

#### 4.1. The Climate in Jean Marie River from the 1950s to 1980s

The weather in the JMR area from the time of settlement until the 1970s was typically characterized with long and very cold winters, short cool springs, short and hot summers, and longer falls in comparison to the climate in the last 15-20 years.

Although the weather has always been unpredictable to a certain degree, the people of JMR, especially the Elders, usually knew when seasons started changing and when extreme weather events would occur well in advance of these changes or events happening. The people of JMR knew how to predict these changes based on the traditional knowledge (TK) that has accumulated over the generations of the Slavey people who have lived in this area. Observing the weather and anticipating how this will affect the environment and wildlife was an important aspect of our TK, as this was essential for our survival and for maintaining the health of our people physically, mentally, spiritually, and emotionally; as well as to maintain the health of the community and its culture.

Interviewees mentioned that when they were youth and young adults they remembered the seasonal weather patterns, for the most part, happening like clockwork.

“And we still have ice flows in June on the river (referring to the 1950s). At that time it never fails. You know, every spring after all the – sometime after the leaves come out we have a big – sometimes we have a big snowfall... We move out of our houses in the winter, and in spring set up a tent outside – you could hear all the spruce trees with wet snow on it, just cracking like somebody shooting. That’s the kind of spring. And then the summertime only gets really warm in July, not in June. July is our warmest month – summer month. And then right around the end of July we have a big storm. It’s just like clockwork. Everybody knows its coming. It would storm pour rain and wind for about three days... August it’s pretty good. You know, that’s the time they called it Indian summer, in August, it’s really hot.” (*Ernest Hardisty, September 2010; parenthesis added*).

Part of this perception of timing of the seasons was based on the ability of Elders in the past to predict weather in the short term, and also when seasons would change; for instance, if winter would come earlier or later.

“They (the Elders) were amazing. They looked at the stars and if the stars are blinking faster it means there will be a wind, they used a set of stars to tell time. I am not sure if this method could be used these days. I’ve travelled and was taught by all the men in the community. They observed everything; sometimes when we settled at our camp and we heard lots of owls they would say that it’s going to snow, these sorts of things they had used to predict the weather. I don’t know whether people are still using these methods. People are no longer on the land in the winter....

During the time when I was young the winters were very cold, very cold. During those cold days there would be ice fog all along the river. During the summer it was very hot and it used to rain for several days. These rains have names (such as) berry ripening rain, that’s how it used to be but now things are different... In the fall, sometimes the people would say that the fall would be long. The Elders would predict what the weather would be like and usually they were right. Most times the fall weather would last a long time, where there is no snow on the ground but the ground was well frozen. Sometimes they would predict that the fall would be short and so it was. We would get early snowfall. Elders would predict what the weather would be like and that’s what the people

went by.” (*Billy Norwegian, September 2010; translated by Margaret Ireland; parenthesis added*).

Basically, weather was one of the first factors to consider when conducting many types of traditional land use (TLU) and cultural activities, and still is today, and the ability to predict weather mediated the relationships that members of our community had with nature, with each other, and with other communities. As the weather and climate have changed over the seasons and years, our people have adjusted to these changes using our TK that we have particularly adapted to our traditional territory.

However, since the 1970s, and especially in the last 15-20 years, the climate has begun to change noticeably in JMR, with the weather in all seasons becoming generally warmer. There is more snow in winter, particularly in late autumn/ early winter, and less rain in the summer; however, it is the more subtle shifts in the timing of seasonal weather changes and the associated changes to the environment that are having the most pronounced impacts on the land and on our community. A typical year before the 1970s will be briefly described to better understand how significant some of the recent changes to the climate are, or will be, to our community.

Starting in the autumn the season was usually from late September to early/mid November. During the fall it would become cold; freezing the ground and water, but usually little snow would be on the ground until after Christmas. Many birds were seen flying south and there was always an abundance and variety of ripe berries. Before snow accumulated significantly the ground, rivers, and lakes were frozen allowing our trappers to safely travel anywhere to set up their trap lines.

Winters were very cold, with temperatures around -50°F not uncommon. There was lots of snow in the winter, but usually not before Christmas. The thickness of the ice on the Mackenzie River was about seven to eight feet thick, and all waterways could be safely used as travel routes for hunting and trapping.

