



“On behalf of the Willow Lake Métis Nation I’d like to acknowledge the work of the Municipal Climate Change Action Centre in producing this Climate Adaptation Report. The Willow Lake Métis Nation is embarking on a new project that will enhance not only our community but will have far reaching benefit for anyone who lives in or visits the RMWB. Participating in this study has given us new ways of seeing and understanding the changes we see around us. It has allowed us to be pro-active in our planning and design and has given us confidence that this development can be very successful. In addition to the support of the province of Alberta, thanks go to The Resilience Institute and Associated Engineering for their excellent work with us in completing this important document.”

- President Stella Lavallee;
Willow Lake Métis Nation

Willow Lake Métis Nation

The Stories of Adaptation project spotlights Indigenous climate leadership across Alberta and features projects completed through the Climate Resilience Capacity Building (CRCB) Program.

This profile was completed in collaboration with Willow Lake Métis Nation administration, in conversation with Destiny Martin, Sustainability Manager, and Matthew Michetti, Senior Manager of Government and Industry Relations.

Our gratitude and appreciation to Destiny, Matthew, and Willow Lake Métis Nation leadership for their support of this project and for contributing their time and expertise to this community profile.



Willow Lake Métis Nation

Willow Lake Métis Nation (WLMN) is a sovereign, self-governing Métis Nation with longstanding ties to Northern Alberta within the Regional Municipality of Wood Buffalo. In 2022 the Nation celebrated a symbolic purchase, with the acquisition of over 200 acres of land near Anzac, Alberta, located south of Fort McMurray and Wood Buffalo National Park within the Athabasca Watershed. Previously owned by one of the founding families of the Nation, this land purchase has enabled WLMN to establish a permanent home for their Citizenry within their ancestral homelands.

The land is the cornerstone of the WLMN’s Sustainability and Food Sovereignty initiatives. Through these initiatives, the Nation will safeguard culture, drive economic opportunity, and strengthen community resilience in the face of a changing climate. They plan to develop the land and establish a bison ranch, heritage centre, housing, local food opportunities, and more. These initiatives position the Nation to be self-reliant, sustainable, and resilient for generations to come.

The land purchase is also a blank slate for Willow Lake. It comes with an opportunity to consider climate impacts and strengthen climate resilience in all new development. This proactive approach demonstrates the value of climate adaptation.

With contracted services provided by The Resilience Institute (TRI), WLMN completed a Climate Risk Assessment to evaluate climate impacts that may be detrimental to future community development initiatives. The Climate Risk Assessment was funded by the Government of Alberta through the Climate Resilience Capacity Building Program administered by the Municipal Climate Change Action Centre.

Completing this risk assessment was a natural fit for Willow Lake. Spending time on the land, harvesting, and monitoring changes in the environment are central to identity and culture within the Nation, and Citizens take an active role in land-based initiatives.

“That’s primarily where this assessment has been useful for me. Having just acquired this land, it’s a greenfield project for us. So being able to have this kind of information at the very start while we’re considering where certain things are going to go has been really, really useful.”

- Matthew Michetti

“We’re talking about a Nation that is very much land-based. In addition to the land that they own, we have a number of registered trappers that are within the Citizenry. It’s one of the main recreational pursuits of the Nation as well, just being out on the land, with families, and harvest camps. This really spoke to an interest that the Nation already had inherently. It’s just another way of looking at what we’re seeing.”

- Matthew Michetti

"A lot of our community are very concerned about water levels, whether that has to do with industry, or whether that's to do with climate change, they're definitely seeing differences in water levels out there on the land. So a lot of it has to do with the Section 35 rights of hunting and fishing and being out on the land, seeing those changes, and knowing what it was like years ago."

- Destiny Martin



Experiencing Climate Impacts

While changes to the landscape can also be linked to nearby industrial development activities, the scope of the Climate Risk Assessment only considered the impacts of climate change-related hazards on the built, natural, social, cultural, and economic systems of Willow Lake Métis Nation.

The impacts of a changing climate are already present within Willow Lake's territories. Land users and Citizens who report knowing what it used to be like, are seeing changes to the landscape over generations of families being out on the land. Through their Indigenous Guardians Program, the Sustainability Department works with land users who have a wealth of traditional knowledge and connection to the land to document changes to the environment.

The community has seen extreme weather events like heat waves and wildfires grow in frequency and intensity. Increasingly erratic

freeze-thaw cycles are impacting the safety of citizens that spend time on the land in the winter months. Citizens are reporting changes in both wildlife habitat and the presence/absence of animal species when hunting and fishing.

Impacts to water bodies and aquatic ecosystems across the watershed are a pressing concern for the Nation. Willow Lake, previously known as Gregoire Lake, and the surrounding watershed hold a great deal of importance for the Nation. Through time spent on the lake fishing and harvesting, Citizens are reporting concerns about water levels and fish health.

"One of the creeks was pretty low and a couple of our land users were able to catch spawning pickerel with their hands because they can't make it up river. We are seeing an awful lot of impacts."

- Matthew Michetti

Bringing Together Traditional Knowledge and Climate Science

Completing this Climate Risk Assessment is part of a series of initiatives that the WLMN Sustainability Department is implementing to proactively respond to environmental changes.

