

# 2025 Annual Project Report

Siksika Nation  
Community Shelterbelt Program



Project  
Forest

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# Land Acknowledgement

## | Traditional Territories



Elder Rufus Pretty Young Man of Siksika First Nation

**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, Values and Purpose

## 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 air and water, increase biodiversity and contribute to the overall health and well-being of our community.



## 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

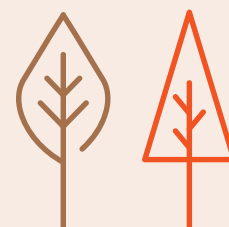
We document, monitor, and share our processes and findings with partners and the public—every step of the way, on every project.

### 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.

## Our Purpose

Inspiring interconnectedness  
and hope rooted in  
reciprocity and community





# 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 2025 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.



While the initial Siksika Nation Community Shelterbelt Program report did not include alignment with UN SDG 17 (Partnerships for the Goals), we have since expanded our reporting framework and added relevant metrics that were not reflected in the original Annual Report. See page [32](#) for details.

### Purpose & Positive Impact

The following UN SDGs are impacted by Project Forest Siksika Nation Community Shelterbelt Program:

#### Purpose



#### Positive Impact



# Overview

## | Forest Facts

### About the forest you funded.

NAME

Siksika Nation Community  
Shelterbelt Program

DATE PLANTED

Spring 2024

TOTAL SEEDLINGS PLANTED

152,760

TOTAL CO<sub>2</sub> REMOVED FROM THE AIR\*

Phase 1: 48,860 metric tonnes

SPECIES PLANTED

- Common Caragana (88,390)
- Colorado Blue Spruce (13,860)
- Okanese Poplar (11,245)
- Manitoba Maple (5,110)
- Green Ash (3,600)
- Northline Saskatoon (3,575)
- Scots Pine (2,970)
- Sea Buckthorn (2,780)
- Showy Mountain Ash (2,520)
- Ponderosa Pine (1,620)
- Silver Buffalo Berry (1,320)
- Smokey Saskatoon (570)
- Wild Red Raspberry (130)

LOCATION

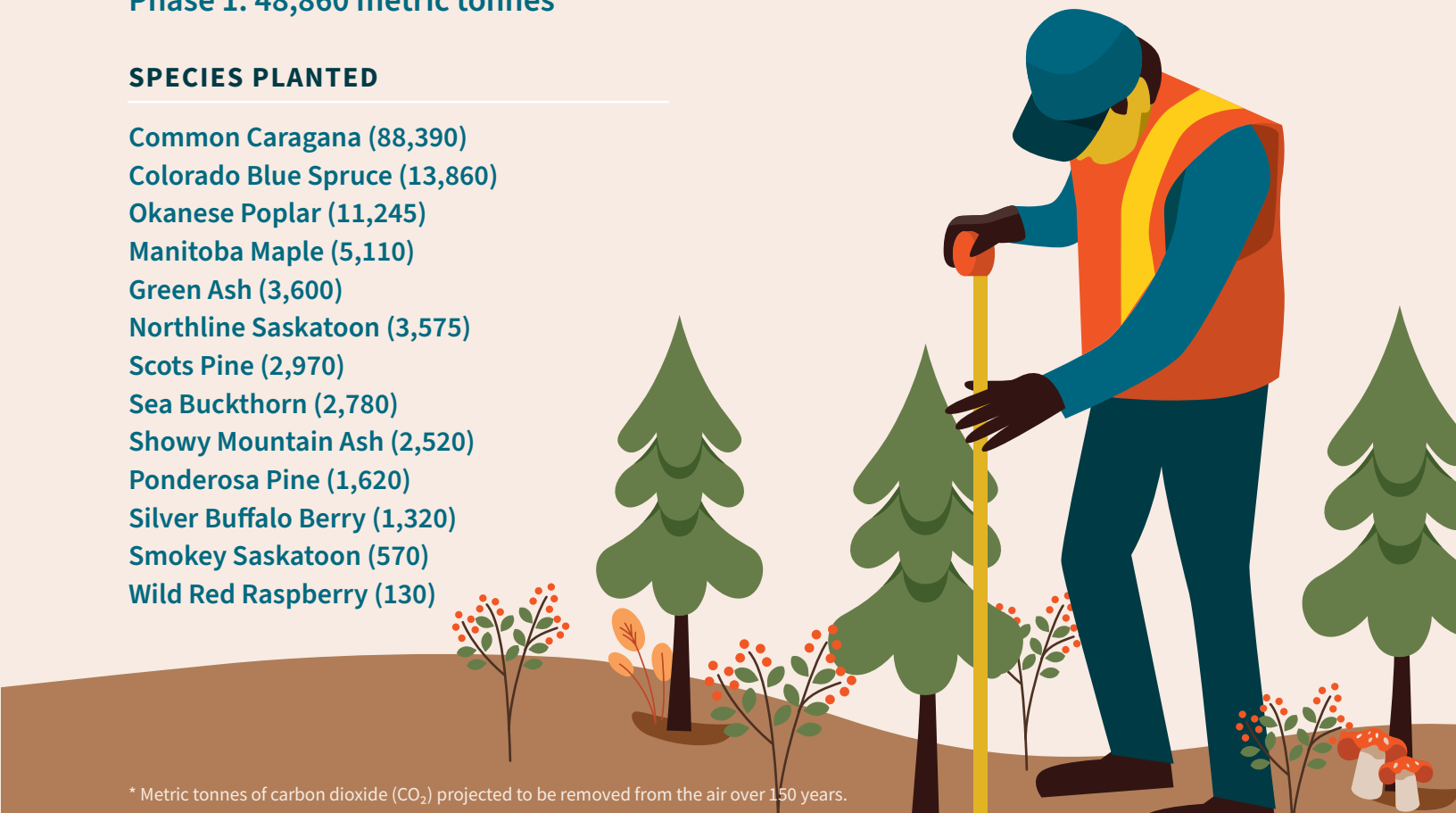
Siksika Nation  
Treaty 7 Territory  
[50°47'N 112°55'W](#)

SIZE

27,800 meters

TOTAL SPECIES PLANTED

13



\* Metric tonnes of carbon dioxide (CO<sub>2</sub>) projected to be removed from the air over 150 years.



# 2025 Activity Summary Report

## Siksika Nation Community Shelterbelt Program

This summary reframes the key findings from the Siksika Nation Community Shelterbelt Program survey reports through the lens of four relevant UN Sustainable Development Goals (SDGs).



# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program

## Purpose

### | UN SDG 15 - Life on Land

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



**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.**

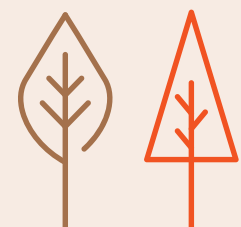
The Siksika Nation Shelterbelt Program did not undergo a formal monitoring assessment in 2025. Given the scale of the planting area, conventional ground-based survey methods present logistical challenges, and a drone survey is being planned for 2027 to provide a more comprehensive and spatially accurate assessment of the site.

In preparation, Siksika Nation has engaged a summer student to walk the land with a GPS unit, establishing precise survey linework that will guide the drone's flight path and ensure it is positioned accurately over the planted areas. This groundwork is essential, as the current linework is approximate and would not yield reliable results if used to direct aerial monitoring at this stage.

Precise GPS mapping completed in the summer of 2026 will lay the foundation for accurate drone-based monitoring throughout the remaining phases of the project, supporting Project Forest's long-term commitment to evidence-based land stewardship.

### Project Forest's Trail Camera Project

Project Forest's trail camera initiative is a long-term wildlife monitoring program designed to track wildlife activity over time. The primary goal of the Trail Camera Project is to observe and track the return of wildlife and gradual regeneration of functional ecosystems across project sites. Footage captured by motion-activated trail cameras is reviewed annually to assess how nature-based solutions are contributing to improving ecological function.



# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program

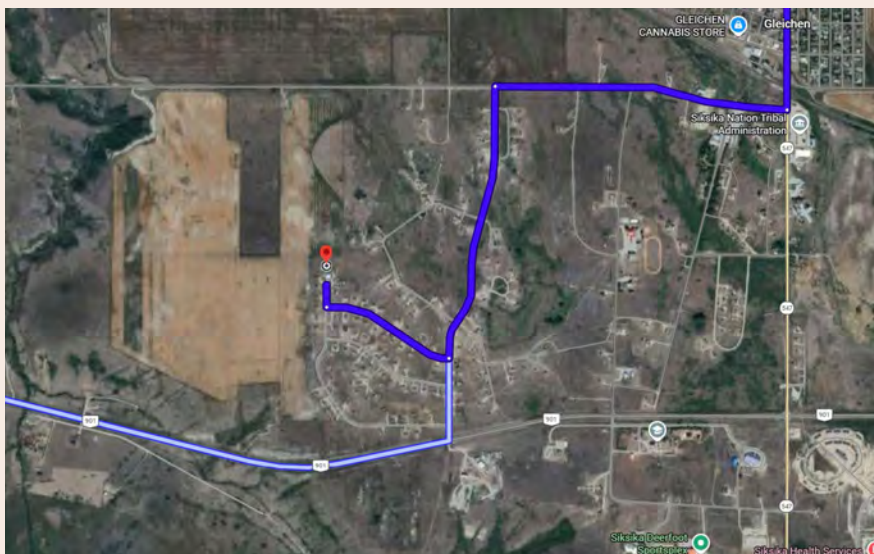
## Purpose

### | UN SDG 15 - Life on Land



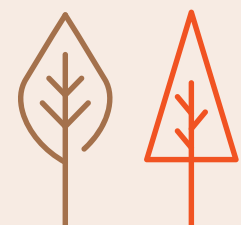
Trail cameras were installed at the Siksika Nation Community Shelterbelt Program in the winter of 2025 as part of Project Forest's long-term biodiversity monitoring program. In their first season of operation, the cameras have already captured deer, coyote, and wild horses across the site.

However, due to the proximity of the shelterbelt to adjacent roadways, a significant portion of the footage captured to date has been triggered by passing vehicles rather than wildlife. This is a known limitation, which will be addressed by ensuring cameras are orientated toward the shelterbelt interior, thus generating more data that is directly relevant to the ecological and habitat function of the project.



Siksika Nation Trail Camera 1

**Trail Camera 1:** Positioned along the perimeter of a residential area within the Siksika Nation community, with the field of view oriented toward the adjacent shelterbelt planting site

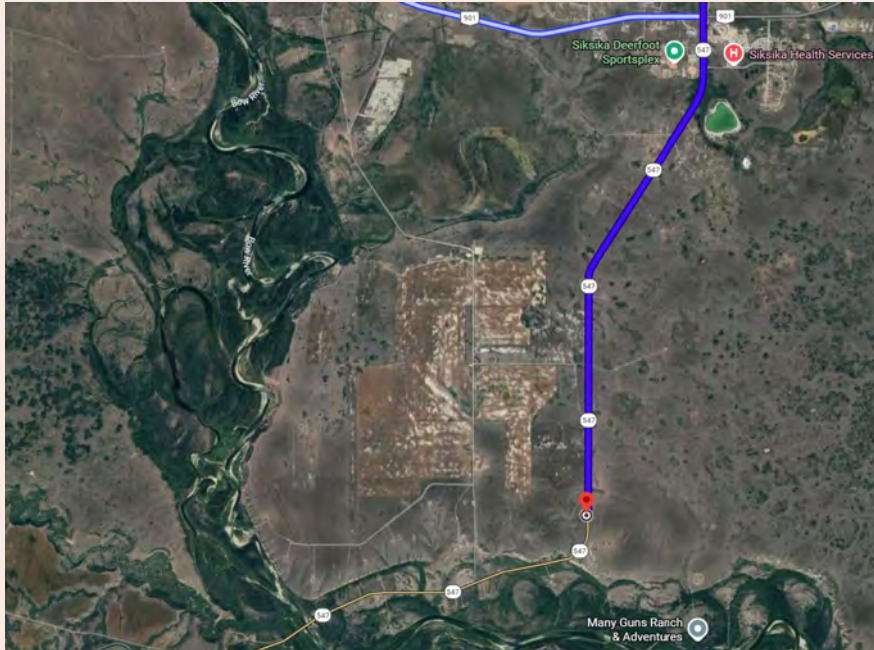




# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program

## Purpose

| UN SDG 15 - Life on Land

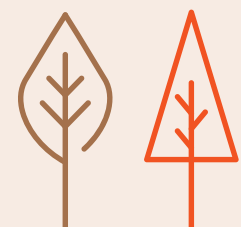


Siksika Nation Trail Camera 2

**Trail Camera 2:** Positioned roadside with the shelterbelt planting site within the camera frame. Wildlife detections in 2025 include wild horses, coyotes, and birds.

