Round one information request (IRs) - Responses from Norman Wells RRC.

A. Observation of Caribou and Climate Change in General SRRB IRs to all indigenous parties:

1. Has your community observed changes in:

Weather patterns:

Grandfathers worried about hot, cold, and wind. None of the other weather systems. Back in the late 1800's there was really severe cold weather . We barely survived because it was so cold.It never got warm. No climate change then, like there is now. When it was cold, it was COLD. For a stretch of time. Used to be -40 degrees for months at a time. End of November to the end of March. Now, it's not like that. Back in the day, the Elders could predict the weather by looking at the sky. Not anymore.

Grandfathers worried about hot, cold and wind. None of the other weather systems. In 1973, summertime, really high water. You really had to watch out when you were on the Keele. In the 1970's weather started to change. Not as bad as today.

There have been significant noticeable changes in weather patterns. Usually the North wind prevails however in the last few years the South wind has been constant, colder and stronger. The weather seems to change its behavior faster and more unpredictable. I t has been harder to read and weather reports are not reliable.

Freeze up and/or thaw dates:

When the Mackenzie freezes up, it's usually around November 13-15th, when the river would usually stop. As of now the water is so shallow this year. The ice doesn't freeze solid like it used to. Not as thick either. When the south wind came, the wind helped the snow before. It's really weird. For breakup, there used to be massive pieces of ice but today, it just sort of floats away now, not in big pieces of ice. In the 1990's the weather started to go haywire, back in the 1970's temperatures weren't as bad as they are now in the summer.

Freeze up time is now later in the year (est. December) due to warm weather. It is hard to read the ice. The Mackenzie "River" does not freeze the same as it has done in the past and that is concerning to people who use the "river" corridor to travel. Another noticeable change is that the river has a lot of places with open water and we have seen the river push back and reverse, especially where the Bear River meets the Mackenzie River by Tulita.
Ptarmigan's like to sleep in the snow. Wind from the north started to come again and now the ptarmigan is back.

Permafrost:

Permafrost is melting off now. All the mountain rivers come and the Mackenzie river goes up. This year, there was so much rain on the other rivers in the mountains, but it didn't make it to the

Mackenzie River. Where did all the water go? Did it sink into the water? The cycle of water going up and down, it follows all the four seasons. The Keele is still flowing in the fall now. Permafrost must be melting in the hills that keep feeding the Keele River. Maybe that's why the land is so dry.

There are many visible changes that are really concerning in regards to permafrost thawing. There is a lot of slumping on the “river” banks, small lakes draining into the river

Water courses and sediment:

Back in the day, they used to dredge the Mackenzie River to keep the main channels deep. With the man made islands around Norman Wells the river is wrecked. On the mackenzie, sediment is caving in on both sides. It’s harder to get around by boat. The river is more unpredictable. With water so low, there are alot more sandbars. Watch the Government start dredging again soon.

Ice build up on snow:

In the winter, rain creates ice on the snow making it crunch. Starting to see more rain in the winter months. In April, see it before the rain comes.

Wind speeds and/or direction:

The wind is much faster now. South wind coming up and wildlife starters moving all over the place. North wind is the boss. Ptarmigan wind comes from the west. Ptarmigan’s like to sleep in the snow. Wind from the north started to come again and now the ptarmigan is back. South wind comes, changes the Ptarmigan. They left, now they’re back.

Rain in winter events:

“50+ years ago, when I was around 16-17 years old. I was walking home after the New Years dance and it started to rain.” - Johnny McDonald

Last year, (2022-2023 winter) it rained and wind came along on December 3,2022. The world’s weather is haywire now. It will never be the same again.

Other changes to weather and climate:

Four seasons used to be on schedule, but from the 1970’s to 1990’s everything started to change. Snow in the middle of summer. Lots of sloughing on the side of the river with trees coming down. In the 1970’s the cold weather set in, got rid of alot of small songbirds and even migratory birds. Last summer (2023), there were not a lot of mosquitos because of all the smoke. This impacts the birds, what do they eat when this happens? With all the fires this summer, all the small animals are impacted. Does ECC check for deaths from fires? If you check, there will be lots of animals (moose, bear, some dead.) with such thick smoke, it's hard to see where you are going when traveling.

