of cumulative progress include:

- Nearly 770,000 trees and shrubs were planted, with our 1 millionth tree coming in 2026!
- 320.9 hectares of restored land moving toward healthy, self-sustaining forests through targeted planting, monitoring, and maintenance.
- 38 different species have been planted, aligning with local site conditions and needs.
- Expanded Indigenous-led and community-driven partnerships, with long-term stewardship plans in place.
- Clear contributions to UN SDGs, especially SDG 15 (Life on Land), SDG 13 (Climate Action), SDG 11 (Sustainable Cities and Communities), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), and SDG 6 (Clean Water and Sanitation).
- 72 Funding partners and growing.

Overview

| 2024 Year in Review

4

new forests
planted

28

species
planted

119.4

hectares rewilded

364,740*

seedlings planted



*This excludes the full U of A seedling numbers - planting to be completed in 2025



95,778*

metric tonnes of CO2 projected to be
removed from the air over 150 years*

*Estimated lifetime of the forest

350,000 + seedlings planted in 2024.

2024 was about deepening roots - advancing sites planted in prior years and responsibly launching new ones. Field surveys guided practical actions such as fill planting and vegetation management. Community programs and Indigenous partnerships continued to expand, connecting people to land and culture while accelerating restoration.

Overview

| United Nations Sustainability Development Goals

Goals to Transform Our World

Planting new forests is critically important in addressing the challenges of our time, particularly when aligned with the United Nations Sustainable Development Goals (UN SDGs). As our communities grapple with climate change and biodiversity loss, forests emerge as pivotal solutions that intersect with multiple UN SDGs including, combating climate change and preserving biodiversity, fostering economic development, ensuring food security, promoting clean water access, and advancing social equity. Aligning the impacts of our forests with the UN SDGs is essential for communicating to stakeholders our dedication to sustainability, transparency, and the measurement of progress over time.

In our 2024 Annual Report, we have linked the outcomes of our rewilding projects with relevant UN SDG targets and indicators, as well as aligned them with corresponding Environment, Social, and Governance goals. This comprehensive approach ensures that our partners have readily accessible information for corporate sustainability reporting, simplifying the process and enhancing transparency.



Purpose & Positive Impact

The following UN SDGs are impacted by the 2023 Project Forest rewilding projects:

Purpose



Positive Impact



Purpose

| UN SDG 15 - Life on Land

Goal: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Matching ESG Goals:

- Providing clean air and water
- Improving biodiversity
- Re-establishing traditional landscapes



Project Forest is making a positive impact through restoring degraded land to increase forest cover, enhance biodiversity, and promote the sustainable use of terrestrial ecosystems.

Indicator 15.1.1: Forest area as a proportion of total land area

The majority of our project sites are located in regions impacted by agricultural expansion. These areas encompass lands of significant conservation importance where, through planting a forest, we are able to make tangible contributions to their ecological restoration.

Annual Monitoring Surveys

Surveys are conducted across all project sites to assess the overall health of the forest through monitoring tree growth and mortality, observing volunteer vegetation, and identifying site maintenance requirements. Intensive on the ground surveys occur for the first five growing seasons at each project location. The survey data collected is used in the preparation of our Annual Project Reports.

All surveys are completed by Regulated Forestry Professionals (RFP) or under the direct supervision of an RFP. The parameters for success are dependent on the site conditions and defined at the start of each project.

Land degradation “is a negative trend in land condition, caused by direct or indirect human-induced processes including anthropogenic climate change, expressed as long-term reduction or loss of at least one of the following: biological productivity, ecological integrity or value to humans” (IPCC, 2019).

662

Plots Sampled

Purpose

| UN SDG 15 - Life on Land



Table 1: 2024 Site Surveys Completed

Rewilding Surveys	Shelterbelt Assessment Surveys
ACA Centennial Forest - Benoit	Paul First Nation
ACA Centennial Forest - Flatbush	Siksika First Nation
Camp Creek	
Doig River First Nation	
Golden Ranches	
Nutrien Forest	
Swan River First Nation	
Strathcona Forest	

NSR-LIG is an abbreviation of “not sufficiently restocked - let it grow”. The NSR-LIG status is applied to plots where under-height trees are left to grow with the expectation that this treatment will be sufficient for them to meet the SR standard at the next annual survey.



Afforestation Survey at Siksika First Nation

78%
Seedling Survival Rate

Across all sites surveyed in 2024 we sampled a total of 662 plots and found an average total stocking rate (SR + NSR-LIG) of 78% (Figure 1). The data from the surveys is recorded in an Afforestation Survey Report for each project location, this report is included in each individual annual project report. The data from all surveyed project sites has been compiled into the Afforestation Survey Cover Page (Appendix A - Afforestation Survey).

Table 1: Acceptable Stocking Summary

Type of Plot	# of Plots 2023	% of Plots 2023	# of Plots 2024	% of Plots 2024
Total Sufficiently Restocked (SR)	228	45.2	433	64.8
NSR-Let It Grow (NSR-LIG) Stocking	172	34.1	88	13.2
Not Sufficiently Restocked (NSR)	104	20.6	141	21.1
Total Stocking (SR + NSR-LIG/Total # of Plots)	400	79.4	521	78.0

* Shelterbelt assessment surveys were done at both Siksika Nation and Paul First Nation late in the year after intital planting. Those numbers are not reflected here.

Purpose

| UN SDG 15 - Life on Land



In 2024, Project Forest’s rewilding initiatives directly advanced United Nations Sustainable Development Goal 15 by protecting, enhancing, and creating diverse habitats that sustain biodiversity, strengthen ecosystem services, and secure long-term ecological resilience. Each project applied site-specific rewilding strategies, rigorous ecological monitoring, and adaptive management to ensure measurable progress in reversing land degradation and fostering healthy ecosystems.

Through the expansion of vegetation cover, enhancement of habitat quality, and strengthening of ecological connectivity, we are generating measurable contributions to Sustainable Development Goal 15 (Life on Land) across all sites under our stewardship.

Key 2024 outcomes include:

- Species integration for ecological fit: Selection and planting of species—both native and non-native—that are well-suited to site conditions and provide long-term habitat and ecosystem benefits.
- Enhanced ecological connectivity: Establishment of large-scale community and school shelterbelts, along with multi-species rewilding projects, to link fragmented habitats.
- Protection of sensitive species: Targeted planting and habitat enhancements to support threatened and at-risk flora and fauna.
- Improved habitat functionality: As rewilded areas mature, structural complexity increases, providing enhanced nesting, foraging, and shelter opportunities for wildlife.

10

Surveys Completed

Afforestation “is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources. annual monitoring survey” (UNFCCC, 2008).



“Project Forest’s rewilding vision is precisely aligned with Alberta Conservation Association’s restoration goals on Camp Creek and other Conservation Sites. Their thoughtful planning, attention to detail, and collaborative strengths will benefit Albertans and wildlife for generations to come.”

—**Dan Sturgess**, Biologist, Alberta Conservation Association (ACA)

Purpose

| UN SDG 15 - Life on Land



Indicator 15.1.2: Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

Project Forest partners with Indigenous communities and conservation groups to plant trees and shrubs that contribute to increasing the overall forested area in Canada. By identifying non-forested land that could benefit from rewilding we are enhancing the coverage of forest ecosystems, which are a critical component of terrestrial biodiversity.

We partner with landowners who can guarantee that the forest we plant today will be protected and remain forests for future generations to enjoy. Our permanence agreement ensures that we are establishing new protected areas and expanding existing ones. By converting degraded or unused land into forested areas, we increase the total area designated for conservation, which directly improves Indicator 15.1.2.

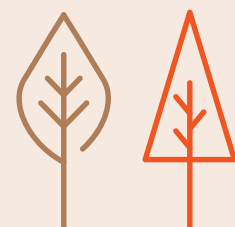
Our forests are situated in northeastern British Columbia, specifically the [Peace River region](#), stretching across the [Boreal Forest Natural Region](#) in northern and central Alberta and in the [Boreal Plain Ecozone](#) in northeastern Saskatchewan. The land is managed, and its long-term protection overseen, by our Indigenous and conservation land partners.

In 2024, across four projects, we planted 28 species of trees, shrubs, and vascular plants - carefully selected for their suitability to each site and resilience in a changing climate. This focus on native and locally adapted species enhances biodiversity, expands forest cover, and contributes to climate change mitigation.

Annual monitoring also tracks the presence of noxious weeds. In 2024, surveys across 10 sites recorded Canada thistle, sow thistle, and common tansy among others. Where weed presence is significant, Project Forest works with land partners to identify and implement appropriate vegetation management strategies. Full details on vegetation observations are included in each project's annual report.

28

Species Planted

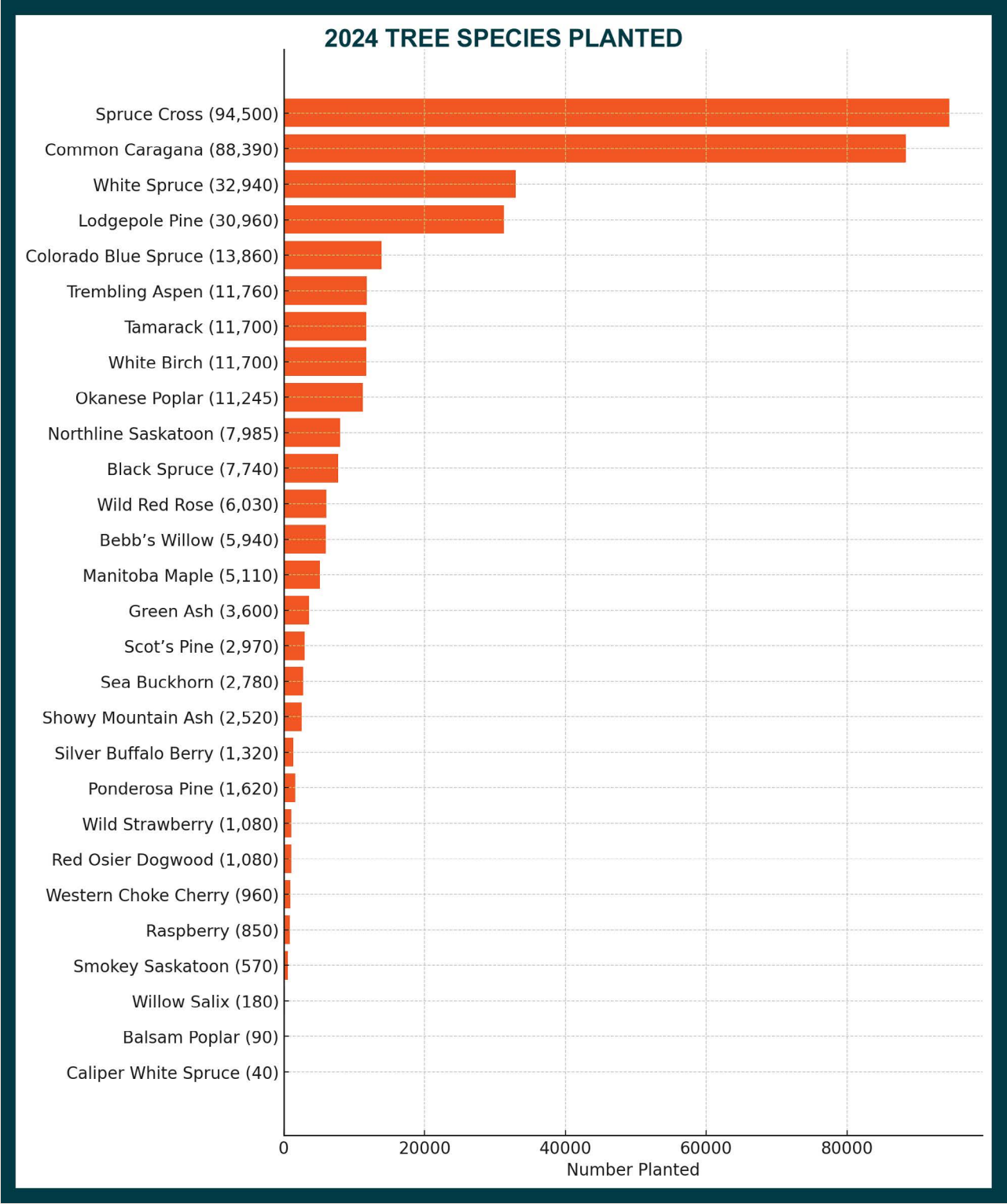


Purpose

| UN SDG 15 - Life on Land



Figure 1: Tree species planted in 2024

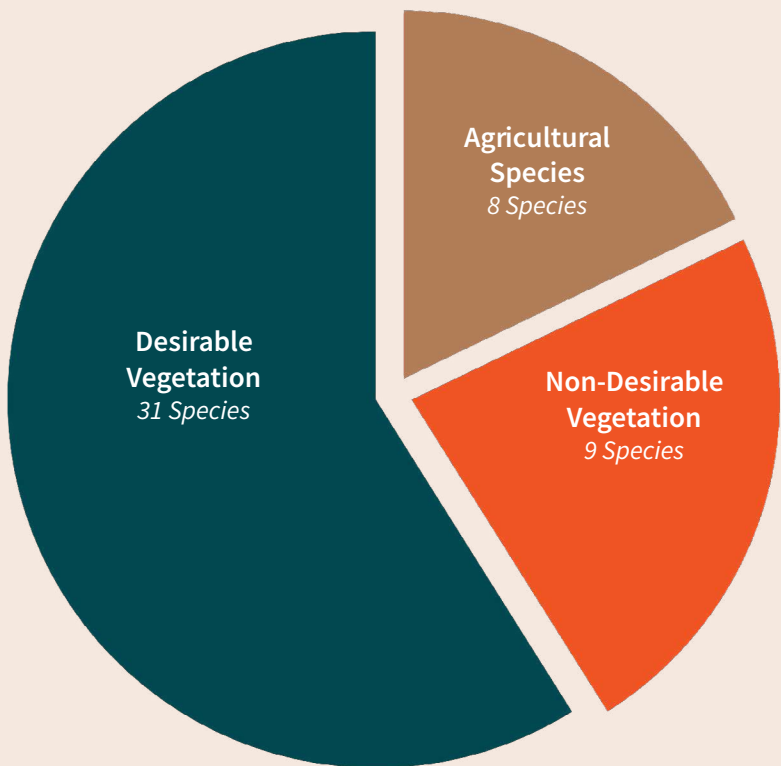


Purpose

| UN SDG 15 - Life on Land



Figure 2: Observed Herbaceous and Woody Vegetation Across All Surveyed Sites



During our 2024 surveys, desirable vegetation was abundant across all monitored sites. Non-desirable vegetation consisted primarily of species classified as noxious weeds. Survey findings indicate that site conditions are shifting to favour native herbaceous and woody species. The presence of naturally occurring desirable vegetation - species that established without our direct planting - serves as a strong indicator of rewilding success, reflecting the land's gradual return to its natural state

Desirable Vegetation (31)

Agrimonia	Goldenrod
Aster spp.	Heather spp.
Avens spp.	Horsetail
Buckwheat	Lesser meadow rue
Bunchberry	Mug wort
Clover spp.	Nettle spp.
Common alfalfa	Noble yarrow
Common cattail	Northern Bedstraw
Common Plantain	Pea vine
Common yarrow	Pennycress
Cow parsnip	Redstem storksbill
Dandelion	Sedge spp.
Fern spp.	Shrubby cinquefoil
Field sagewort	Vetch spp.
Fringed sagebrush	Wild strawberry
Golden currant	

Agricultural Species (8)

Brome spp.	Reed Grass
Common Bent grass	Timothy hay
Grass spp.	Wild oats
Quack grass	Wild Rye

Non-Desirable Vegetation (9)

Bull Thistle	Perennial
Canada Thistle	Sow thistle
Comon Tansy	Scentless
Knapweed spp.	Chamomile
Kochia/Cypress spp.	Yellow Toadflax

Purpose

| UN SDG 15 - Life on Land



2024 Highlights (Life onLand)

Golden Ranches (Alberta)

- 2024 bird surveys recorded 22 species onsite, including Sprague's Pipit (threatened) and Baltimore Oriole (formerly sensitive), demonstrating improving habitat function as the site matures.
- Ongoing monitoring and remediation keep the site on trajectory, with corporate fill-planting supplementing areas identified through stocking surveys.