Baseline data from these cameras will establish a foundation for year-over-year comparisons that will, in time, help tell a compelling and evidence-based story of ecological recovery. Each year going forward, recorded wildlife occurrences will be catalogued by species and year, building a cumulative record of how the landscape continues to evolve as the shelterbelt grows.

Siksika Nation has been given full access to the camera feeds, making the monitoring program a shared, collaborative tool between Project Forest and the community.



# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program

## Purpose

### | UN SDG 13 - Climate Action

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



**Carbon Capture:** The site is currently on track to remove 355,630 metric tonnes of CO<sub>2</sub> as projected in year one.

This is inclusive of the assumption that seedlings planted in Phases 2 and 3 will sequester carbon at rates proportional to those observed in the current phase. This number will be refined as field monitoring data and site-specific modeling capacity improve.

# 355,630

metric tonnes of CO<sub>2</sub>  
projected to be removed  
from the air

### Building Human Capacity and Raising Awareness

On 18 June 2025, Project Forest hosted its second annual Seedling Giveaway at Siksika Nation, distributing 5,170 seedlings of wild raspberry, mountain ash, and silver buffaloberry to Nation members for planting around their households. The event brought together representatives from six financial partner organizations as hands-on volunteers, creating a space for shared stories and direct connection between corporate partners and the Siksika community.

By returning culturally and ecologically significant plants to individual households, the giveaway extends climate-conscious land stewardship beyond Project Forest's formal planting sites and into the fabric of daily community life. Each seedling planted represents a small but meaningful contribution to local carbon uptake, urban heat reduction, and community-level climate resilience.

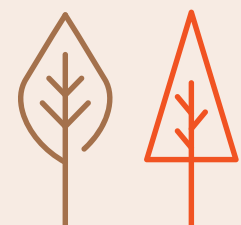
Events like this also reinforce the principle that climate resilience is built not only through large-scale nature-based solutions, but through the small, meaningful acts of stewardship that connect people to the land around them (Heller, 2005).

# 5,170

seedlings given away to  
Nation members in 2025

Species of cultural  
significance:

Wild Raspberry, Mountain  
Ash, Silver Buffaloberry



# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program



## Purpose

### | UN SDG 13 - Climate Action

#### Community and Corporate Outreach

Project Forest's 2025 Corporate Planting event at Siksika Nation brought together 25 partner companies and 284 employees to plant trees directly within the community shelterbelt. 9,900 Colorado blue spruce and ponderosa pine seedlings were planted over two weeks in September. Through hands-on participation in nature-based solutions, corporate employees gained direct exposure to the ecological and cultural dimensions of climate action.

The seedlots for both species planted in 2025 are as follows:

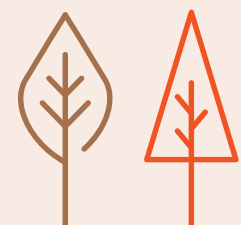
**Table 1: Seedlots for 2025 Corporate Planting Seedlings**

| Seedling Species     | Seedlot Number                                                 |
|----------------------|----------------------------------------------------------------|
| Colorado Blue Spruce | TT XXColoradoBlueSpruce910001<br>picepun-BS 412A 1+0 (180 box) |
| Ponderosa Pine       | TT 13PonderosaPineA6900<br>pinupon-Pp 412A 1+0 (160 box)       |

Each tree planted deepens a shared sense of responsibility for the health of the landscape, providing an increasingly enriching outdoor environment for Siksika Nation residents for generations to come.

# 284

Number of corporate employees at Project Forest's 2025 Corporate Planting Event at Siksika Nation

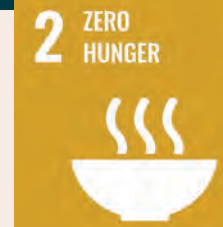


# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program

## Positive Impact

### | UN SDG 2 - Zero Hunger

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



In 2025, Project Forest distributed 5,170 food, medicinal, and culturally significant plants to community members at our Annual Siksika Nation Seedling Giveaway & Community Barbecue. A total of three different species were provided to households for planting around their homes.

*The information shared below was not provided to us by Elders or any Nation.*

#### Wild Red Raspberry (2,290)

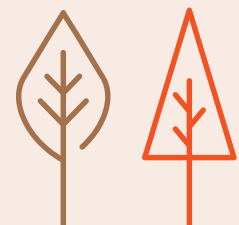
- Berries are high in antioxidants and rich in vitamins, making them a nutritious food source consumed fresh or prepared in jams, jellies, sauces, and baked goods.
- Traditionally used medicinally to ease menstrual cramps, support healthy pregnancy, and potentially aid in childbirth.
- Leaves are used to prepare medicinal teas associated with uterine and digestive health.

#### Silver Buffaloberry (1,080)

- Berries contain high levels of vitamin C, carotenoids, and antioxidant phenolics, consumed fresh, dried for winter storage, or incorporated into pemmican.
- Berries were traditionally eaten fresh, dried, or in jelly, and were used to treat stomach troubles.
- Berries and plant parts served as traditional remedies for stomach complaints, constipation, and fevers, while the high vitamin C and antioxidant content contributes to supporting immunity.

#### Mountain Ash (1,800)

- Inner bark has been used traditionally to treat sore throats, leaves as a remedy for colds, and berries for their potential to provide relief from kidney-related issues.
- Showy mountain ash has been used as a traditional medicine to treat type-2 diabetes, subsequently validated through ethnobotanical research (Eid et al., 2016).
- Sorbus decora has demonstrated glucose-mediating activity in vivo and other diabetes-related activity in vitro (Harbilas et al., 2009; Eid et al., 2016).





# 2025 Activity Summary Report - Project Forest Siksika Nation Community Shelterbelt Program

## Purpose

### | UN SDG 11 - Sustainable Cities & Communities

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



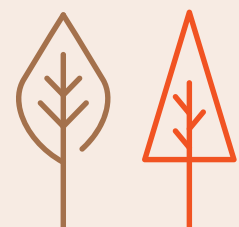
## Partnership Model

Beyond the land itself, Project Forest is committed to granting First Nation-owned businesses first right of refusal on project work, and to transparently tracking and reporting all resulting economic activity. This ensures that the partnership model generates measurable social and economic benefits for the communities it operates within. The shelterbelts created on Indigenous lands are, in this way, simultaneously ecological, cultural, and community infrastructure.

In 2025, local watering contractors from Siksika Nation were hired to maintain irrigation across the community shelterbelts, supporting seedling survival through the establishment phase. This created direct local employment opportunities, outlined below:

**Table 2: Local Contract Totals in 2025**

| Siksika Nation Watering Contractors | Approximate Hours (Combined) | Total Earnings      |
|-------------------------------------|------------------------------|---------------------|
| May                                 | 30                           | \$ 5,938.46         |
| June                                | 120                          | \$ 30,712.00        |
| July                                | 120                          | \$ 30,712.00        |
| August                              | 120                          | \$ 30,712.00        |
| <b>Totals</b>                       | <b>390</b>                   | <b>\$ 98,074.46</b> |



# 2024 Activity Summary Report

## Siksika Nation Community Shelterbelt Program

This summary reframes the key findings from the Siksika Nation Community Shelterbelt Program survey reports through the lens of three relevant UN Sustainable Development Goals (SDGs).



# 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.**

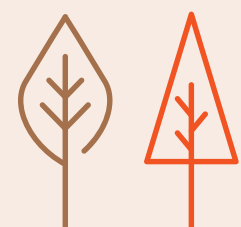
**Indicator 15.1.1:** Forest area as a proportion of total land area.



# 137,690

Total Trees & Shrubs  
Planted in 2024

The Project Forest Siksika Nation Community Shelterbelt Program is a collaboration between Project Forest and Siksika Nation, aimed at bringing urgently needed trees to the community over five years. The program seeks to address the lack of natural infrastructure in both residential and agricultural areas, where community members are increasingly feeling the effects of climate change.



# 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 to plant trees, shrubs, food and medicinal plants that contribute to increasing nature and forested areas.** This project directly enhances biodiversity and improves ecosystem services through the careful planting of tree and shrub seedlings. Species for this project were selected in consultation with Siksika Nation for their ability to survive in the adverse growing conditions identified throughout the project area.

The Project Forest Siksika Nation Community Shelterbelt Program is a collaborative, multi-year initiative designed to enhance tree cover, protect against extreme weather, and provide cultural and ecological benefits to the community. Historically, First Nations communities, including Siksika Nation, were excluded from federal programs that supplied farmers with trees for shelterbelts across the prairies. This left their lands more vulnerable to harsh climatic conditions, wind damage, and soil degradation.

The installation of shelterbelts throughout the Nation will provide numerous benefits, including:

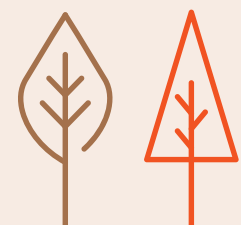
- Improve human health and living conditions,
- Privacy from the vehicle traffic,
- Reduced noise from highway traffic,
- Shelter from the wind and snow in the winter,
- Shade in the summer,
- Foods and medicine source for the community,
- Preserve topsoil within the agricultural regions of the Nation,
- Safer winter driving conditions through capturing snow drifts,
- Create wildlife habitat, and
- Sequestering carbon.

This program will use three varieties of shelterbelts, each with their own unique benefits. They are:

- Community Shelterbelts
- Agriculture Shelterbelts
- Transportation Shelterbelts

**27,800**  
meters of land planted

**13**  
Different species of trees & shrubs





# Purpose

## | UN SDG 15 - Life on Land



During the first phase of the project, 137,690 seedlings were deployed throughout Siksika Nation. Thirteen different species were planted, they were selected because of their ability to survive in harsh growing conditions such as direct sunlight and limited amounts of water. Phase One is projected to remove 48,860 tonnes of CO<sub>2</sub> from the atmosphere while enhancing food and medicine availability, habitat for wildlife, and overall community well-being.

**Table 1: Seedling Planting Numbers**

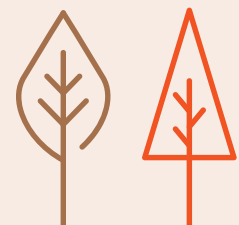
| Project Event          | Seedlings      |
|------------------------|----------------|
| Corporate Planting     | 7,020          |
| Seedling Giveaway      | 6,795          |
| Professional Planting  | 123,875        |
| <b>Seedlings Total</b> | <b>137,690</b> |

**137,690**  
seedlings were deployed

The Siksika Nation Shelterbelt Program prioritizes creating a long-lasting, climate-resilient solution for the community, selecting tree and shrub species best suited to the region's challenging conditions. While only one native species is included: silver buffaloberry, the chosen mix reflects careful research and collaboration with community leaders to ensure the shelterbelts can thrive and provide lasting benefits.

Species selection was guided by site-specific ecological constraints, including temperature extremes, desiccating winds, and low annual precipitation. To address these challenges, drought and cold-tolerant species not commonly found in the region were introduced based on their demonstrated resilience in comparable climates.

The objective is to establish long-term, self-sustaining shelterbelts that protect soil, enhance biodiversity, and improve people's lives —aligning with UN Sustainable Development Goal 15.3 (Combat desertification, restore degraded land and soil) and 15.5 (Protect biodiversity and natural habitats).



