

## 4.6. Vegetation

The changing climate has had visible impacts on vegetation, trees in particular. There is the above-mentioned issue of ‘drunken trees’ in permafrost areas, but there is also the concern of the northward spread of spruce bud worm. This issue, along with drier summers, could significantly impact the ecosystem, as well as increase the risk of forest fires. With drier summers some participants remarked the vegetation is looking wilted, more yellow, and generally unhealthy, and one particularly well known wetland area where many birds used to come to nest in the spring is now very dry, with noticeably less water and vegetation growing in the area; and almost no migratory birds are returning in the spring.

“In the early 70s, I remember the Elders sitting with my mother and they were talking about the differences they were noticing. They talked about the differences they noticed with the trees. If you take a good look around you would say they were right. They were talking about the berries at that time and the grasses were also different, they noticed the grass was not fully green and that it appears to be dry. Even back then, the Elders were talking about the changes that were happening so we start to pay more attention to things, we realized that they were right, the grass looks unhealthy.” (*Yvonne Norwegian, November 2010; translated by Margaret Ireland*).

Another change many people in JMR believe is connected with climate change is the significant decline in abundance and quality of many types of berries harvested by the community. Many of these berries ripen in the summer or fall and are harvested at this time, but in recent years there are fewer berries to pick, and many are still not ripe in the fall.

“In the summer there were many berries and there are many things that are different, they’re no berries and there are many things that are different, there are no berries in the fall. At Rabbitskin, where I grew up, there use to be lots of Saskatoon berries and there’s hardly any, my younger brothers and sisters are telling me that there’s hardly any Saskatoon berries in the area; occasionally there’s one or two hanging from the branches.” (*Yvonne Norwegian, November 2010; translated by Margaret Ireland*).

“Last summer there was hardly any rain, but this year was different again. This summer we are getting more rain, there’s lots of thunder and rain. Everybody thought there will be lots of berries, but there are hardly any berries. There were blueberries, which people had harvested and there were some high bush cranberries. What I noticed about these berries was that they didn’t last very long, they fell off almost immediately. What is causing this? Perhaps changes in climate, even though we had a fair amount of rain there were hardly any berries.” (*Billy Norwegian, September 2010; translated by Margaret Ireland*).

These berries are an important source of vitamins and anti-oxidants that are freely and easily obtained; whereas, fruits and vegetables in the grocery store are expensive and are often of low quality. Moreover, people in the community believe that there is a correlation between the decline in the abundance and quality of berries and increased sightings of black bears in the community during the fall.

However, with spring starting earlier and the summers ending later there is a longer growing season, evidenced by the increase in underbrush growth along riverbanks and trap lines, as well as the increased quality and quantity of flowers and/or vegetables in some people’s home gardens.

**Table 5: Climate Observations and Impacts Associated with Vegetation**

Theme	Observations	Impacts	Relation to Health	Vulnerability Ranking	Magnitude	Duration	Ability to Adjust
Vegetation	<ul style="list-style-type: none"> <li>Trees and grasses are looking more unhealthy</li> <li>Trees are getting leaves about a month earlier</li> <li>Decreased abundance of many types of berries (e.g. cloudberrries, high/low bush cranberries, Saskatoon berries, raspberries, and soap berries)</li> </ul>	<ul style="list-style-type: none"> <li>Indicative of an unhealthy ecosystem and habitat loss for animals common to the area</li> <li>Reduced availability and abundance of country foods</li> </ul>	<ul style="list-style-type: none"> <li>Erosion of TK and cultural practices in relation to plant species</li> </ul>	Medium	Weak	Intermediate	Moderate
			<ul style="list-style-type: none"> <li>Reduced availability of country foods to community resulting in more dependence on store bought foods</li> </ul>	Medium	Weak	Intermediate	Difficult
	<ul style="list-style-type: none"> <li>More trees are dead or dying as a result from permafrost melting, especially tamarack, poplar, and spruce</li> <li>Northward spread of spruce bud worm infestations</li> </ul>	<ul style="list-style-type: none"> <li>Infestation of spruce bud worm killing off more trees</li> <li>Fallen trees are blocking access to harvesting areas</li> <li>Higher risk of forest fires</li> </ul>	<ul style="list-style-type: none"> <li>Reduced habitat for animals with northward spread of spruce bud worm</li> </ul>	High	Medium	Short	Moderate
			<ul style="list-style-type: none"> <li>Reduced availability of country foods in the community resulting in more dependence on store bought foods</li> </ul>	Medium	Strong	Medium	Difficult
			<ul style="list-style-type: none"> <li>The community is more susceptible to suffer negative personal and community health impacts caused by forest fires</li> </ul>	High	Weak	Short	Easy
	<ul style="list-style-type: none"> <li>Increased sightings of new plants, especially along road ways (e.g. Canadian thistle, hog weed, sweet clover)</li> </ul>	<ul style="list-style-type: none"> <li>Invasive plant species may start to dominate over native plant species</li> </ul>	<ul style="list-style-type: none"> <li>Increased potential for more community members to develop allergies and/or asthma</li> </ul>	Low	Weak	Long	Easy
	<ul style="list-style-type: none"> <li>Underbrush along riverbanks, trails, and trap lines become overgrown in the summer</li> <li>Longer growing season</li> </ul>	<ul style="list-style-type: none"> <li>More time, money and energy to maintain travel routes and trap lines, less time to harvest animals</li> <li>More varieties and abundance of flowers, fruits and vegetables are being grown in gardens; however, gardens cannot be started until June instead of late May</li> </ul>	<ul style="list-style-type: none"> <li>More difficult to access harvesting areas to gather country foods</li> </ul>	Medium	Weak	Long	Easy
			<ul style="list-style-type: none"> <li>Increased potential for more community members to develop allergies and/or asthma</li> </ul>	Low	Weak	Long	Easy
			<ul style="list-style-type: none"> <li>Increased opportunities to grow local fruits and vegetables, and reduce dependency on store bought foods</li> </ul>	Medium	Weak	Intermediate	Easy