

COMMUNITY-BASED

FISH AND WILDLIFE WORK PLAN



LITTLE SALMON/CARMACKS TRADITIONAL TERRITORY 2019-2024



Illustration by Alexis Johnnie

For additional copies of this report contact:

Director, Fish and Wildlife Branch

Environment Yukon (V-5A)
P.O. Box 2703
Whitehorse, YT Y1A 2C6
www.env.gov.yk.ca
fish.wildlife@gov.yk.ca

Little Salmon/Carmacks First Nation

PO Box 135, N'jnrò 52
Carmacks, Government of Yukon Y0B 1C0
info@lscfn.ca

Carmacks Renewable Resources Council

Box 122
Carmacks, Yukon
Y0B 1C0
Carmacksrrc@northwestel.ca

This report may be cited as: Little Salmon/Carmacks First Nation Traditional Territory Fish and Wildlife Planning Team. 2019. Community-Based Fish and Wildlife Work Plan for the Little Salmon/Carmacks First Nation Traditional Territory. Environment Yukon, Whitehorse, Yukon. XX pages.

ISBN: 978-1-55362-822-4

Cover Photo credits: Illustration by Keenan Tom



Illustration by Chanel Johnnie



Illustration by Lawa Skookum



Illustration by Mason Johnnie-Blackjack

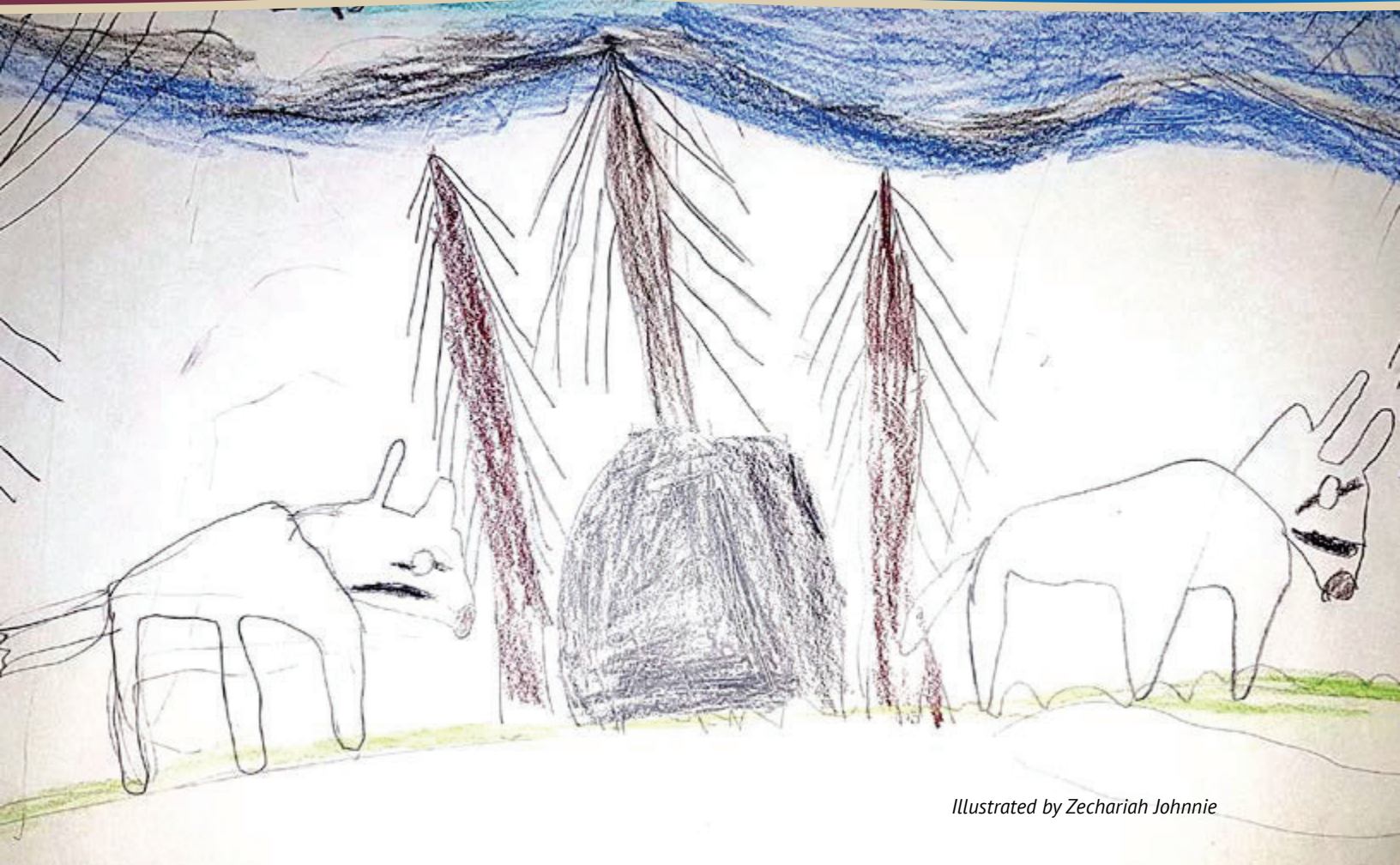
Disclaimer:

This community-based fish and wildlife work plan shall not create any commitments or obligations that are legally binding on the planning participants or create or affect any legal rights of the planning participants. Without limiting the generality of the foregoing, this community-based fish and wildlife work plan shall not create, affect, define, interpret or apply any roles, responsibilities, rights or interests under the Little Salmon/Carmacks First Nation Final or Self-Government Agreements.