# Purpose

## | UN SDG 15 - Life on Land



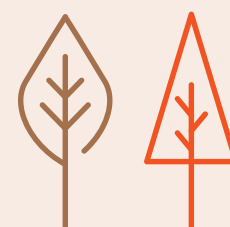
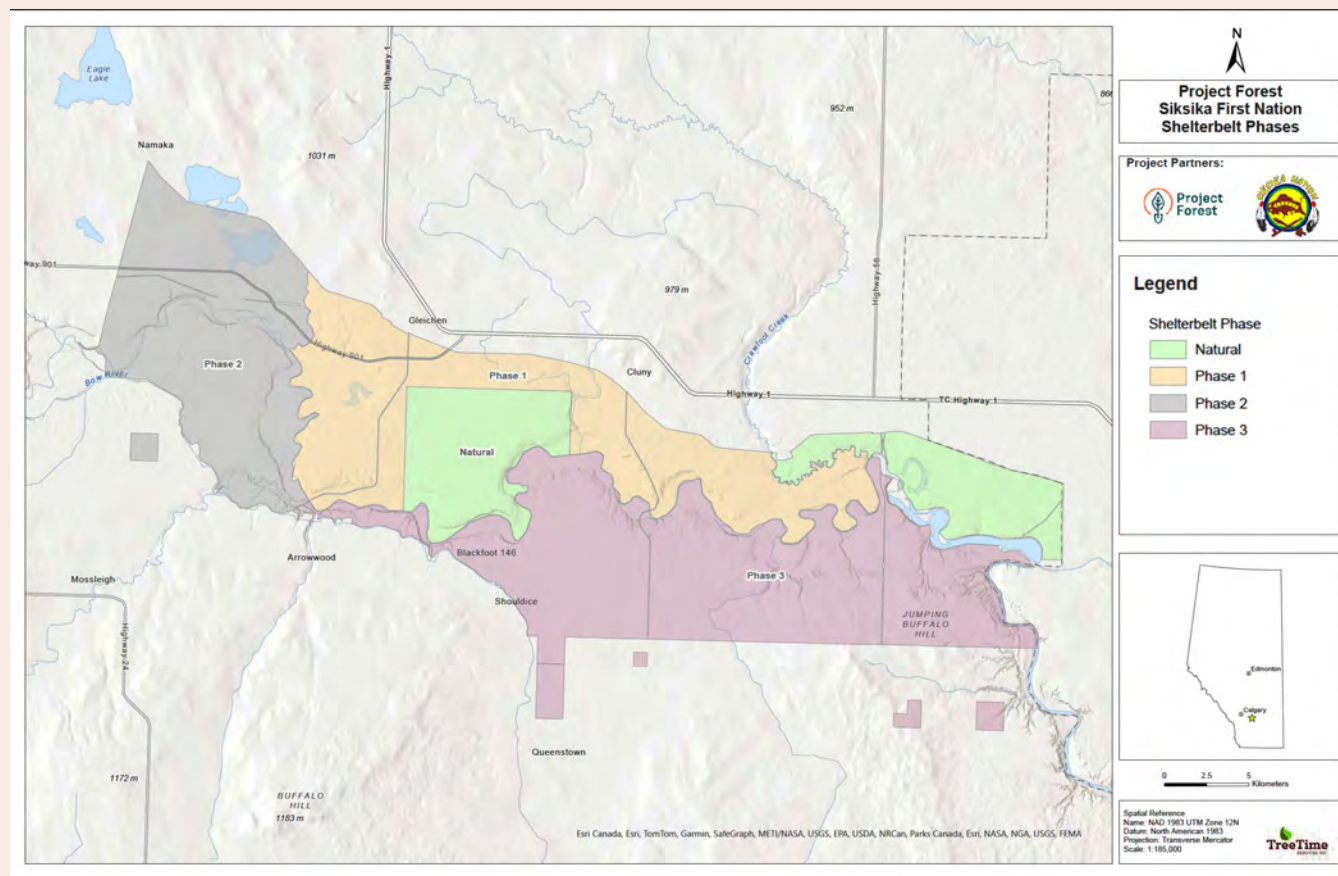
The new species agreed upon after extensive research and discussion with the Siksika Nation Elders, Council Members and Community were:

- Colorado Blue Spruce
- Scots Pine
- Okanese Poplar
- Manitoba Maple
- Common Caragana
- Sea Buckthorn
- Green Ash
- Northline Saskatoon
- Showy Mountain Ash
- Ponderosa Pine
- Silver Buffalo Berry
- Smokey Saskatoon
- Wild Red Raspberry



Silver Buffaloberry

**Figure 1: Siksika First Nation Shelterbelt Phases**

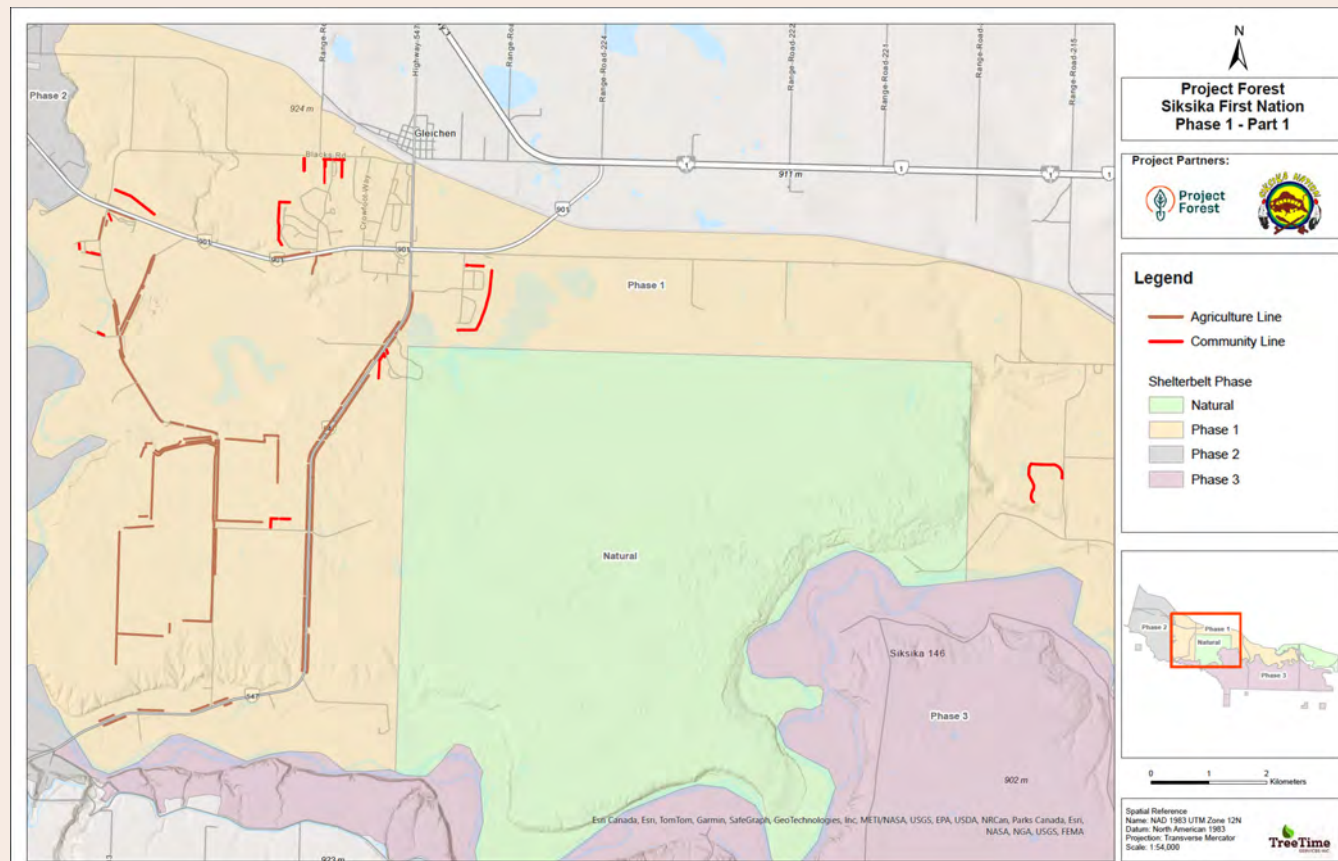


# Purpose

## | UN SDG 15 - Life on Land



Figure 2: Siksika First Nation Shelterbelt Phase 1 Part 1



**Indicator 15.2.1:** Progress towards sustainable forest management.

Through the Siksika Nation Community Shelterbelt Program, Project Forest is helping the community enhance degraded lands and create shelterbelts that provide lasting environmental benefits. **The program's Shelterbelt Plans, Monitoring Protocols, and Remediation Actions ensure that every seedling planted contributes to SDG Indicator 15.2.1** by advancing sustainable tree management principles on a local scale. These shelterbelts improve air and water quality, provide wind protection, foster wildlife habitat, and strengthen the community's connection to the land; ensuring environmental and cultural benefits for present and future generations.

## Rewilding Plans

Prior to planting, we create a Rewilding Plan to identify and address any challenges and to ensure that the seedlings planted have the best chance of survival.

# Purpose

## | UN SDG 15 - Life on Land



To create a Rewilding Plan, a site visit is conducted to survey the area where we identify and develop mitigation strategies for any site limiting factors and come up with a recommended species list. After consultation with the Nation we finalize the number and types of species that will be planted. Our Rewilding Plans include detailed planting maps, site limiting factor mitigation strategies, end of life vegetation management plans, site preparation prescriptions, and a project specific monitoring plan.

We tailored our rewilding plan based on site limiting factors such as: high summer and low winter temperatures, limited moisture availability, soil compaction, and potential salt contamination from road maintenance, [Appendix A - Work Scope].

The plan was designed to create benefits to the Nation such as: reduced winter winds, lowering summer temperatures, privacy from highway traffic, reduced noise pollution for the communities throughout the Nation, top soil conservation, increased biodiversity and safer winter travel due to the snow catching potential of mature shelterbelts.

### Monitoring Protocols

During project design and budgeting, Project Forest budgets for a 25% mortality event for all projects. While planning for the best, preparing for the worst is a prudent strategy to ensure Project Forest achieves the objective of mature trees throughout all of its project areas.

Each site is surveyed annually, the results of the survival surveys are used to determine if a fill plant is required, [Appendix C - Site Survey]. The results of the Phase1 Part 1 site surveys are as follows:

**Table 2: Agriculture Shelterbelt**

| Species         | Planted | Visited | % Alive (of Visited) |
|-----------------|---------|---------|----------------------|
| Blue Spruce     | 14,300  | 3465    | 26.2%                |
| Ponderosa Pine  | 9500    | 2455    | 20.4%                |
| Manitoba Maple  | 630     | 400     | 34.4%                |
| Okanese Poplar  | 22,490  | 3600    | 18.8%                |
| Sea Buckthorn   | 1280    | 530     | 0.4%                 |
| Common Caragana | 20,600  | 4350    | 2.8%                 |

# Purpose

## | UN SDG 15 - Life on Land



**Table 3: Community Shelterbelt**

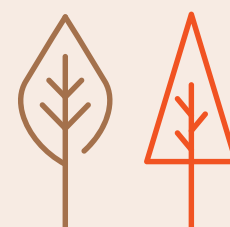
| Species             | Planted | Visited | % Alive (of Visited) |
|---------------------|---------|---------|----------------------|
| Blue Spruce         | 2070    | 675     | 36.7%                |
| Ponderosa Pine      | 5410    | 2200    | 53.5%                |
| Manitoba Maple      | 2210    | 950     | 19.4%                |
| Okanese Poplar      | 1755    | 230     | 30.2%                |
| Sea Buckthorn       | 720     | 190     | 17.6%                |
| Common Caragana     | 7000    | 1580    | 1.0%                 |
| Silver Buffaloberry | 350     | 120     | 4.3%                 |
| Green Ash           | 4030    | 1090    | 7.4%                 |

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.

Project Forest in conjunction with Pembina Pipelines, will host the “Pembina Pathways Days,” which is their largest staff volunteer event of the year.

As part of our adaptive management strategy, two-person field teams will be deployed to systematically assess seedling survival across all shelterbelt planting sections. This ground-truthing exercise is designed to validate the 2024 survey data and ensure an accurate understanding of establishment success. Our objective is to achieve 100% spatial coverage of the planted area to identify underperforming zones and guide targeted remediation efforts.





# Purpose

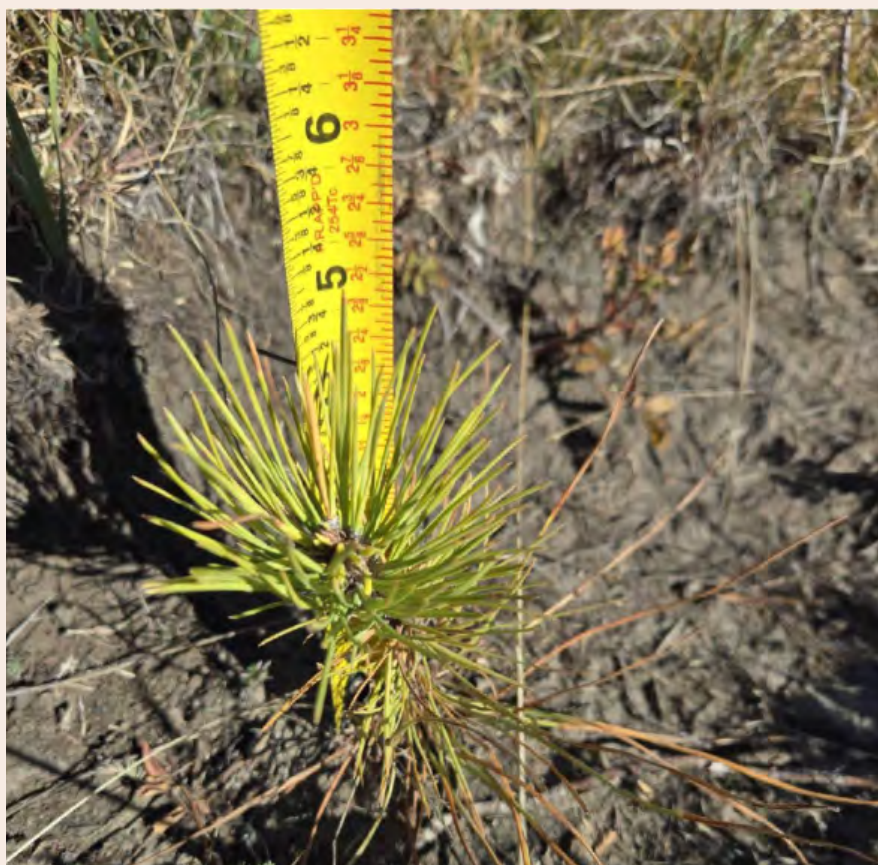
## | UN SDG 15 - Life on Land



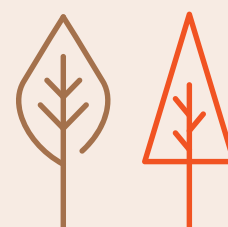
Species selection for replanting will be data-driven. Only those species demonstrating high survivability and ecological compatibility will be included in the fill plant, while poorly performing species will be excluded. This approach supports more efficient resource use and improves the likelihood of long-term success.

