

2024 Annual Project Report

Project Forest Camp Creek



Project
Forest

Contents



ACKNOWLEDGEMENT	3
ABOUT US	4
Our Mission	4
Our Values	4
OVERVIEW	5
How to Use This Report	5
Forest Facts	6
2024 ACTIVITY SUMMARY	7
UN SDG 15 - Life on Land	8
UN SDG 13 - Climate Action	10
UN SDG 06 - Clean Water and Sanitation	11
2023 ANNUAL REPORT	12
UN SDG 15 - Life on Land	13
UN SDG 13 - Climate Action	19
UN SDG 11 - Sustainable Cities and Communities	21
POSITIVE IMPACT	22
UN SDG 3 - Good Health and Well-Being	22
UN SDG 6 - Clean Water and Sanitation	23
FUNDING PARTNERS	24
References	25
Appendix A - Site Survey	26
Appendix B - Restoration Overview	37

Land Acknowledgement

| Traditional Territories



Member of Cumberland House Cree Nation 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

| Our 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

| 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 2023 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 Project Forest Camp Creek forest:

Purpose



Positive Impact



Overview

| Forest Facts

About the forest you funded.

NAME

Project Forest Camp Creek

DATE PLANTED

Fall 2022

TOTAL SEEDLINGS PLANTED

57,960

TOTAL CO2 REMOVED FROM THE AIR*

28,199 metric tonnes

SPECIES PLANTED

Green Alder (2,520)
White Birch (2,340)
White Spruce (23,040)
Balsam Poplar (7,560)
Willow (7,560)
Lodgepole Pine (14,940)

LOCATION

County of Barrhead, Alberta

[54°15'27.2"N 114°43'59.2"W](#)

SIZE

28 hectares

TOTAL SPECIES PLANTED

6



* Metric tonnes of carbon dioxide (CO₂) projected to be removed from the air over 150 years.

2024 Activity Summary Report

Project Forest Camp Creek

This summary reframes the key findings from the Camp Creek survey reports through the lens of three relevant UN Sustainable Development Goals (SDGs).



2024 Activity Summary Report - Project Forest Camp Creek

| UN SDG 15 - Life on Land

Goal: Sustainably manage forests, combat desertification, reverse land degradation and halt biodiversity loss.

The Challenge:

In support of UN Sustainable Development Goal 15: Life on Land, Project Forest conducted a stocking survey at Camp Creek on October 12–13, 2024, assessing 75 plots across 28 hectares. The objective was to assess reforestation success and biodiversity.

The Reality:

The survey revealed a strong improvement in regeneration, with 41.4% of previously understocked plots now meeting criteria. However, the site achieved 78.7% acceptable stocking—just below Project Forest's 80% target and slightly lower than 2023's result of 80.0%.

The Context:

Despite narrowly missing the internal goal, the site continues to outperform the landowner Alberta Conservation Association's minimum threshold of 60% survival—demonstrating measurable progress in forest recovery and alignment with SDG 15's focus on restoring degraded lands.

The Obstacle:

The primary barrier to full regeneration was intense herbaceous competition. Surveyors reported widespread tall grasses and thick grass matting, which hindered seedling establishment by limiting light, space, and access to soil moisture—key challenges in achieving resilient, biodiverse ecosystems.



78.7%
Seedling Survival Rate

Table 1: 2023/2024 Stocking Summaries

Type of Plot	# of Plots 2023	% of Plots 2023	# of Plots 2024	% of Plots 2024
Total Sufficiently Restocked (SR)	13	17.3	44	58.7
NSR-Let It Grow (NSR-LIG) Stocking	47	62.7	15	20.0
Not Sufficiently Restocked (NSR)	15	20.0	16	21.3
Total Stocking (SR + NSR-LIG/Total # of Plots)	60	80.0	59	78.7

Purpose

| UN SDG 15 - Life on Land



The stocking summary illustrates the current regeneration performance of the Camp Creek site based on 75 surveyed plots:

- 58.7% of plots are Satisfactorily Restocked (SR)
- 20.0% are Not Satisfactorily Restocked Let-It-Grow (NSR-LIG), down by 42.7%, - a positive result as this demonstrates the seedlings are growing as expected.
- 21.3% are Not Satisfactorily Restocked (NSR)

One of the NSR areas identified in 2023 has expanded and is now 3.3 ha, due to the encroachment of herbacious vegetation and noxious weeds. This area was reviewed with the landowner, the **Alberta Conservation Association**, and it was determined a fill plant was not necessary at this time.

Figure 1: Camp Creek Planting Site

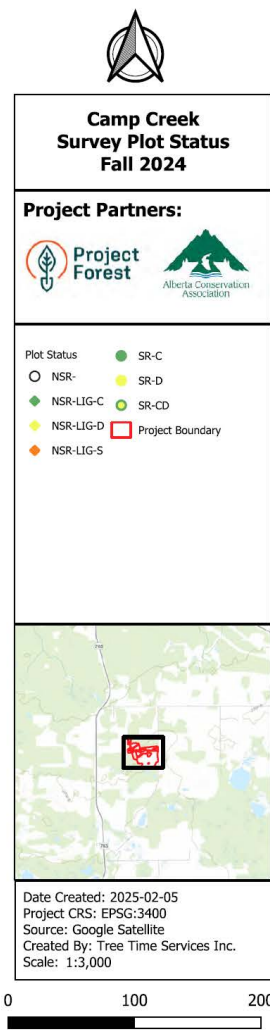
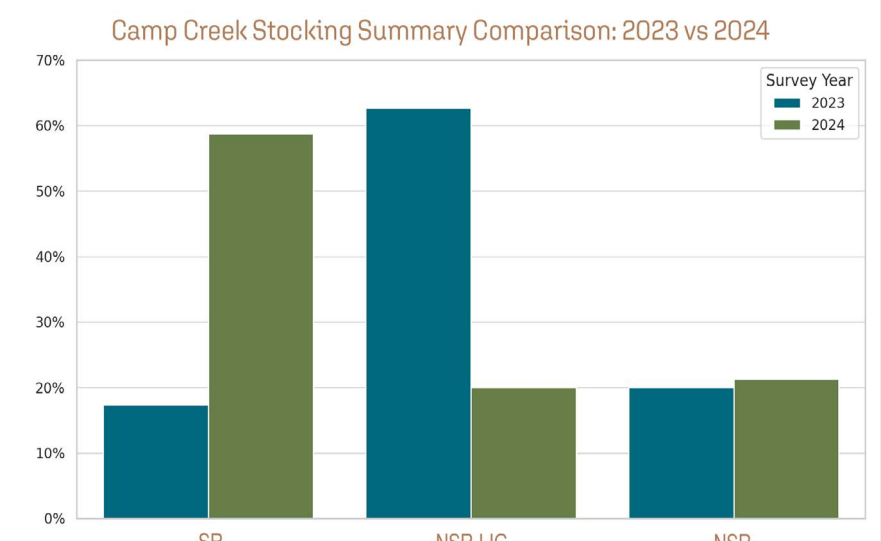