COMMUNITY-BASED

Fish and Wildlife Work Plan

for the
**Little Salmon/Carmacks First Nation
Traditional Territory**
2018-2024



Illustrated by Zechariah Johnnie

Table of Contents

Little Salmon/Carmacks First Nation Traditional Territory Map	6
Introduction.....	7
What is this plan about?.....	8
How the plan was developed	8
Successes from Past Work Plans	9
Acknowledgements	9
Priorities	10
Other topics/Plans	11
Utthì Cho/Wood bison	12
Elk.....	12
Egay/Wolves	12
Sra Cho/Grizzly Bears.....	12
Taghāl Män /Mandanna Lake.....	13
Tsáwnjik Chu/Nordenskiöld – Habitat Protection Area	14
Gyo/Salmon	15
Planning Principles and Communication	16
Dän K’l, Doòli and Traditional Knowledge	16
Communication	17
Proposed Activities and Projects	18
Fish and Wildlife Habitat.....	19
Climate Change.....	21
Hande/Moose.....	23
Hudzi/Caribou.....	26
Łuk/Freshwater fish.....	29
Human/Wildlife interactions and Hunting.....	32
Mäk/Sheep	34
Utthì Cho/Bison.....	35
Elk.....	36
Nakhyał Zhay/Trapping	38
Monitoring and Stewardship.....	39
What is Next?.....	41

LITTLE SALMON/CARMACKS FIRST NATION TRADITIONAL TERRITORY

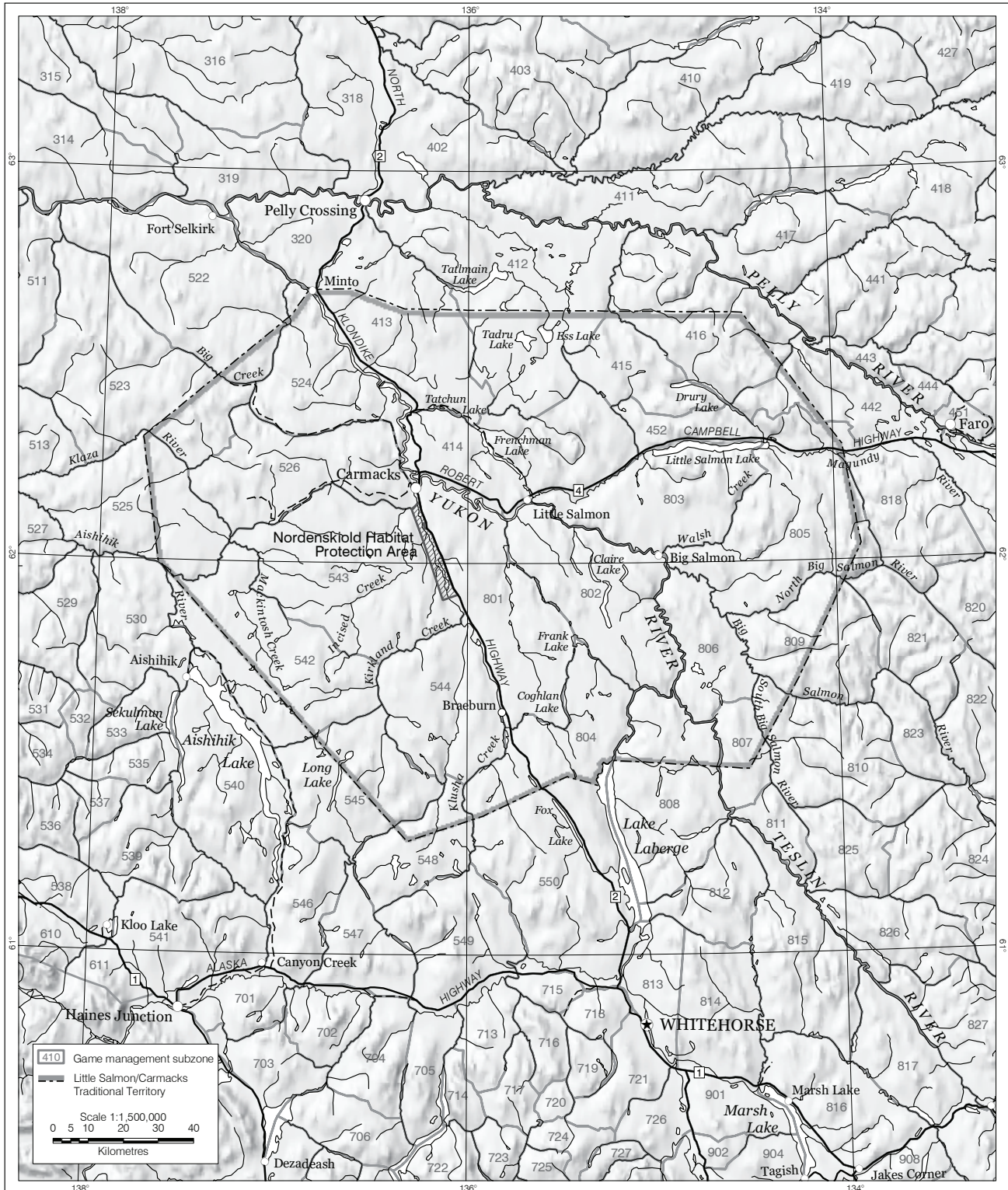


Figure 1: Little Salmon/Carmacks First Nation Traditional Territory

Introduction



Illustrated by Lawa Skookum

WHAT IS THIS PLAN ABOUT?