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) and 15.5 (protect and restore biodiversity).

The survey will be conducted in October 2025. Upon completion, results will inform species-site matching, causal analysis of mortality, and development of a refined planting strategy grounded in local performance metrics.



Siksika Nation Site Survey



# 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 shelterbelts we build can have a significant impact on mitigating climate change.**

**Indicator 13.2.2:** Total greenhouse gas emissions per year.

The shelterbelts act as carbon sinks, absorbing carbon dioxide (CO<sub>2</sub>) from the atmosphere through photosynthesis and storing it in their biomass and soil. By planting them, we increase the amount of CO<sub>2</sub> sequestered, thereby reducing the concentration of greenhouse gases (GHGs) in the atmosphere. This helps mitigate climate change by reducing the amount of CO<sub>2</sub> that contributes to global warming (NRCAN, 2024).

Over 800,000 more seedlings are projected to be planted in Phase Two and Phase Three of this project over the next few years. The total amount of CO<sub>2</sub> projected to be removed from the atmosphere from the Siksika Nation Community Shelterbelt Program is around 355,630 tonnes.

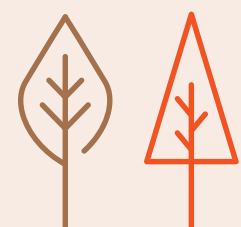
Project Forest typically uses the [Carbon Budget Model of the Canadian Forest Sector \(CBM-CFS3\)](#) modelling framework developed by Natural Resources Canada to assess the impacts of our forests on carbon. This is the national standard for reporting on forest carbon.

# 356K

**Metric tonnes of CO<sub>2</sub> projected to be removed over the project's lifetime**

### **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



*“...For over 100 years, the federal government provided farmers across the prairies with trees for shelterbelts, protecting them from harsh elements and improving crop conditions. However, Siksika Nation and many other First Nations were not given access to these trees or the numerous benefits they offered.*

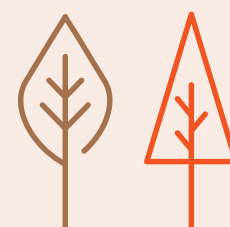
*Today, Siksika Nation is experiencing the impact of climate change firsthand. Living in a valley with little to no natural protection from extreme weather, the community is increasingly vulnerable.”*

Eldon Weasel Child, Siksika Nation Knowledge Keeper

For the Siksika Nation Community Shelterbelt Project, the Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) was not directly applicable, as it was developed for forest ecosystems and is not calibrated for agricultural soils where this project is situated. Recognizing the need for accurate projections of carbon sequestration, the project team sought support from carbon modeling experts. However, efforts to secure external expertise were unsuccessful.

To address this gap and ensure continuity in climate impact estimation, preliminary carbon sequestration calculations were completed using ChatGPT, based on best available data and species-specific estimates. These values are documented in Appendix D - Carbon Sequestration Calculations, which provides a detailed carbon forecast for Year 1, Phase 1 of the planting program; (based on a 150 year calculation).

Currently, the total project carbon estimate assumes that the additional 800,000 seedlings scheduled for future phases will sequester carbon at rates proportionate to the 2024 planting cohort. This assumption will be refined as field monitoring data and site-specific modeling capacity improve—supporting more accurate climate impact reporting in future project phases and contributing to nature-based climate solutions under SDG 13.



# 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:

### 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

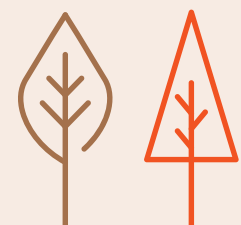
- In-person, hands-on volunteering opportunities for Silver, Gold and Platinum financial partners
- Educational talks around seedling physiology, forest succession, tree planting technique, tree planting survey methodology, seed collection, plant identification, and traditional plant uses
- On **October 22, 2023 our Sikisika First Tree Planted Celebration** took place, and we planted 7,020 trees during the corporate planting.

# 21

Project Funding Partners



Sikisika Nation First tree Planted Celebration



# Purpose

## | UN SDG 13 - Climate Action



### 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

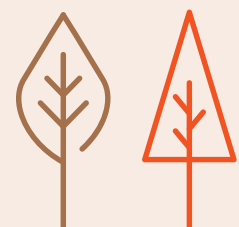
- Overview of the rewilding process for general audiences
- Discussions of more in-depth topics such as working with Indigenous communities, operating a non-profit, and sustainable forest practices

### 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

### Community Engagement

- On June 18, 2024, Project Forest coordinated a large-scale community seedling give away at Siksika Nation, during which 6,795 native seedlings were gifted to Nation members. The objective was to provide five seedlings per household to encourage local stewardship and participation in landscape restoration efforts. These annual seedling giveaways will continue throughout the life of the project to foster sustained community involvement and ecological awareness.
- On June 27, 2023, a Sweetgrass Ceremony and community engagement session was held to ceremonially launch the project. The event was led by Siksika Nation members and included traditional ceremonies, a sharing circle focused on project dialogue and cultural knowledge exchange, and the distribution of sweetgrass to schools and participating Nation members. These actions support deep, culturally grounded engagement and ensure that restoration efforts align with the values, knowledge, and leadership of the community.





# 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.



**Shelterbelts can have a positive impact on communities through creating safer, resilient, and sustainable natural spaces.**

**Target 11.5:** Significantly reduce the number deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including environmental (water, wind) disasters.

The creation of community shelterbelts buffers roads, providing privacy and reducing exposure to dust and traffic; enhancing livability, safety, and sustainable community design.

Community health includes shade, reduced traffic noise, safer winter driving, and overall improved living conditions.

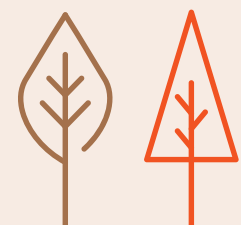
Benefits, including:

- Shelter from the wind and snow in the winter
- Shade in the summer
- Improve road conditions near homes
- Privacy from the vehicle traffic
- Preserve topsoil within the agricultural regions of the Nation
- Safer winter driving conditions through capturing snow drifts

Community shelterbelts create natural barriers from roads, shield homes from heavy winds, as well as making driving conditions safer in dangerous weather conditions.

1M

Seedlings to be planted  
over the life of the project



# 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.

When working with Indigenous communities, Project Forest offers the first right of refusal for site preparation and maintenance work to the Nation.

Rewilding projects require labour to complete, including but not limited to:

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

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 and expand local fiscal space. For the 2024 Community Shelterbelt Program, we hired tree planters and watering contractors (post planting) for this project. The employment opportunity was as follows:

**Table 4: Local Contractors Hired**

| Employment Opportunity                     | Total Hours (Combined) | Total Earnings |
|--------------------------------------------|------------------------|----------------|
| Tree Planters (x3)                         | 47 Hours               | \$1,468.75     |
| Watering Contractors (2 crews of 2 people) | 2,688 Hours            | \$80, 640.00   |
| Totals                                     | 2,735 Hours            | \$82, 108.75   |

As future phases of the Siksika Nation Community Shelterbelt Project are implemented, local contractors from Siksika Nation will continue to be retained to carry out post-planting maintenance activities, specifically the irrigation of the community shelterbelts during the first three growing seasons following establishment.

In addition, Tree Time Services Inc., the tree planting contractor for the project, will provide seasonal employment opportunities for Siksika Nation members during planting periods, supporting both local economic development and skills training in ecological restoration practices.

# 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.

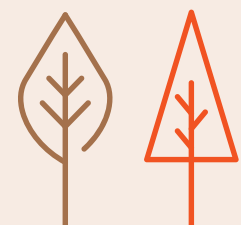
**Trees act as natural air filters by absorbing pollutants and particulate matter from the atmosphere.** They remove harmful gases by absorbing them through their leaf stomata, filtering these chemicals from the air. Particulate matter is intercepted by the tree's surfaces. When it rains, the particles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

In addition to improving air quality, trees provide opportunities for people to connect with nature, enjoy recreational activities, and experience the positive physical and mental health effects of spending time outdoors. The community will have access to nutritious food bearing plants and shrubs, promoting physical wellness and good health. They also provide various ecosystem services that indirectly contribute to our health and well-being.

Some of the important ecological services provided by shelterbelts include:

- cleaning water through water filtration
- cleaning air through oxygen production and absorption of pollutants
- enhancing soils and restoration of nutrients through the inclusion of food bearing plants and shrubs
- absorbing CO<sub>2</sub> from the atmosphere
- expanding biodiversity due to increased biomass of leaf litter

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



# 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.

On June 18, 2024, Project Forest hosted a seedling giveaway at Siksika Nation which included a community lunch. 6,795 seedlings (5 total per household) were given away, along with instructions for planting. Any extra seedlings were donated to Blackfoot Crossing and Old Sun's College.

The list of seedlings was as follows:

- Smokey Saskatoon (570)
- Wild Red Raspberry (130)
- Northline Saskatoon (3,575)
- Snowy Mountain Ash (2,520)

# 6,795

Food bearing seedlings  
planted



Siksika Seedling Giveaway

# Positive Impact

## | UN SDG 17 - Partnerships for the Goals

**Goal:** Strengthen the means of implementation and revitalize the global partnership for sustainable development.

**Matching ESG Goals:**

- Coordinating conservation, Indigenous, and business partnerships.
- Directing private capital toward public-good outcomes.
- Strengthening ESG transparency and accountability.



Every nature-based solution built by Project Forest is made possible by the coming together of funding partners, Indigenous communities, conservation organizations, and land stewards, each contributing something the others cannot provide alone.

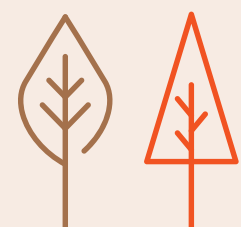
**Indicator 17.3.1:** Additional financial resources mobilized from multiple sources.

Nature-based solutions benefit everyone, yet it rarely has a natural funding source. Project Forest’s funding model is designed to draw resources from multiple sectors, allowing partners to share the full cost of a project in a manner that is structured, accountable and scalable. Since 2020, this approach has grown to include 77 funding partners, connecting the Canadian business community to Indigenous territories and conservation sites in a meaningful way.

The establishment of community shelterbelts at Siksika Nation was made possible through partnerships built on shared values and a collective commitment to long-term nature-based solutions. This alignment demonstrates how multi-source funding can generate a lasting ecological and community legacy.

77

Total funding partners  
between 2020 and 2025





# Positive Impact

## | UN SDG 17 - Partnerships for the Goals



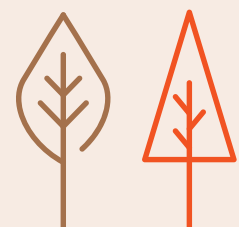
**Target 17.16:** Enhance the Global Partnership for Sustainable Development through multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources.

Large scale shelterbelts are the product of relationships that no single organization could build alone. Conservation groups contribute land and ecological expertise. Indigenous communities contribute land, traditional knowledge, cultural context, and long-term stewardship. Businesses contribute financial resources that make rewilding possible. Post-secondary institutions contribute research capacity and scientific rigour that strengthen our understanding of how these nature-based solutions grow and function over time. When brought together in alignment, Project Forest is able to coordinate their contributions and ensure that the outcomes are documented and shared in a way that keeps all partners accountable and engaged year after year.

With additional guidance from the Indian Resource Council who hold a formal seat on our Board of Directors, we ensure that Indigenous institutional knowledge doesn't only shape our planting plans but our governance. This exchange of resources and knowledge deepens over time as relationships with our partners grow stronger each year. The result is not a transactional arrangement, but a growing community of organizations and individuals united around a shared commitment to rewilding Canada, one forest at a time.