Strathcona Forest (Alberta)

- The third-year monitoring assessment (Oct 2024) confirmed 92.3% tree survival, with 66.7% of plots now Sufficiently Restocked (SR) and five plots improving from NSR-LIG to SR with no corrective actions required.

Camp Creek (Alberta)

- The 2024 stocking survey assessed 75 plots across 28 ha. Acceptable stocking reached 78.7% (just below the 80% target), with 41.4% of previously understocked plots now meeting criteria. Herbaceous competition remains the main limiting factor.

Nutrien Forest (Alberta)

- First post-planting survey (Oct 2024) showed 90.2% of plots satisfactorily restocked, with minor NSR plots linked to mowing. The current plan is to let the trees grow to form a closed canopy in 3–5 years, while using mowing to keep weeds down in the meantime.

Doig River First Nation Rewilding (Treaty 8)

- Spring 2024 planting established 116,100 trees and 20,070 shrubs across 56.2 ha (11 native species). Year 1 monitoring recorded 97.3% acceptable stocking.

Siksika Nation – Community Shelterbelts (Treaty 7)

- Phase 1 Part 1 survey (Oct 2024) traversed 21.8 km of the 27.8km planted length - a mortality event was observed. A more in-depth survey is scheduled for 2025, offering further data for a fill plant strategy.

Wihnemne School Food & Medicine Forest (Treaty 8)

- In 2024 Project Forest combined landscape-sized trees for immediate shade with seedlings for long-term succession, while embedding food- and medicine-bearing shrubs into the plan for educational and shelterbelt protective purposes.



Sprague's Pipit

Purpose

| UN SDG 15 - Life on Land



Indicator 15.2.1: Progress towards sustainable forest management

Project Forest's Rewilding Plans, Monitoring Protocols, and Remediation Actions are central to ensuring that our project sites progress toward becoming healthy, resilient forests, directly contributing to SDG 15.2.1 by advancing sustainable forest management practices. These measures balance community needs with the long-term stewardship of forest resources, preserving ecological integrity while delivering lasting benefits for people and nature.

Our approach combines proactive planning, science-based monitoring, and adaptive management to provide verifiable evidence that rewilded lands will mature into thriving forests. This commitment supports environmental restoration today and safeguards ecosystem services for future generations.

Rewilding Plans

Before planting, each site undergoes a thorough assessment to identify challenges and optimize conditions for seedling survival.

We:

- Conduct site visits to survey conditions, identify site limiting factors, and develop mitigation strategies.
- Recommend species mixes tailored to local ecology and community priorities.
- Collaborate with landowners to finalize planting numbers and species selection.
- Produce detailed planting maps, site preparation guidelines, vegetation management plans, and project-specific monitoring schedules.
- This tailored planning ensures that rewilded forests are ecologically appropriate, socially relevant, and positioned for long-term success.

Monitoring Protocols

Our monitoring methodology meets rigorous standards for sustainable forest management verification. Key elements include:

Establishing 2.44 permanent monitoring plots per hectare.

- Annual surveys for up to six years post-planting to track growth and survival rates.
- Budgeting for a 25% fill plant to replace mortality within the early establishment phase.
- Using collected data to guide maintenance, adaptive interventions, and schedule additional silvicultural activities if necessary.

Sustainable Forest

Management is a way of using and caring for forests to maintain their environmental, social, cultural and economic values and benefits over time (NRCAN, 2024).



Purpose

| UN SDG 15 - Life on Land



These protocols ensure that forests remain on a positive trajectory toward maturity, maintaining biodiversity, enhancing ecosystem services, and meeting the indicators of SDG 15.2.1.

Silvicultural Strategy

In the event of substantial tree mortality prior to the site passing the standard set out in our monitoring protocols, Project Forest will conduct a fill plant. A fill plant will occur when a 'Not Sufficiently Restocked (NSR)' area is identified. We budget for a 25% fill plant for each project site and are able to pool and target funds to affected project sites when needed. The 2024 Annual Monitoring Surveys indicated that three of the 10 sites surveyed may require remedial activities:

Siksika Nation Community Shelterbelt Program

A mortality event has been observed, initiating the requirement for a targeted fill plant. Prior to scheduling this silvicultural activity a comprehensive survey will be conducted in 2025. We hope to assess 100% of the previously planted area. The primary objective of the 2025 survey is to generate high-resolution data on survival rates and stocking density to inform the design and scope of the fill plant.

Project Forest will proceed with Corporate Planting events in September 2025, during which approximately 12,000 seedlings will be strategically deployed to address identified mortality hotspots as an interim mitigation strategy.

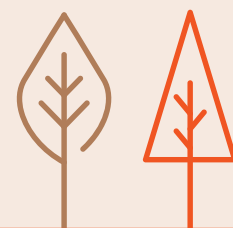
Wihnemne School Food and Medicine Forest

Survey results revealed a wide variance in species survival. While white spruce (92%) and caliper spruce (95%) performed strongly, survival rates were lower for balsam poplar (56%) and significantly poor for chokecherry (33%) and Saskatoon (1%). The survey crew was not able to quantify the willow survival rate.

The site will be assessed again during the fall of 2025. Should the results remain consistent, a fill plant will be scheduled for the spring of 2026. Paul First Nation will be consulted to discuss the deployment of any species selected for a fill plant.



3 year old white spruce at Swan River First Nation



Purpose

| UN SDG 15 - Life on Land



AMA Centennial Forests Benoit & Flatbush

Following a review of the stocking data, the Flatbush site was inspected jointly by Project Forest leadership and the ACA. It was determined that a heat dome event during the 2023 planting season adversely affected the establishment and survival of white spruce seedlings. While previously established white spruce are performing well, the extreme heat and drought conditions at the time of planting limited root development in newly planted stock, resulting in insufficient establishment and high mortality during the first growing season.

Project Forest and the ACA assessed the site and agreed to proceed with a fill plant. A total of 46,100 seedlings, representing four different tree species, will be planted in the areas identified in Figures 3 and 4.

Please see Table 2: Fill Plant Species List for information regarding how many and of what species will be fill planted.

Figure 3: Flatbush 2024 Survey Fill Plant Area 01



Figure 4: Flatbush 2024 Survey Fill Plant Area 02



Table 2: Fill Plant Species List

Seedling Species	Seedling Number
White Birch	3,600
White Spruce	28,100
Lodgepole Pine	28,800
Tamarack	5600

Importantly, elevated mortality rates are not viewed as project failures, but rather as critical learning opportunities that enable evidence-based course correction. This aligns with our long-term commitment to ecological restoration under SDG 15.3 - *restore degraded land*.

Purpose

| UN SDG 15 - Life on Land



Indicator 15.3.1: Proportion of land that is degraded over total land area.

Together with First Nations across Western Canada and conservation groups like the Nature Conservancy of Canada (NCC) and the Alberta Conservation Association (ACA), Project Forest is working to rewild degraded land that has been disturbed and has not recovered through normal ecological processes.

Doig River First Nation, in partnership with Project Forest, is rewilding land by planting more than 136,000 trees and shrubs. Along the trails, food-bearing and medicinal plants have been established, ensuring community members have year-round access to culturally significant species.

By identifying non-forested land that could benefit from rewilding, we are enhancing the coverage of forest ecosystems, which are a critical component of terrestrial biodiversity. As the land transitions back into a forest, it will clean the air and water, provide habitat for countless species of flora and fauna and play an important role in the community; providing access to hunting and foraging grounds through a network of trails.

Situated within Doig River First Nation in Treaty 8 Territory, the 56.2 hectare site had long remained underutilized, having been cleared approximately 50 years ago and intermittently used for cattle grazing. Through this project, the community seeks to restore ecological function, cultural connection, and climate resilience to this landscape.

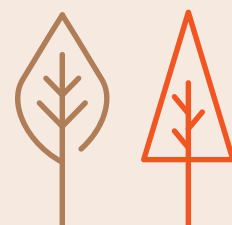
It should be noted that the project site was originally 46 hectares, but due to a wildfire, 10 more hectares were added to the project area. The final project area was 56.2 hectares, with an additional 20,000 white spruce seedlings planted than initially planned.

Ecosystem degradation

is defined as, “an event or process that reduces the productivity or value of an ecosystem, or that delays or prevents an ecosystem from recovering from disturbance through normal successional processes” (Haeussler et al., 2002).

8

Land Partners



Purpose

| UN SDG 13 - Climate Action

Goal: Take urgent action to combat climate change and its impacts.

Matching ESG Goals:

- Reducing GHG emissions
- Experiencing nature in an educational and interactive way



The forests we plant can have a significant impact on mitigating climate change.

Indicator 13.2.2: Total greenhouse gas emissions per year

Forests play a critical role as carbon sinks, capturing carbon dioxide (CO₂) from the atmosphere through photosynthesis and storing it in both biomass and soils. By establishing new forests, we increase the total amount of CO₂ sequestered, helping to lower atmospheric greenhouse gas (GHG) concentrations and slow the rate of global warming (NRCAN, 2022).

At full maturity, Project Forest’s rewilding sites are projected to sequester approximately 286,999 metric tonnes of CO₂ over their lifetimes, making a substantial contribution to climate change mitigation.

To measure and verify this impact, Project Forest applies the [Carbon Budget Model of the Canadian Forest Sector \(CBM-CFS3\)](#), a modelling framework developed by Natural Resources Canada. This model is recognized as the national standard for assessing and reporting forest carbon, ensuring our calculations are scientifically robust and nationally consistent.

286,999

Metric tonnes of CO₂ projected to be sequestered

Carbon Budget Model of the Canadian Forest Sector

is an aspatial, stand- and landscape-level modelling framework used for international reporting of the forest carbon balance of Canada’s managed forest (NRCAN, 2024).

*CO₂ sequestration was not calculated at the Cumberland House Cree Nation Food and Medicine Forest or for the shrub species planting at the Swan River First Nation Ecological Reconciliation Project. Food-bearing and medicinal plants and shrubs have a negligible carbon benefit.

Purpose

| UN SDG 13 - Climate Action



Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

Project Forest provides our partners and the wider community with the opportunity to participate in educational activities through our Community and Corporate Outreach Program. Experiencing nature in an educational and interactive way enriches knowledge, fosters a connection with the environment, promotes well-being, and encourages responsible environmental behaviour. These are some of the engagement activities we conducted in 2024:

Tree Planting Events

- On June 24th, 2024 Project Forest hosted a groundbreaking celebration and tree planting event at Paul First Nation's Elementary Jr. High School grounds.
- 5 partner companies with 100 employees took part in our 2024
- Golden Ranches Corporate Tree Planting Events
- 17 partner companies with 227 employees planted on Siksika First Nation.
- Educational talks around seedling physiology, forest succession, tree planting technique, tree planting survey methodology, seed collection, plant identification, and traditional plant uses

Indigenous Engagement

- On June 18, 2024 Project Forest hosted a Seedling giveaway at Siksika Nation, giving away 570 smokey Saskatoon, 130 wild red raspberry, 3,575 northline Saskatoon, and 2,520 showy mountain ash seedlings; offering in-person, hands-on volunteering opportunities for nine of our financial partners.
- Opportunity to learn from Indigenous Knowledge Keepers and Elders in various capacities from presentations, interviews and talks, to one-on-one exchanges at our Corporate Planting Events and Annual Partner Celebration.

Celebration

- First Tree Planted Celebrations were held in 2024 at Doig River First Nation on June 13 and Paul First Nation on June 24, following an earlier celebration at Siksika Nation on October 22, 2023.



Golden Ranches Planting Day

Purpose

| UN SDG 13 - Climate Action



Podcast, radio, tv and webinar interview

- Overview of the rewilding process for general audiences
- Discussions of more in-depth topics such as working with Indigenous communities, operating a non-profit, and sustainable forest practices

Lunch and Learns, Keynote Presentations and Panel Discussions

- Overview of the rewilding process, our projects, and stories of community impact
- Stakeholder project impacts and opportunity to engage with the Project Forest team

Annual Partner Celebration

- On April 18, Project Forest hosted it's Annual Partner Celebration, at Ikea, Calgary with presentations featuring keynote speaker Brent Dodginghorse, and indigenous musicians Sorrel Rider.
- Focus on Indigenous reconciliation through rewilding, sustainable business practices, and community investment

Seedling and Seed Kit giveaway events throughout the year

- Opportunity to interact with the Project Forest team
- Celebrate the impact your organization is making
- Engage with the Project Forest community

29

Funding Partners
in 2024



Purpose

| UN SDG 11 - Sustainable Cities and Communities

Goal: Make cities and human settlements inclusive, safe, resilient and sustainable



Matching ESG Goals:

- Generating social & economic growth
- Advancing health & wellbeing
- Developing deeply ingrained Indigenous relationships

Restoring degraded land can have a positive impact on communities through creating safe, resilient, and sustainable natural spaces.

Target 11.4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage



Tobacco sprinkled around a seedling in a planting ceremony

Forests hold immense cultural and spiritual significance for many Indigenous Peoples. Through planting forests in Indigenous communities, we provide opportunities to preserve cultural heritage, traditional knowledge, and spiritual connections to the land. Forests provide a space for traditional land-use activities including ceremonies, hunting, and gathering food and medicinal plants.

Purpose

| UN SDG 11 - Sustainable Cities and Communities



Planting native species is a powerful way to restore the natural heritage of the land, reviving ecosystems that have supported life for generations. At Project Forest, we work hand-in-hand with our Indigenous land partners to learn which plants hold cultural, spiritual, and dietary significance, as well as which species once thrived on their lands but are now absent. This collaboration ensures that every plant we introduce serves a meaningful purpose—whether it is to nourish the community, heal the land, or support local wildlife.

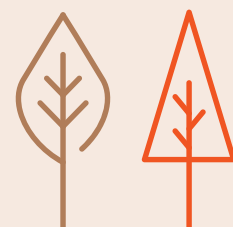
Indigenous communities possess deep, intergenerational knowledge of local plant species—knowledge that extends beyond simple identification to include cultivation practices, seasonal rhythms, and traditional uses for food, medicine, and ceremony. By creating food and medicine forests, we not only restore ecosystems but also preserve and activate this traditional wisdom. These forests become living libraries, where Elders share stories, techniques, and cultural teachings, while younger generations learn to tend the land in ways that honor their heritage



“...The Project Forest Cumberland House Cree Nation Food and Medicine Forest signifies our community’s commitment to restoring and preserving our cultural heritage. By reintroducing these food-bearing and medicinally significant plants and trees, we ensure the well-being of our community and future generations.”

—**Chief Rene Chaboyer**, Cumberland House Cree Nation

Project Forest’s work with Indigenous partners to plant culturally and ecologically significant native species directly supports UN SDG 11, Target 11.4, by safeguarding both cultural and natural heritage. Communities preserve traditional ecological knowledge, strengthen cultural identity, and restore ecosystems that have sustained life for generations.



Purpose

| UN SDG 11 - Sustainable Cities and Communities



Indicator 11.a.1: Number of countries that have national urban policies or regional development plans that (a) respond to population dynamics; (b) ensure balanced territorial development; and (c) increase local fiscal space

The trees we plant provide areas for recreation and traditional land use within the community. Our funding partners finance the rewilding costs including seedlings, planting, and labour, allowing communities to allocate more funds to services and infrastructure.