Figure 2: Stocking Summary Comparison



A significant reclassification of plots from NSR-LIG to SR in 2024 indicates that many seedlings previously deemed marginal have demonstrated adequate height growth and overall vigor to now meet stocking standards. This improvement suggests that the planted seedlings have continued along healthy developmental trajectories, with no major mortality or stagnation in growth. The results reflect the effectiveness of earlier silvicultural interventions and favorable growing conditions.

This positive trend supports progress toward UN SDG Goal 15: Life on Land, which emphasizes sustainable forest management and restoration of degraded landscapes. Continued monitoring of stand development will be essential to ensure these early gains translate into structurally complex, resilient forest systems that contribute to long-term ecological function, carbon sequestration, and biodiversity conservation.

| UN SDG 13 - Climate Action

Goal: Take urgent action to combat climate change and its impacts. By restoring forest ecosystems, this project contributes to:

- **Carbon capture:** The 2024 survey indicates that the site is on track to remove 28,199 metric tonnes of CO₂ as per our original carbon modeling.

41.4% ↑
Gain of sufficiently restocked trees from 2023

28,199
Metric tonnes of CO₂ projected to be removed from the air.



| UN SDG 6 - Clean Water and Sanitation

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

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.

Rain accumulation for Camp Creek in 2024 was as follows:

- 104.9 mm of rain ≈ 29.37 million liters of water

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. That data can be found [HERE](#)



Figure 5: 2024 Camp Creek Annual Precipitation

	Step Description	Formula/Conversion	Rainfall
1	Area of land	1 hectare = 10,000 m ²	28 ha × 10,000 = 280,000 m ²
2	Convert Depth to Meters	cm ÷ 100; mm ÷ 1000	104.9 mm = .1049 m
3	Volume (m ³)	Volume = Area × Depth	280,000 × .1049 = 29,372 m ³
4	Convert to Liters	1 m ³ = 1,000 liters	29,372 × 1,000 = 29,372,000 liters
Total Accumulation = 29,372,000 liters			

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.

29.4M

Liters of water accumulation at Camp Creek in 2024

2023 Annual Report

Project Forest Camp Creek

The Camp Creek project stands as a multidimensional sustainability initiative. Through continued monitoring, adaptive management, and collaboration, Project Forest and our partners are creating tangible, lasting impacts across several pillars of the 2030 UN SDG Agenda.



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.

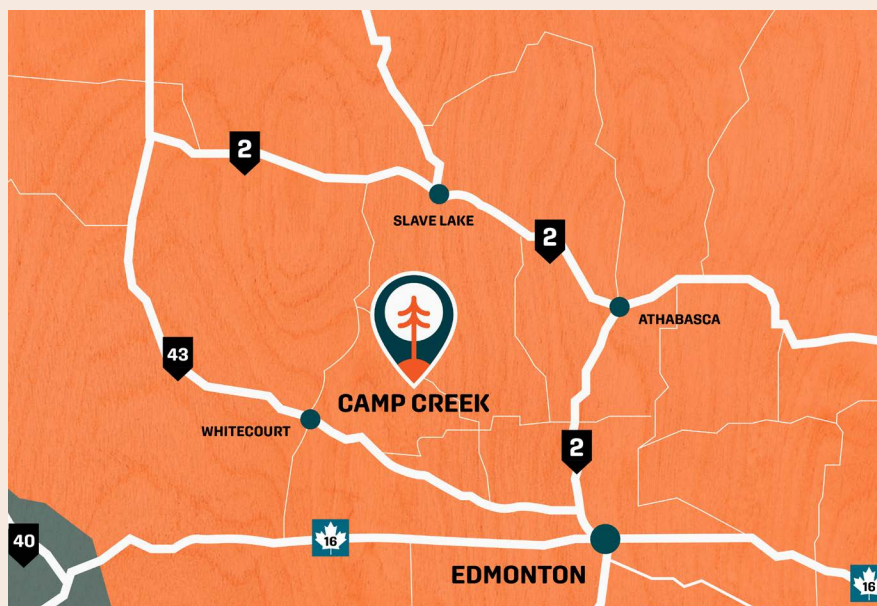
Matching ESG Goals:

- 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



57,960
Seedlings Planted

Project Forest Camp Creek has increased forested area in the County of Barrhead region in northern Alberta by transitioning a 28 ha hayfield back to native mixedwood forest. A total of 57,960 trees were planted in September 2022 on the conservation site owned and maintained by the Alberta Conservation Association (ACA).

Purpose

| UN SDG 15 - Life on Land



Project Forest Camp Creek

The first Afforestation Survey at Camp Creek occurred in Fall 2023. The survey data collected indicated an average total stocking rate (SR + NSR-LIG) of 80.0% (Figure 1). Data from the project surveys is recorded in an Afforestation Survey Report (Appendix A - Afforestation Survey Report).

There is a large presence of Canada Thistle within the site that needs to be addressed. Project Forest and the ACA need to discuss vegetation management option approaches for the site. Two NSR areas have been identified that can be considered for a fill plant.

Figure 1: Acceptable Stocking Summary

Type of Plot	# of Plots	% of Plots
Total Sufficiently Restocked (SR)	13	17.3
NSR-Let It Grow (NSR-LIG) Stocking	47	62.7
Not Sufficiently Restocked (NSR)	15	20.0
Total Stocking (SR + NSR-LIG/Total # of Plots)	60	80.0

80.0%
Seedling Survival Rate

75
Plots Sampled

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 monitoring survey.

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 works with conservation groups to rewild areas of high conservation value. We transition degraded land owned and managed by conservation groups into species-rich forests that increase biodiversity, create habitat, and clean the air and water.

The Project Forest Camp Creek site is owned and maintained by the Alberta Conservation Association as part of the Camp Creek Conservation Area. It is located within the Central Mixedwood Natural Subregion of the Boreal Forest Natural Region.