**Target 17.17:** Encourage and promote effective public, public-private, and civil society partnerships.

Permanence agreements with landowners guarantee that seedlings planted remain protected in perpetuity. First-right-of-refusal commitments to First Nations ensure that partnership benefits flow back to communities in the form of employment and contracts. These are not informal arrangements; they are documented, enforceable commitments that anchor our partnerships over the long term and model what responsible, accountable public-private and civil society collaboration can look like in a conservation context.



# Partner

| Funding Partners



# Our work is not possible without you.

Thank you to our funding partners!

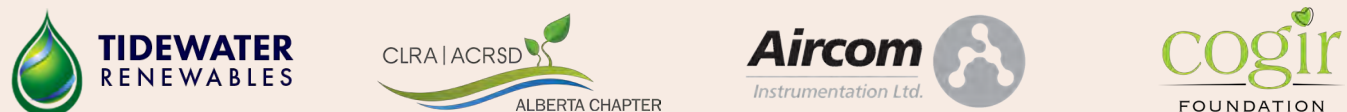
## Diamond Willow



## Platinum Forest



## Gold Woodland



## Silver Orchard

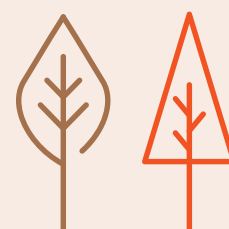


## Bronze Grove



# References

- Eid, H. M., et al. (2016). Phytogeographic and genetic variation in *Sorbus*, a traditional antidiabetic medicine: Adaptation in action in both a plant and a discipline. *PeerJ*, 4, e2645. <https://doi.org/10.7717/peerj.2645>
- 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.
- Harbilas, D., et al. (2009). In vivo anti-diabetic activity of the ethanolic crude extract of *Sorbus decora* C.K.Schneid. (Rosaceae). *Evidence-Based Complementary and Alternative Medicine*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3163474/>
- 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.
- Natural Resources Canada. (2024). *Carbon Budget Model*. Government of Canada. <https://natural-resources.canada.ca/climate-change/climate-change-impacts-forests/carbon-budget-model>
- Natural Resources Canada. (2024). *Forest carbon*. Government of Canada. <https://natural-resources.canada.ca/climate-change/forest-carbon>
- Natural Resources Canada. (2024). *Sustainable forest management in Canada*. Government of Canada. <https://natural-resources.canada.ca/forests-forestry/sustainable-forest-management/sustainable-forest-management-canada>
- Natural Resources Canada. (2025). *Water*. Government of Canada. <https://natural-resources.canada.ca/forests-forestry/sustainable-forest-management/water>
- 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.





# Appendix A - Work Scope

## Project Forest Work Scope for Tree Time Services - Project Forest Siksika Nation Community Shelterbelt Program

### Project Location & Background

The Project Forest Siksika Nation Community Shelterbelt Program is found within the reserve boundaries of Siksika Nation (SN) and can be found here: <https://goo.gl/maps/cDRLrqHYnBNNy9eo6>

The full project area is not yet known. In the words of the community members from SN, they "are desperate for trees." As their Nation is mostly occupied by native prairie, which is rapidly becoming an ecosystem that is more and more rare, it was a challenge to determine the best place to plant trees while:

1. Maintaining the ecological values and importance of the native prairie lands found within SN
2. Creating a significant project that will provide positive human impacts and ecological impacts to SN

After touring SN, it was determined that during the days of the Alberta Prairie Shelterbelt program their Nation, among other First Nation communities in the non-forested regions of Alberta were not supplied with the trees that went to western farmers and landowners. This oversight has resulted in a tremendous number of trees surrounding SN, but very few within the boundaries of SN. This project will bring parity to the community members of SN compared to the surrounding landscape.

Three site limiting factors have been identified throughout the Nation:

1. Soil compaction
2. Drought like conditions
3. Salt impacts from winter de-icing

The project plan will need to identify ways to mitigate all of these site limiting factors to ensure project success. Mitigation strategies like a watering truck and/or temporary drip irrigation lines should be considered for the soil moisture, a soil sampling program should be completed along the ditch lines of all roads that are salted in the winter (soil sample intervals of surface, 15cm and 30cm) and a mechanical site preparation strategy will be required to ensure plantable microsites for all trees. If and when areas of concern are noted and a mitigation strategy is not possible, they should be removed from the plantable project area.

Additionally, it is expected that a number of areas that could be planted will have to be dropped due to the presence of underground facilities. As the planners design the project, all planting areas should be designed under the assumption that there are no underground facilities. A ground disturbance package will be created and once verified, areas of concern will then be removed from the site plan. Finally, there are overhead powerlines through the nation that will need to be avoided. The utility company will need to be consulted to determine how close trees are allowed to be planted. A safe



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buffer should be designed around all powerlines. Should short species like, but not limited to raspberry, silver buffalo berry and Canada wild rose be suitable, they can be considered for planting around the powerlines should the utility company approve this strategy.

## Project Objectives

The project is broken up into the following shelterbelt programs:

1. Agricultural Shelterbelt
2. Community Shelterbelt
3. Cultural Shelterbelt

The objectives of each type are:

1. Agricultural Shelterbelt
  - a. Preserve topsoil within the agricultural regions of the Nation
  - b. Making driving conditions safer in the winter by providing a wind barrier to capture snow drift
  - c. Create wildlife habitat
  - d. Sequestering carbon is a result of doing this work well
2. Community Shelterbelt
  - a. Improve human health
  - b. Provide privacy from the vehicle traffic
  - c. Reduce noise from highway traffic where people live
  - d. Provide shelter from the wind and snow in the winter
  - e. Provide shade in the summer
  - f. Provide foods and medicines for the community
  - g. Create wildlife habitat
  - h. Sequestering carbon is a result of doing this work well
3. Cultural Shelterbelt
  - a. Add a tree component to areas such as the Arbor, museum and school
  - b. Provide an aesthetic improvement and privacy as requested by SN
  - c. Improve living conditions on the Nation
  - d. Improve human health through the addition of trees throughout the Nation/

## Shelterbelt Species Designs:

After touring the Nation with a community member, the following Shelterbelt designs were approved:

### 1. Agricultural Shelterbelt

There are 3 iterations of the Agricultural Shelterbelt designs based on the site limiting factors that have been identified in the field. It may not be feasible to water these shelterbelts and that limiting factor must be considered in all phases of the Agricultural Shelterbelt plan.



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The agricultural shelterbelts will be no more than 3 rows wide with 5m between row spacing. They will only consist of traditional shelterbelt tree species. Food bearing, medicinal and culturally significant plants should be avoided in these areas to reduce project cost.

**a. Normal Agricultural Shelterbelt**

- i. A mixture of the following species can be prescribed based on availability and professional discretion:
  - 1. Manitoba Maple
  - 2. Okanese Poplar
  - 3. Colorado Blue Spruce
  - 4. Bur Oak
  - 5. Ponderosa Pine
  - 6. Scotch Pine

**b. Drought Shelterbelt**

- i. A mixture of the following species can be prescribed based on availability and professional discretion:
  - Row 1: Caragana, Silver buffalo berry
  - Row 2: Okanese Poplar, Scotch Pine, Colorado Blue Spruce
  - Row 3: Green Ash, Lodgepole

**c. Salt Shelterbelt**

- i. A mixture of the following species can be prescribed based on availability and professional discretion:
  - 1. Row 1: Sea buckthorn, silver buffalo berry
  - 2. Row 2 and 3: Ponderosa Pine, Russian Olive, Bur Oak, Manitoba Maple, Mountain Ash, Hawthorn

Caragana is a preferred species on SN. There are examples through SN of caragana thriving.

It should be noted that in many areas of southern Alberta, Russian Olive is considered an invasive species. That said, it may be one of the few trees in a 3-row shelterbelt design that can thrive in these challenging conditions. For that reason, it is on the list and should only be prescribed if there are no other suitable trees for the project design. The only risk of spread for the Russian Olive is in the unlikely event that a seed finds its way into a waterway and those seeds drain into the Bow River, there are not many waterways through SN. Additionally, all of these shelterbelts will be along agricultural fields and will be maintained annually during harvest. They will not be allowed to encroach beyond their planting boundaries.



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## 2. Community Shelterbelt

Community Shelterbelts will provide the community members with the food bearing, medicinal and culturally significant plants. They have been selected for deployment in these areas as these shelterbelts will be closest to where the people live.

Depending on how much room there is to instal the shelterbelts the species selection will change. There are 5 iterations of the Community Infrastructure Shelterbelt design. Each row will be 5 meters apart, in row spacing will be determined based on species and best practices. Field survey may be required to determine how many rows of trees can be planted in each location.

- 1 row - Caragana
- 2 row - Caragana & Okanese poplar (or suitable substitute based on seedling availability)
- 3 row - Caragana, Okanese poplar, Colorado Blue Spruce
- 4 row - Caragana, Saskatoon, Okanese poplar, Colorado Blue Spruce
- 5 row - Caragana, Raspberry, Saskatoon, Okanese poplar, Colorado Blue Spruce

At a yet to be determined time, additional food bearing, medicinal and culturally significant plants will be planted in-between the rows. The species selection process will be completed through a survey of the community members in each project location. Project Forest will share the list of plants identified by Siksika Nation as food bearing, medicinal and culturally significant and a community engagement plan will be developed in conjunction with the Nation.

In addition to the shelterbelts, community members will be provided up to 10 trees per household based on a list of available and suitable species provided by TTSl. The soils where people live are very compacted, it is likely that a soil auger planting program will be required to help community members instal the trees. A maintenance and watering training program should be developed. Fertilizer tea bags or stakes should also be considered. This phases of the project would be considered a municipal planting project with 1 and 2 year old trees.

## 3. Cultural Shelterbelt

Several culturally and aesthetically significant sites were identified for tree planting during the tour. Each area requires a unique planting plan, the areas currently scheduled for planting are as follows:

- Treaty 7 Signing Site
- The Gravel Pit Row 1 - Caragana Row 2 - Green Ash Row 3 - Colorado Blue Spruce
- The Siksika Nation Arbor
- The cemetery
- The elementary school
- The museum



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- Urban municipal services area
- Waste transfer station (high priority)

As the project evolves, additional areas will be identified.

## Project Planning

Project Forest uses [Matidor](#) for all our project planning. TTSI staff will be provided access to the platform and training on how to design the project and create the tasks. This data and this platform will be used to monitor and manage each shelterbelt as a unique polygon and track successes and failures as observed.

While the majority of the planning work left is a desktop exercise, field work may be required for ground truthing and is a reasonable expense and task to complete this work.

## Shelterbelt Design

All areas scheduled for shelterbelt planting should be prepared using industry best practices. A biodegradable mulch should be used to mitigate vegetative competition and keep the soil moisture high.

## Assessment Protocols

Project Forest requires an assessment protocol to be developed to define project success. The current Project Forest assessment manual has been designed to monitor traditional rewilding work and is not an appropriate standard to determine project success for a shelterbelt project. An annual inspection should be included in this document.

## Monitoring and Maintenance

As part of the project design, a maintenance plan, watering plan and monitoring plan including a fill plant will be required.

As part of the project maintenance, manual vegetation management should be considered for up to the first 4 years after planting. All vegetation should be discing back into the soil, **just mowing will not be an acceptable method of vegetation management.**

Project Forest will require a detailed watering protocol. Professional guidance is required regarding how many year(s) watering will be required or if there is a height and performance standard required before watering is no longer needed.

## Desired Planting Window



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This is a multi year, multi phase project. The first planting of coniferous trees should occur during the fall 2023 planting season. All deciduous trees and shrubs should be planted starting in the spring of 2024.

When deploying deciduous trees and shrubs, they must only be planted as spring dormant seedlings, and they should be planted as early into the planting season as possible.

## Expected Deliverables

A Shelterbelt plan for full implementation. This would include the following:

- Identify site limiting factors and comment on them
- Mechanical Site Preparation plan and equipment list with estimated total hours required
- Ground Disturbance package (all areas where underground facilities are identified will be removed from the project plan. When designing planting areas, assume there are no underground facilities).
- Total project area in hectares
- Total seedling numbers per species
- Site plan in Matidor - all polygons are to be provided unique identifiers and number and species of seedling shall be tracked per polygon in Matidor.
- Annual monitoring and vegetation management plan
- Budget for fill plant of 25% across full project area
- Final survey plan
- Site specific assessment standard (Project Forest Assessment Survey to be used as the guideline and then customized to the project based on the project design).

## Timelines

In preparation for a 2 billion tree submission due on the 13th of January, this a final plan is requested by end of day January 6 2023.

Please let us know what is a realistic timeline based on staff availability.