When operating on First Nation land, Project Forest will always grant the Nation's economic development corporations and First Nation owned businesses first right of refusal on the following project work opportunities:

- Mechanical site preparation
- Seed collection
- Vegetation management
- Survival assessment survey and data collection
- Cover crop deployment
- Construction work

The IRC (Indian Resource Council), works with Project Forest to promote First Nation and local participation on different site activities, and has an MOU in place to help each organization accomplish their mission. The IRC holds a seat on Project Forest's Board of Directors, offering an important Indigenous perspective at the board level.

Local fiscal space

is defined as the sum of financial resources available to a government for the improved delivery of basic services without any prejudice to the sustainability of a government's financial position (Heller, 2005).

"We value our partnerships with companies who share our appreciation for nature, its beauty, and everything it has to teach us."

Reclaiming the land around the school grounds gives the children even more learning opportunities which is priceless. As the trees grow the children will also grow in so many ways."

Faron Bull, Paul First Nation Councilman



Dechant Construction Site preparation at Paul's Elementary Jr. High School

Purpose

| UN SDG 11 - Sustainable Cities and Communities



A total of 116,100 tree seedlings and 20,070 shrubs were planted at the Doig River First Nation Rewilding Project, with a strategy to increase biodiversity and ensure cultural relevance. As part of this project, Uujo Contracting LP was awarded over \$130,000 for site preparation work.

In a separate initiative, Project Forest advanced its commitment to local partnerships by hiring Indigenous-owned contractors from Siksika Nation, who earned over \$80,000 over three months for watering services.

Project Forest has worked closely with Indigenous Box™ since 2021- a company focussing on social-impact gifting; they partner with hundreds of Indigenous businesses to showcase their products, scale operations, and build sustainable growth.

Table 3: 2024 Indigenous and Economic Impact

Employment Opportunity	Total Hours (Combined)	Total Economic Impact
Uujo Contracting LP (Site Preparation)	540 Hours	\$130,322.06
Local Tree Planters (x4)	80.5 Hours	\$2,445.95
Watering Contractors (2 crews of 2 people)	728 Hours	\$80,640.00
Indigenous Box (Client Promotional Expenses)	————	\$16,817.00
Totals	1,348.5 Hours	\$215,225.01



Partnering with local Indigenous subcontractors like Uújo Contracting LP and Indigenous Box, strengthens community leadership in land stewardship. Project Forest advanced SDG 11 by creating green infrastructures that enhance daily life: cooler neighborhoods, safer school grounds, wind and dust protection for rural areas, and welcoming spaces for gathering, learning, and cultural practice. We work with communities to design forests that meet local needs and ensure lasting benefits.

Purpose

| UN SDG 11 - Sustainable Cities and Communities



Indicator 11.7: Provide access to safe and universal green and public spaces

Siksika Nation Community Shelterbelt Program (Treaty 7)

Siksika Nation's multi-year shelterbelt program extends along roadways and community sites to reduce wind, dust, and drifting snow while improving safety and comfort. In October 2024, surveys assessed 24% of the planted trees and recommended species-specific fill planting and grazing management in select segments. As establishment progresses, the linear canopy will deliver environmental benefits (cooling and windbreaks), safer active-transport corridors, and more attractive community edges.

Wihnemne School Food & Medicine Forest (Paul First Nation, Treaty 6)

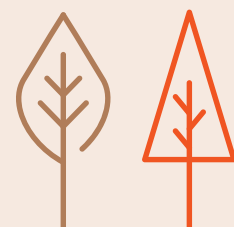
At Paul's Elementary Jr. High School, the 2024 plan integrated landscaped-sized trees for immediate shade and structure with seedlings and food/medicine shrubs for long-term function. The result is a safer, greener campus that supports outdoor learning, cultural programming, and everyday use by students and families. Teachers and Elders incorporate plant identification, harvesting protocols, and cultural stories with students.

Doig River First Nation Rewilding Project (Treaty 8)

A total of 56.2 hectares of previously cleared and degraded land has been planted to initiate its transformation into a multifunctional landscape that integrates ecological renewal with cultural values. The project engaged local Indigenous subcontractors, including Úújō Contracting, to reinforce community agency and leadership in land stewardship. In total, 116,100 tree seedlings and 20,070 shrubs were planted, including: spruce cross, black spruce, lodgepole pine, paper birch, Bebb's willow, and other culturally significant food and medicine bearing shrubs.

Strathcona Forest (Northwestern Alberta)

The 2024 monitoring assessment verified high survival rates and adequate stocking levels, indicating that no remedial interventions are necessary. Results also show increasing biodiversity, and the developing stand structure remains on trajectory to support the Alberta Conservation Association's objective of transitioning this project area into a functioning forest ecosystem.



Positive Impact

| UN SDG 2 - Zero Hunger

Goal: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.



Planting a forest can have indirect but important impacts on addressing hunger, achieving food security, improving nutrition, and promoting sustainable agriculture.

Target 2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

Indigenous food and medicine forests incorporate a wide variety of plant species, including vascular plants, shrubs, fungus, bushes, and trees. This diverse range of edible and medicinal plants provides a broad selection of food and healing sources for the community year round.

By growing food and medicinal plants, Indigenous communities can reduce their reliance on external sources and commercial markets. This enhances the community's self-sufficiency and food sovereignty.

In 2024, Project Forest planted 191,595 food, medicinal, and culturally significant plants across our project sites. A total of 11 different species were planted. *The information shared below was not provided to us by Elders or the Nations.*

191,595
Food and Medicine
Plants and Shrubs Planted

Food and Medicinal Seedlings planted in 2024

Spruce Cross (94,500), Black Spruce (7,740), White Spruce (32,940)

- Spruce needles, rich in vitamin C, were traditionally used to treat scurvy and respiratory ailments like coughs, colds, and flu.
- Resin has antiseptic, healing, and anti-inflammatory properties for wounds, burns, and irritations or incorporated into ointments.
- Inner bark can be boiled and used to treat digestive disorders.

White Birch (11,700)

- Bark contains betulin, which has anti-inflammatory and pain-relieving properties. Used to treat skin problems, arthritis, and diabetes-related issues.
- Sap can be used to treat coughs, colds, and fevers.
- Leaves can be used to make a tea for treating digestive issues.

Positive Impact

| UN SDG 2 - Zero Hunger



Lodgepole Pine (20,700)

- Pine seeds found inside the cones are edible when young and can be eaten raw or toasted.
- The sap can be collected in the spring and consumed as a drink.
- The inner bark, especially the cambium layer, can be eaten raw or cooked. It has a sweet or orange-like flavor. It can also be dried and reconstituted later or ground into a flour.
- Resin can be used to treat sore throats, toothaches, and infections.

Bebb's Willow (5,940)

- Bark contains salicin, (a precursor to aspirin), making it useful for pain relief and fever reduction.
- The diamond willow fungus grows on mature Bebb's willow and is used in cultural activities.

Red Osier Dogwood (1,080)

- Dogwood bark is known for its astringent and anti-inflammatory properties as an ailment
- The inner bark is used in teas for colds and sore throats.

Wild Red Raspberry (850)

- Berries are high in antioxidants.
- Used in pies, jams, jellies, sauces, and baked goods.
- Used for medicinal purposes to ease menstrual cramps, support healthy pregnancy, and potentially aid in childbirth.



Wild Red Raspberry

Northline Saskatoon (7,985)

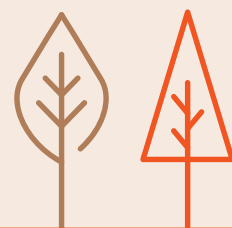
- Berries used in pies, jams, jellies, sauces, and baked goods.
- Medicine: Treating liver diseases, disinfecting wounds, preventing miscarriages, and as a laxative.

Western Chokecherry (960)

- Berries used in pies, jams, jellies, sauces, baked goods, pemmican and wine.
- Bark, leaves, and roots used to treat colds, coughs, pneumonia, and sore throats.

Wild Strawberry (1,080)

- Strawberries contain antioxidants and vitamins A, C, and E, which can be beneficial for overall health.
- Contains salicylic acid, which helps with liver, stomach, and kidney issues, as well as rheumatism and gout.



Positive Impact

| UN SDG 2 - Zero Hunger



Wild Red Rose (6,030)

- Rose petals and hips help reduce inflammation in the body, potentially easing conditions like arthritis and inflammatory bowel disease.
- Rose tea used for bloating and constipation.
- Calms the nerves promoting relaxation, helping with anxiety and depression.
- Rose petals have antibacterial properties, which is useful for wound healing and skin health.

Balsam Poplar (90)

- Buds used for chest congestion, skin and muscle pain.
- Bark has anti-inflammatory and fever reducing properties

Related Projects

Wihnemne School Food & Medicine Forest (Paul First Nation)

2024 planting integrated caliper-sized trees for shade and structure with seedlings and shrubs that will produce edible and medicinal yields. The design reflects cultural values and supports hands-on education in plant identification, harvesting, and care.

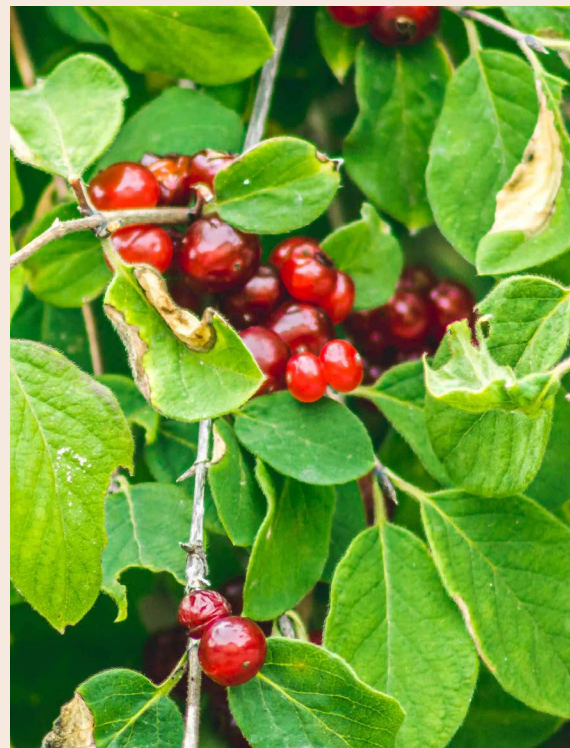
Doig River First Nation – Rewilding with Food & Medicine Species

Spring 2024 saw the planting of 20,070 shrubs and a diverse mix of 11 native species selected for food, medicine, and ecological benefits. The project supports food sovereignty and promotes sustainable use of natural resources.

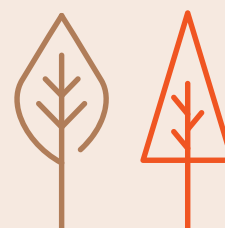
Siksika Nation Community Shelterbelt Program

Shelterbelt planting included species with edible or medicinal uses, aligning climate adaptation with food security objectives.

In 2024, Project Forest contributed to SDG 2 by integrating food and medicine-bearing plants into restoration projects, supporting local food systems, and creating educational opportunities around sustainable harvesting. These efforts provide immediate and long-term benefits, offering communities access to culturally significant foods and medicines while fostering stewardship skills that connect people to the land.



Western Chokecherry



Positive Impact

| UN SDG 3 - Good Health and Well-Being

Goal: Ensure healthy lives and promote well-being for all, at all ages.



Planting a forest can have several positive impacts on ensuring healthy lives and promoting well-being for all ages.

Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Forests act as natural air filters by absorbing pollutants and particulate matter from the atmosphere. Trees remove harmful gases by absorbing them through their leaf stomata, filtering these chemicals from the air. Particulate matter is intercepted by the tree's surfaces. When it rains, the particles are washed off and carried to the ground. Planting forests can help improve air quality, by reducing the exposure of communities to harmful pollutants (Nowak et al., 2014).

In addition to improving air quality, forests provide opportunities for people to connect with nature, enjoy recreational activities, and experience the positive physical and mental health effects of spending time outdoors. They also provide various ecosystem services that indirectly contribute to our health and well-being.

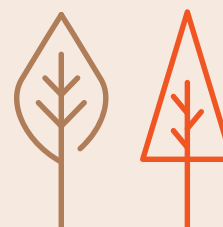
Some of the important ecological services provided by forests include:

- cleaning water through water filtration
- cleaning air through oxygen production and absorption of pollutants
- rebuilding of soils and restoration of nutrients
- holding back floodwaters and releasing needed water into rivers and streams
- absorbing CO₂ from the atmosphere
- maintaining biodiversity by providing habitat for countless species

These services all indirectly impact human health and well-being.

11

Communities Impacted



Positive Impact

| UN SDG 3 - Good Health and Well-Being



Related Projects

Siksika Nation Community Shelterbelt Program

Shelterbelt projects improve air quality by reducing windblown dust from roads and open areas. The microclimate benefits, including cooling and wind reduction, support safer outdoor activity and improved comfort for residents.

Wihnemne School Food & Medicine Forest (Paul First Nation)

New plantings create shaded play and learning spaces for children while incorporating culturally significant species. This supports both physical activity and cultural well-being by linking students to traditional ecological knowledge.

Doig River First Nation Rewilding Project – Rewilding & Trails

Forested trail corridors offer safe, shaded routes for walking and gathering, improving accessibility and comfort during warmer months.

In 2024, Project Forest advanced SDG 3 by designing and maintaining green spaces that directly improve community health and well-being. Our forests reduce exposure to airborne dust, provide cooling shade, buffer sounds, and create inviting outdoor environments for physical activity and social interaction. These spaces also support mental health by fostering cultural connections and offering peaceful, restorative settings for daily life.

Project Forest Wihnemne School Food and Medicine Forest



Positive Impact

| UN SDG 6 - Clean Water and Sanitation

Goal: Ensure availability and sustainable management of water and sanitation for all



The forests we plant can have positive impacts on ensuring the availability and sustainable management of water.

Indicator 6.3.2: Proportion of bodies of water with good ambient water quality.

Forests filter, purify and improve the quality of our water. Tree roots help retain soil and reduce the transport of pollutants into water bodies. Planting forests in watershed areas can contribute to protecting water quality, ensuring access to clean water for communities (NRCAN, 2021).

While planting forests alone cannot solve all our water-related challenges, they do offer nature-based solutions to help achieve sustainable management of our water resources.

Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

Soils with high biodiversity—characterized by diverse vegetation and active microbial communities—function as natural filtration systems, enhancing the quality of infiltrating rainwater and snowmelt. In contrast to monoculture agricultural soils, which are typically compacted and exhibit low microbial diversity, biodiverse soils demonstrate superior capacity for water infiltration, retention, and purification.

As reforestation progresses, soils gradually shift from agricultural to forest profiles, marked by increased organic matter, improved structure, and changes in microbial communities. These developments enhance ecological function by promoting cleaner groundwater recharge, reducing surface runoff, and supporting more resilient and sustainable watershed hydrology, (Tiquia, et al).

595.6M

Liters of water accumulation
in 2024



Positive Impact

| UN SDG 6 - Clean Water and Sanitation

We measured the total water accumulation for 2024 on six of our project sites (newer projects were excluded as seedlings need to grow a certain height as well as root expansion for these calculations to meet UN SDG requirements). Table 5 shows the precipitation results for Project Forest Golden Ranches and is a detailed example of how the annual rainfall is calculated. Figure 4 reprints the cumulative rainfall on six of our project sites.

As Project Forest does not operate its own weather monitoring stations or gauges, we rely on historical data provided by the Government of Canada. Specifically, we reference the “Past Weather and Climate” database to obtain annual rainfall figures within a 25 km radius of each planting site. This data can be found [HERE](#).

Note: The numbers reflected here are for annual rainfall only. While snowfall does create available soil water, the actual number is impossible to verify due to run off and melting events while ground conditions are frozen and trees aren’t transpiring.