Fire patterns changed, fires don't burn the same. They burn now in little pops, not in a predictable way. Fires go down into the earth (underground burns.) Lichen has shallow roots and the fire burns those

roots too. The same goes with berries. The Stewart Lake fire; there used to be so many berries, but they are all gone now. They grow back quicker. Sucker Lake Island; normally a lot of high bush cranberries, but none this year. Aswell as across the creek not on berry, they are all dried up. No cranberries this year, but a lot of blueberries.

In 2015-2016 there was a lot of snow in July/August.

2. **What has your community noticed about how these changes affect caribou?**

The caribou move around. Where are the caribou going? Everyday walking in the same direction, heard after heard. We know they are going to rut. GNWT wouldn't say when the question was asked. All the creeks back then, you could just see all the moose laying down in the water all over. Many moose and caribou.

Less bears, GNWT/ECC kill them. They killed 23 bears in one summer. Wolves, lots of young ones this year all the way up to the quarry.

3. **In what ways is how you harvested caribou been affected by these changes?**

Weather changes, it changes drastically in minutes . Before you were able to predict these changes sooner and go off that. Now it changes and you can get stuck out on the land or stuck in storms. The winds have changed, the water levels in the summer are low (more sandbars), the heat is hotter, many things are dryer than normal.

4. How has the quality of the caribou affected by these changes, if any?

Freezing rain can be hard for them to access food sources under the snow due to a hard crust under the snow. Low water levels can mean they might have a hard time accessing good water sources in the winter as the water will freese to the rock bed.

5. **What,if any, new dangers or safety concerns are showing up on the land with the changes observed?**

Everything is unpredictable now. It's not safe, we can't depend on the land like we used to. Elders used to predict the weather, but not anymore. It's super unpredictable.

6. What does your community look for to know if it is safe to go on the land or if there is any danger due to these changes?

Weather temperatures, winds, Overflow areas; changes due to warmer weather and things not freezing over properly. Open water on the river; can be dangerous to travel with the unknown as to where they are.

7. Do the above dangers or concerns affect how your community accesses the land and water?

Overflow can cut off access to hunting grounds and makes it dangerous to travel. Open water on the river; can be dangerous for new travelers, but also a lot more open areas than back when we were kids.

8. **What stories does your community have about climate change from the ancestors, grandfathers or grandmothers, or other knowledge holders?**

Leon Andrew " Our people, they used to live on the small animals, rabbit, chicken, ptarmigan. Even other things along the way. They know how to conserve wildlife for themselves. We did well. When you get tired of rabbits, go fishing. Then leave the fish alone and go get something else. They knew what to do. We knew when the fish ran. We know when the run will be."

" Family members talked about the polar reversal. Things moving around, old family members talked about this. Something will happen, but we don't know what." " My grandmother used to talk about this too. In Fort Good Hope, Elders talk about the ocean waters coming back. If there was a Tsunami from the arctic ocean. Norman Wells would be flooded" - Leon Andrew

9. **How is the weather and climate change described in your indigenous language?**

Climate Change, "Eh'ta'go'kay-eh"

B. Observations Wild Fire and Caribou SRRB IR's to all Indigenous Parties:

1. **How does your community view/value wildfires?**

The wind carries the fire across the river though the ash. Fires also create their own pressure system. Fires these days aren't as predictable. The GNWT still says that fire's won't jump the river or act in certain ways, but we don't know. The pine needles explode and go right away. Crowning fires go up the trees so quickly, they jump fast and far.

Hail at Mile 222. It's very uncommon. Lately you see it more in the mountains. Thunderstorms at least twice a day at Mile 222.

2. **What changes in wildfires has your community observed over time?**

The fires pop up everywhere now. They're not predictable and they keep burning late into the season.

