



Fort McKay First Nation is a signatory to Treaty 8. Its nearly 900 members live about 60 km north of Fort McMurray in the community of Fort McKay and the Moose Lake and Buffalo Lake reserves.

Fort McKay First Nation

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

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This profile was completed in collaboration with James "Scotty" Stewart, Fort McKay Elder, Dante Howe, Fort McKay community member, and Skylar Lipman, Fort McKay Sustainability Department, and in conversation with The Resilience Institute project team, Laura S. Lynes, Henry Penn, and Jeff Baker.

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A Changing Environment

"And people used to fish off the bridge. Just drop a line. They see fish come through. Now we can't, because there's nothing there."

- James "Scotty" Stewart

James "Scotty" Stewart is a respected Elder of Fort McKay, and Dante Howe is a Fort McKay community member, land user, and traditional drummer. Drawing on their lived experiences and spending time on the land in Fort McKay, both Scotty and Dante have observed changes in the environment over time.

In winter, the cold is not as extreme as they remember. And summers are getting drier and drier; the water levels in rivers, streams, and creeks have dropped drastically. Scotty remembers people playing in the MacKay River and seeing people fish off the bridge, but now the water levels have dropped too much.

These changes also mean that birds are altering their migration patterns. Habitat for animals like rabbits, chickens, and beavers are also changing. Dante, Scotty, and other land users must go farther away from the community to harvest them. Dante participated in this project as a youth, turning eighteen partway through. From his perspective, as the landscape changes and becomes drier, plants and medicines that are harvested by community members can no longer grow where they once did.

Wildfires have also increased in frequency and intensity in the northern part of Alberta. The Nation has faced several evacuation alerts in recent years, and with only one road to access or safely evacuate from the community, Scotty and Dante view this as a pressing concern.

Smoke from wildfires in Alberta, British Columbia, Saskatchewan, and the Northwest Territories is a regular occurrence for summers in Fort McKay. When the air quality is poor, children can't play outside, and Elders and community members with respiratory conditions like asthma face greater risks.

"Fire is pretty concerning. Especially for those with respiratory conditions. It can be harder for them."

- Dante Howe

"The river is going lower almost every year, and this year was the lowest I've ever seen the river. And that's concerning because what if it dries up. And also it's getting drier up here throughout the summer times and all that. And that's hard because then our plants, natural medicines can't grow where we go pick them."

- Dante Howe

"I think the driving situation is industry. It's kind of a double whammy. You get the natural climate change and you're getting climate change caused by the escalation of industry all at the same time, and it's just spiraling out of control, that's my view."

- James "Scotty" Stewart



Combined Effects

The climate impacts that Fort McKay experiences are uniquely influenced by the region and the presence of industry. In recent decades, industrial activities have encroached upon FMFN's territory, reaching the doorstep of the community and dramatically altering the environment in northern Alberta and across Treaty 8 territory. As a result, it is difficult to determine if the changes that Scotty, Dante, and other community members are seeing daily are because of climate change, industrial development, or both.

And when industrial impacts and extreme weather events created by climate change meet, the effects on the environment and the community are magnified. Fort McKay is already experiencing the impacts of multiple disturbances from the oil and gas, mining, and forestry sectors. Climate change is an additional disturbance. The impacts of climate change and industry combine to doubly impact ecosystems, communities, well-being, and ways of life. Scotty, Dante, and Skylar describe their observations of some of these combined effects:

- **WIND:** deforestation and industrial activities are leading to windier conditions, worsening as the climate changes and becomes more extreme.
- **WATER LEVELS:** industrial activities are already drawing on the community's water supply and community members are seeing muskeg drying up. This is expected to worsen as climate change makes conditions drier.
- **WILDFIRE:** climate change is leading to more extreme weather events like wildfire. The combined effects of wildfire and industrial sites with flammable materials could have disastrous consequences and lead to dangerous air quality, especially for individuals with respiratory conditions.
- **AIR QUALITY:** there are already days in the community where children can't play outside due to bad odours and poor air quality from tailings ponds and other industrial activities. Combined with the effects of wildfire smoke, the impacts of poor air quality can be especially dangerous as the community sees respiratory conditions become more and more common. Pollution also settles on the snow in winter, making it unusable for recreation or community use.
- **WILDLIFE:** Migration patterns for birds and other animals are changing as climate change and industrial activities impact their habitat. Ducks and geese are not as prevalent in the fall, and industrial seismic lines are pushing other animals into different territories.