263M

Liters of water accumulation
at Gold Ranches in 2024

Table 4: 2024 Golden Ranches Annual Precipitation

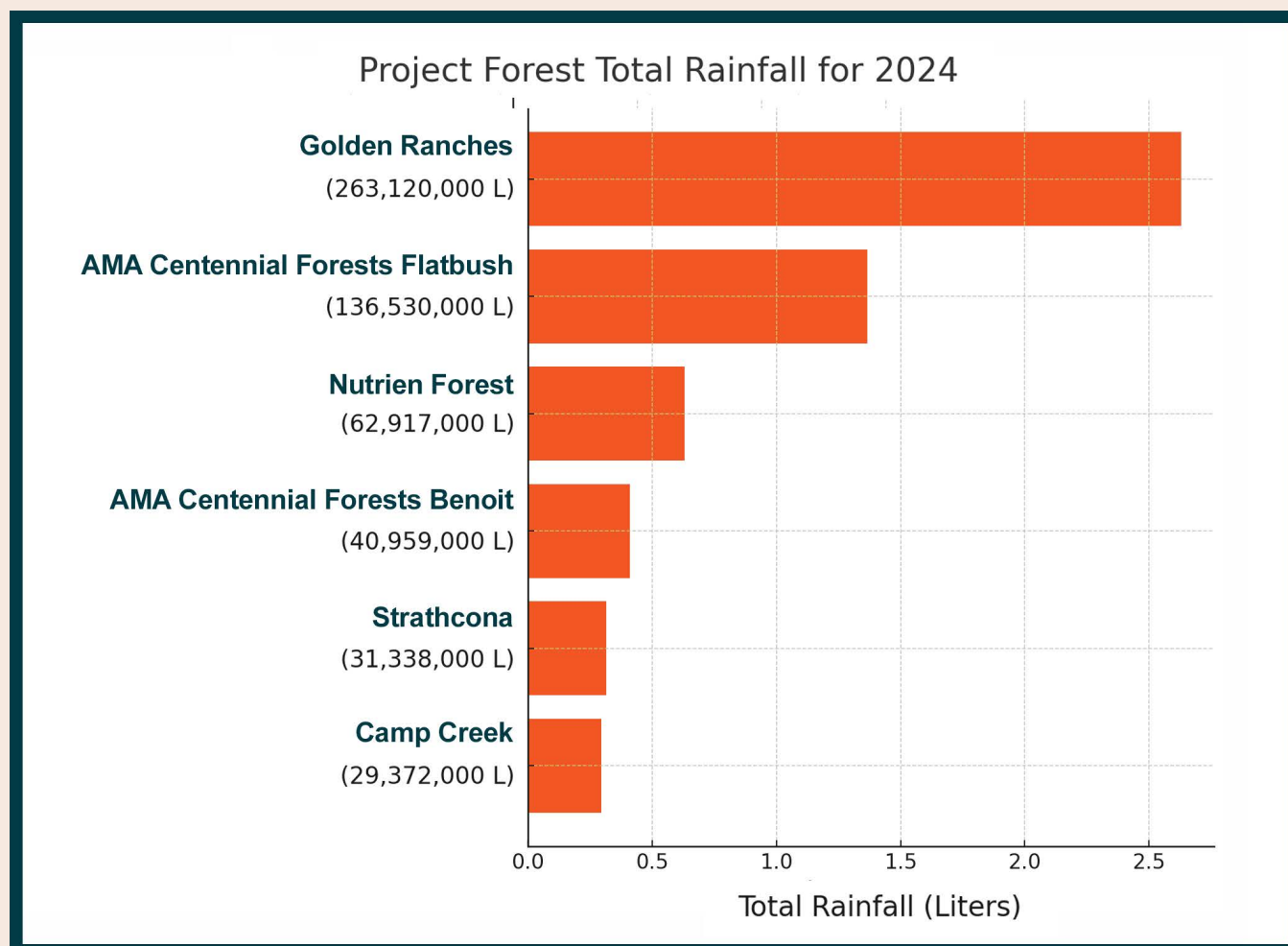
	Step Description	Formula/Conversion	Rainfall
1	Area of land	1 hectare = 10,000 m ²	55 ha × 10,000 = 550,000 m ²
2	Convert Depth to Meters	cm ÷ 100; mm ÷ 1000	478.4 mm = 0.4784 m
3	Volume (m ³)	Volume = Area × Depth	550,000 × 0.4784 = 263,120 m ³
4	Convert to Liters	1 m ³ = 1,000 liters	263,120 × 1,000 = 263,120,000 liters
Total Accumulation = 263,120,000 liters			

Positive Impact

| UN SDG 6 - Clean Water and Sanitation

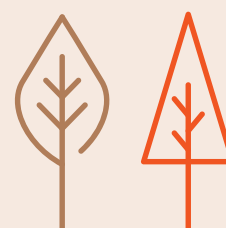


Figure 5: 2024 Annual Rainfall for Project Forest Sites



595,574,000 total liters measured in 2024

In 2024, Project Forest advanced SDG 6 through strategic planting and the integration of forested buffers to protect waterways. These initiatives improved water quality, reduced sedimentation, enhanced natural filtration, and increased the resilience of aquatic ecosystems. In Indigenous and rural communities, forested buffers also protect culturally important water bodies while contributing to long-term watershed health.



Our Partners

| Land Partners



Project Forest Camp Creek



Our Partners

| Funding Partners

Diamond Willow



Our Partners

| Funding Partners

Platinum Forest













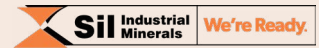
Our Partners

| Funding Partners

Gold Woodland



Silver Orchard



Bronze Grove



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Appendix A - Afforestation Survey Cover Page

Afforestation Survey Cover Page				
Surveyor 1:	Krishanda Zimmer	Survey Date(s):	Fall 2024	
Surveyor 2:	Lawrence Fraser	Total Plots:	668	
Surveyor 3:	Sienna Vance			
Surveyor 4:	Andrea McRae			
Stocking Calculations				
Type of Plot	# of Plots	% of Plots	Meet Final Criteria	% of Plots
SR with Acceptable Conifer trees	167	25.0	10	1.5
SR with Acceptable Deciduous trees	92	13.8	12	1.8
SR Acceptable Shrubs	63	9.4	38	5.7
SR with Acceptable Conifer & Deciduous trees	32	4.8	1	0.1
SR with Acceptable Conifer trees & Shrubs	53	7.9	24	3.6
SR with Acceptable Deciduous trees & Shrubs	16	2.4	9	1.3
SR with Acceptable Conifer & Deciduous trees & shrubs	10	1.5	6	0.9
NSR-LIG with Conifer	38	5.7		
NSR-LIG with Deciduous	10	1.5		
NSR-LIG with Shrub	22	3.3		
NSR-LIG with Conifer & Deciduous	0	0.0		
NSR-LIG with Conifer & Shrubs	14	2.1		
NSR-LIG with Deciduous & Shrubs	3	0.4		
NSR-LIG with Conifer & Deciduous trees & shrubs	1	0.1		
NSR -No Acceptable Woody species present	141	21.1		
Acceptable Stocking Summary				
Plot Stocking Status	# of Plots	% of Plots		
SR	433	64.8		
NSR-LIG	88	13.2		
NSR (excludes NSR-LIG)	141	21.1		
Total Stocking (SR +NSR-LIG)	521	78.0		
Herbaceous Vegetation Observed on Site			Noxious weeds	
Grass spp.	Common yarrow	Avens spp.	Canada thistle	
Common bent	Horsetail	Field sagewort	Bull thistle	
Brome spp.	Noble yarrow	Nettle spp.	Sow thistle	
Reed grass	Goldenrod	Lesser meadow rue	Common tansy	
Quack grass	Pea vine	Cow parsnip	Yellow toadflax	
Clover spp.	Vetch spp.	Pennycress	Scentless chamomile	
Wild Oats	Northern bedstraw	Mug wort	Kochia/cypress spp.	
Wild rye	Wild strawberry	Golden currant	Knapweed spp.	
Common alfalfa	Aster spp.	Dandelion	Perennial sow thistle	
Agrimonia	Bunchberry			
Timothy hay	Common Plantain			
Buckwheat	Fringed sagebrush			
Sedge spp.	Common cattail			
Fern spp.	Shrubby cinquefoil			
Heather spp.	Redstem storksbill			



Project Forest – Alberta Conservation Association

SAMPLE Conservation Site Rewilding Work Plan

Date



Prepared by:



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1 Project Overview

Project Forest and Alberta Conservation Association (ACA) have partnered to rewild SAMPLE ha within the SAMPLE Conservation Site. Project Forest has retained Tree Time Services for project planning, project management and field implementation of the Project Forest ACA Rewilding Project.

The ACA has 5 long-term objectives for management of the SAMPLE Conservation Sites. Partnering with Project Forest will achieve 3 of the 5 long-term objectives including:

- Promote and restore native biodiversity,
- Increase ecological connectivity, and
- Increase carbon sequestration.

As per information provided by the ACA, the site does not require mechanical site preparation. Prior to planting, a cover crop will be sown. As part of the rewilding scope of work, the project area has been assessed, seedling and site preparation prescriptions have been developed, and a post implementation monitoring program has been developed.

The project site is about 100 km northeast of Edmonton. See **Error! Reference source not found.** for an **Error! Reference source not found.**

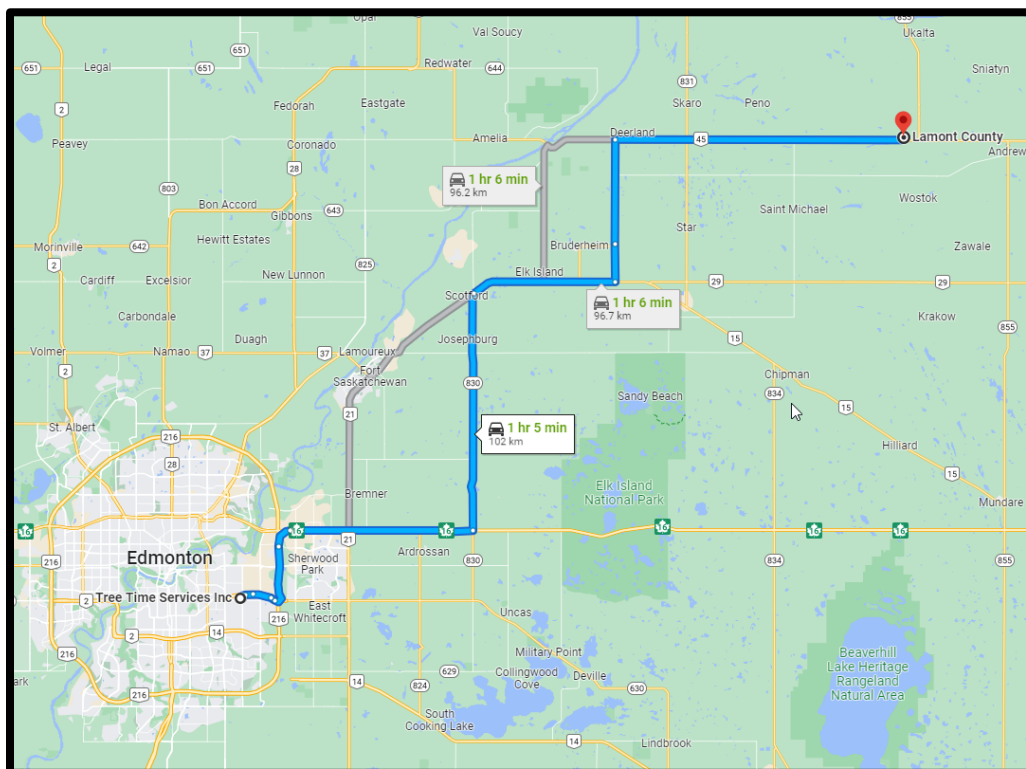


Figure 1. Directions to SAMPLE Conservation Site from Edmonton, AB

2 Site Prescription

The property is located in a transition zone between the Dry Mixedwood Natural Sub-Region of Boreal Forest and the Central Parkland and within the Central Parkland 1.1 seed zone. This site is SAMPLE ha in area and has been divided into 3 areas. Table 1 lists the sections of the project site and their respective areas. See **Error! Reference source not found.** the site prescription map.

Table 1. Project site sections and respective areas

Section	Area (ha)
A	2.5
B	3.0
C	3.7

Based on aerial imagery Section B of the planting area is a continuation of wetland from the lake to the forested section adjacent to the planting site. Both Section A and C are more upland.

2.1 Site Preparation

The area the ACA has identified for tree planting section will not require site preparation. Since the ACA secured the site, the ACA has entered into a Crop Licence Agreement with the neighbouring landowner, with the intent to crop the land until restoration activities can be conducted on the crop field.

Based on this agreement, no further site preparation is required regarding the revegetation of this site.

2.2 Cover Crop

A cover crop will be sown to minimize vegetative competition during the first season of growing. A cover crop using a native seed blend will be deployed at a seeding rate of 15 kg/ ha. The cover crop was developed in consultation with a supplier of native seed mix company. Table 2 lists the grass seed mix for the cover crop.

Table 2. List of grass seed to be deployed

Species	% of Blend by Weight
Rocky Mountain Fescue	16.0
Green Needlegrass	10.0
Slender Wheatgrass	12.0
Northern Wheatgrass	18.0
Diploid Annual Ryegrass	10.0
White Clover	10.0
Nuttall's Alkaligrass	4.0
Canada Wildrye	15.0
Western Wheatgrass	5.0

Two viable options exist for the distribution of seed for the cover crop: seed tilling or drone seeding. An environmental professional will visit the site and determine which of the two options will be used.

2.3 Seedling prescription

Tree planting will occur in May/ June of 2023. The area will be planted on average 2200 stems/ha. Table 3 displays the seedlings ordered for the project area. Sections A & C are prescribed white spruce, lodgepole pine, and white birch. The white birch will be planted in clusters of 10 seedlings, and the white spruce and

lodgepole pine will be uniformly distributed. These species were chosen because of the upland soils, and the surrounding forest composition. Section B was prescribed black spruce based on aerial imagery and is consistent with the transition from the lake to the wetland adjacent to the polygon.

Table 3. Seedlings ordered for project area

Season	Species	Latin Name	Amount	Section
Spring 2023	Lodgepole Pine	<i>Pinus contorta var. latifolia</i>	3780	A, C
Spring 2023	White spruce	<i>Picea glauca</i>	8280	A, C
Spring 2023	White Birch	<i>Betula papyrifera</i>	1980	A, C
Spring 2023	Black Spruce	<i>Picea mariana</i>	5940	B

The average tree planting density for the site was increased due to several reasons:

- The birch will be planted in clusters that equate to ~4,000 stems/ ha,
- The edges of the site adjacent to the road will be planted at a higher density, and
- Higher than expected mortality has been observed at similar sites.

Seedlings will not be evenly distributed across site. It will have more variable spacing between seedlings to develop a more natural distribution.

3 Project Implementation Considerations

3.1 Permit Requirements

No permits are required at this time.

Should permits be required, all processes and procedures will be followed prior to starting work.

3.2 Resource List

See Appendix 3 for resource list. This includes resources required to complete the work, including a 25% fill plant if required.

4 Project Monitoring

A project specific monitoring plan will follow the *Project Forest Monitoring Assessment Standards*. Annual site assessments will be conducted to monitor the project. A Final Assessment will determine if the site is on trajectory to become a mature forest. Currently, the expectation is to have the Final Assessment completed in the fall of 2029.

5 Maintenance

Maintenance recommendations will be based on the latest monitoring assessment. Recommendations may include vegetation management or fill planting and will be discussed with the ACA. Once the Final Assessment is successful, the site will no longer require maintenance.