Community-based fish and wildlife work plans are one way that Government of Yukon (YG), First Nation governments and Renewable Resources Councils come together to decide the priority fish, wildlife and habitat issues for their Traditional Territory, as well as how – and by whom – these issues will be tackled.

The following community-based work plan was developed by Little Salmon/Carmacks First Nation, Carmacks Renewable Resources Council and Government of Yukon; hereafter referred to as the planning team. This work plan is the third developed for the Traditional Territory. It builds on previous work and includes new ideas and issues brought forward by community members and the planning team. This work plan represents a shared vision for fish and wildlife management in the Traditional Territory over the next five years.

Identification of the agencies responsible for carrying out the proposed work is done with the best available knowledge of existing resources; implementation of the proposed work is subject to management priorities and budgetary constraints for each of the planning team participants.

There are a variety of other management plans that are currently in place in the Traditional Territory, and this work plan is intended to complement those existing plans.



HOW THE PLAN WAS DEVELOPED

In November 2017, the planning team met to review the 2012-2017 work plan and agreed to develop a new work plan. The planning team then met again in March 2018, to decide on a process to develop a new work plan.

As a first step, the planning team developed a short newsletter and questionnaire that were sent out to community members in Carmacks, 15 questionnaires were returned with comments. The planning team also developed a long-form interview and hired local community members to conduct in person interviews with 20 participants. Participants interviewed were chosen based on their extensive knowledge of the Little Salmon/Carmacks First Nation Traditional Territory.

In May 2018, the planning team hosted a community dinner at the Heritage Hall in Carmacks. More than 40 community members attended to share their ideas and input about community-based fish and wildlife management and values. The planning team then met on June 3-4, 2018 to review and discuss all the community input gathered and discussed direction and topics for the updated work plan.

SUCCESSSES FROM PAST WORK PLANS

There have been two previous work plans for the Little Salmon/Carmacks Traditional Territory. Through our collaborative work we have seen great successes. Some of these are highlighted below.

- The community voiced a need for increased enforcement in the Little Salmon/Carmacks First Nation Traditional Territory. These concerns contributed to a game guardian position staffed in 2004 and a permanent Government of Yukon conservation officer staffed in Carmacks in 2011.
- Community concerns were raised about the increased development pressure on the Klaza caribou herd which led to a five year study of the herd completed between 2012 and 2017. This involved monitoring radio-collared caribou, habitat mapping, lichen mapping, ground disturbance mapping and fire risk mapping, culminating in development of a range assessment for the Klaza caribou herd.
- Ongoing concerns about low fish populations in Frenchman, Twin, and Mandanna lakes led to lake trout population assessments being completed on all three lakes. Results led to regulation changes to limit angler harvest on both Frenchman and Twin lakes.
- Concerns about moose and the need for more information-sharing between the planning team and community led to workshops being held to discuss moose populations and map local knowledge about important moose habitat in 2012, 2013, and 2015. A census of moose was also conducted in the Tatchun Moose Management Unit in November 2017.
- Electric fences were put up at the Carmacks landfill after concerns were raised about foxes and wolves being attracted to the community. There has been a significant decrease noted in the number of problem foxes and wolves within the community.
- Community members wanted to know more about sheep populations within the Traditional Territory which led to sheep surveys in the Magundy-Little Salmon Lake and Glenlyons Range areas in 2014, 2015, 2016 and 2017, and a survey of the Kirkland Creek-Division Mt. area in 2017.

Due to other priorities arising, as well as time and budgetary constraints there are several items in the previous plan that were not able to be completed between 2012-2017. These items were included in the review process by the planning team and if they were ongoing concerns from the community, they were carried forward into this plan. These are summarized in *Appendix A*.

ACKNOWLEDGEMENTS

The planning team would like to thank the many community members who shared their knowledge and wisdom through the planning process. The planning team would like to acknowledge the community members who participated in community meetings and interviews, and who took the time to respond to the mail out questionnaire. We hope this work plan reflects your interests and we look forward to your continued support of this work in the coming months and years.

The planning team would also like to thank Agnes Charlie, Jocelyn Skookum, and Alma Wrixon for the Northern Tutchone translations.