“It is a pleasure working with the team at Project Forest. Their re-wilding 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 at Alberta Conservation Association (ACA)

A total of six different tree species have been planted at the site, they are green alder, white birch, white spruce, balsam poplar, willow and lodgepole pine. The species planted are all native to the site's ecological zone. By planting and maintaining native species, the Project Forest community is contributing to their preservation, promoting biodiversity and restoring the ecosystem.

Mammals expected to be present on this site based on survey data from the Alberta Conservation Association include moose, white-tailed deer, black bear, ruffed grouse and small mammals commonly found in mixedwood boreal forest.

6

Species Planted

Purpose

| UN SDG 15 - Life on Land



Indicator 15.2.1: Progress towards sustainable forest management

The Project Forest Rewilding Plans, Monitoring Protocols, and Remediation Actions are designed to ensure the health and success of our forest. *Sustainable forest management* balances the needs of the community with the long-term use of forest resources while preserving the ecological integrity and benefits the forest provides to people and the environment. As part of Project Forest's commitment to rewild land on behalf of our partners and the wider community, we employ a number of tools and metrics to provide scientific verification that our project sites will become mature forests that will benefit the environment and surrounding communities today, and generations to come.

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).



Cover Crop Seeding at Camp Creek

Rewilding Plans

Prior to planting a forest, Project Forest assesses the land and identifies site limiting factors. A Rewilding Plan is created and site limiting factors are addressed to ensure that the seedlings planted have the best chance of survival (Appendix B - Camp Creek Rewilding Plan).

Unlike many of our other planting sites, there was no site preparation needed at Project Forest Camp Creek. Due to continual cultivation and a loamy soil, the existing soil conditions and vegetation were suitable for planting. Prior to tree planting, we seeded the site with an annual rye grass cover crop. This helps to reduce weeds and forage grasses in the bare soil and provides a short-term cover crop as the tree species establish on site. We seeded in the fall to provide the seed the best

Purpose

| UN SDG 15 - Life on Land



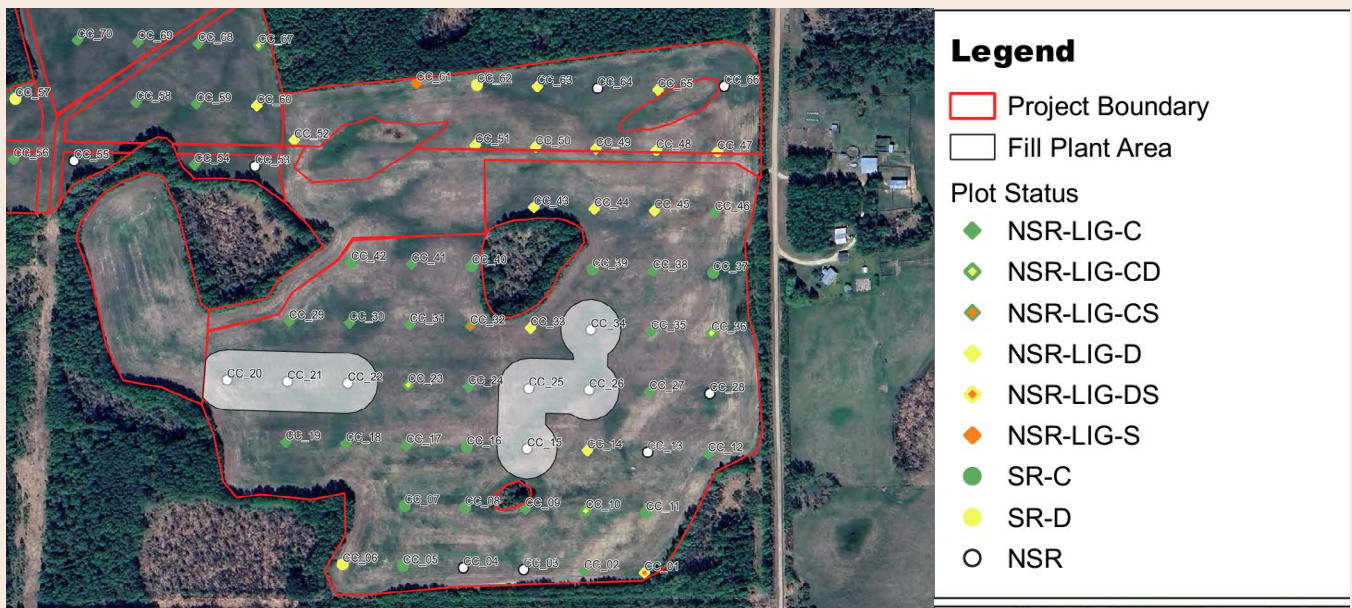
chance to germinate the following spring. This decision was made after the germination failure at another site, Project Forest Golden Ranches.

A four hectare area of the site was not planted. It will remain as open parkland in an attempt to promote ungulate habitat. This area was seeded with a custom cover crop mix of grasses that are desirable to ungulates.

Monitoring Protocols

The Project Forest Monitoring Plan requires that 2.44 plots per hectare are surveyed and each plot location is permanently marked. This resulted in 75 plots being sampled across the Camp Creek site. The survey data collected is used to prescribe future monitoring and maintenance events. We budget for a 25% fill plant for each project site in the event of significant tree mortality within the first six years. Our monitoring protocol ensures the seedlings planted are on a trajectory to becoming a mature forest through annual monitoring for up to six years post-planting.

Figure 2: Recommended Fill Plant Areas



2023 fill plant areas marked in white on the Camp Creek Survey Map (Appendix A)

Remediation Activities

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. The 2023 survey indicated that a number of areas (marked in white) may require remediation activities.

Purpose

| UN SDG 15 - Life on Land



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

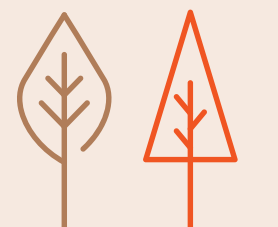
Project Forest is rewilding degraded land that has been disturbed and has not recovered through normal ecological processes.

The Project Forest Camp Creek site is located approximately 100 km northwest of the city of Edmonton, in the Camp Creek Conservation Area between Township Road 612 and Range Road 55. At some point in its history, the site was cleared for agricultural purposes. Prior to rewilding, the Camp Creek site was a hay and crop field.