780-222-7947 | 3464 78 Ave NW | Edmonton, Alberta | T6B 2X9 [ProjectForest.ca](https://ProjectForest.ca)





# Appendix B - Planting Report



## Project Forest – Siksika Nation

Siksika Nation Community Shelterbelt As-Planted Report

January 21, 2025



Prepared by:



## **Table of Contents**

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| 1 | Project Implementation Summary ..... | 2 |
|   | Appendix A: As – Planted Maps .....  | 3 |

## **1 Project Implementation Summary**

|                             |                                                                                                                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site location:              | Siksika Nation                                                                                                                                                                                                                |
| Site Prep Dates:            | April 22, 2024 - April 28, 2024                                                                                                                                                                                               |
| Planting Dates:             | May 1, 2024 - May 16, 2024                                                                                                                                                                                                    |
| Number of Trees Planted:    | 27,785                                                                                                                                                                                                                        |
| Number of Shrubs Planted:   | 96,090                                                                                                                                                                                                                        |
| Number of km Planted:       | 93.0 km                                                                                                                                                                                                                       |
| Subcontractors Involved:    | Producers Equipment Co. [Site prep]<br>Ember Archaeology [Historical Resource Pedestrian Assessment]<br>Tree Time Services [Project management, seedlings, and planting]<br>Siksika Nation – four Nation member tree planters |
| Planted Species Composition |                                                                                                                                                                                                                               |
| Species                     | Quantity                                                                                                                                                                                                                      |
| Blue Spruce                 | 6,840                                                                                                                                                                                                                         |
| Scots Pine                  | 2,970                                                                                                                                                                                                                         |
| Ponderosa Pine              | 1,620                                                                                                                                                                                                                         |
| Okanese Poplar              | 11,245                                                                                                                                                                                                                        |
| Manitoba Maple              | 5,110                                                                                                                                                                                                                         |
| Common Caragana             | 88,390                                                                                                                                                                                                                        |
| Sea Buckthorn               | 2,780                                                                                                                                                                                                                         |
| Silver Buffalo Berry        | 1,320                                                                                                                                                                                                                         |
| Green Ash                   | 3,600                                                                                                                                                                                                                         |

## **Appendix A: As – Planted Maps**





**Siksika Community  
2024 Planted Shelterbelts  
Map 1**

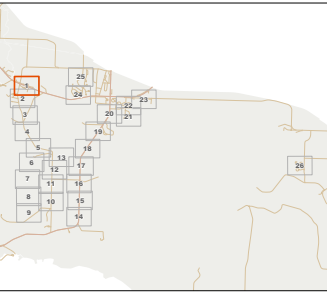
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species              | Seed Number |
|--------|----------------------|-------------|
| CW     | Blue Spruce          | 50          |
| CW     | Okame Poplar         | 70          |
| CW     | Silver Buffalo Berry | 110         |
| DI     | Okame Poplar         | 780         |
| DI     | Silver Buffalo Berry | 350         |
| OK     | Blue Spruce          | 200         |
| OK     | Okame Poplar         | 270         |
| OK     | Silver Buffalo Berry | 400         |
| EP     | Caragana             | 210         |
| EP     | Okame Poplar         | 20          |
| ET     | Caragana             | 2740        |
| ET     | Ponderosa Pine       | 410         |
| ET     | Okame Poplar         | 550         |
| FA     | Caragana             | 170         |
| FA     | Blue Spruce          | 50          |
| FA     | Okame Poplar         | 60          |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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# Siksika Community 2024 Planted Shelterbelts Map 2

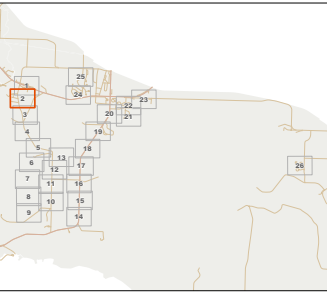
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| CW     | Blue Spruce    | 60          |
| CW     | Okanese Poplar | 70          |
| CW     | Silver Buffalo | 110         |
| DA     | Caragana       | 2150        |
| DA     | Blue Spruce    | 300         |
| DA     | Okanese Poplar | 430         |
| OK     | Blue Spruce    | 200         |
| OK     | Okanese Poplar | 210         |
| OK     | Silver Buffalo | 400         |
| EL     | Caragana       | 460         |
| EL     | Scots Pine     | 120         |
| EL     | Mandarin Maple | 150         |
| EQ     | Caragana       | 370         |
| EQ     | Blue Spruce    | 60          |
| EQ     | Green Ash      | 60          |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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0 50 100 200 Meters





**Siksika Community  
2024 Planted Shelterbelts  
Map 3**

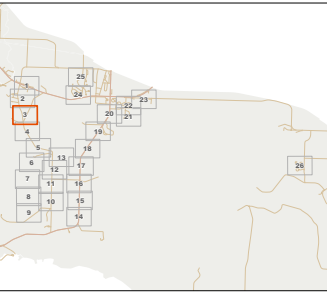
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| CD     | Caragana       | 1580        |
| CD     | Scots Pine     | 240         |
| CD     | Okanese Poplar | 320         |
| CI     | Caragana       | 150         |
| CI     | Blue Spruce    | 30          |
| CI     | Okanese Poplar | 40          |
| CJ     | Ponderosa Pine | 130         |
| CJ     | Okanese Poplar | 170         |
| CR     | Caragana       | 2380        |
| CR     | Blue Spruce    | 370         |
| CR     | Okanese Poplar | 480         |
| CU     | Caragana       | 1450        |
| CU     | Blue Spruce    | 220         |
| CU     | Okanese Poplar | 290         |
| DA     | Caragana       | 2150        |
| DA     | Blue Spruce    | 320         |
| DA     | Okanese Poplar | 430         |
| EG     | Caragana       | 410         |
| EG     | Scots Pine     | 70          |
| EG     | Manitoba Maple | 90          |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 4**

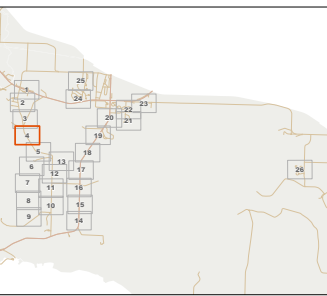
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species         | Seed Number |
|--------|-----------------|-------------|
| B1     | Caragana        | 2080        |
| B1     | Blue Spruce     | 310         |
| B1     | Okavango Poplar | 420         |
| BK     | Caragana        | 1320        |
| BK     | Blue Spruce     | 190         |
| BK     | Okavango Poplar | 270         |
| CI     | Caragana        | 150         |
| CI     | Blue Spruce     | 30          |
| CI     | Okavango Poplar | 40          |
| CM     | Caragana        | 210         |
| CM     | Blue Spruce     | 40          |
| CM     | Okavango Poplar | 50          |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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0 50 100 200 Meters





# Siksika Community 2024 Planted Shelterbelts Map 5

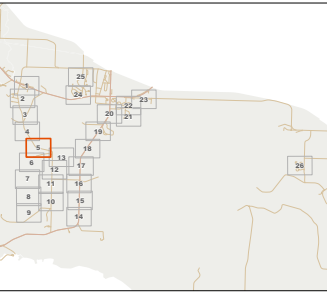
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species      | Seed Number |
|--------|--------------|-------------|
| BK     | Caragana     | 1320        |
| BK     | Blue Spruce  | 190         |
| BK     | Okame Poplar | 270         |
| BN     | Caragana     | 1560        |
| BN     | Scots Pine   | 240         |
| BN     | Okame Poplar | 350         |
| BQ     | Caragana     | 510         |
| BQ     | Scots Pine   | 90          |
| BQ     | Okame Poplar | 110         |
| BR     | Caragana     | 1430        |
| BR     | Scots Pine   | 210         |
| BR     | Okame Poplar | 280         |
| BV     | Caragana     | 1490        |
| BV     | Scots Pine   | 230         |
| BV     | Okame Poplar | 300         |
| BY     | Caragana     | 1450        |
| BY     | Scots Pine   | 230         |
| BY     | Okame Poplar | 300         |
| DX     | Caragana     | 310         |
| DX     | Scots Pine   | 50          |
| DX     | Okame Poplar | 70          |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 6**

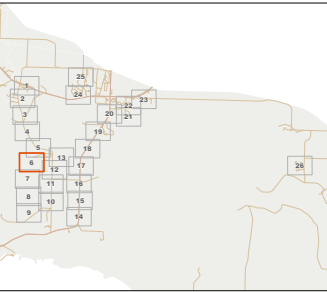
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species       | Seed Number |
|--------|---------------|-------------|
| AX     | Caragana      | 3670        |
| AX     | Blue Spruce   | 550         |
| AX     | Okunez Poplar | 710         |
| BN     | Caragana      | 1580        |
| BN     | Scots Pine    | 245         |
| BN     | Okunez Poplar | 320         |
| BQ     | Caragana      | 510         |
| BQ     | Scots Pine    | 95          |
| BQ     | Okunez Poplar | 110         |
| BR     | Caragana      | 1430        |
| BR     | Scots Pine    | 210         |
| BR     | Okunez Poplar | 280         |
| BV     | Caragana      | 1490        |
| BV     | Scots Pine    | 230         |
| BV     | Okunez Poplar | 300         |
| BY     | Caragana      | 1450        |
| BY     | Scots Pine    | 230         |
| BY     | Okunez Poplar | 300         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 7**

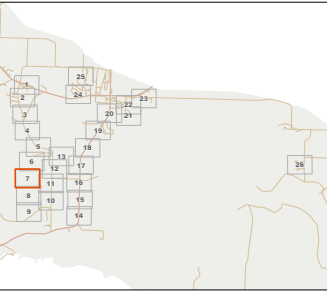
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species       | Seed Number |
|--------|---------------|-------------|
| AX     | Caragana      | 5300        |
| AK     | Blue Spruce   | 810         |
| AK     | Okunev Poplar | 1070        |
| AO     | Caragana      | 520         |
| AO     | Blue Spruce   | 80          |
| AO     | Okunev Poplar | 110         |
| AX     | Caragana      | 3670        |
| AX     | Blue Spruce   | 580         |
| AX     | Okunev Poplar | 710         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 8**

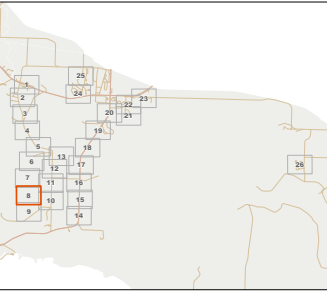
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species       | Seed Number |
|--------|---------------|-------------|
| AK     | Caragana      | 5300        |
| AK     | Blue Spruce   | 810         |
| AK     | Okunev Poplar | 1070        |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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0 50 100 200 Meters





# Siksika Community 2024 Planted Shelterbelts Map 9

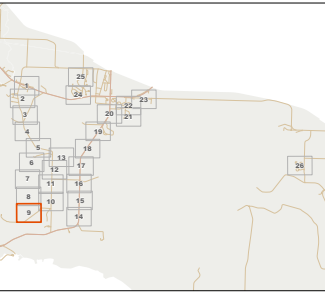
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species       | Seed Number |
|--------|---------------|-------------|
| AC     | Caragana      | 170         |
| AC     | Blue Spruce   | 30          |
| AC     | Okunev Poplar | 40          |
| AK     | Caragana      | 5300        |
| AK     | Blue Spruce   | 810         |
| AK     | Okunev Poplar | 1070        |
| AL     | Caragana      | 360         |
| AL     | Blue Spruce   | 50          |
| AL     | Okunev Poplar | 70          |
| AM     | Caragana      | 270         |
| AM     | Scots Pine    | 40          |
| AM     | Okunev Poplar | 60          |
| BG     | Caragana      | 2820        |
| BG     | Blue Spruce   | 270         |
| BG     | Scots Pine    | 160         |
| BG     | Okunev Poplar | 560         |
| BH     | Caragana      | 400         |
| BH     | Blue Spruce   | 70          |
| BH     | Okunev Poplar | 80          |
| BI     | Caragana      | 1080        |
| BI     | Scots Pine    | 160         |
| BI     | Okunev Poplar | 220         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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0 50 100 200 Meters





**Siksika Community  
2024 Planted Shelterbelts  
Map 10**

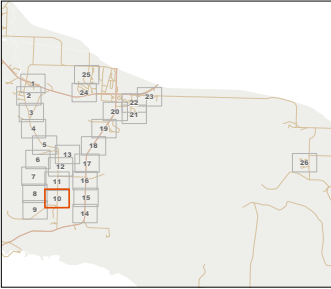


Legend:

- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species         | Seed Number |
|--------|-----------------|-------------|
| AJ     | Caragana        | 1610        |
| AJ     | Scotts Pine     | 250         |
| AJ     | Chamisso Poplar | 330         |
| AN     | Caragana        | 680         |
| AN     | Blue Spruce     | 110         |
| AN     | Chamisso Poplar | 140         |
| AO     | Caragana        | 1360        |
| AO     | Blue Spruce     | 200         |
| AO     | Chamisso Poplar | 270         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 11**