6 Deliverables and Timeline

Table 4. Project deliverables and timelines

Deliverable	Description	Timelines
Planning	- General consultation, client meetings. - Determining cover crop plan. - Completion of Rewilding Plan. - Finalization of Monitoring Plan. - Additional time for project management.	February - March 2023
Project Seedling Ordered	- Lodgepole Pine: 3780 seedlings - White spruce: 8280 seedlings - White Birch: 1980 seedlings - Black Spruce: 5940 seedlings - Cold storage, transportation, and storage	Deliver Spring 2023
Cover Crop	- Purchase cover crop seed. - Sow cover crop.	May 2023
Planting Phase	All seedlings	May/ June 2023
Monitoring Program	The site will be monitored based on the monitoring protocols developed with the Rewilding Plan.	Start: 2024
Fill Plant	- A fill plant would occur at any point during the annual assessment survey process should data indicate that the site may not meet the rewilding standards of the monitoring plan. - The project budget will include funding for a 25% fill plant.	If required, prior to Final Survey
Final Assessment	Complete final assessment to confirm observations that the site is on a trajectory to becoming a forest.	no later than fall 2029

7 Safety

Project Forest expects a high degree of safety from all contractors and people on site. Therefore, Project Forest requires a site-specific safety plan from the main contractor or supervisor on site. This plan needs to include:

- First aid requirements,
- Emergency response plan,
- Safe work permits (if applicable),
- Verification of safety tickets,
- Site orientation,
- Daily tailgates,
- Ongoing Hazard and Risk Assessments, and
- A copy of the contractors Health and Safety Plan

Additionally, Project Forest Contractors will follow their respective health and safety plans as well as Alberta OH&S procedures and guidelines. If there are any conflicts with safety plans or policies, the most stringent plan will take precedence. Any injury, damage or other adverse event must be reported to Project Forest immediately.

PROJECT FOREST

MONITORING ASSESSMENT STANDARDS & PROTOCOLS

Version: 2.0

Date: January 8, 2024



Version Number	Purpose/ Change	Author	Date
1.1	Update Protocols – based on field and reporting feedback	Lindsay Dent, RPF; Tree Time Services Inc	March 28, 2024
2.0	Updated Protocols – based on Land Partner feedback	Lindsay Dent, RPF; Tree Time Services Inc	January 8, 2025

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1 About the Project Forest *Monitoring Assessment Standards*

This monitoring program has been designed specifically to assess the progress of Project Forest project areas. The purpose of this document is to establish a standard that can be adjusted to individual Project Forest projects. As part of Project Forest's commitment to their partners, this monitoring program aims to provide a level of scientific verification that planted seedlings are on trajectory towards becoming mature shrubs and trees. The *Monitoring Assessment Standards* will be tailored to the unique field level conditions and goals of each site as Project Forest is committed to monitoring, maintaining, and delivering corrective treatments on each project.

This monitoring program incorporates legislated methods of disturbance assessment for public forested lands in Alberta. Although some of the assessment and survey procedures are unique to this document, the background information, methodology, and rationale for this monitoring program are obtained from the following documents: Reforestation Standard of Alberta, Alberta Regeneration Standards for the Minable Oil Sands, and the 2010 Reclamation Criteria for Wellsites and Associated Facilities for Forested Lands.

1.1 Project Forest Background

Project Forest partners with various organizations to create opportunities to rewild and grow natural infrastructure across Western Canada. By collaborating with conservation groups, Indigenous communities, and other land partners, and connecting them with businesses, we aim to afforest non-productive land and transform it into thriving forests or natural infrastructure that will benefit communities of the land partners. These partnerships allow landowners and First Nations communities to plant their land, which increases biodiversity and other natural benefits, while also allowing businesses to contribute to making a positive environmental change.

Project objectives of all planted areas are:

- To restore habitat loss created from agriculture, and industrial disturbance on sites that have no legislated obligations to restore natural habitat.
- To ensure that planted seedlings are on a trajectory to grow into mature shrubs and trees that achieve the projects objects, e.g. a forest.
- To permanently capture carbon and store it in trees and soils therefore reducing the amount of atmospheric carbon.
- To assist landowners in achieving their environmental objectives for the land, with the purpose of the project remaining permanently on the landscape.
- To promote and help businesses grow their Environmental, Social, and Governance criteria score and leave a positive legacy.

1.2 Purpose

The procedures for this Monitoring Assessment Standard were designed to be repeatable, robust, simple, unambiguous, technically defensible, and consistent to produce reliable results. The procedures:

- Provide a method to assess the level of project success at establishing natural infrastructure, and
- Enable the assessment of each area to determine the adequacy of stocking, survival, and growth.

This document describes the procedures to collect the field data, determine the regeneration status of each plot, and extrapolate the information over the site. The data collected under these guidelines will be used to develop treatment recommendations after each monitoring event. Or the project sites are on a trajectory to become mature shrubs and trees that achieve projects' objectives.

1.3 Scope and Applicability

Annual monitoring assessments are conducted on all active Project Forest project sites. The monitoring assessments will be completed in accordance with the procedures described in this standard, unless

otherwise specified and approved by Project Forest. All Project Forest project areas continue to receive annual monitoring assessments until a final assessment threshold has been met.

1.4 Timelines

Monitoring assessments will be completed annually, ideally at the end of the growing season, in the fall. If they cannot be completed in the fall, the following spring is acceptable. Project Forest sites will be eligible for an assessment after one growing season and will be expected to hit target criteria within 6 growing seasons.

See Table 1 for a generalized timeline of assessments. Note that when 80% of monitoring plots are sufficiently restocked, this triggers the completion of the monitoring program, regardless of year. Thus, Project Forest's commitments to their project partners will have been fulfilled and removes the site liability from Project Forest.

Table 1. Survey Timeline

Year/ Season	Assessment*	Description
After first growing season	Year One Survey	• Establish and complete plots • Determine Stocking % ○ If >80% of plots pass, further monitoring not required ○ If <80% plots pass, recommend additional silviculture treatment to Project Forest ▪ Project Forest will initiate treatment accordingly
After second - fifth growing season	Respective Annual Survey	• Complete plots • Determine Stocking % ○ If >80% of plots pass, further monitoring not required ○ If <80% plots pass, recommend additional silviculture treatment to Project Forest ▪ Project Forest will initiate treatment accordingly
After sixth growing season	Year Six Survey	• Complete plots • Determine Stocking % ○ If >80% of plots pass, further monitoring not required ○ If <80% plots pass, recommend additional silviculture treatment to Project Forest ▪ Project Forest will initiate treatment accordingly Final year for treatments.

If less than 80% of a given site is satisfactorily stocked after 6 surveys, then a final silviculture treatment will be delivered. After this final 6-year treatment, Project Forest will no longer be liable for the trajectory of the site.

1.5 Commitment

Project Forest will monitor projects until the site reaches the desired measurements or for a maximum duration of six years, whichever occurs first. Once sites meet the targets listed in this document, they will be considered on the right trajectory to become a mature site, and Project Forest's commitments to their project partners will have been fulfilled, removing liability from Project Forest. If the site does not meet the identified targets within the 6 year time frame, Project Forest will do one last treatment to guide the trajectory of the site to become a mature and successful project. After this last treatment, Project Forest's commitments to their project partners will have been fulfilled, thus removing afforestation liability from Project Forest.

2 Personnel and Equipment Requirements

The following standards address the qualifications of surveyors and equipment requirements to conduct field surveys and apply to all monitoring assessments completed at Project Forest sites.

2.1 Field Surveyor Qualifications

Surveys shall be completed by, or under the direct supervision of an environmental regulated professional with education and/ or experience in plant identification and vegetation monitoring. This individual needs to be a member of an association such as the Alberta Association of Forest Management Professionals, Forest Professionals British Columbia, Alberta Institute of Agrology, or the Alberta Society of Professional Biologists, etc.

Direct supervision includes:

- Overseeing the surveys as they occur,
- Providing direction and feedback to surveyors in a timely manner, and
- Ensuring surveys being conducted under their direct supervision are complete and accurate.

Companies hired to complete monitoring assessments for Project Forest will list the names (first and last) of qualified surveyors on the monitoring assessments cover page (Appendix 1) and Assessment Summary Sheet (Appendix 2).

2.2 Global Positioning System

The use of a Global Positioning System (GPS) for surveys is required when establishing plot centers. When surveyors choose a GPS for completing the monitoring assessment:

- The minimum accuracy of the GPS receivers should be 10 meters horizontally at a 95% confidence level.
- The GPS receiver should be set to position or record using the North American Datum for 1983 (NAD 83).

GPS best practices include:

- GPS receivers are set to position or record in 3D mode (i.e., simultaneous observations to a minimum of four satellites); and
- During static point-mode surveys, the minimum recording duration at each survey point should be 30 seconds with a minimum of 15 individual position fixes during this period

2.3 Field Equipment Requirements

Successful implementation of the monitoring program requires the use of proper field equipment for both safety and precision of data capture. For accurate data capture, specific tools and equipment are required for execution of the monitoring program field components. This list of equipment can be found in Appendix 3: Required Equipment.

3 Survey Standard

The objectives of the monitoring assessments are:

- To determine and document the growth status of a Project Forest site;
- To assess species composition and distribution of seedlings, suckers, and advanced growth with high potential for survival and future growth;
- To identify areas and conditions within a site where regeneration success has been inhibited or is unlikely to meet the goals of the project in the future; and

- To inform the next steps of further silviculture treatments, including Let It Grow, or release the site as the site met acceptable standards.

The monitoring assessment is to be conducted on the predetermined plots, included in the project work plan approved by Project Forest. The purpose of this survey is to determine if regeneration has been established according to the standards found in this document. If an area has not been planted with seedlings, a monitoring assessment is not required as it is not considered part of the afforestation project area.

Once the final assessment criteria has been met according to the *Monitoring Assessment Standards*, the site is passed, and the plot deemed sufficiently restocked (SR).

3.1 Regeneration Stocking

A minimum of one woody stem, over a species-specific height, is required to consider a plot Sufficiently Restocked (SR). For the purposes of the Assessment, a plot is defined as a circular 1.78m radius plot having an area of 10 m². A woody plant is a plant that produces wood as its structural tissue. Woody plants are usually either trees or shrubs.

Any woody plant is considered an acceptable species.

3.2 Acceptable Trees and Shrubs

Stocking status shall be determined by assessing the spatial distribution of woody plants. Mature woody species and planted caliper trees within plots will not be included in the calculations when determining planting success of seedlings.

An acceptable woody plant is an individual seedling, sucker, coppice or advanced regeneration that:

- a) Is alive.
- b) Is a woody plant.
- c) Originated from seed, suckering or coppice.
- d) Achieved the minimum acceptable woody plant requirement at the time of the survey (See Table 2 in Section 3.3).

In addition to the criteria above:

- 1) White spruce and balsam fir trees shall have a live crown ratio of 0.33 or greater.
- 2) Coniferous and deciduous trees will have a diameter at breast height (dbh) of 5 cm or less to be included in the stem count.

3.3 Minimum Total Tree Stocking Percent

If less than 80% of the site's plots are not sufficiently restocked plots, then a silviculture treatment may be warranted. This could include tree-planting if plots are not sufficiently restocked, or a Let-It-Grow approach if plots are stocked but the seedlings are not of sufficient size. Specific treatments will be prescribed by a regulated professional and approved by Project Forest.

Monitoring assessments can be completed any time after a herbicide treatment, provided that the treatment efficacy is evident, and the surveys are still being conducted annually.

Project Forest will not meet the minimum total tree stocking percent if rounding is required to reach the minimum percent stocking. For example, if the entire area has a stocking percent of 79.6% it will not meet the requirements, it must be equal to or greater than 80.0%.

In addition, an area that is 1.5 ha or greater that is determined to be NSR the environmentally regulated professional will recommend a fill plant, even if the stocking percent is greater than or equal to 80%.

All coniferous and deciduous trees that meet minimum acceptable height requirements and all woody plants regardless of height will contribute to stem counts. Any woody species can contribute to conditional status if they are located within the assessment plot boundaries, assuming that they are new growth, including natural ingress of woody plants are eligible for stocking calculations. Trees with a dbh of 5 cm or greater are not to be counted. If there is a high density of 11 or more stems per species within a plot, in the plots notes the surveyor may record 10+ seedlings.

Project Forest may choose Let-It-Grow as an afforestation treatment in cases where information has been collected for conditional seedlings present at the time of a monitoring assessment. For the purposes of total stocking percent calculations, conditional plots will be referred to as Not Sufficiently Restocked (NSR).

3.3.1 Final Height Trees

Planted seedlings will only be deemed to be of acceptable height for sufficiently restocked status when they reach the minimum criteria outlined in Table 2. If less than 80% of plots are sufficiently restocked, further silvicultural treatment is required.

Table 2. Criteria for acceptable height requirements to consider for Final Assessment criteria

Species Name	Latin Name	Category	Sufficiently Restocked Conditions
Conifer trees*	N/A	Conifer Tree	1 m
Deciduous trees	N/A	Deciduous Tree	2 m
Green alder	<i>Alnus crispa</i>	Shrub	1 m
River alder	<i>Alnus incana</i>	Shrub	1 m
Willow spp.	<i>Salix</i> spp.	Shrub	1 m
Red Osier dogwood	<i>Cornus sericea</i>	Shrub	1 m
Saskatoon	<i>Amelanchier alnifolia</i>	Shrub	1 m
Canadian Buffaloberry	<i>Shepherdia canadensis</i>	Shrub	1 m
Raspberry	<i>Rubus idaeus</i>	Shrub	0.75 m
Wild Rose	<i>Rosa</i> spp.	Shrub	0.75 m
Honeysuckle	<i>Lonicera</i> spp.	Shrub	0.9 m
Common Blueberry	<i>Vaccinium myrtilloides</i>	Shrub	Producing berries
Dewberry	<i>Rubus pubescens</i>	Shrub	Producing berries/ runners
Bog Cranberry	<i>Vaccinium vitis-idaea</i>	Shrub	Producing berries

4 Survey Method

4.1 Plot Determination

The assessment locations will be pre-determined by a regulated professional using GIS software after planting events have occurred the first year. The assessment plot centers will be the same each year. When a surveyor is in the field, the surveyor will navigate to the predetermined plot location using a GPS device and then collect specific data present in a 10 m² plot. Once all the plot locations have been determined, the plot information will be saved in a format which will allow it to be uploaded to an appropriate GPS system as per Section 2.2.

Plot Frequency

Area based Project Forest sites will receive at a minimum of 2.77 assessment plot locations per hectare, based on the stratification of the project site. The number of plots will be rounded up. For example, to determine the number of plots required for a project that is 5.1 ha:

$$\begin{aligned}\text{\# of required plots} &= \text{area of site (ha)} \times 2.77 \text{ plots/ ha} \\ &= 5.1 \text{ ha} \times 2.77 \text{ plots/ ha} \\ &= 14.127 \text{ plots} \\ &= 15 \text{ plots}\end{aligned}$$

To determine the spacing between plots based on square spacing grid, use the formula below, along with the continued example from above on how to use the formula.

$$\begin{aligned}\text{Plots spacing (m)} &= \sqrt{\text{Opening Area (ha)} \times 10,000 \text{ m}^2/\text{ha} \div \text{required \# of Plots}} \\ &= \sqrt{(5.1 \times 10,000 \div 15)} \\ &= \sqrt{3,400} \\ &= 58.3 \text{ m}\end{aligned}$$

To determine the spacing between plots based on rectangular spacing grid, use the formula below, along with the continued example from above on how to use the formula.

Each strata identified and planned for will receive a minimum of 3 assessment plots.

Linear based Project Forest sites will receive a minimum of six 5 m long assessment plots per kilometer or a minimum of 3 assessment plots for a project type.

$$\begin{aligned}\text{\# of required plots} &= \text{length of site (km)} \times 5 \text{ plots/ km} \\ &= 0.75 \text{ km} \times 5 \text{ plots / km} \\ &= 3.75 \text{ plots} \\ &= 4 \text{ plots}\end{aligned}$$

To determine the distance between plots, move the first and last plots 10 m in from the linear planting ends. See below to calculate the distance between plots, based on the example above.

$$\begin{aligned}\text{m between plots} &= [\text{length of site (m)} - 10 \text{ m} \times 2 \text{ from linear ends}] / [\text{total plots} - 1] \\ &= [750 \text{ m} - 20 \text{ m}] / [4 \text{ plots} - 1 \text{ plot}] \\ &= 730 \text{ m} / 3 \text{ plot (spaces)} \\ &= 243.33 \text{ m between plots}\end{aligned}$$

The survey intensity is adapted from the Reforestation Standard of Alberta (2024).