Rewilding degraded ecosystems has several positive effects including, an improvement to soil health, increased biodiversity, habitat for birds and animals, ground water filtration and improved air quality.

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)



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 act as carbon sinks, absorbing carbon dioxide (CO₂) from the atmosphere through photosynthesis and storing it in their biomass and soil. By planting forests, we increase the amount of CO₂ sequestered, thereby reducing the concentration of greenhouse gases (GHGs) in the atmosphere. This helps mitigate climate change by reducing the amount of CO₂ that contributes to global warming (NRCAN, 2022).

The amount of CO₂ projected to be removed from the atmosphere over the lifetime of Project Forest Camp Creek is 28,199 metric tonnes. The estimated lifetime of a forest is 150 years.

Project Forest uses the [Carbon Budget Model of the Canadian Forest Sector \(CBM-CFS3\)](#) modelling framework developed by Natural Resources Canada to assess the impacts of our forests on carbon. This is the national standard for reporting on forest carbon.

28,199

Metric tonnes of CO₂ projected to be removed from the air.

Carbon Budget Model of the Canadian Forest Sector

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).

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 2023:

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

Corporate Tree Planting Events

- In-person, hands-on volunteering opportunities for Silver, Gold and Platinum financial partners
- Educational talks around seedling physiology, forest succession, tree planting technique, tree planting survey methodology, seed collection, plant identification, and traditional plant uses

Indigenous Engagement

- 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

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

Annual Partner Celebration

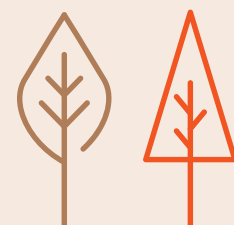
- Presentations featuring a wide range of speakers from the Project Forest community
- Focus on Indigenous reconciliation through rewilding, sustainable business practices, and community investment

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

7

Project Funding Partners



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.

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

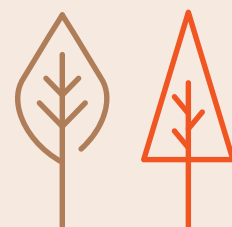
Project Forest Camp Creek provides an area for recreation and hunting for Albertans in the County of Barrhead region. Visitors to the forest can boost the local economy by increasing revenue from tourism-related activities such as accommodation, transportation and food services. Rewilding projects require labour to complete, including but not limited to:

- Vegetation management
- Cover crop deployment
- Tree planting
- Survival assessment survey and data collection

By investing in rewilding, Project Forest funding partners are creating employment opportunities. The income earned by individuals through these jobs can have a positive economic impact, leading to increased tax revenues for the government and expanding **local fiscal space**.

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).



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

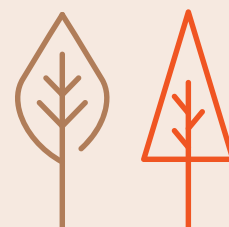
Forests act as natural air filters by absorbing pollutants and particulate matter from the atmosphere. Trees remove harmful gases by absorbing them through their leaf stomata, filtering these chemicals from the air. Particulate matter is intercepted by the tree's surfaces. When it rains, the particles 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.



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.

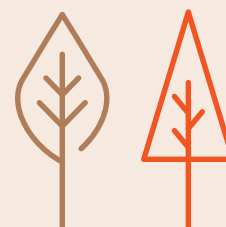
Forests filter, purify and improve the quality of our water. Tree roots help retain soil and reduce the transport of pollutants into water bodies. Planting forests in watershed areas can contribute to protecting water quality, ensuring access to clean water for communities. (NRCAN, 2021)

Project Forest Camp Creek is located in the Pembina River Watershed, one of the highest impacted watersheds in the Athabasca River Watershed. Its headwaters are located in the Eastern Slopes of Alberta's Rocky Mountains before it flows eastward near the communities of Entwistle, Sangudo, Barrhead, and Westlock to join the Athabasca River near Flatbush, Alberta. The [Athabasca Watershed Council](#) is actively seeking to increase watershed resilience through riparian habitat assessments, education, restoration and conservation.

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

Forests act as natural sponges and filters, absorbing rainfall and gradually releasing it while purifying it as it passes through the ecosystem. By restoring forests, we can enhance water quality, reduce erosion, and promote water retention in the landscape.



Partners

Funding Partners



Project Forest Camp Creek

Our work is not possible without you.

Thank you to the Project Forest Camp Creek funding partners!



References

- Haeussler, S., Bedford, L., Leduc, A., Bergeron, Y. & Kranabetter, J.M. (2002). Silvicultural disturbance severity and plant communities of the southern Canadian boreal forest. *Silva Fennica* 36(1): 307–327.
- Heller, P. S. (2005). *IMF Policy Discussion Paper: Understanding Fiscal Space*. International Monetary Fund. <https://www.imf.org/external/pubs/ft/pdp/2005/pdp04.pdf>
- IPCC. *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*. Edited by P.R. Shukla et al., 2019, in press.
- NRCAN. (2024, April 4). *Carbon Budget Model for the Canadian Forest Sector*. Government of Canada. <https://natural-resources.canada.ca/climate-change/climate-change-impacts-forests/carbon-accounting/carbon-budget-model/13107>
- NRCAN. (2022, May 31). *Forest Carbon*. Government of Canada. <https://natural-resources.canada.ca/climate-change/adapting-impacts-and-reducing-emissions/climate-change-impacts-forests/forest-carbon/13085>
- NRCAN. (2024, June 21). *Sustainable Forest Management*. Government of Canada. <https://natural-resources.canada.ca/our-natural-resources/forests/sustainable-forest-management/sustainable-forest-management-canada/24361>
- NRCAN. (2021, February 16). *Water*. Government of Canada. <https://natural-resources.canada.ca/our-natural-resources/forests/sustainable-forest-management/conservation-and-protection-canadas-forests/water/13207>
- Nowak, D. J., Hirabayashi, S., Bodine, A., & Greenfield, E. (2014). Tree and forest effects on air quality and human health in the United States. *Environmental Pollution*, 193, 119-129.
- UNFCCC. *Glossary of CDM Terms*. EB41, 2008. Quoted in Global Canopy Programme, “Glossary of Terms,” *The Little REDD Book: A Guide to Governmental and Non-Governmental Proposals for Reducing Emissions from Deforestation and Degradation*, Global Canopy Foundation, November 2008.
- Tiquia, S. M., & Tam, N. F. Y. (2000). *Microbial activities in composts during the composting process*. *Bioresource Technology*, 75(3), 193–200.
- Young, I. M., & Crawford, J. W. (2004). *Interactions and self-organization in the soil-microbe complex*. *Science*, 304(5677), 1634–1637.
- Fierer, N., & Jackson, R. B. (2006). *The diversity and biogeography of soil bacterial communities*. *PNAS*, 103(3), 626–631.