**Project Partners:**

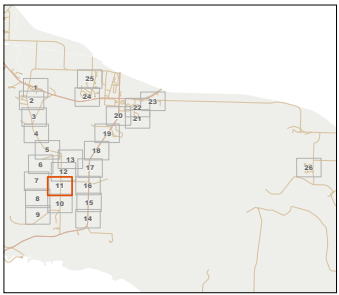


Legend:

- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species      | Seed Number |
|--------|--------------|-------------|
| AN     | Caragana     | 680         |
| AN     | Blue Spruce  | 110         |
| AN     | Okame Poplar | 140         |
| AP     | Caragana     | 540         |
| AP     | Blue Spruce  | 80          |
| AP     | Okame Poplar | 110         |
| AQ     | Caragana     | 1300        |
| AQ     | Blue Spruce  | 200         |
| AQ     | Okame Poplar | 270         |
| AT     | Caragana     | 1570        |
| AT     | Blue Spruce  | 240         |
| AT     | Okame Poplar | 320         |
| AV     | Caragana     | 240         |
| AV     | Blue Spruce  | 30          |
| AV     | Okame Poplar | 50          |
| AW     | Caragana     | 330         |
| AW     | Blue Spruce  | 50          |
| AW     | Okame Poplar | 70          |
| BF     | Caragana     | 3390        |
| BF     | Blue Spruce  | 520         |
| BF     | Okame Poplar | 680         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 12**

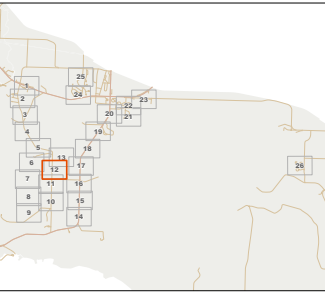
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species         | Seed Number |
|--------|-----------------|-------------|
| BF     | Caragana        | 3390        |
| BF     | Blue Spruce     | 520         |
| BF     | Chamisso Poplar | 680         |
| BX     | Caragana        | 3050        |
| BX     | Blue Spruce     | 480         |
| BX     | Okunev Poplar   | 610         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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Created by: Tree Time Services Inc.  
Scale: 1:2,000







# Siksika Community 2024 Planted Shelterbelts Map 13

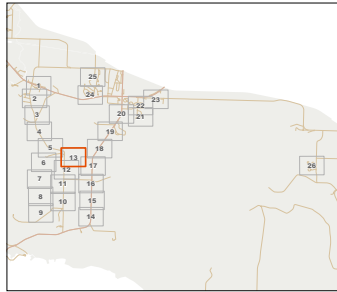
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number | Buffer | Species        | Seed Number |
|--------|----------------|-------------|--------|----------------|-------------|
| BF     | Caragana       | 3300        | DX     | Caragana       | 3050        |
| BF     | Blue Spruce    | 520         | DX     | Blue Spruce    | 480         |
| BF     | Okanese Poplar | 680         | DX     | Okanese Poplar | 610         |
| BN     | Caragana       | 1580        | CA     | Caragana       | 1010        |
| BN     | Scots Pine     | 240         | CA     | Scots Pine     | 70          |
| BN     | Okanese Poplar | 320         | CA     | Okanese Poplar | 180         |
| BO     | Caragana       | 2480        | CC     | Caragana       | 2150        |
| BO     | Blue Spruce    | 380         | CC     | Scots Pine     | 370         |
| BO     | Okanese Poplar | 500         | CC     | Okanese Poplar | 480         |
| BP     | Caragana       | 690         | DW     | Caragana       | 310         |
| BP     | Blue Spruce    | 110         | DW     | Blue Spruce    | 50          |
| BP     | Okanese Poplar | 140         | DW     | Okanese Poplar | 60          |
| BV     | Caragana       | 1490        | DX     | Caragana       | 310         |
| BV     | Scots Pine     | 230         | DX     | Scots Pine     | 50          |
| BV     | Okanese Poplar | 300         | DX     | Okanese Poplar | 70          |
| BW     | Caragana       | 120         | DY     | Caragana       | 1040        |
| BW     | Scots Pine     | 30          | DY     | Blue Spruce    | 160         |
| BW     | Okanese Poplar | 30          | DY     | Okanese Poplar | 210         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



Date Printed: June 10, 2024  
Spatial Reference  
Name: NAD 1983 UTM Zone 12N  
Datum: North American 1983  
Created by: Tree Time Services Inc.  
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0 50 100 200 Meters





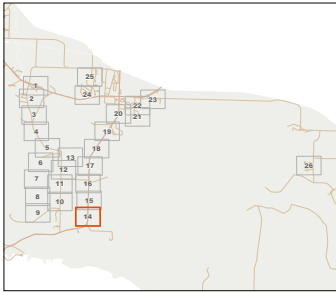
**Siksika Community  
2024 Planted Shelterbelts  
Map 14**

**Project Partners:**

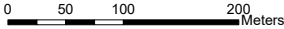


- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



Date Printed: June 10, 2024  
Spatial Reference  
Name: NAD 1983 UTM Zone 12N  
Datum: North American 1983  
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Scale: 1:2,000







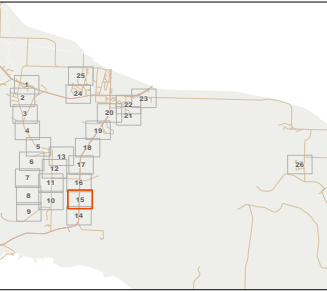
**Siksika Community  
2024 Planted Shelterbelts  
Map 15**

**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



Date Printed: June 10, 2024  
Spatial Reference  
Name: NAD 1983 UTM Zone 12N  
Datum: North American 1983  
Created by: Tree Time Services Inc.  
Scale: 1:2,000







**Siksika Community  
2024 Planted Shelterbelts  
Map 16**

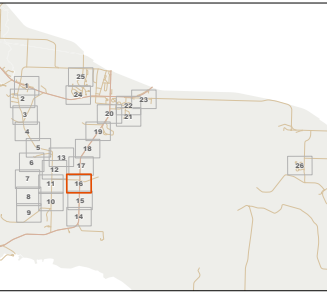
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| AS     | Caragana       | 300         |
| AS     | Blue Spruce    | 50          |
| AS     | Okamee Poplar  | 60          |
| AU     | Caragana       | 750         |
| AU     | Blue Spruce    | 120         |
| AU     | Okamee Poplar  | 150         |
| AY     | Caragana       | 710         |
| AY     | Blue Spruce    | 110         |
| AY     | Okamee Poplar  | 150         |
| AZ     | Caragana       | 2880        |
| AZ     | Ponderosa Pine | 450         |
| AZ     | Maple          | 600         |
| BA     | Caragana       | 700         |
| BA     | Blue Spruce    | 110         |
| BA     | Okamee Poplar  | 140         |
| BD     | Caragana       | 1770        |
| BD     | Blue Spruce    | 410         |
| BD     | Okamee Poplar  | 540         |
| BD     | Sea Buckthorn  | 280         |
| ED     | Caragana       | 610         |
| ED     | Ponderosa Pine | 100         |
| ED     | Manitoba Maple | 130         |
| EE     | Caragana       | 1600        |
| EE     | Blue Spruce    | 80          |
| EE     | Ponderosa Pine | 150         |
| EE     | Manitoba Maple | 310         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 17**

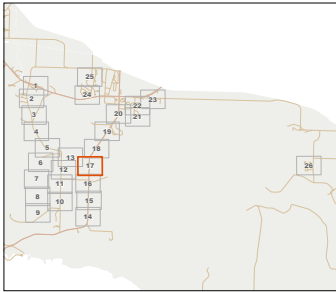
**Project Partners:**



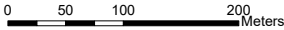
- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| AZ     | Caragana       | 2980        |
| AZ     | Ponderosa Pine | 450         |
| AZ     | Maple          | 600         |
| BD     | Caragana       | 1770        |
| BD     | Blue Spruce    | 410         |
| BD     | Okamee Poplar  | 540         |
| BD     | Saw Buckhorn   | 280         |
| BO     | Caragana       | 2480        |
| BO     | Blue Spruce    | 380         |
| BO     | Okamee Poplar  | 500         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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# Siksika Community 2024 Planted Shelterbelts Map 18

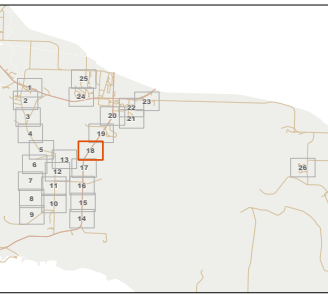
**Project Partners:**



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species             | Seed Number |
|--------|---------------------|-------------|
| AG     | Ponderosa Pine      | 220         |
| AG     | Manitoba Maple      | 200         |
| AG     | Silver Buffaloberry | 440         |
| CF     | Caragana            | 2080        |
| CF     | Ponderosa Pine      | 310         |
| CF     | Okame Poplar        | 420         |
| CG     | Caragana            | 790         |
| CG     | Ponderosa Pine      | 120         |
| CG     | Okame Poplar        | 160         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 19**

**Project Partners:**

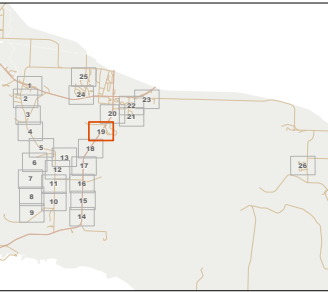


Legend:

- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species             | Seed Number |
|--------|---------------------|-------------|
| AG     | Ponderosa Pine      | 220         |
| AG     | Manitoba Maple      | 260         |
| AG     | Silver Buffaloberry | 440         |
| AH     | Caragana            | 270         |
| AH     | Ponderosa Pine      | 390         |
| AH     | Green Ash           | 60          |
| AI     | Ponderosa Pine      | 10          |
| AI     | Okame Poplar        | 20          |
| AI     | Sea Buckthorn       | 40          |
| CG     | Caragana            | 790         |
| CG     | Ponderosa Pine      | 120         |
| CG     | Okame Poplar        | 160         |
| CK     | Ponderosa Pine      | 30          |
| CK     | Okame Poplar        | 30          |
| CK     | Sea Buckthorn       | 50          |
| CL     | Ponderosa Pine      | 60          |
| CL     | Sea Buckthorn       | 120         |
| CS     | Ponderosa Pine      | 50          |
| CS     | Okame Poplar        | 70          |
| CS     | Sea Buckthorn       | 110         |
| EH     | Caragana            | 1760        |
| EH     | Ponderosa Pine      | 250         |
| EH     | Green Ash           | 340         |

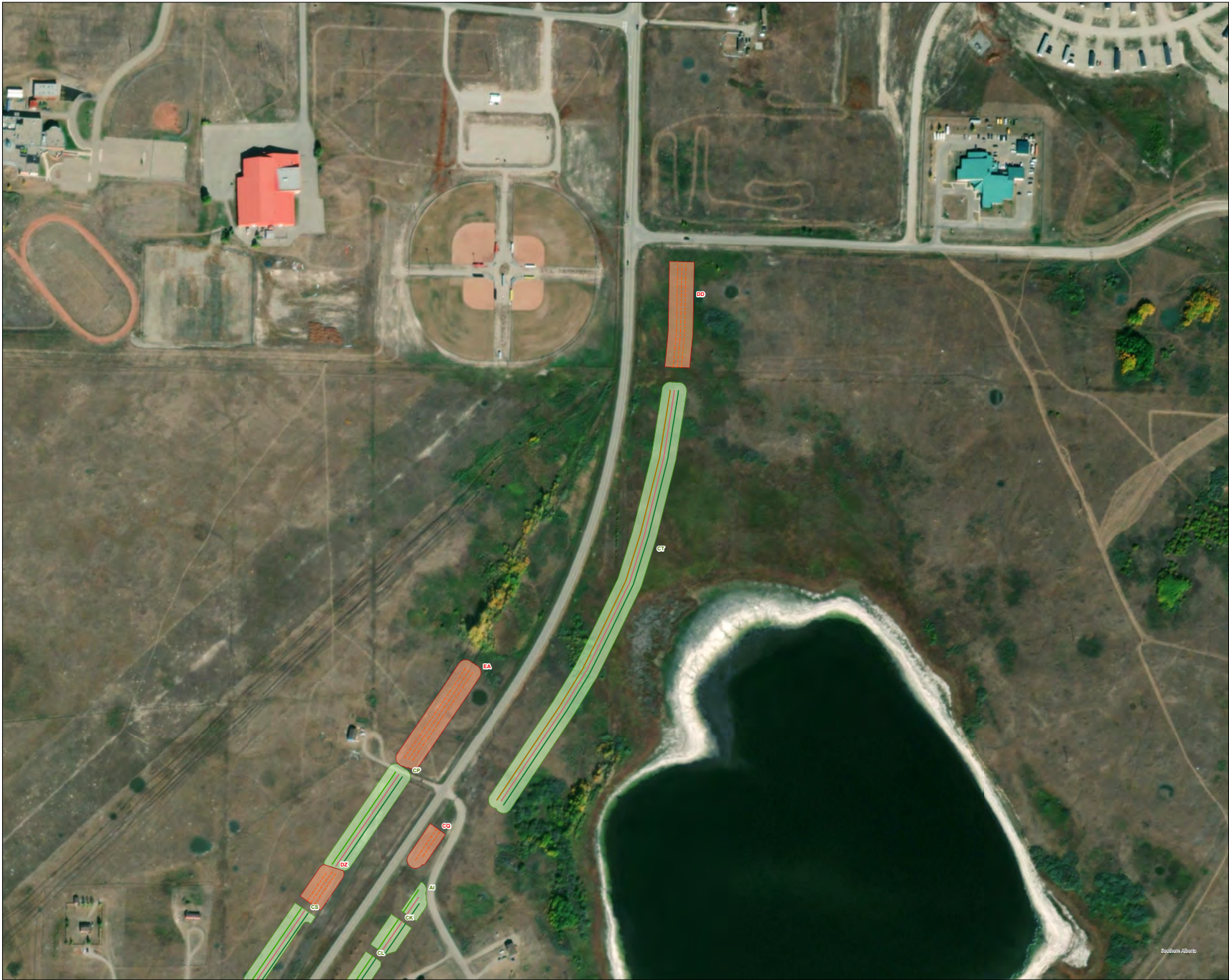
\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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**Siksika Community  
2024 Planted Shelterbelts  
Map 20**