- **Where did your community first notice these changes?**
- **Where on the land have the wildfire changes been seen?**

3. **What changes has your community observed in smoke and any lingering effects? In humans? In Caribou?**

More Smoke, causes respiratory challenges and issues. Causes people to have headaches and migraines.

4. **What stories does your community have about wildfires and burning from the ancestors, your grandfathers or grandmothers, or knowledge holders?**

Mountain Dene would set fires to let the hunters know where we are. Let the branches burn. Didn't worry about it getting big, but now it's too dry. The ground is so dry. In the 1960's fires weren't active. Then the land dried up and it's so dry as of today. The GNWT just lets it burn.

5. **Does your community distinguish between good and bad wildfires? If so, what are the characteristics?**

Fires now: all these small sports. Lots of smoke. Doesn't burn as hot or in the same way, goes underground. Keeps reigniting. Some wildfires are okay because they cause cyclical regeneration. All the roots of black spruce aren't getting enough water. Raspberry bushes are starting to grow around the trees sucking up the water for the black spruce. This is a new reality with low water and dry fuel for the fire. Dryness of the trees causes crowning fires, as well as underground fires, which melts the permafrost. Heat from the wildfires made the seeds release. (documentary for Borealis) Coal seams are naturally occurring, no permafrost to melt there. We aren't 100% if there is permafrost up there. Boggy area.

6. **How are different types of fires described in your indigenous language?**

7. **What changes in wind and how wind affects wildfires have your community observed?**

The wind's have changed. Used to be prevailing North winds. Now it's South wind. South wind was cold and strong, usually warm. Wind isn't good for fires of any kind, especially directional. Winds are eddying now, dry wind, huge waves against the current of the river, no direction, goes all over the place. No birds/animals, nothing around. When the eddying wind would stop, it would come from the south and around. They are all over the place.

" Ravens always take shelter, they can solve anything."

8. **What effects of wildfires on caribou or caribou habitat has your community obverved?**

The protection of Caribou needs to be fought early, so the key habitat isn't destroyed. We need to take action as soon as it starts. Mile 50, Caribou travel there in the fall and winter. People freely go there from outside of Norman Wells. Monitoring needs to be done at Mile 50. At Mile 222, lots of people are traveling there to harvest caribou. It needs to be monitored as well. In Norman Wells people have to travel a distance to harvest caribou. It's costly.

Muskox and Caribou do share the same habitat.They help each other. Muskox dig up the ground and it can help the Caribou eat more lichen.

9. **Where on the land and/or water have these changes been noticed?**

Doris lake - Low water (water looks full of sediment/Darker Green), but Florence lake was normal.
Where doris flows into the Mountain River the creek bed is starting to get full of green algae.

The Mackenzie river is extremely low compared to previous years. It's dangerous to go on the river if you don't follow the main channels.

10. **How long does it take for caribou food and habitat to return after burning?** \

    The Caribou cycle back sometimes. It takes at least 50 years for the caribou's food to come back after a fire. Grass and willows come up after the fires. Poplar comes up and Tamarack comes back.

11. **What can be done to protect caribou and caribou habitat from wildfires?**

C. Additional Questions SRRB IRs to all interested parties.

1. **Do you have questions for other parties?**

2. **What effects does the government of forestry and management have on wildfires?**

People aren't happy with the management of fires. Many of the decisions come from down south and decisions need to be made in the North. When it comes to fires, Indigenous people have no say. The government doesn't listen to what the communities want. Management doesn't know about it to begin with. They use to shut fires down right away. Now they use VARS (Values At Risk), if there are no cabins or human life. They let it burn, but wildlife are living beings. This is important. Does the GNWT know what is of importance (Cultural, archeological, wildlife.) Fires in the North should be actioned as soon as they are seen. To not be waited on until they are out of control.

VARS (Values at Risk) does not work. People at Old Fort Point were using their own resources to fight fires. GNWT should be working with the people to fire smart cabins. Preventative methods need to be used beforehand. As people we should be able to apply for funding, that's our food security. Traditional harvesting.

The GNWT has up to $5000 for lost cabins(rebuild). Many people aren't aware. How do you know you are eligible? More communication is needed on the GNWT's part.