Priorities

The following were identified by the planning team, based on community input, as the most important priorities to address in the traditional territory over the next five years:

- **Cumulative effects on fish and wildlife:** further our understanding of the impacts of development; particularly mining and exploration, on fish and wildlife and their habitat within the traditional territory. This will include an understanding of increased access to remote areas and reclamation of past development.
- **Climate Change:** further our understanding of the potential impacts of climate change on fish and wildlife and their habitat within the traditional territory to better prepare for future scenario planning and adaptation needs.
- **Moose:** complete a traditional territory wide moose range assessment to better prepare for future land development to effectively manage moose and their habitat. This will involve identifying culturally and ecologically important areas for moose.



Illustrated by Sophie Harris

Other Topics/Plans

This work plan is not intended to duplicate other ongoing work in the Little Salmon/Carmacks First Nation Traditional Territory. Brief descriptions are provided below on management plans or initiatives for elk, bison, wolves, grizzly bears, the fish populations of Mandanna Lake and for the Tsâwnjik Chu Habitat Protection Area.

Concerns related to these topics were brought up during the planning process, but the broader management of these species will be addressed through these other management and planning initiatives. Regionally specific proposed projects and activities on some of these topics are described in subsequent sections.



Illustration by
Eva Sunshine Morgan-Skookum

UTTHÌ CHO/WOOD BISON

The Aishihik wood bison herd has been regularly surveyed since 2007 and is currently estimated at 1255 animals (2016). The 2012 management plan for the herd aimed to balance the need to manage a Species at Risk with community concerns related to the herd size. Yukon government, Little Salmon Carmacks First Nation, and the Carmacks Renewable Resources Council work cooperatively with the Yukon Bison Technical Team, and Yukon Bison Management Committee, to implement the management plan and address issues related to herd management. A review and update of this management plan will be initiated in the fall of 2018.

Community members continue to express concerns about the size of the herd, the increase in bison hunters and related impacts, and the potential impacts of bison on the land and other species.

The parties will bring forward the concerns raised by the community to the Wood Bison Technical Team and will continue work to share information about bison management, and bison impact studies and other research with the community.

ELK

The *Management Plan for Elk in Yukon 2016* in Yukon focuses on keeping the two Yukon elk herds, Takhini and Braeburn healthy, and to manage their habitat and range carefully, as well as to further understand and mitigate the impacts of elk presence on the landscape.

The Braeburn elk herd range is within the Little Salmon/Carmacks First Nation Traditional Territory. There are approximately 100 elk in this herd.

Community members expressed concern about elk on the landscape and their impacts on other wildlife specifically in the spreading of ticks to moose and caribou.

EGAY/WOLVES

The *Yukon Wolf Conservation and Management Plan 2012* provide long term guidance on how wolf populations should be managed in Yukon. There are an estimated 4000-5000 wolves in Yukon, spread throughout the territory. The population is considered healthy.

Community members raised concerns about wolves continuing to come into the community and attacking resident's dogs. There is a sense the number of wolves that are coming into contact with people is increasing. There were also concerns about the impact of wolves on moose and caribou populations in the area.

SRA CHO/GRIZZLY BEARS

The Yukon Fish and Wildlife Management Board and the Government of Yukon are developing a Grizzly Bear Conservation and Management Plan for Yukon. The management plan is in its final stage of completion and is anticipated to be available in 2019.

Community members continue to have concerns about bears coming into the community. They are seen to be attracted to the community due to improper garbage storage. Residents would like to see more work done to better educate people on proper garbage storage as well as to understand what to do if there is a bear encounter.