“Back in those days it was really cold. We try to dig our heels into the snowdrift, we wouldn’t even make a little dent. That’s how cold it was. It was so cold, we had to go to the Mackenzie River to retrieve water to drink, but the ice was so thick, about eight feet thick back then.” (*Stanley Sanguéz, September 2010*).

Spring marked the end of the trapping season as trappers needed to get their traps out before the rivers and lakes started to breakup. With the gradual warming in the spring months – late March to mid/late May – the ice on the rivers would crack loudly as the ice broke up. After the ice in the rivers and lakes had melted many types of birds came to the area, filling the air with the sounds of birds and frogs.

“Spring was also the same. The Elders predicted when spring would arrive. Spring brought major changes; breakups were great, lots of water, if there was lots of snow during the winter, there would be lots of water. Breakups along the Jean Marie River were very powerful and the ice would clear out of the Jean Marie River leaving the shore clear of ice. For the last several years breakups along the Jean Marie River are very quiet, the ice almost melts away so the shore is overgrown with shrubs. Judging by the past river activities, things have changed considerably.” (*Billy Norwegian, September 2010; translated by Margaret Ireland*).

Summers were short but they were usually hot, but not too hot, and according to the interviewees, rain would usually fall around the same time each summer. Thunderstorms in the summer during this time period were infrequent and not very intense when they did happen.

“In the summer it didn’t rain that much and it wasn’t that hot, for me it wasn’t that hot. And there were many birds, you could hear all the birds, and in the spring you would also hear the frogs, lots of frogs. Now you very seldom hear a bird and in the spring you don’t hear frogs.” (*Yvonne Norwegian, November 2010; translated by Margaret Ireland*).

The approximate timing of seasonal changes and the indicators used to predict these changes had become a pattern that had remained fairly constant over many generations. When to go out trapping, and when to harvest certain animals or plants at certain times of the year was primarily mediated by the season and the weather. In a sense what is perceived as ‘good weather’ is a basic factor for the health of the body, community, and environment. Changes and restrictions imposed by governments and industry have also interfered significantly with our people’s connection with the land, but the weather remains one of the most important factors in determining when we can practice particular TLU activities and other cultural activities.

Many participants recalled when they were younger the Elders told them that negative changes would occur to the weather, the animals and to the vegetation in the future; brought upon by the disrespectful treatment of the world by industrialized societies and cultures. The changes associated with climate that these Elders spoke of have started to be noticed by the eldest of interviewees as early as the 1970s, and have become particularly noticeable to other community members in the last 15-20 years.

“My late father, sometimes he would sit at the table and speak of things to come. He talked about things as we know them to be, how the earth is going to change, how all things would change in the future. I remember thinking, I was a young man then, and I wondered how the earth will change, it was hard for me to believe that the earth, which has been in existence for time immemorial, would change. This is how he spoke with us, he also said that the animals eventually would change and we would notice when it becomes quite noticeable. I used to wonder what is he talking about, how would the earth change, the animals change, not only that but he also spoke of the white people exploiting the earth, depleting the earth of its life force, which eventually would put people in a very difficult existence. These were the things he spoke of. I used to think that this earth is our land and there is no way it would be destroyed. I am amazed that my late father spoke of things that would be several years ago and now we are living these changes.” (*Douglas Norwegian, November 2010; translated by Margaret Ireland*).

The predictions by these Elders of major changes to the climate and environment, and how this will impact our community, are becoming reality. The older generations and Elders in our community today have begun to observe these changes with great concern, and people have also started experiencing impacts related to climate change. These observations and impacts will be discussed in separate, but overlapping themes in the following sections.

“People know of the changes in the weather. People are aware of the changes on the land, with wildlife, water and the trees, but people do not understand why this is happening. In the future this will be felt more; it will create great changes... the Elders talked about the future, changes would occur for everything and how it’s going to be very difficult for the people, people will experience hardship. What they predicted will come to be, there’s no changing it; it is the truth... The Elders of the past had powerful knowledge and when they predicted something it usually is the truth and it comes to be.” (*Billy Norwegian, September 2010; translated by Margaret Ireland*).