Appendix A - Camp Creek Afforestation Survey

Afforestation Survey Cover Page				
Project Site: Camp Creek				
Survey Date(s)	October 12-13, 2024	Total Plots	75	
		Planted Area	31.9 ha	
Stocking Calculations				
Type of Plot	# of Plots	% of Plots	Meet Final Criteria	% of Plots
SR with Acceptable Conifer trees	33	44.0	0	0
SR with Acceptable Deciduous trees	10	13.3	0	0
SR Acceptable Shrubs	0	0.0	0	0
SR with Acceptable Conifer & Deciduous trees	1	1.3	0	0
SR with Acceptable Conifer trees & Shrubs	0	0.0	0	0
SR with Acceptable Deciduous trees & Shrubs	0	0.0	0	0
SR with Acceptable Conifer & Deciduous trees & shrubs	0	0.0	0	0
NSR-LIG with Conifer	7	9.3	0	0
NSR-LIG with Deciduous	7	9.3	0	0
NSR-LIG with Shrub	1	1.3	0	0
NSR-LIG with Conifer & Deciduous	0	0.0	0	0
NSR-LIG with Conifer & Shrubs	0	0.0	0	0
NSR-LIG with Deciduous & Shrubs	0	0.0	0	0
NSR-LIG with Conifer & Deciduous trees & shrubs	0	0.0	0	0
NSR -No Acceptable Woody species present	16	21.3	0	0
Acceptable Stocking Summary				
Plot Stocking Status	# of Plots	% of Plots		
SR Plots	44	58.7		
NSR-LIG Stocking	15	20.0		
NSR (excludes NSR-LIG)	16	21.3		
Total Stocking (SR + NSR-LIG):	59	78.7		
Herbaceous Vegetation Observed on Site			Noxious Weeds	
Grass spp.			Thistle spp.	
Quack grass				
Dandelion				
Clover spp.				
Common bent				
Wild rye				
Common alfalfa				
Project Comments: Camp Creek has good survival; however, the total acceptable sites fell from last year's 80% to 78.7%. This does not meet Project Forest's criteria of ≥80% of sites being acceptably stocked. Tall, thick grass and occasional grass matting were reported by surveyors. Competition may need to be addressed in addition to a fill plant.				

Plot	Tree & Shrub Stocking								Status	Tallest in Plot		Risk factors	
	Acceptable		Acceptable		Under Height		Under Height			Species	Height (cm)	Evidence of: Damage, Disease, Competition,	Noxious Weeds
	Species	Number	Species	Number	Species	Number	Species	Number					
CC_001	White Birch	1			Raspberry	2	Trembling Aspen	1	SR	White Birch	76	Thick grass	
CC_002	White Spruce	1							SR	White Spruce	31	Grass not thick in this area	
CC_003									NSR			Thick grass and quack grass	
CC_004									NSR			Thick grass competition	
CC_005	White Spruce	2							SR	White Spruce	40	Thick overhead of quack grass	
CC_006	Balsam Poplar	2			Balsam Poplar	6			SR	Balsam Poplar	137		
CC_007	White Spruce	2			White Birch	1			SR	White Spruce	42	Thick quack grass	
CC_008	White Spruce	1							SR	White Spruce	42		
CC_009									NSR				
CC_010					White Spruce	1			NSR-LIG	White Spruce	25		
CC_011	White Spruce	1							SR	White Spruce	31		
CC_012	White Spruce	1	White Birch	1					SR	White Birch	112		
CC_013									NSR			Thick grass	
CC_014									NSR			Thick thistle and quack grass overstory	Thistle
CC_015									NSR			Thick grass mat.	
CC_016	White Spruce	1							SR	White Spruce	55		
CC_017	White Spruce	1							SR	White Spruce	40	Tall thick grass competition	
CC_018	White Spruce	1			White Spruce	1			SR	White Spruce	37	Thick tall quack grass	
CC_019	White Spruce	1			White Spruce	1			SR	White Spruce	35		
CC_020									NSR			Thick grass mat competition	
CC_021	White Spruce	1							SR	White Spruce	30	Thick ground cover of grass	
CC_022									NSR			Thick grass cover	
CC_023					White Spruce	1			NSR-LIG	White Spruce	28	Thick overstory	
CC_024	White Spruce	2							SR	White Spruce	40		
CC_025					White Spruce	1			NSR-LIG	White Spruce	25	Thick grass competition	
CC_026									NSR			Thick grass mat	
CC_027									NSR			Thick grass and grain competition	
CC_028									NSR			Thick grass and quack grass	
CC_029					White Spruce	2			NSR-LIG	White Spruce	28		
CC_030									NSR			Thick grass mat	
CC_031					White Spruce	1			NSR-LIG	White Spruce	29		
CC_032	White Spruce	1	Willow spp.	1					SR	Willow spp.	60		
CC_033	White Spruce	1			Willow spp.	3			SR	Willow spp.	52		
CC_034									NSR			Thick grass mat	
CC_035	White Spruce	1							SR	White Spruce	41		
CC_036	White Spruce	2							SR	White Spruce	37		
CC_037	Lodgepole Pine								SR	Lodgepole Pine	49	Heavy grass	
CC_038	White Spruce	1							SR	White Spruce	38		
CC_039	White Birch	1							SR	White Birch	80	Tall grass	
CC_040	White Spruce	2			White Spruce	1	Willow spp.	3	SR	White Spruce	47		
CC_041	White Spruce	1			White Spruce	1			SR	White Spruce	30		
CC_042	White Spruce	2							SR	White Spruce	62		
CC_043					White Birch	1			NSR-LIG	White Birch	45	Tall grass	
CC_044					Balsam Poplar	1			NSR-LIG	Balsam Poplar	58	Tall grass	
CC_045	White Birch	1							SR	White Birch	70	Tall grass	
CC_046	Lodgepole Pine	1							SR	Lodgepole Pine	45		