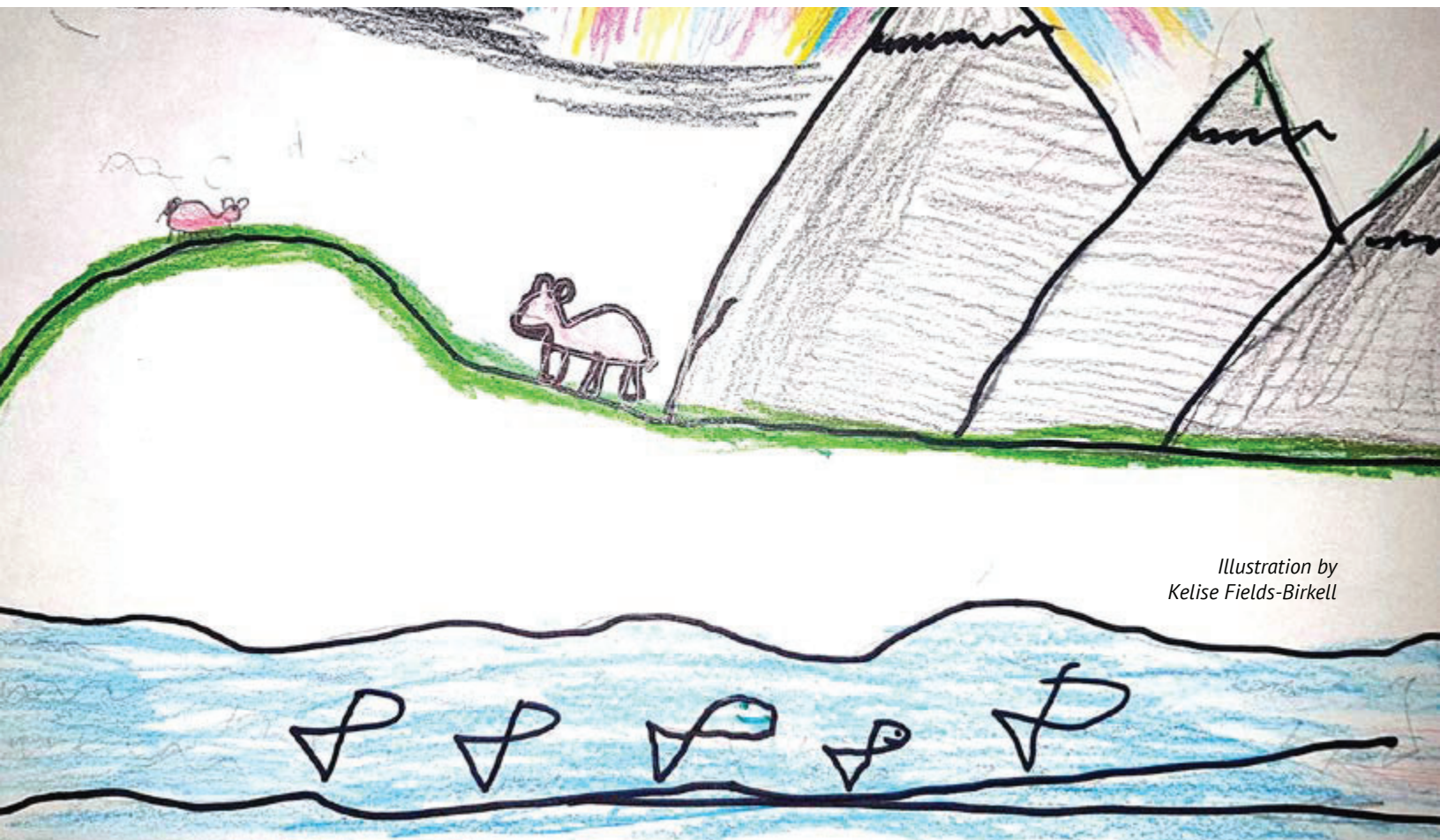
■ TAGHÄL MÄN /MANDANNA LAKE

A management plan for Mandanna Lake was created in 2003 and updated in 2010. Mandanna Lake was identified as a 'special lake' by the Little Salmon/Carmacks First Nation in their Final Agreement in 1997. Schedule C of Chapter 16 requires the plan to be consistent with these objectives:

- Conservation of Freshwater Fish in Mandanna Lake;
- Respect for the traditional and current use of Mandanna Lake by Little Salmon/Carmacks people and the importance of the lake to the Little Salmon/Carmacks First Nation; and
- The need to treat all users of Mandanna Lake fairly.

Mandanna Lake was the first lake in Yukon to close licensed lake trout harvest in 2001-02, due to low lake trout numbers. The lake is popular as a fly-in fishing destination for tourism operators who have offered catch-and release sport fishing since the closure. A lake trout survey was last completed in 2013. The population was considered healthy.

Community members continue to voice concerns about angler fishing pressure on lake trout in Mandanna Lake as well as catch and release fishing as a management tool. After consultations with Little/Salmon Carmacks First Nation, Government of Yukon has proposed a regulation change, limiting the practice of catch and release fishing for Mandanna Lake. The regulation allows for the daily harvest or release of five fish, regardless of species. However, of the five fish, only one lake trout may be retained.



*Illustration by
Kelise Fields-Birkell*

■ TSÂWNJIK CHU/NORDENSKIOLD – HABITAT PROTECTION AREA

A management plan was jointly created for Tsâwnjik Chu Habitat Protection Area in 2010 by Little Salmon/Carmacks First Nation and Government of Yukon . The area was identified under the Little Salmon/Carmacks First Nation Final Agreement, Chapter 10, Schedule A.

Tsâwnjik Chu Habitat Protection Area is a key river and wetland complex that provides important habitat to moose, ducks, muskrat, salmon, and other wildlife. The area has been important to the Little Salmon/Carmacks First Nation for centuries, and continues to be important for traditional harvesting and to teach youth the ways of living off the land in a respectful way.

There were no specific concerns voiced regarding the management of Tsâwnjik Chu Habitat Protection Area other than how the important area could be affected by current and future development and changes due to climate change. The Tsâwnjik Chu Habitat Protection Area Management Plan will be reviewed in early 2019.



Illustration by Kendrick Billy

■ GYO/SALMON

Salmon populations are important to the Little Salmon/Carmacks First Nation citizens, and to other Yukoners.

Many community members raised concerns over low numbers of salmon and the quality of the waters they are using. As the management of salmon stocks and fisheries is a federal responsibility, salmon are not be addressed in this work plan. The Yukon Salmon Sub-Committee is a public advisory body established under the Umbrella Final Agreement. The committee is a forum for public involvement in all aspects of the management of salmon stocks and fisheries and provides recommendations to the Minister of Fisheries and Oceans and First Nation governments.

- The Carmacks Renewable Resources Council will continue to bring forward concerns and interests from the community to the Yukon Salmon Sub-Committee.