When the impacts of industry are so immediate, it becomes a balancing act to both respond to day-to-day concerns and prepare for a climate reality that is decades into the future.

With this in mind, Nation staff and community members worked with The Resilience Institute to complete a Climate Risk Assessment, bringing together emergency preparedness, disaster risk reduction, community health and wellbeing, and long-term climate resilience in a whole community approach. 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.



Bringing Together Ways of Knowing

Bringing together climate data with community-specific knowledge and lived experience has resulted in the most accurate picture of Fort McKay's climate future.

Regional climate projections alone did not account for lived experiences of the impacts of both climate and industry. This level of detail was only captured through in-depth community discussions.

For example, when the TRI team brought climate projections to the workshops which indicated there would be little to no change in wind speeds in the future, the community compared it with local monitoring data and lived experiences. In their observations, conditions were getting windier and windier. Community members and staff found that this was due to the combined effects of tailings dams and deforestation, leading to wind tunnels and creating windier conditions. The climate data alone only told one half of the story.

"Always take the opportunity to interrogate the data and bring that back to community members and say, is this still fitting with what you've experienced in the past, your expectations for the future, what you're seeing on the land right now? And not being afraid to have that moment of questioning the data."

- Henry Penn

A Holistic Approach to Adaptation

During this project, Elders emphasized that the climate risk assessment would be most beneficial for the next generation, for their grandchildren and great-grandchildren. However, with the pace of climate change accelerating, the community is already experiencing its impacts. While Fort McKay is a future-thinking Nation, they understand the importance of responding to immediate impacts today alongside preparing for the future.

That's why emergency response planning was such a significant part of this process.

There is only one main road connecting Fort McKay to the rest of the province. In the case of an extreme weather event like a wildfire, the lack of infrastructure poses a challenge for first responders to access the community and for community members to safely evacuate. Building a secondary road for emergency access was a key recommendation in this project. The road would benefit community members now and into the future.

Laura and Scotty share that adaptation strategies and planning need to be holistic and consider the now and the near-term as well as the long-term.

"But I think the projected 50, 60 years should be cut by three quarters, because global warming is accelerating at an extreme speed that we're going to have to play catch up."

- James "Scotty" Stewart

A COMMUNITY-LED APPROACH

In collaboration, Fort McKay First Nation staff and The Resilience Institute project team engaged diverse members of the community and administrators in multiple workshops. Together they explored environmental changes across Fort McKay's territory and shared their concerns and hopes for the future.