4.1.1 Plot Naming and Numbering

A plot number will be assigned to each plot center location. The first plot will be the furthest southeast location along the planting area boundary, and as the plot's numbers increase the plot locations will move from east to west and south to north, following a pattern similar to the Alberta Township numbering system. For example, if there are 56 plots then plot 1 will be the most southeastern plot and plot 56 will be the most north- western plot. See example below.

56	55	54	53	52	51	50	49
41	42	43	44	45	46	47	48
40	39	38	37	36	35	34	33
25	26	27	28	29	30	31	32
24	23	22	21	20	19	18	17
9	10	11	12	13	14	15	16
8	7	6	5	4	3	2	1

Figure 1. Example of Plot Numbering

For the purposes of standardization across Project Forest monitoring projects, plot numbers will be named and numbered. Plots will be referred to with a two-letter identifier in front of the plot number. For example, plot 5 at Golden Ranches would be listed as GR-05.

4.2 Field Work - Plot Assessment

Plot center will be marked by pushing a piece of lath into the ground until it is firmly anchored. The surveyor will write the plot number onto the lath using a permanent marker. This information is required for future data validation purposes. The marking will correspond with Project name and plot number as discussed above. Once marked, the surveyor will attach two pieces of heavy-duty flagging tape/ ribbon to the lath to make it easily identifiable.

This process is primarily intended for the first year of a monitoring program, when assessment plots have yet to be staked out and named. It is possible that over time, stakes may go missing or that markings may be compromised. Therefore, it is the responsibility of qualified surveyors to ensure missing stakes or faded markings are replenished as needed. As such, extra survey lath should be brought to monitoring programs in subsequent years.

All assessments will occur within the boundaries of a 10 m² plot. The boundaries for the assessment plot are to be determined using the 1.78m plot cord. The presence of acceptable species of coniferous, deciduous, shrub or other will be recorded. Appendix 4: Survey Tally Card lists the information that is required to be collected during the survey.

To determine if a woody stem is inside the plot, measure from the point where the plot center marker enters the ground to the base of the woody stem. If any part of the stem is within 1.78 m of the plot center, then the woody stem is in the plot.

Included in the documentation of the plot assessment will be:

1. Counts of acceptable woody species
2. Herbaceous vegetation. The herbaceous vegetation documentation is not a tally count.
3. Noxious weeds present. The noxious weeds documentation is not a tally count.
4. Additional growth limiting factors. Examples of growth limiting factors include physical damage, disease, competition, and additional comments

All observations that occur within plot boundaries, with the exemption of herbaceous vegetation and weeds, will be recorded within the Tally Card comments (Appendix 4: Survey Tally Card). If the surveyor observes a herbaceous or woody species, or other pertinent information that is observed during the Assessment that does not fall within any of the plot boundaries, the surveyor will document the observed vegetation on the Afforestation Survey Cover Page as depicted in Appendix 2: Assessment Summary Sheet.

For Linear projects, such as shelterbelts, the same form will be used. The same form can be used for all

rows within the linear projects, refer to Appendix 2: Assessment Summary Sheet.

For caliper trees, all caliper trees unless otherwise stated will receive an assessment. See form in Appendix 5: Caliper Tree Assessment Sheet.

4.3 Plot Data

4.3.1 Tree species

An acceptable tree is an individual seedling, sucker, coppice, or more advanced growth that:

- Is alive;
- Is a woody species;
- Originated from seed, suckering, coppice, or planting;
- Is 30 cm or taller if a coniferous tree;
- Is 60 cm or taller if a deciduous tree; and
- Does not have a dbh larger than 5 cm.

4.3.2 Tallest Woody Stem in Plot

Height shall be measured as the tree lies perpendicular (plumb) from upper most live bud to ground for all trees regardless of lean from vertical. Where no acceptable woody stems are present in the plot, record “No” in the appropriate space under the Species field.

4.3.3 Other Factors

These are observations of presence of factors that are, or may, impact seedling vigour or survival. There are sections in the tally assessment (Appendix 4: Survey Tally Card) to note presence of damage, disease, competition, noxious weeds, and other comments that the Environmental Professional and Project Forest should be made aware of so impact to the site’s success can be mitigated through treatment recommendations.

Weeds/ Undesirable Plants

Weeds are generally defined as undesirable or unwanted plants. The distribution of weeds’ locations will be documented throughout the site.

4.3.4 Herbaceous Cover

This section will be completed for every fourth plot. The assessor will list the herbaceous species visible from the plot, which means that species that are visible from the plot but outside the plot should be recorded. This information will inform how the site is progressing as the site matures, and if there is increasing biodiversity.

4.3.5 Assessment photos

Several photo types need to be captured during the assessment.

Table 3. Site photos required during data collection

Photo Type	Description & Instructions
Project Photo	A (non-survey) stake will be placed in a spot which can be used as a camera support in an area which will capture a large portion of the site. A landscape photo should be taken and match the monitoring protocols for the site. The purpose of this photo is to demonstrate the growth and change of the site year over year.
General Plot Photo	The purpose is to capture the plot name of the stake and show the general vegetation cover within the plot. The photo should face north for consistency and to capture the change and development of the site over time.
Tallest Woody Species	This will capture and document this information on the tally sheet.
other site observations	This will document the concerns or observations that should be noted in the Tally Cover Page. Examples of this would include damage to seedlings (physical, insect, disease), competition, and noxious weeds.

General Site Photos	This includes insects, birds, animals, natural ingress, or other beautiful photos. These photos will be used by Project Forest Communications Division to share the story of the project's growth.
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4.4 SR and NSR Definitions

A plot will be considered SR if:

- at least one woody stem that meets height requirements is tallied within the boundaries of a 10 m² plot,

A plot will be considered NSR if:

- there is less than one woody stem meeting height requirements within the boundaries of a 10 m² plot.

A plot will be eligible for an NSR-LIG code if:

- the number of under-height trees as per Section 3.5 brings the total woody stem count to at least one stem within the boundaries of a 10 m² plot, and
- at least one of the total stems, including under-height woody stems, within the 10 m² plot are woody stem.

4.5 NSR Protocols

When a plot is eligible for NSR-LIG, it is still considered NSR. However, if eligible for NSR-LIG, the NSR-LIG status will be considered an afforestation treatment and no further work is required.

During the survey, if a plot is classified NSR and is not eligible for NSR-LIG, the surveyor will conduct:

- a) One plot 25 m north of the NSR plot center; and
- b) One plot 25 m south of the NSR plot center.

After completing the two additional plots, the three-plot area will be considered SR if:

- a) Both additional plots meet the SR requirements; or
- b) One plot meets SR, and a second plot is eligible for NSR-LIG; or
- c) Both additional plots are eligible for NSR-LIG.

After completing the two additional plots, the three-plot area will be considered NSR if one or more of the additional plots is considered NSR and not eligible for NSR-LIG.

4.6 Survey Data Collection

Project Forest will inform the surveyor on the platform to use to collect survey data for the projects.

During data collection, Table 4 lists the abbreviations for the different plot types recommended for use, if required

Table 4. Abbreviations for the various plot types available during assessments

Identified Plot Type	Abbreviation
SR with Acceptable Conifer trees	SR – C
SR with Acceptable Deciduous trees	SR – D
SR Acceptable Shrubs	SR – S
SR with Acceptable Conifer & Deciduous trees	SR – CD
SR with Acceptable Conifer trees & Shrubs	SR – CS
SR with Acceptable Deciduous trees & Shrubs	SR – DS
SR with Acceptable Conifer & Deciduous trees & shrubs	SR – CDS
NSR-LIG with Conifer	NSR-LIG – C
NSR-LIG with Deciduous	NSR-LIG – D
NSR-LIG with Shrub	NSR-LIG – S
NSR-LIG with Conifer & Deciduous	NSR-LIG – CD
NSR-LIG with Conifer & Shrubs	NSR-LIG – CS
NSR-LIG with Deciduous & Shrubs	NSR-LIG – DS
NSR-LIG with Conifer & Deciduous trees & shrubs	NSR-LIG – CDS
NSR -No Acceptable Woody species present	NSR

4.7 Plot Level Stocking Calculations: Sufficiently Restocked (SR) and Not Sufficiently Restocked (NSR) Status

When the surveyor is assessing the stocking of a plot, the surveyor must meet the minimum plot requirements of 2.77 plots per hectare. If the woody stems in the plot are of acceptable height as per Table 2 in Section 3.3, they may count towards the stocking requirement for the plot.

A plot will be considered SR if:

- at least one woody stem that meets height requirements is tallied within the boundaries of a 10 m² plot,

A plot will be eligible for an NSR-LIG code if:

- at least one woody stem within the 10 m² plot, and
- below height requirements to be categorized as SR.

A plot will be considered Not Sufficiently Restocked (NSR) if:

- there are no woody stems within the boundaries of a 10 m² plot.

When tallying plots, the surveyor must also total plots based on the composition of each plot, not only its status. For example, a Sufficiently Restocked plot could be stocked with a coniferous tree or a deciduous tree, therefore for greater accuracy, coding information should include a plot status code followed by a species grouping modifier. A plot that is not sufficiently restocked with both a deciduous tree and a shrub would then be listed as, NSR-LIG- DS. For a full list of codes, see Section 4.6.

4.8 Damage and Site Conditions

The extent of damage to acceptable woody plants by insects, disease and animals must be recorded during the Assessment on the Survey Cover Page (Appendix 1: Survey Cover Page). If the source of the damage is not identifiable while in the field, then the surveyor must ensure sufficient photographic evidence is captured to allow investigation later. Space is also provided to record damage due to animals and disease in the comments section of the Tally Card (Appendix 4: Survey Tally Card).

Recording damage and site condition information is very important for determining why a particular area may have failed the stocking standards. If an area is determined to be NS due to animal or disease damage, that area will be eligible for a re-survey provided that the woody vegetation has only incurred damage and not mortality. The second survey on the damaged area must occur in the next growing season.

It is important to consider that areas damaged by animals or disease may still be eligible for NSR-LIG if they still meet the requirements of an acceptable tree. If an area has been attacked by disease or animal and mortality has occurred at levels that make the area NSR and not eligible for NSR-LIG, then a fill plant activity will be necessary. The density from the Monitoring assessment will be determined and the fill plant will be scheduled at a density that would bring the NSR area(s) up to a density of 1600 woody stems/ha with trees.

Below is an example of a fill plant prescription for an area damaged by disease or animal:

EXAMPLE: If the monitoring assessment tree density (SR and NSR-LIG) is 500 woody stems/ha, the fill plant density would be 1100 woody stems/ha. If the NS area is two hectares, a total of 2,200 seedlings would be planted and an additional survey event is not required that year.

When an area is considered NSR as per Section 4.4.2, then the total NSR area will be calculated as follows:

$$(\# \text{ of NSR Areas}) \times 1.5 = \text{NSR Area (ha)}.$$

Documentation of damages, growth-limiting site factors, and invasive/ noxious weed species is highly important to the success of these sites. Whenever deleterious site conditions or noxious weeds are encountered, they must be recorded on the Establishment Survey Summary Sheet. Furthermore, the distribution and density of noxious weeds will be recorded when encountered, and recorded in as much detail as is reasonably possible. Note a few possible dispersion patterns in Figure 1.

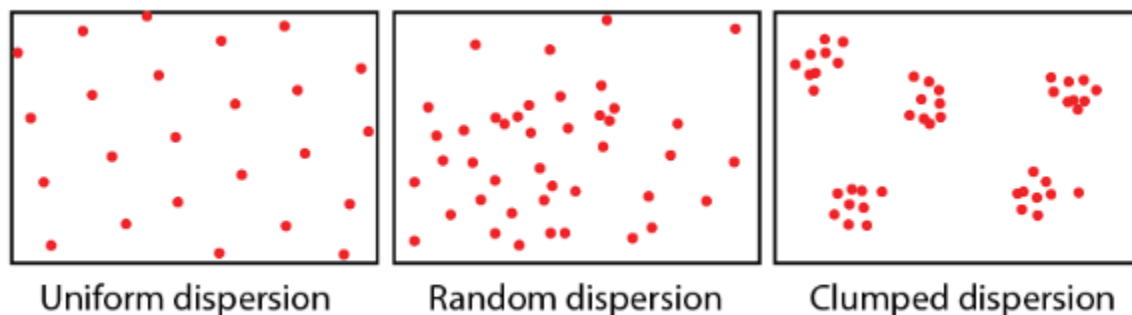


Figure 1. Dispersion patterns

4.8.1 Loss of Afforestation Liability

If any part of the afforestation treatment area encountered during the Monitoring assessment is discovered to have been damaged by forest fire or an additional development (regardless of type), Project Forest will no longer be responsible for the impacted area(s), even if the additional development is a Project Forest initiative. All area(s) impacted by forest fire, insects or industrial development will be removed from the afforestation project area and all pre-determined plot numbers in the impacted area(s) will be recorded on the Survey Cover Page (Appendix 1: Survey Cover Page). These plots will be deleted from the Monitoring assessment and will not be moved or reassigned to other areas of the site.

During the Monitoring assessment if a development area is encountered, the surveyor will document the size and location of the development (only in areas where the development has occurred in the defined project area). This information will then be submitted as part of the Survey Cover Page (Appendix 1: Survey Cover Page) to Project Forest and removed from the project's total area.

4.9 Moving Plots

In the event any portion of the plot falls outside of the defined afforestation area, the surveyor may move the plot up to 20 m in a north, east, south, or west direction to a representative area within the project. If a plot is moved, the surveyor is required to collect a waypoint capturing the latitude and longitude of the new plot location, as well as document and justify the change in plot location in the Comments section of the Tally Card (Appendix 4: Survey Tally Card). The minimum plot spacing will be 25m to provide even coverage throughout the entire area.

4.10 Plots to Delete.

Plots will only be deleted during the Project Forest Monitoring Assessment Program if part of the afforestation project area has been impacted by forest fire or development. Plots may be moved if they meet the plot moving conditions as per Section 4.9.

4.11 Stocking Status

Based on the results from the assessment stocking status can be SR, NSR-LIG, or NSR. For a plot area to be considered SR, it must meet the minimum stocking (%) requirements as found in Section 3.3. If an area is considered SR, the area will be considered on a trajectory to become a mature forest.

4.11.1 Percent Stocking Calculation

The percent stocking calculation shall be submitted to Project Forest on the Survey Cover Page (Appendix 1: Survey Cover Page). One Afforestation Survey Cover page will be required for the project area and shall include:

- a) Total number of plots to calculate stocking.
- b) Number of SR plots for the area.
- c) Number of under-height plots for the area.
- d) Number of NSR plots for the area.
- e) Number of moved plots with plot name and justification for the plot move.
- f) Total area subtracted from the project area, submitted with a description.

Based on the above values, the Total Stocking (%) shall be calculated as follows for each area:

A plot considered SR will count once towards the Total Tree Stocking (%) of an area, thus Total Tree Stocking (%) shall be calculated by dividing the number of plots considered SR by the total number for plots for the entire area and then multiplying by 100.

If the status of the area is determined to not be SR, the formula will be calculated as follows:

1. Total Potential Stocking = (# of SR plots) + (# of NSR-LIG plots)
2. Total Potential Stocking % = (Total Potential Stocking/ Total number of plots) X 100

If the Total Potential Stocking (%) is less than the minimum stocking (%) requirements, an additional afforestation treatment will be recommended as per Table 1. Survey Timeline in Section 1.4.