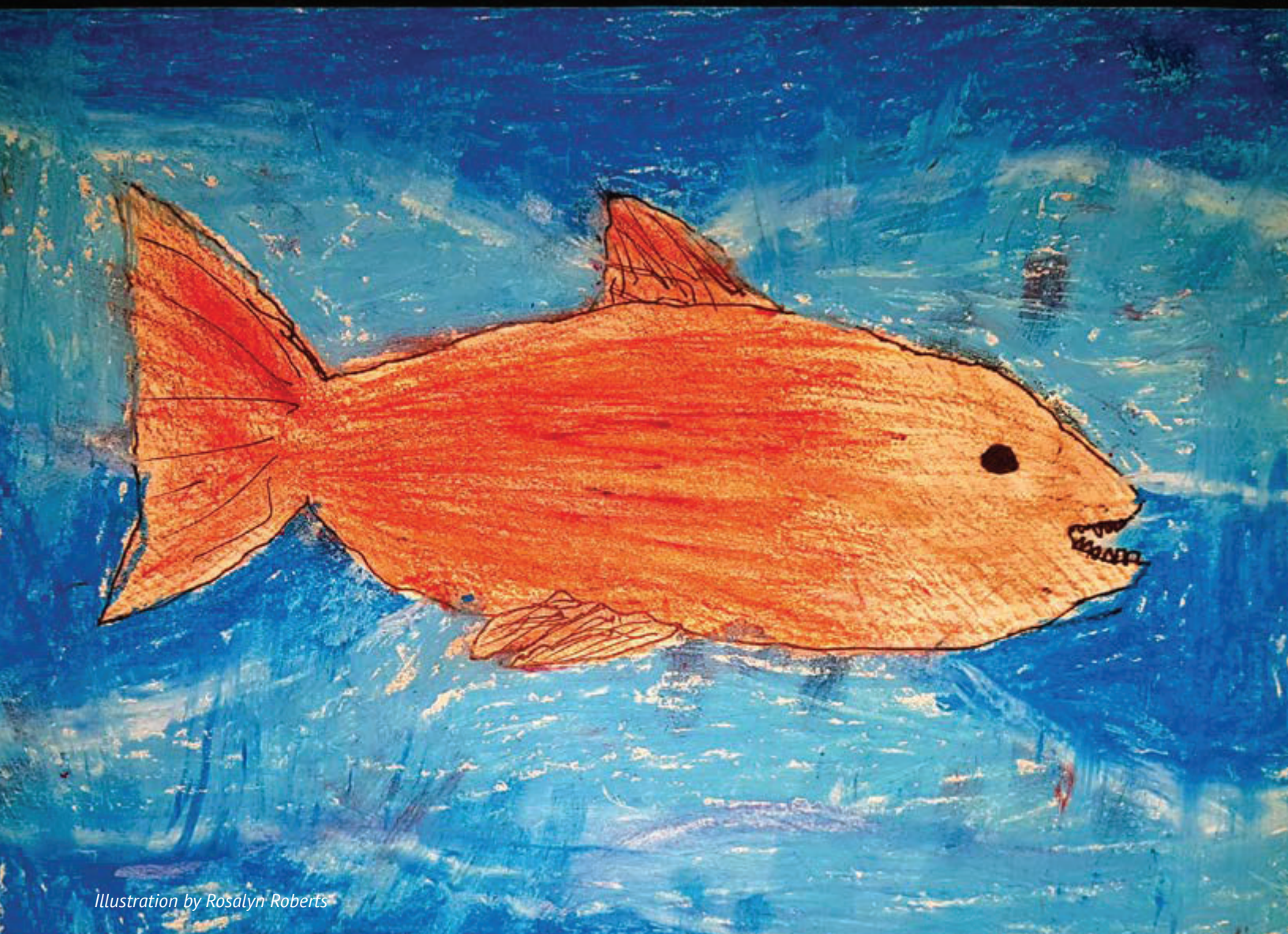


Illustration by Rosalyn Roberts

Planning Principles and Communication

PLANNING PRINCIPLES

DÄN K'I, DOÛLI AND TRADITIONAL KNOWLEDGE

The objectives and proposed activities laid out in this work plan aim to recognize, respect, and provide space for cultural connection to fish, wildlife and the land as well as to contribute to Northern Tutchone cultural revitalization. Little Salmon/Carmacks First Nation Elders have contributed their extensive knowledge and understanding of fish, wildlife and the land to both this planning process and to previous work plans. The collaborative work we aim to do through this work plan endeavors to honour and share the teachings of the Elders, the spirit and intent of the Little Salmon/Carmacks First Nation Final Agreement and the Northern Tutchone way of life for future generations. We also aim to recognize and respect Dän K'I – the 'First Nation Way' and Doûli when interacting and addressing issues related to fish, wildlife and the land. From a First Nations perspective, the ecosystem is seen as a connected whole. Although it is difficult to fully communicate the interconnected relationship that First Nations have with land, this relationship, it is an underlying principle of this work plan. Through implementation of this work plan, we will continue to seek guidance from Elders and communicate regularly with the community.



Illustration by Jasper Charlie

COMMUNICATION

The value of working towards strong communication and information sharing among the planning team is fundamental to the success of this work plan.