The Department conducts water monitoring and samples water from lakes in the region, with plans to expand monitoring to rivers and streams across the watershed. Summer and winter fish camps bring community members together to harvest fish and monitor populations of pickerel and white fish. The Department also works closely with the Nation's youth, bringing high school students together for an annual winter fish camp where students process fish and learn about land-based activities. The Department is

preparing to launch a wildlife monitoring program which will see cameras positioned around the landscape to help answer questions about how industrial activities and changes in the environment are impacting wildlife behaviour and habitat.

With this Climate Risk Assessment, Willow Lake Métis Nation brings climate science and land-based traditional ecological knowledge together, creating a more complete picture of how climate change is impacting the land, the community, and traditional ways of life. The outcomes of the assessment reinforce what citizens are reporting from time spent on the land – that climate-related events like wildfires, wildfire smoke, and extreme heat and drought are high risk and have the potential to severely impact the Nation.

"There's alignment on what the Citizens are saying and what had come out in the assessment" - Destiny Martin

The outcomes of the Climate Risk Assessment enable WLMN to consider new opportunities through the lens of climate resilience. The findings directly connect to the two pillars of the Nation's Community Development Plan:

FOOD SOVEREIGNTY and **TOURISM**.

FOOD SOVEREIGNTY

Through local initiatives including a farm plot, hydroponics, and community and family gardens, the Nation plans to supply visitors to the area and neighbouring communities with fresh produce, and provide a reliable and sustainable food supply for the Nation. The risk assessment informed the Nation's decision to pursue a farm plot, to ensure that the Nation has a sustainable food supply that is more resilient to drought, invasive species, and other extreme events.

TOURISM

Visitors to the area will be able to enjoy a range of accommodations and experiences that highlight traditional foods, lifestyles, a Heritage Centre, and experience all that the Boreal Forest has to offer. The risk assessment has provided the Nation with information to inform the development of Citizen housing, accommodation for guests, and the Heritage Centre, including the placement of buildings and the use of design features to best protect development from extreme weather conditions.

Growing Onwards and Upwards

"There's a lot of things that we have to take into consideration that maybe weren't thought about before the risk assessment was completed."

- Destiny Martin

The cornerstone of the initiative is to bring bison back to the landscape, and to establish a bison ranch to support both the tourism and food sovereignty goals. The area has felt the impacts of industrial activities and a changing climate. Reintroducing a native livestock species back to the area will remediate the land and return it to a state of balance. In addition to supporting their food sovereignty and tourism goals, the reintroduction of a landmark species of cultural significance for Métis people will strengthen the Nation for generations to come.

"It's super special, especially for the people. Métis people and bison have been together forever and they're very intertwined. Bringing bison back to the community can only create a greater culture and a greater sense of purpose and who we are."

- Destiny Martin

The risk assessment gives the Nation critical information to inform where to locate the bison ranch and enables the Nation to consider how they might evacuate the herd during an extreme event like a wildfire or flood.

To ensure the safety of their Citizens, the Nation is also taking steps to prioritize emergency response planning to prepare for potential evacuations. Elders and vulnerable community members are being added to a registry to ensure their needs are taken care of during an emergency.



"It's been a foundational bit of information in terms of making the decision to have a farm plot, have something where we can actually have a controlled environment, so we can assure that we're going to produce something, even in drought years."

- Matthew Michetti



Another Perspective

As the Nation prepares to advance their Community Development Plan Initiatives to realize new opportunities for the region, the Climate Risk Assessment provides a valuable perspective and body of knowledge to inform this work, enabling the community to apply a climate-informed lens to their decision-making going forward.

The Climate Risk Assessment outlines actions for WLMN to build climate resilience across natural, built, and social systems, including:

- Designing buildings with fire-resistant materials
- Conducting ongoing environmental monitoring
- Identifying public cooling and clean air centres
- Selecting drought resistant vegetation
- Developing an emergency response plan
- Installing signage to build awareness

Equipped with this Climate Risk Assessment, the Nation has an informed foundation from which to embark on this new opportunity. As a sovereign Nation, this assessment will support Willow Lake Métis Nation as they establish a permanent place to call home.

“Personally, and for my Department, it was very valuable. Knowledge is power. So the more information that we have, it allows us to make those decisions based upon that information... It just gives that extra bit of information to help us focus on what we really need to be looking at, when it comes to climate change.”

- Destiny Martin

AN ALL-HANDS-ON-DECK EXERCISE

Willow Lake knows that the interconnectedness of community development, tourism, food sovereignty, and climate adaptation requires an all-hands-on-deck approach, including engaged Citizens, an active Sustainability Department, and supportive leadership.

From all that they have learned in conducting this Climate Risk Assessment, they share some lessons for other local governments that are embarking on climate adaptation projects:

- **RESOURCE** your sustainability department appropriately to ensure that they can champion the work.
- **FIND** opportunities to bring community knowledge and perspectives into the project and communicate findings with community members.
- **APPLY** a climate lens when considering all decisions, plans, and projects.
- **INTEGRATE** the findings of a climate risk assessment beyond the sustainability department and across all internal teams and departments (i.e. health).

“Doing a project like this is really important before you venture out and just start different projects. It starts out as a really great foundation for any kind of projects, whether that’s in the sustainability department or health department or whatever kind of thing that you’re in”

- Destiny Martin

“This has been a foundational document, that goes along with our biophysical assessments, with our permit reviews, this is something that pre-exists design and engineering work. So if you’re looking at any kinds of new projects, new developments, absolutely it’s critical. It’s formed an elemental piece of how we’re functioning as an office”

- Matthew Michetti



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