4.11.2 Site Density –Survey

The minimum site density for the project area to be considered SR and on a trajectory to become a mature forest will be 1,600 woody stems/ha. Site density is calculated as follows:

Total woody stems tallied/number of plots x 1000

Example 1:

- Total woody stems tallied is 368
- Total plots is 152
- Site density => $368 \text{ woody stems} / 152 \text{ plots} * 1000 = 2,421 \text{ woody stems/ha}$
- Site meets minimum density requirement no additional work is required.

Example 2:

- Total woody stems tallied is 151
- Total plots is 152
- Site density => $151 / 152 * 1000 = 993 \text{ woody stems/ha}$
- Site does not meet minimum density requirement; a silviculture treatment is required.

When the minimum site density is not met, an additional silvicultural treatment is required. Should a fill plant be the silviculture treatment, the fill plant must bring up the site density to 1,600 stems/ha.

A fill plant tree number calculation example is below:

- Site density = 993 woody stems/ha
- Site area = 55ha
- Density top up calculation => $1,600 \text{ woody stems/ha} - 993 \text{ woody stems/ha} = 607 \text{ woody stems/ha}$
- Tree order calculation => $607 \text{ woody stems/ha} * 55 \text{ ha} = 33,385 \text{ woody stems required.}$

4.12 Outcomes of NSR Areas

An additional afforestation treatment will only be required if an area is determined to be NSR. Individual NSR areas will not require an afforestation treatment, they will however be selected as the afforestation treatment areas if the area is determined to be NS. If the stocking status of an area is considered NSR, then an appropriate afforestation treatment for the NSR areas must be prescribed by the managing regulated professional.

As per Section 1.3 an afforestation treatment is defined as any silvicultural technique used to improve the biomass volume. These treatments include, but are not limited to, mechanical site preparation, vegetation management, Not Sufficiently Restocked 'Let-It-Grow' Status and tree planting. A regeneration survey is not considered an afforestation treatment.

4.12.1 Possible Outcomes for areas considered as NSR.

When an area is classified as NSR, Project Forest has the following two options:

1. Re-survey the area classified as NSR with new predetermined plot locations for that area. This additional survey must be completed in the same season as the first survey. If the new survey meets the minimum stocking requirements, then the area will be considered SR and an additional afforestation treatment will not be necessary.
2. Complete a one-time fill plant event of the area classified as NSR. Once the fill plant activity has been completed, the area would then be classified as SR and require no further afforestation treatments or additional Monitoring assessments to confirm stocking status.

If a fill plant is prescribed as the afforestation treatment by the EP, the fill planting density requirements will be followed as per Section 4.11.2.

For example:

Golden Ranches required a total of 54 plots, 14 of which were NSR and 40 were SR. The total stocking for that area was 74% which is considered NSR. If 14 of the plots in the area were considered NSR, then the total NSR area as per Section 4.5 is 21 ha. If the average density of all the NSR areas was 750 woody stems/ha, then according to Section 4.5 the fill plant prescription would be required to bring up the total density to 1,600 woody stems/ha. A fill plant of 850 woody stems/ha would be required, which would equate to 17,850 seedlings.

5 Reporting

Monitoring assessments conducted on any Project Forest Afforestation Project areas shall be reported to Project Forest within 30 days of completing the field work. A complete and validated monitoring assessment summary sheet (Appendix 6: All Project's Summary Sheet) must accompany all reporting of Monitoring assessments to Project Forest for each area surveyed.

Validated work is work that has been prepared by or reviewed and approved by a regulated professional. The regulated professional who validates work must have done the work, contracted the work, or supervised those who did the work. The validating RP is accountable for ensuring the reporting of the Monitoring assessment is complete, accurate and on time.

See Appendix 7: An Example Monitoring Report for an example report.

5.1 Recommendations

Developing recommendations in the reports:

- If the summation of SR and NSR-LIG plots are less than 80% a fill plant will be recommended,
- If an area larger than 1.5 ha is identified as NSR, and
- If any weed concerns are identified, a management strategy between Project Forest and the land owner will be recommended.

5.2 Submission

The Monitoring assessment submission packages to Project Forest shall include:

- a) Afforestation Survey Reporting Cover Page
- b) Monitoring assessment Finalized Survey Assessment Maps
- c) Monitoring assessment Tally Cards

5.2.1 Map Symbols and Definitions

All maps submitted to Project Forest shall have the applicable information for each area surveyed, as shown in Table 3 and plots shall be illustrated on the map as per Table 5.

Table 5: Depicts symbols to use in final reports submitted to Project Forest

	SR with Acceptable Conifer trees
	SR with Acceptable Deciduous trees
	SR Acceptable Shrubs
	SR with Acceptable Conifer & Deciduous trees
	SR with Acceptable Conifer trees & Shrubs
	SR with Acceptable Deciduous trees & Shrubs
	SR with Acceptable Conifer & Deciduous trees & shrubs
	NSR-LIG with Conifer
	NSR-LIG with Deciduous
	NSR-LIG with Shrub
	NSR-LIG with Conifer & Deciduous
	NSR-LIG with Conifer & Shrubs
	NSR-LIG with Deciduous & Shrubs
	NSR-LIG with Conifer & Deciduous trees & shrubs
	NSR -No Acceptable Woody species present

6 Survey Quality

Project Forest requires the monitoring assessment information to be complete and accurate. The contractor shall ensure quality control systems are developed and utilized. Quality control systems must include surveyor training, field auditing and data validation and records of the training session and attendees must be available to Project Forest upon request. The surveyors shall receive training specific to the Project Forest Afforestation Monitoring Program to ensure appropriate measurements are made and recorded. All records of the training sessions and attendees will be tracked and made available to Project Forest upon request.

Audits of all areas and/or surveyors shall be conducted using check surveys carried out by qualified surveyors. Audits shall focus on areas where the risk of error is highest. The survey contractor will be

required to submit an auditing plan to Project Forest for approval prior to starting the monitoring program field work.

7 Glossary of Terms

Advanced regeneration – a tree that meets all criteria for an acceptable tree, established prior to harvest, will likely be alive at next harvest. (AESRD 2013)

Acceptable tree - An acceptable woody plant is an individual seedling, sucker, coppice, or advanced regeneration that:

- a) Is alive.
- b) Is an acceptable tree or woody plant.
- c) Originated from seed, suckering or coppice.
- d) Achieved the minimum coniferous or deciduous height requirement at time of survey (Table 2 in 3.5).

In addition to the criteria above, coniferous tree species shall have:

- a) A well-defined stem
- b) Two or fewer stems originating at the base of the tree.
- c) White spruce and balsam fir trees shall have a live-crown ratio of 0.33 or greater.

Assessment plot – assessment plots occur within the boundaries of a 10 m² (1.78 m horizontal radius) plot at the predetermined plot location provided to the surveyor. Within this boundary, the presence of acceptable coniferous, deciduous, and woody plants will be recorded on the Monitoring assessment Tally Sheet.

Coppice – a natural regeneration process like suckering where the seedling or sapling regenerates from the cut or damaged stump. Several healthy stems may be observed coming from one stump. Found primarily in birch, but also in other deciduous species. (AESRD 2013)

Coniferous trees – needle-leaved tree species which produces cones (includes larch spp.) (AESRD 2013)

Deciduous trees – broadleaved tree species that lose their leaves in the fall. (AESRD 2013)

Diameter at Breast Height (DBH) – Tree diameter at 1.35 m from the ground

Growing Season - the period between June 20 and August 1 annually

Herbaceous plant – plants that die back to ground level at the end of each season. They have no above ground, persistent woody stem and may be annual, biennial or perennial.

LIG (Let-It-Grow) – an afforestation treatment in cases where information has been collected for under-height trees present at the time of an Monitoring assessment.

Live crown ratio - the proportion of total stem length that is covered by living branches. It is expressed as a percentage or decimal of the total tree height. Live crown ratio is a useful indicator of the status of the tree in relation to vigor, photosynthetic leaf area, and is inversely related to stocking density. It is assumed that live crown ratio must be greater than 0.3 (30%) for the tree to release well.

Natural Infrastructure - nature-based solutions that promote, use, restore or emulate natural ecological processes

NSR (Not Sufficiently Restocked) - A plot will be considered NSR if it fails to meet the criteria set out Section 4.4

NSR Area Calculation - When an area is considered NSR as per Section 4.4, then the total NSR area will be calculated as follows: NSR Area (ha) = (# of NSR Areas) x 1.5

NSR-LIG (Not Sufficiently Restocked – Let-It-Grow) - For the purposes of Total Stocking percent calculations, LIG plots will be referred to as Not Sufficiently Restocked – Let-It-Grow (NSR-LIG). When a plot meets the NSR-LIG requirements it is still considered NSR, however if the stocking percentage of all the NSR-LIG plots increases the overall stocking as per the instructions in Section 4.11.1 of this document then further afforestation treatments are not necessary.

Quality control systems - surveyor training, field auditing and data validation and records of the training session and attendees will be provided to Project Forest.

Regulated Professional- A members of a professional regulatory organization of Alberta. This includes Alberta Institute of Agrology, Alberta Association of Forest Management Professionals, and the Alberta Society of Professional Biologists.

Afforestation technique - defined as any silvicultural technique used to improve the biomass volume. These treatments include, but are not limited to, mechanical site preparation, vegetation management, Not Sufficiently Restocked 'Let-It-Grow' (NSR-LIG) Status and tree planting. A regeneration survey is not considered an afforestation treatment.

Seedling – a tree that meets all criteria for an acceptable tree that established post-harvest. (AESRD 2013)

Shrub – distinguished from a tree by its multiple stems and shorter height, usually under 6 m (20 feet) tall. Some species may grow into either trees or shrubs depending on growing conditions.

Silviculture - the theory and practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse management objectives, needs and values (UofA 2024)

Stocking % - the sum of all satisfactorily restocked plots on the opening, divided by the total number of valid plots, multiplied by 100 to express term as a percentage. (AESRD 2013)

Sucker – new growth arising from along the root systems of trees and shrubs.

SR (Sufficiently Restocked) – plots will be considered SR if it meets the criteria set out in Table 1 in Section 4.4.1

Tally card – card used during plant surveys to track the number of species of each target species on site.

Under-height trees – a tree that has all the characteristics of an acceptable tree except that the coniferous, deciduous or shrub minimum tree height requirements are not met. The minimum height requirements for under-height trees are 10 cm, if coniferous, 30 cm, if deciduous and 10cm for shrubs. (AESRD 2013)

Woody plants – plants that produce wood as its structural tissue.

Appendix 1: Survey Cover Page

Afforestation Survey Cover Page				
Project Site:				
Surveyor ID 1		Total Plots		
Surveyor ID 2		Survey Date(s)		
Stocking Calculations				
Type of Plot	# of Plots	% of Plots	Meet Final Criteria	% of Plots
SR with Acceptable Conifer trees				
SR with Acceptable Deciduous trees				
SR Acceptable Shrubs				
SR with Acceptable Conifer & Deciduous trees				
SR with Acceptable Conifer trees & Shrubs				
SR with Acceptable Deciduous trees & Shrubs				
SR with Acceptable Conifer & Deciduous trees & shrubs				
NSR-LIG with Conifer				
NSR-LIG with Deciduous				
NSR-LIG with Shrub				
NSR-LIG with Conifer & Deciduous				
NSR-LIG with Conifer & Shrubs				
NSR-LIG with Deciduous & Shrubs				
NSR-LIG with Conifer & Deciduous trees & shrubs				
NSR -No Acceptable Woody species present				
Acceptable Stocking Summary				
Plot Stocking Status	# of Plots	% of Plots		
SR Plots				
NSR-LIG Stocking				
NSR (excludes NSR-LIG)				
Total Stocking (SR + NSR-LIG):				
Herbaceous Vegetation Observed on Site			Noxious Weeds	
Project Comments (put additional comments on the back):				

Appendix 2: Assessment Summary Sheet

Project Forest Monitoring Assessment Summary Sheet

Applicability: Trajectory of re-wilding success

Landowner

Address/ Location

Year Planted

Assessment #:

First and last name of qualified surveyors (or as attached):

Disturbance Areas and area to be removed from reforestation project area(s):

Summary of Preventive and Corrective Actions- for which regeneration survey audits were completed:

Declaration:

I do hereby declare that this submission:

- a) Adheres to all components of the required Quality Assessment/Quality Control program, and;
- b) Includes only surveys that have been conducted according to the methods detailed in the Project Forest - Golden Ranches Reforestation Monitoring Program, and;
- c) Complies with the requirements for report timing and format.

Validated/Signed by:

Registration # (if applicable)

Date:

Print Name:

Company:

Appendix 3: Required Equipment

- Survey lath, spray painted
- Winter ribbon
- Permanent marker
- Tape measure
- GPS
- Field maps
- Camera
- Data collection application
- Plant identification book
- Weed identification book

Appendix 4: Survey Tally Card

[illegible]

Appendix 5: Caliper Tree Assessment Sheet

Tree Health Assessments									
Project Site:									
Surveyor ID 1					Total Trees:				
Surveyor ID 2					Date:				
Tree #		Tree Species				Age:			
DBH:		# of trunks		Height					
Foliage Color				Vigor					
Growth Obstruction:				Major Pests					
Comments									
Tree #		Tree Species				Age:			
DBH:		# of trunks		Height					
Foliage Color				Vigor					
Growth Obstruction:				Major Pests					
Comments									
Tree #		Tree Species				Age:			
DBH:		# of trunks		Height					
Foliage Color				Vigor					
Growth Obstruction:				Major Pests					
Comments									
Tree #		Tree Species				Age:			
DBH:		# of trunks		Height					
Foliage Color				Vigor					
Growth Obstruction:				Major Pests					
Comments									
Tree #		Tree Species				Age:			
DBH:		# of trunks		Height					
Foliage Color				Vigor					
Growth Obstruction:				Major Pests					
Comments									
Tree #		Tree Species				Age:			
DBH:		# of trunks		Height					
Foliage Color				Vigor					
Growth Obstruction:				Major Pests					
Comments									
Additional Comments:									

Appendix 6: All Project's Summary Sheet

Afforestation Survey Cover Page

[illegible]