Improving communication and information sharing is intended to encourage the planning team to share knowledge and resources, and to work in a coordinated fashion towards common fish and wildlife management goals.

The following sections outline specific guidance for improving communication and information-sharing.

AMONG THE PLANNING TEAM

- Continue to share information and ensure all parties are made aware of relevant fish and wildlife management issues.
- Meet annually to communicate progress on proposed projects and activities included in this work plan and to discuss project development and financial considerations.

WITH THE COMMUNITY

- Involve all planning team participants in community outreach and information-sharing.
- Clarify the intended audience for communications and always strive to meet the needs of the audience when considering format and delivery.
- Communicate frequently about work being carried out in the Little Salmon/Carmacks First Nation Traditional Territory (and other areas if relevant), including regular monitoring, special research and projects, and relevant past work.
- Use existing tools and explore new ways to communicate with the public, including newsletters, meetings, social media, etc.
- Involve the community in work activities where possible.

MAY GATHERING

The annual May Gathering is an important sharing space, which incorporates Traditional Knowledge, and provides guidance to the three Northern Tutchone First Nations of Yukon (Little Salmon/Carmacks First Nation, First Nation of Na-Cho Nyäk Dun, and Selkirk First Nation) on fish and wildlife management awareness and responsibility as well as stewardship roles of First Nations and others. Updates on fish and wildlife projects and activities described in this work plan will be shared at the May Gathering.



Proposed Activities and Projects

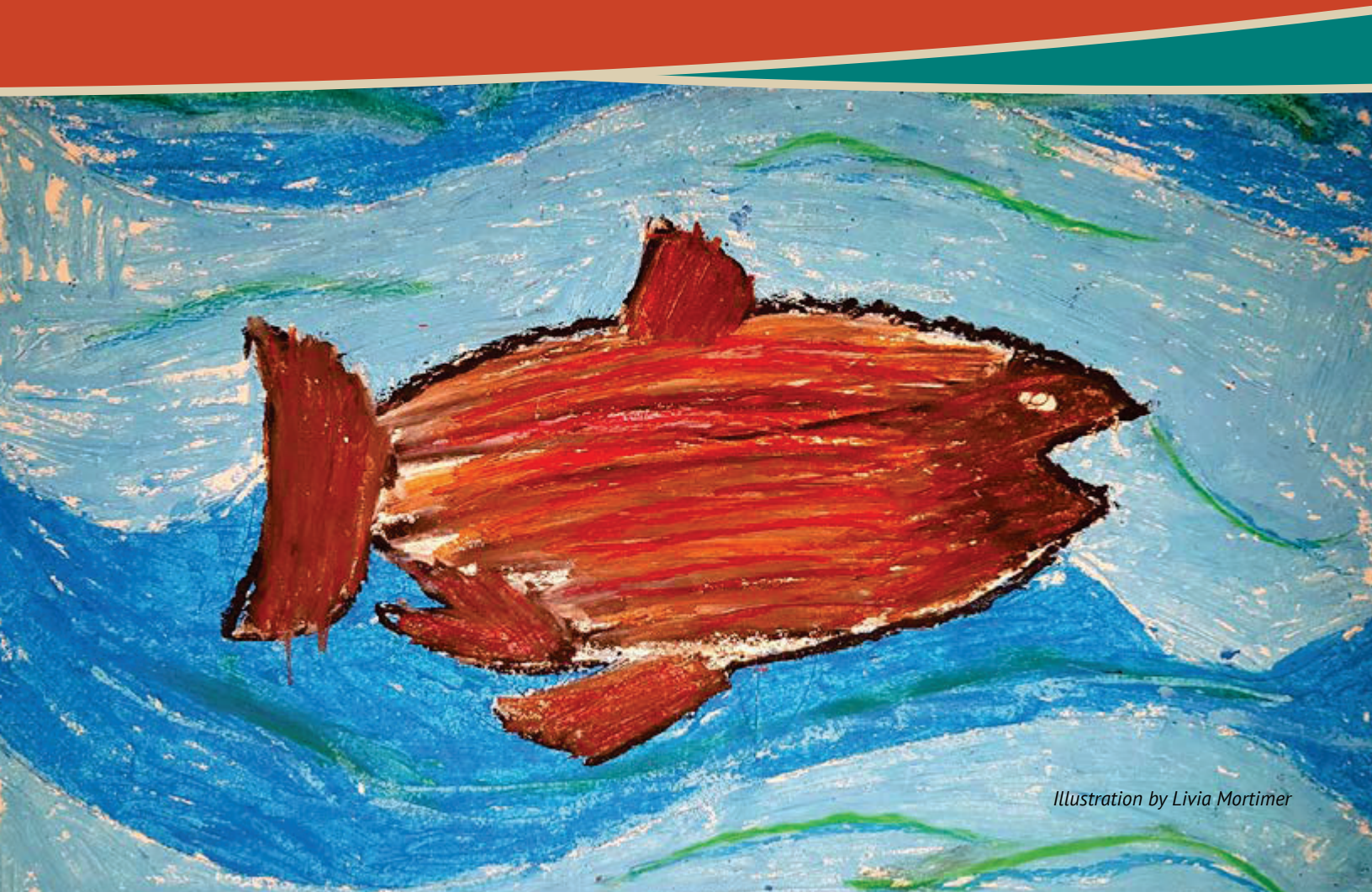


Illustration by Livia Mortimer

*Illustration by
Shirley O'Brien*



FISH AND WILDLIFE HABITAT

WHAT ARE THE CONCERNS?