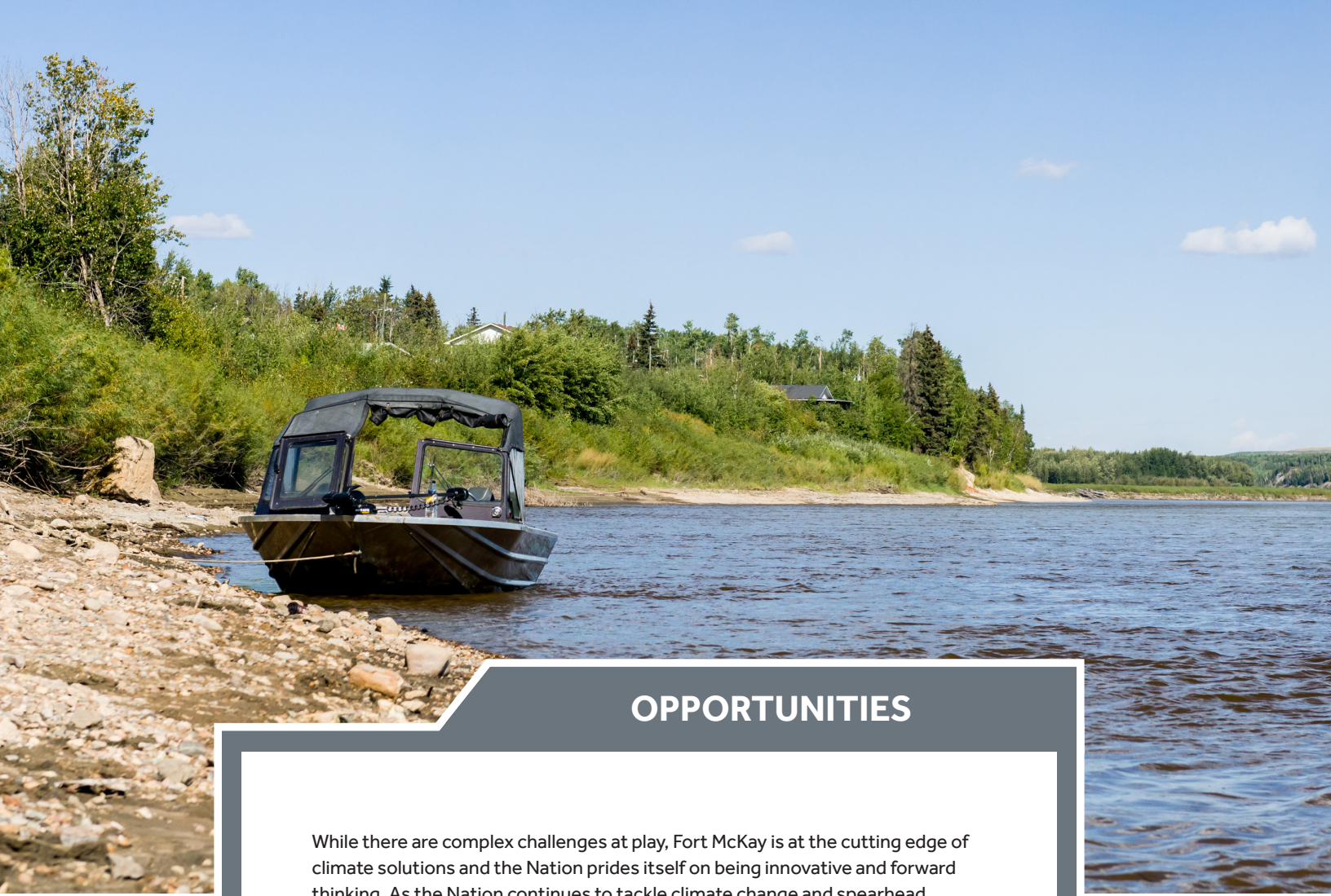
Elders, youth, adults, and internal FMFN Departments, including staff from Sustainability, the Park Ranger and Environmental Monitoring Programs, Capital Projects, and Lands & Leasing attended the workshops.

The project team wove future climate projections together with what they heard from community members about the changes they've have been experiencing. The amalgamated local, cultural and technical knowledge was then further verified with the community to finalize the understanding of climate risks and the impacts of those risks.



"You're already impacted, right? How many times have you been on evacuation alert? How many times you can't go outside because the air quality is too bad? So what does it look like to do adaptation strategies now and in the near future for people who are alive now.... So it's the now, the near term, and the longer term, and looking at what kind of strategies we can do that addresses all of them from a more holistic way."

- Laura S. Lynes



OPPORTUNITIES

While there are complex challenges at play, Fort McKay is at the cutting edge of climate solutions and the Nation prides itself on being innovative and forward thinking. As the Nation continues to tackle climate change and spearhead climate solutions for the region, the risk assessment has provided a number of opportunities, including actions for the Nation to consider. Fort McKay community members also shared recommendations for government, regulators, and industry to ensure actions are taken to reduce the impacts of combined industry and climate change effects.



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