Appendix 7: An Example Monitoring Report

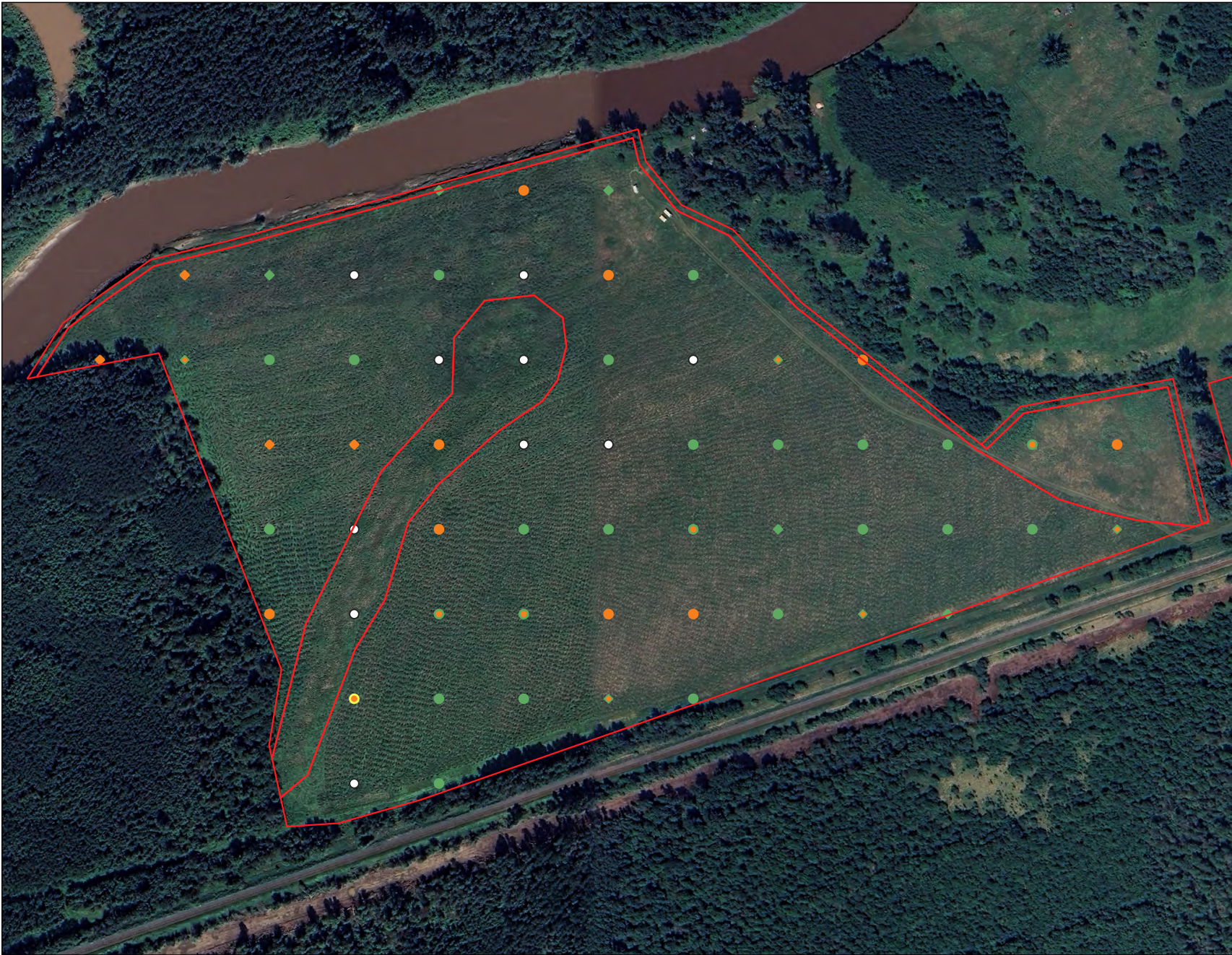
Afforestation Survey Cover Page				
Project Site: Swan River First Nation				
Survey Date(s)	October 19, 2023	Total Plots	138	
Stocking Calculations				
Type of Plot	# of Plots	% of Plots	Meet Final Criteria	% of Plots
SR with Acceptable Conifer trees	29	29.6	2	2.0
SR with Acceptable Deciduous trees	0	0.0	0	0.0
SR Acceptable Shrubs	15	15.3	2	0.0
SR with Acceptable Conifer & Deciduous trees	1	1.0	1	1.0
SR with Acceptable Conifer trees & Shrubs	10	10.2	4	4.1
SR with Acceptable Deciduous trees & Shrubs	4	4.1	1	1.0
SR with Acceptable Conifer & Deciduous trees & shrubs	1	1.0	0	0.0
NSR-LIG with Conifer	9	9.2	N/A	N/A
NSR-LIG with Deciduous	0	0.0	N/A	N/A
NSR-LIG with Shrub	7	7.1	N/A	N/A
NSR-LIG with Conifer & Deciduous	0	0.0	N/A	N/A
NSR-LIG with Conifer & Shrubs	9	9.2	N/A	N/A
NSR-LIG with Deciduous & Shrubs	0	0.0	N/A	N/A
NSR-LIG with Conifer & Deciduous trees & shrubs	0	0.0	N/A	N/A
NSR -No Acceptable Woody species present	13	13.3	N/A	N/A
Acceptable Stocking Summary				
Plot Stocking Status	# of Plots	% of Plots		
SR Plots	60	61.2		
NSR-LIG Stocking	25	25.5		
NSR (excludes NSR-LIG)	13	13.3		
Total Stocking (SR + NSR-LIG):	85	86.7		
Herbaceous Vegetation Observed on Site			Noxious Weeds	
Dandelions	Cinquefoil		Canada thistle	
Grass spp.	Fern sp			
Common Yarrow	Lambs quarters			
Avens	Wild mustard			
Plantain	Hemp nettle			
Tansy mustard	Goldenrod			
Stinkweed				
Dock sp.				
White clover				
Stinging nettle				
<u>Project Comments:</u> The project is growing well. Some of the woody stems within plots are starting to grow past project milestone heights.				

Assessment Survey Tally Card

Plot	Tree & Shrub Stocking												Status	Tallest in Plot		Risk factors		
	Acceptable		Acceptable		Acceptable		Acceptable		Under Height		Under Height			Species	Height (cm)	Evidence of: Damage, Disease, Competition,		Noxious Weeds
	Species	Number	Species	Number	Species	Number	Species	Number	Species	Number	Species	Number						
Sr_01	Sw	1											SR	Sw	36			
Sr_02													NSR					
Sr_03	Bw	1	Raspberry	2					Sx	3			SR	Bw	90			
Sr_04	Tx	2							Sx	3	Aw	4	SR	Tx	112			
Sr_05	Tx	1											SR	Tx	127			
Sr_06									Sw	2	Raspberry	1	NSR-LIG	Sw	23			
Sr_07	Sw	1											SR	Sw	36			
Sr_08_new									Sw	1			NSR-LIG	Sw	29			
Sr_09									Pl	1	Raspberry	1	NSR-LIG	Pl	25			
Sr_10	Tx	1											SR	Tx	76			
Sr_11	Raspberry	10							Sw	1	Raspberry	3	SR	Raspberry	62			
Sr_12	Raspberry	2											SR	Raspberry	62			
Sr_13	Tx	2	Raspberry	1	Sx	1							SR	Tx	107			
Sr_14	Tx	2	Raspberry	2									SR	Tx	130			
Sr_15													NSR					
Sr_16	Raspberry	6							Raspberry	9			SR	Raspberry	134			
Sr_17	Sw	1							Sx	10			SR	Sw	30			
Sr_18													NSR			Thick grass thatch		
Sr_19	Raspberry	1							Raspberry	2			SR	Raspberry	68			
Sr_20	Tx	1											SR	Tx	88			
Sr_21	Sw	1											SR	Sw	39			
Sr_22	Pl	1	Raspberry	1					Raspberry	3			SR	Raspberry	73			
Sr_23									Sw	1			NSR-LIG	Sw	27			
Sr_24	Sw	1							Sx	3			SR	Sw	36			
Sr_25	Sw	2											SR	Sw	30			
Sr_26	Sw	1											SR	Sw	34			
Sr_27									Sw	1	Sx	1	NSR-LIG	Sx	32			
Sr_28	Honeysuckle	10											SR	Honeysuckle	82			
Sr_29	Sw		Snowberry	10									SR	Honeysuckle	84			
Sr_30	Pl	1											SR	Pl	34			
Sr_31	Pl	1											SR	Pl	30			
Sr_32	Pl	2							Sx	1	Raspberry	3	SR	Pl	44			
Sr_33	Pl	1							Aw	1	Sx	1	SR	Pl	33			
Sr_34													NSR					
Sr_35													NSR					
Sr_36	Raspberry	1											SR	Raspberry	66			
Sr_37									Raspberry	1			NSR-LIG	Raspberry	43			
Sr_38									Sx	1			NSR-LIG	Sx	9			
Sr_39									Raspberry	1			NSR-LIG	Raspberry	18			
Sr_40									Raspberry	3	Sw	1	NSR-LIG	Sw	21			
Sr_41	Sw	1											SR	Sw	48			
Sr_42	Sw	1											SR	Sw	42			
Sr_43													NSR			Heavy thistle competition		
Sr_44													NSR			Heavy grass competition		

Plot	Tree & Shrub Stocking												Status	Tallest in Plot		Risk factors		
	Acceptable		Acceptable		Acceptable		Acceptable		Under Height		Under Height			Species	Height (cm)	Evidence of: Damage, Disease, Competition,	Noxious Weeds	
	Species	Number	Species	Number	Species	Number	Species	Number	Species	Number	Species	Number						
Sr_45	Pl	1											SR	Pl	31			
Sr_46													NSR			Heavy grass & thistle competition		
Sr_47									Sw	1	Sx	1	NSR-LIG	Sw	16			
Sr_48	Sx	10	Honeysuckle	10					Sw	1			SR					
Sr_49	Sw	1							Pl	1			SR	Sw	36			
Sr_50	Raspberry	3	Wild Rose	2									SR	Raspberry	81			
Sr_51													NSR			Heavy grass & thistle competition		
Sr_52	Sw	1											SR	Sw	31			
Sr_53													NSR			Heavy thistle competition		
Sr_54									Sw	1			NSR-LIG	Sw	28			
Sr_55									Raspberry	3			NSR-LIG	Raspberry	39			
Sr_56									Sw	1			NSR-LIG	Sw	24			
Sr_57	Sw								Raspberry	1			SR	Sw	48			
Sr_58									Sw	1			NSR-LIG	Sw	22			
Sr_59													NSR				Canada thistle	
Sr_60	Pl	1											SR	Pl	36			
Sr_62									Raspberry	1			NSR-LIG	Raspberry	20			
Sr_63	Pl	1											SR	Pl	37			
Sr_64	Sw	1							Sw	1			SR	Sw	1			
Sr_65													NSR			Heavy thistle & grass competition		
Sr_66													NSR					
Sr_67	Raspberry	1							Raspberry	3	Pl	1	SR	Raspberry	60			
Sr_68									Sw	1			NSR-LIG	Sw	29			
Sr_69									Raspberry	6	Sw	1	NSR-LIG	Raspberry	30			
Sr_70									Raspberry	3			NSR-LIG	Raspberry	25			
Sr_71	Sw	1											SR	Sw	34			
Sr_72									Sw	1			NSR-LIG	Sw	19			
Sr_73									Raspberry	2	Pl	1	NSR-LIG	Raspberry	22			
Sr_74									Sw	1	Raspberry	1	NSR-LIG	Raspberry	52			
Sr_75									Raspberry	1			NSR-LIG					
Sr_76	Pl	1							Raspberry	1			SR	Pl	40			
Sr_77	Pl	3											SR	Pl	48			
Sr_78	Tx	3											SR	Tx	79			
Sr_79	Sw	3							Sx	6	Aw	2	SR	Aw	36			
Sr_80	Snowberry	50							Sw	1			SR		102			
Sr_81	Honeysuckle	10											SR	Honeysuckle	81			
Sr_82	Sx	3	Honeysuckle	10									SR	Sx	207			
Sr_83	Honeysuckle	10											SR	Honeysuckle	123			
Sr_84	Sw	3	Wild Rose	3	Honeysuckle	10							SR	Wild Rose	160			
Sr_85	Sw	5	Honeysuckle	10									SR	Honeysuckle	144			
Sr_86	Pb	9	Sx	3									SR	Pb	203			
Sr_87	Honeysuckle	10	Bw	1	Raspberry	2	Twinberry	1	Sw	1			SR	Bw	102			
Sr_88	Sx	10	Aw	1	Honeysuckle	10							SR	Sx	202			
Sr_89	Honeysuckle	10	Raspberry	1	Sx	1							SR	Sx	170			

Plot	Tree & Shrub Stocking												Status	Tallest in Plot		Risk factors		
	Acceptable		Acceptable		Acceptable		Acceptable		Under Height		Under Height			Species	Height (cm)	Evidence of: Damage, Disease, Competition,		Noxious Weeds
	Species	Number	Species	Number	Species	Number	Species	Number	Species	Number	Species	Number						
Sr_90	Sw	1	Saskatoon	3	Pb	1	Snowberry	100	Sw	1	Raspberry	2	SR	Saskatoon	176			
Sr_91									Sw	1			NSR-LIG	Sw	25			
Sr_92	Raspberry	2	Sw	1	Snowberry	10							SR	Raspberry	110			
Sr_93_New	Sw	1							Raspberry	2	Snowberry	3	SR	Raspberry	45			
Sr_94	Tx	1	Raspberry	4									SR	Raspberry	145			
Sr_95									Sw	1			NSR-LIG	Sw	22			
Sr_96	Raspberry	6	Snowberry	10					Sw	1			SR	Raspberry	221			
Sr_97	Wild Rose	1	Sw	1	Snowberry	10							SR	Wild Rose	107			
Sr_98	Pb	2	Snowberry	10									SR	Honeysuckle	104			



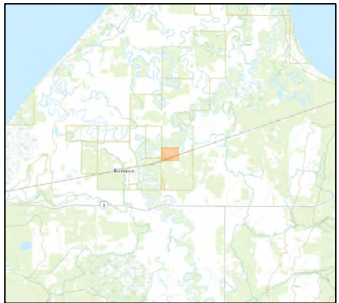
Swan River - Map 1
Survey Plot Status
Fall 2023

Project Partners:

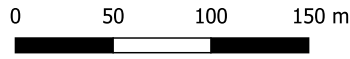


Legend

- Project Boundary
- Plot Status
 - NSR
 - NSR-LIG-C
 - NSR-LIG-CS
 - NSR-LIG-S
 - SR-C
 - SR-CS
 - SR-DS
 - SR-S



Date Created: 2023-11-15
Project CRS: EPSG:3400
Source: Google Satellite
Created By: Tree Time Services Inc.
Scale: 1:2,500





Swan River - Map 2 Survey Plot Status Fall 2023

Project Partners:

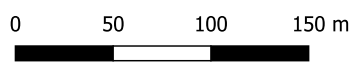


Legend

- Project Boundary
- Plot Status
 - NSR
 - NSR-LIG-C
 - NSR-LIG-CS
 - NSR-LIG-S
 - SR-C
 - SR-CS
 - SR-S



Date Created: 2023-11-15
Project CRS: EPSG:3400
Source: Google Satellite
Created By: Tree Time Services Inc.
Scale: 1:2,500





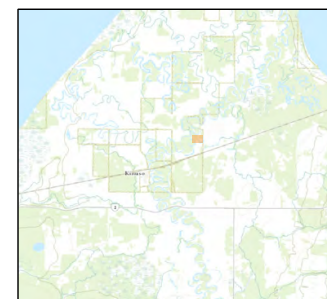
**Swan River - Map 3
Survey Plot Status
Fall 2023**

Project Partners:



Legend

- Project Boundary
- Plot Status
- ◆ NSR-LIG-C
- SR-C
- SR-CD
- SR-CDS
- SR-CS
- SR-DS
- SR-S



Date Created: 2023-11-15
Project CRS: EPSG:3400
Source: Google Satellite
Created By: Tree Time Services Inc.
Scale: 1:1,500



Site Photos

Plot SR_25



Plot SR_43



Plot SR_63



Plot SR_73



Plot SR_85



Plot SR_91



Project Forest Monitoring Assessment Summary Sheet

Project Name	Swan River First Nation
Applicability:	Trajectory of re-wilding success
Landowner:	Swan River First Nation
Site Location:	55.340255,-115.398149
Year Planted:	2021
Assessment #:	2

First and last name of qualified surveyors (or as attached):

Maclean Forbes

Disturbance Areas and area to be removed from afforestation project area(s):

No areas will be removed from the project area.

As per the Project Forest Monitoring Program, all area(s) impacted by forest fire, insects or industrial development will be removed from the afforestation project area. No such disturbance were recorded.

Summary of Preventive and Corrective Actions:

It is recommended that:

1. Leave the NSR-LIG areas, as there is a reasonable likelihood exists that a sufficient percentage of NSR-LIG sites will become SR sites within the coming years.
2. There is Canda thistle present. Project Forest should discuss this with Swan River First Nation and determine the best approach for weed management on the site.

Declaration:

I do hereby declare that this submission:

- a) Adheres to all components of the required Quality Assessment/Quality Control program, and;
- b) Includes only surveys that have been conducted according to the methods detailed in the Project Forest - Golden Ranches Reforestation Monitoring Program, and;
- c) Complies with the requirements for report timing and format.

Validated/Signed by:



Registration #

1838

Date:

February 2, 2024

Print Name:

Lindsay Dent

Company:

Tree Time Services Inc.