Plot	Tree & Shrub Stocking								Status	Tallest in Plot		Risk factors	
	Acceptable		Acceptable		Under Height		Under Height			Species	Height (cm)	Evidence of: Damage, Disease, Competition,	Noxious Weeds
	Species	Number	Species	Number	Species	Number	Species	Number					
CC_047	White Birch	1			White Birch	1			SR	White Birch	74	Grass	
CC_048					White Birch	2			NSR-LIG	White Birch	48		
CC_049					White Birch	2			NSR-LIG	White Birch	43	Tall grasses	
CC_050	White Birch	1							SR	White Birch	68	Tall grass	
CC_051					White Birch	1			NSR-LIG	White Birch	58	Tall grass	
CC_052					Balsam Poplar	1			NSR-LIG	Balsam Poplar	42	Tall grass	
CC_053									NSR			Thick grass	
CC_054	Lodgepole Pine	1			White Spruce	1			SR	Lodgepole Pine	38	Thick grass that was trampled	
CC_055	Lodgepole Pine	1							SR	Lodgepole Pine	39	Thick grass	
CC_056	Lodgepole Pine	1							SR	Lodgepole Pine	31	Thick grass	
CC_057	Balsam Poplar	2	Lodgepole Pine	1	Balsam Poplar	9			SR	Balsam Poplar	142		
CC_058					White Spruce	1			NSR-LIG	White Spruce	28	Thick grass	
CC_059	Lodgepole Pine	1							SR	Lodgepole Pine	30	Thick grass	
CC_060					White Spruce	1			NSR-LIG	White Spruce	26	Thick grass	
CC_061					Wild Rose	1			NSR-LIG	Wild Rose	25		
CC_062	White Birch	1							SR	White Birch	76	Tall grass	
CC_063	White Birch	1			White Birch	1			SR	White Birch	92	Tall grass and thistle	Thistle
CC_064									NSR			Tall thick grass	
CC_065					Balsam Poplar	1			NSR-LIG	Balsam Poplar	58	Tall grass	
CC_066									NSR			Thick grass and thistle	Thistle
CC_067	Balsam Poplar	1			Lodgepole Pine	1			SR	Balsam Poplar	110	Thick grass	
CC_068	Lodgepole Pine	1			Wild Rose	1		1	SR	Lodgepole Pine	43	Thick grass	
CC_069	White Spruce	1							SR	White Spruce	37		
CC_070	Lodgepole Pine	1							SR	Lodgepole Pine	30	Area heavily trampled	
CC_071	Balsam Poplar	2			Balsam Poplar	6	Trembling Aspen	1	SR	Balsam Poplar	141		
CC_072	White Spruce	1							SR	White Spruce	31	Tall grass	
CC_073	Lodgepole Pine	1							SR	Lodgepole Pine	34		
CC_074	Lodgepole Pine	2							SR	Lodgepole Pine	39	Thick grass	
CC_075	Lodgepole Pine	1			White Spruce	1			SR	Lodgepole Pine	40	Thick grass	



Camp Creek Survey Plot Status Fall 2024

Project Partners:



- Plot Status
- SR-C (Green circle)
 - SR-D (Yellow circle)
 - SR-CD (Light green circle)
 - NSR- (White circle)
 - NSR-LIG-C (Green diamond)
 - NSR-LIG-D (Yellow diamond)
 - NSR-LIG-S (Orange diamond)
 - Project Boundary (Red outline)



Date Created: 2025-02-05
Project CRS: EPSG:3400
Source: Google Satellite
Created By: Tree Time Services Inc.
Scale: 1:3,000

0 100 200 m





Camp Creek 2024 Survey Fill Plant Area

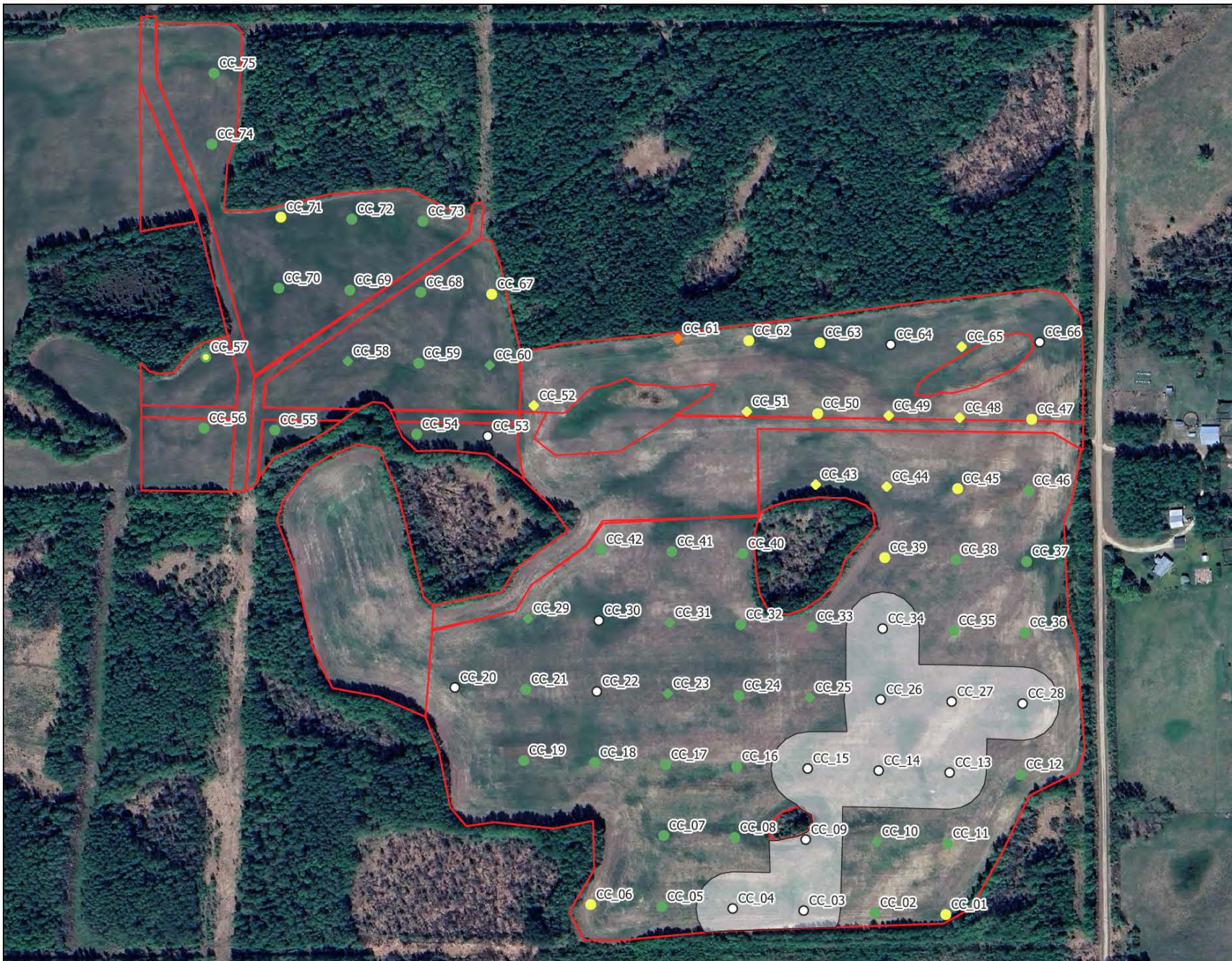
Project Partners:



- Plot Status
- SR-D
 - SR-CD
 - NSR-LIG-C Fill Plant
 - NSR-LIG-D
 - NSR-LIG-S
 - SR-C
 - Fill Plant Area
 - Project Boundary



Date Created: 2025-02-05
Project CRS: EPSG:3400
Source: Google Satellite
Created By: Tree Time Services Inc.
Scale: 1:3,000



Site Photos

Plot CC_02



Plot CC_12





Plot CC_26



Plot CC_36



Plot CC_47



Plot CC_54



Plot CC_62





Project Forest Monitoring Assessment Summary Sheet

Project Name	Camp Creek
Applicability	Trajectory of re-wilding success
Landowner	ACA
Site Location	54.257824, -114.732148
Year Planted	2022
Assessment #:	2

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

Krishanda Zimmer, Lawrence Fraser

Disturbance Areas and areas to be removed from reforestation 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 disturbances were recorded.

Summary of Preventive and Corrective Actions:

One of the NSR areas identified in 2023 has expanded and is 3.3 ha. The area should be investigated for site-limiting factors and considered for a fill plant.

Project Forest and the ACA need to discuss vegetation management options for the site and whether the ACA desires a fill plant.

Declaration:

I do hereby declare that this submission:

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

Validated/Signed by:



Print Name:

Lindsay Dent

Registration #

1838

Date:

January 17, 2024

Company:

Tree Time Services Inc.

Appendix B - Camp Creek Restoration Overview

Project Forest - Camp Creek Restoration Overview

Prepared by Project Forest



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 ProjectForest.ca



This document provides an overview of the restoration plan for Project Forest at the Alberta Conservation Association Camp Creek property at SE 7-61-5-W5M. Timing and exact quantities of seedlings are approximate.

Site Restoration Plan

Species and stock types

We will be using the following species and stock types for this planting:

Table 1: Species recommended for planting at Camp Creek site

Species	Stock Type	Stock Size	Number of Seedlings
White spruce	Plug - 1+0	412A	23,040
Balsam poplar	Plug - 1+0	415D	7,560
White birch	Plug - 1+0	415D	2,340
Lodgepole Pine	Plug - 1+0	412A	14,940
Willow spp.*	Plug - 1+0	412A	7,560
Green Alder	Plug - 1+0	415D	2,520

***Note:** Willow spp. refers to a mix of native willow species.

Site preparation and maintenance

Due to continual cultivation and a complex of soil types, including an Orthic Gray Luvisol, an Eluviated Eutric Brunisol, a Dark Gray Luvisol, and an Orthic Dark Gray Chernozem, site preparation is not required for the soil conditions or current vegetation.

To reduce the establishment of weeds and forage grasses in the bare soil, we will establish a cover crop prior to planting. The recommended seed mix for a cover crop would be Custom Native Reclamation Mix seeded at 15kg/ha (Reference – **Table 2**).

There is also an area of the site not scheduled for planting, but rather scheduled to remain as open parkland in an attempt to promote ungulate habitat. This area will be seeded with Diploid Annual Ryegrass at 30kg/ha.



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 ProjectForest.ca



Table 2: Custom Native Reclamation Mix

Species	Percentage of Mix
Slender Wheatgrass	20.0%
Rocky Mountain Fescue	16.0%
Tufted Hairgrass	8.0%
White Clover – low growing (bare)	12.0%
Canada Wild Rye	25.0%
Diploid Annual Ryegrass	19.0%

Maintenance

The only recommended maintenance activity would be for weeds. As weeds establish onsite, a backpack sprayer could be used as necessary. In areas where the conifers will be exclusively planted, more aggressive annual weed spraying may occur.

Planting strategy/techniques

Project Forest – Camp Creek will be stratified into three different areas (Reference **Appendix A**) based on their topography and drainage. These areas would reflect their suitability for different species and their relative planting proportions.

***Project Forest staff will be onsite September 22, 2022, and the planting strategy will be ground truthed. The possibility of planting area changes does exist and should they occur will be communicated through an edited version of this document submitted to the ACA no later than the 28th of September 2022.**

Area 1

The northwest quadrant of the site will be planted with lodgepole pine and white spruce. Not only will this create a pure coniferous stand which will add stand structure to the rewilding plan, a pure conifer section of the site will allow for noxious weeds and non-desirable vegetation management if needed with no risk to seedling mortality.



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 ProjectForest.ca



Table 3: Recommended Species for Camp Creek Area 1

Species	Proportion	Comments
Lodgepole Pine	80%	Planted evenly across the site targeting the higher well drained areas at 2,000 stems/ha ~ 12,240 seedlings.
White spruce	20%	Planted evenly across the site targeting the lower moderately drained areas at 2,000 stems/ha ~3,060 seedlings

Area 2

This area is the north central portion of the site 3.47ha in area. This area will be planted with a mixture of balsam poplar, white birch and willow spp. These three species will be used to provide adequate species diversity throughout the section of rolling terrain highlighted by two Graminoid marsh areas. Willow spp. will be planted nearest to the marsh areas, balsam poplar will be the secondary species planted at an elevated position to the willow and white birch will be planted throughout the rest of Area 2.

Table 4: Recommended Species for Camp Creek Area 2

Species	Proportion	Comments
Willow Spp.	36%	Planted around the perimeter of the Graminoid marsh areas at 2,000 stems/ha ~2,520 seedlings
Balsam Poplar	31%	Planted at an elevated position above the willow spp. around the Graminoid marsh areas at 2,00 stems/ha ~2,160 seedlings.
White Birch	33%	Planted through the rest of area ~ 2,340 seedlings.