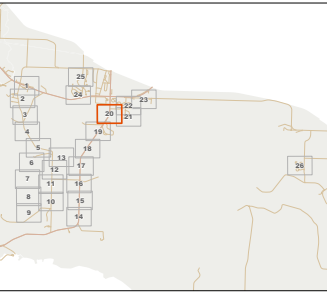
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| AI     | Pondosa Pine   | 10          |
| AI     | Okavase Poplar | 20          |
| AI     | Sea Buckthorn  | 40          |
| CK     | Pondosa Pine   | 30          |
| CK     | Okavase Poplar | 30          |
| CK     | Sea Buckthorn  | 50          |
| CP     | Pondosa Pine   | 70          |
| CP     | Okavase Poplar | 50          |
| CP     | Sea Buckthorn  | 140         |
| CS     | Pondosa Pine   | 50          |
| CS     | Okavase Poplar | 70          |
| CS     | Sea Buckthorn  | 110         |
| CT     | Caragana       | 1020        |
| CT     | Pondosa Pine   | 280         |
| CT     | Okavase Poplar | 370         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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## Siksika Community 2024 Planted Shelterbelts Map 21

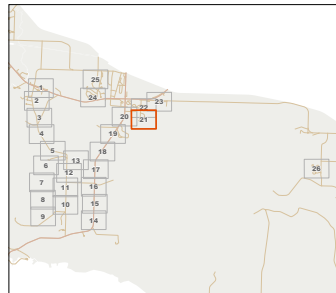
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| DS     | Caragana       | 2030        |
| DS     | Ponderosa Pine | 300         |
| DS     | Manitoba Maple | 410         |
| EI     | Caragana       | 1870        |
| EI     | Ponderosa Pine | 300         |
| EI     | Manitoba Maple | 390         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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Datum: North American 1983  
Created by: Tree Time Services Inc.  
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0 50 100 200 Meters





# Siksika Community 2024 Planted Shelterbelts Map 22

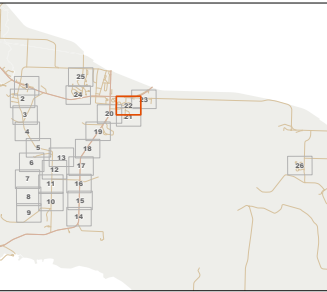
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species         | Seed Number |
|--------|-----------------|-------------|
| CY     | Caragana        | 330         |
| CY     | Ponderosa Pine  | 50          |
| CY     | Okavango Poplar | 70          |
| CZ     | Caragana        | 510         |
| CZ     | Ponderosa Pine  | 80          |
| CZ     | Okavango Poplar | 110         |
| DE     | Caragana        | 750         |
| DE     | Ponderosa Pine  | 110         |
| DE     | Okavango Poplar | 150         |
| DG     | Caragana        | 690         |
| DG     | Ponderosa Pine  | 100         |
| DG     | Okavango Poplar | 140         |
| DJ     | Blue Spruce     | 110         |
| DS     | Caragana        | 2030        |
| DS     | Ponderosa Pine  | 300         |
| DS     | Manitoba Maple  | 410         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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Created by: Tree Time Services Inc.  
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# Siksika Community 2024 Planted Shelterbelts Map 23

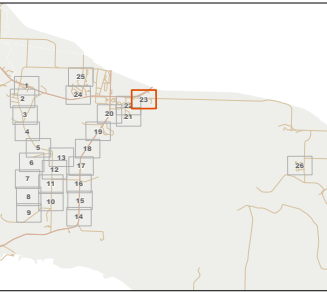
Project Partners:



- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| CY     | Caragana       | 330         |
| CY     | Ponderosa Pine | 50          |
| CY     | Okanese Poplar | 70          |
| DG     | Caragana       | 690         |
| DG     | Ponderosa Pine | 100         |
| DG     | Okanese Poplar | 140         |
| DJ     | Caragana       | 620         |
| DJ     | Blue Spruce    | 110         |
| DJ     | Okanese Poplar | 130         |
| DP     | Caragana       | 1030        |
| DP     | Blue Spruce    | 160         |
| DP     | Okanese Poplar | 210         |
| DQ     | Caragana       | 480         |
| DQ     | Blue Spruce    | 80          |
| DQ     | Okanese Poplar | 100         |
| DS     | Caragana       | 2030        |
| DS     | Ponderosa Pine | 300         |
| DS     | Manitoba Maple | 410         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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0 50 100 200 Meters





# Siksika Community 2024 Planted Shelterbelts Map 24

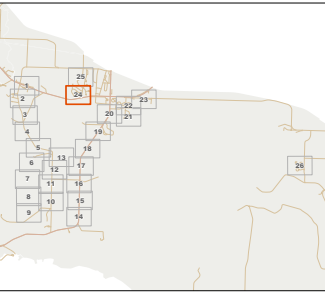
Project Partners:



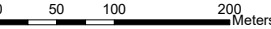
- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| CE     | Blue Spruce    | 170         |
| CE     | Okamee Poplar  | 220         |
| CE     | Sea Buckthorn  | 330         |
| DF     | Pondosa Pine   | 100         |
| DF     | Manitoba Maple | 130         |
| DF     | Sea Buckthorn  | 230         |
| DH     | Blue Spruce    | 720         |
| DH     | Okamee Poplar  | 350         |
| DH     | Sea Buckthorn  | 530         |
| EM     | Caragana       | 2290        |
| EM     | Blue Spruce    | 340         |
| EM     | Green Ash      | 450         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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# Siksika Community 2024 Planted Shelterbelts Map 25

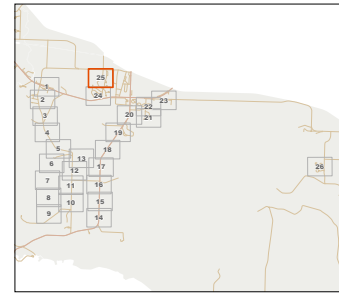
Project Partners:



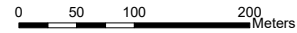
- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number | Buffer | Species        | Seed Number |
|--------|----------------|-------------|--------|----------------|-------------|
| EM     | Caragana       | 2280        | EX     | Caragana       | 780         |
| EM     | Blue Spruce    | 340         | EX     | Ponderosa Pine | 120         |
| EM     | Green Ash      | 450         | EX     | Manitoba Maple | 150         |
| ER     | Caragana       | 960         | EY     | Caragana       | 2280        |
| ER     | Blue Spruce    | 120         | EY     | Ponderosa Pine | 40          |
| ER     | Green Ash      | 170         | EY     | Green Ash      | 50          |
| ES     | Caragana       | 950         | EZ     | Caragana       | 900         |
| ES     | Ponderosa Pine | 150         | EZ     | Blue Spruce    | 140         |
| ES     | Green Ash      | 190         | EZ     | Green Ash      | 190         |
| EU     | Caragana       | 440         | FC     | Caragana       | 240         |
| EU     | Ponderosa Pine | 70          | FC     | Ponderosa Pine | 40          |
| EU     | Green Ash      | 90          | FC     | Green Ash      | 50          |
| EV     | Caragana       | 370         | FD     | Caragana       | 190         |
| EV     | Ponderosa Pine | 60          | FD     | Ponderosa Pine | 30          |
| EV     | Green Ash      | 80          | FD     | Green Ash      | 40          |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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N

## Siksika Community 2024 Planted Shelterbelts Map 26

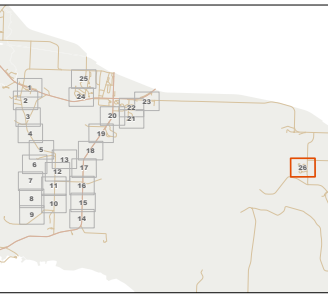
**Project Partners:**




- Planted
- Partially Planted
- Not Planted
- Shelterbelt Not Planted
- Caragana Planted
- Coniferous Planted
- Deciduous Planted
- Shrub Planted

| Buffer | Species        | Seed Number |
|--------|----------------|-------------|
| EF     | Caragana       | 4280        |
| EF     | Ponderosa Pine | 630         |
| EF     | Green Ash      | 840         |
| EJ     | Caragana       | 510         |
| EJ     | Ponderosa Pine | 80          |
| EJ     | Green Ash      | 110         |

\* Areas along the highway are not precise. Site prep did not use GPS tracks.



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 Spatial Reference  
 Name: NAD 1983 UTM Zone 12N  
 Datum: North American 1983  
 Created by: Tree Time Services Inc.  
 Scale: 1:2,000



## Appendix C - Carbon Sequestration Calculations

## Siksika Carbon Sequestration Calculations

| Species              | # | Number of Trees | # | Annual CO <sub>2</sub> e per Tree (kg) | # | 150-Year CO <sub>2</sub> e per Tree (kg) | # | Total CO <sub>2</sub> e over 150 Years (kg) | # | Total CO <sub>2</sub> e over 150 Years (tonnes) |
|----------------------|---|-----------------|---|----------------------------------------|---|------------------------------------------|---|---------------------------------------------|---|-------------------------------------------------|
| Blue Spruce          |   | 6840            |   | 5.83                                   |   | 875                                      |   | 5985000                                     |   | 5985                                            |
| Scots Pine           |   | 2970            |   | 6.67                                   |   | 1000                                     |   | 2970000                                     |   | 2970                                            |
| Ponderosa Pine       |   | 1620            |   | 7.33                                   |   | 1100                                     |   | 1782000                                     |   | 1782                                            |
| Okanese Poplar       |   | 11245           |   | 8.33                                   |   | 1250                                     |   | 14056250                                    |   | 14056.25                                        |
| Manitoba Maple       |   | 5110            |   | 6.67                                   |   | 1000                                     |   | 5110000                                     |   | 5110                                            |
| Common Caragana      |   | 88390           |   | 0.5                                    |   | 75                                       |   | 6629250                                     |   | 6629.25                                         |
| Sea Buckthorn        |   | 2780            |   | 0.67                                   |   | 100                                      |   | 278000                                      |   | 278                                             |
| Silver Buffalo Berry |   | 1320            |   | 0.83                                   |   | 125                                      |   | 165000                                      |   | 165                                             |
| Green Ash            |   | 3600            |   | 6.67                                   |   | 1000                                     |   | 3600000                                     |   | 3600                                            |
| Smokey Saskatoon     |   | 570             |   | 0.4                                    |   | 60                                       |   | 34200                                       |   | 34.2                                            |
| Wild Red Raspberry   |   | 130             |   | 0.17                                   |   | 25                                       |   | 3250                                        |   | 3.25                                            |
| Northline Saskatoon  |   | 3575            |   | 0.4                                    |   | 60                                       |   | 214500                                      |   | 214.5                                           |
| Showy Mountain Ash   |   | 2520            |   | 5                                      |   | 750                                      |   | 1890000                                     |   | 1890                                            |
| Colorado Blue Spruce |   | 7020            |   | 5.83                                   |   | 875                                      |   | 6142500                                     |   | 6142.5                                          |
|                      |   |                 |   |                                        |   |                                          |   |                                             |   | 48860                                           |