Area 3

Area 3 makes up the the majority of Project Forest – Camp Creek’s rewilding area. It is a mix of rolling terrain which incorporates well drained and poorly drained microsite locations. Area three will be managed as a mixed wood forest with a mix of five species.

The lodgepole pine will be planted in the highest best drained portions of Area 3. The white spruce will be planted in the moderately drained sections of Area 3. The balsam poplar and



green alder will be planted evenly throughout Area 3 and the willow will be planted in the lowest and poorly drained sections of Area 3.

Table 5: Recommended Species for Camp Creek Area 3

Species	Proportion	Comments
White spruce	56%	Planted in the moderately drained sections at ~19,980 seedlings
Balsam poplar	15%	Planted evenly throughout area ~5,400 seedlings
Lodgepole Pine	8%	Planted in the well drained sections of the area ~ 2,700 seedlings
Willow spp.*	14%	Planted in the poorly drained sections of the area ~ 5,040 seedlings.
Green Alder	7%	Planted evenly throughout area ~2,520 seedlings

Table 6: Area Planting Summary Table

Species	Number of Seedlings	Area 1	Area 2	Area 3
White spruce	23,040	3060	0	19980
Balsam poplar	7,560	0	2160	5400
White birch	2,340	0	2340	0
Lodgepole Pine	14,940	12240	0	2700
Willow spp.*	7,560	0	2520	5040
Green Alder	2,520	0	0	2520

Rewilding Success

Project Forest is committed to meet or exceed the expectations of the landowner. In this case, the Alberta Conservation Association planting survival expectations are:

“A minimum planting success will be considered at 60% survival over 5 years. 1,2,5-year survival/tree health inspections will be done by the planting partner, with reports on these survival inspections sent to ACA. ACA regional staff will also make special note on the general tree



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 ProjectForest.ca



health and survival on planted sites in their annual inspections. ACA staff will record those findings in the ACA internal tracking spreadsheet”.

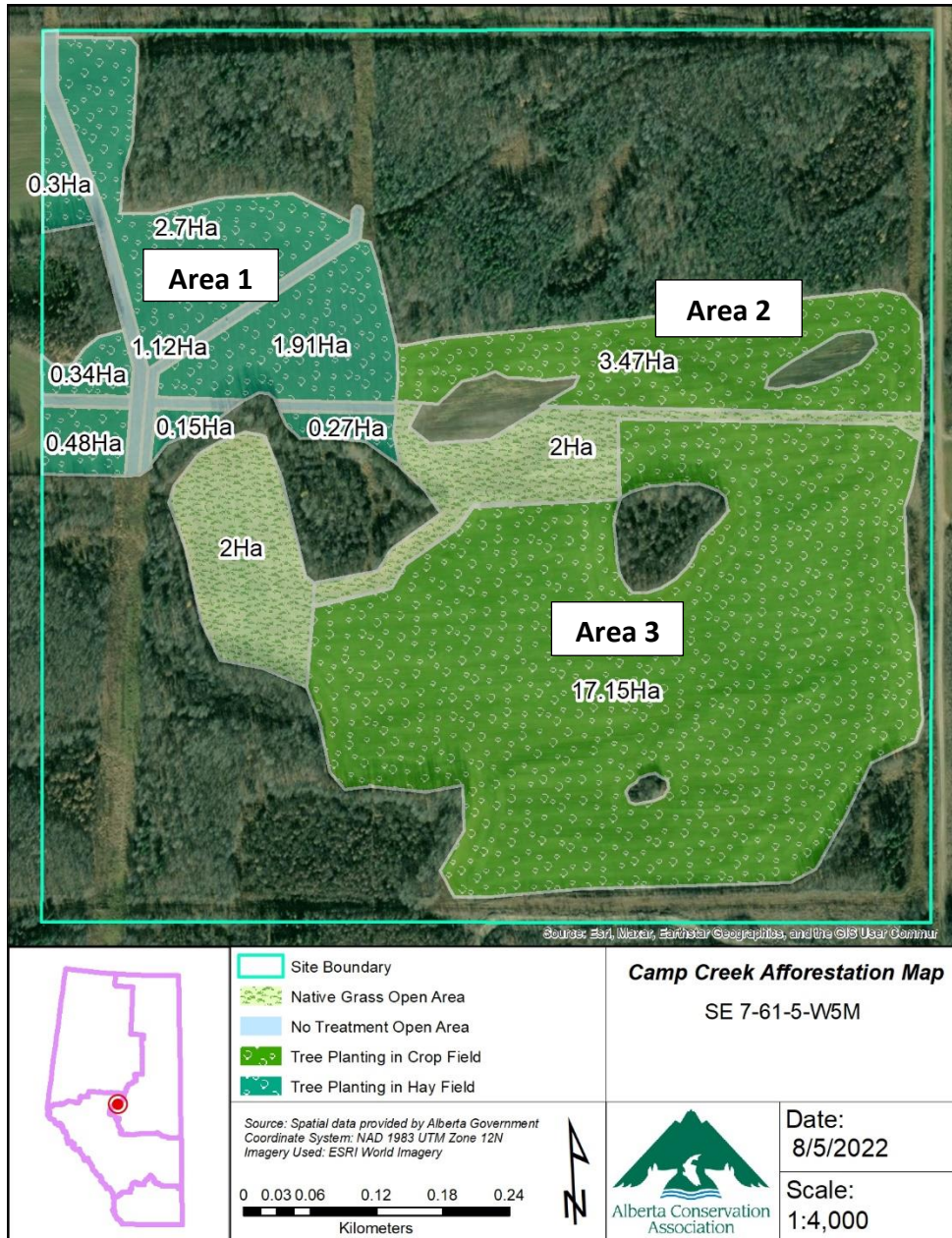
Project Forest guarantees our land and financial partners that all project areas will transition into a mature forest. The Project Forest – Camp Creek monitoring plan will ensure annual assessments of the project location occur to monitor rewilding success. At a time of no longer than 6 years after planting, the final rewilding survey will occur. The definition of success at that time will require a site density of 1,600 stems/ha and a stocking percentage of at least 80% across Project Forest – Camp Creek.



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 ProjectForest.ca



Appendix A – Maps of Planting Area at Project Forest – Camp Creek



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 ProjectForest.ca