As identified in the 2012-2017 work plan and community perspectives collected throughout engagement activities, there continues to be an underlying concern in all sections of this work plan with increased industrial exploration and land development within the Traditional Territory and its impacts on fish and wildlife health and sustainability. There was a consensus among community members at the community dinner and those interviewed throughout the planning process, that mining activities in the Mt Nansen, Freegold and proposed Casino Road areas are leading to increased pressure on fish and wildlife populations.

A summary of concerns regarding the impacts of industrial exploration and associated land development voiced are described below:

- Increased access into remote areas is allowing for greater harvesting of moose, caribou and sheep in areas previously considered inaccessible.
- Habitat loss, fragmentation, noise pollution; human presence and increased hunting are pushing wildlife away from areas they traditionally used.
- Concerns about water quality downstream of mining and exploration projects.
- Disrespectful interactions with the land, water and wildlife, and an unawareness of the cultural connection that community members have to the area by visitors to the traditional territory.
- Low communication from land developers and project proponents. Community members want to be informed on what is happening in the Traditional Territory and in surrounding areas that they have a connection to culturally and traditionally, and they want to educate visitors on how landscape changes are affecting people's way of life and their connection to the land.
- Land and associated wildlife habitat disturbance is making restoration to the original state impossible.
- A fear of exploration and development projects being abandoned without clean up or restoration efforts, stemming from past examples.

Other land uses activities that were brought up were agricultural and residential dispositions, particularly those near important wetland complexes or waterbodies. In addition, the new roads and trails created in association with these projects, leading to increased access into areas once remote and untouched, were also mentioned.

The planning team agreed that there is a need for a better understanding of fish and wildlife habitat requirements and the cumulative impacts of land use, land development and access on fish and wildlife populations. This information will better prepare the planning team for future exploration and land use projects. In recent years, there has been effort made to collect information in the Freegold, and Mt Nansen areas; information on other areas within the Traditional Territory is still needed and should focus on major access roads and other areas where exploration activity is anticipated. This information should include habitats important to fish and wildlife, as well as culturally important areas such as those used for berry picking, harvesting of medicinal plants, and other areas of traditional importance.

There continues to be interest in pursuing protection for the area between Tatchun Creek and Minto along the Yukon River. This area is important to moose during calving, summer and winter, as well as to spawning salmon, nesting and migrating waterfowl, and numerous other wildlife.

The planning team and the community voiced the need for completing regional land use planning (pursuant to Chapter 11 of the Little Salmon/Carmacks First Nation Final Agreement), as well as local area planning, specifically around development areas on the Magundy River, Little Salmon River and Little Salmon Lake.

Lastly, it was discussed that there are an increasing number of beaver occurrences and negative impacts from their dams on important wildlife habitat throughout the Traditional Territory.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Continue to gather baseline information on wildlife habitat and traditional use areas	Identify and map traditional use areas for inclusion in environmental assessments under YESAA including: <ul style="list-style-type: none"> • berry patches • medicinal plants • key habitats for wildlife • culturally important areas 	Led by LSCFN with support from CRRC and YG.
Promote the conservation of fish and wildlife values in land use planning and management	Explore options for measures to protect the area along the Yukon River between Tatchun Creek and Minto.	LSCFN and CRRC
	Participate in the development of the Yukon Wetland Policy that will provide a framework to guide the management of activities in wetlands across Yukon.	All
	Work together to identify areas where there are concerns about impacts from off-road vehicles on fish and wildlife and their habitat.	All
	Participate in the development of regulations under the Territorial (Yukon) Lands Act that will address the impact of off-road vehicles in environmentally sensitive areas.	All
	Participate in the development of regulations on resources road under the Territorial (Yukon) Lands Act that will regulate the construction, use, closure, and decommissioning of resource roads.	All
	Identify areas where local area planning could be considered; currently there are concerns around development on Magundy River, Little Salmon River, and Little Salmon Lake.	Led by LSCFN with support from CRRC and YG.
	Continue to communicate with local Department of Energy, Mines, and Resources staff on inspections of exploration and mining exploration activity sites.	All
	Identify opportunities to communicate directly with exploration and development project proponents to allow for respect-based interactions and to discuss community interests and concerns.	All
	Continue to identify and provide relevant information on development projects within the Traditional Territory that have the potential to affect fish and wildlife habitat during YESAB review processes.	All
Address potential contaminated areas and areas where waste was left behind from past exploration projects.	Identify and record areas that could be potential contaminated sites or are sites with waste from historical exploration projects. Identify other agencies and funding opportunities that could be considered to clean these areas up.	All

CLIMATE CHANGE

WHAT ARE THE CONCERNS?

Yukon is already facing the impacts of climate change and local community members have observed changes to ecological systems such as drying up of ponds and lakes, as well as shifts in fish and wildlife patterns and behaviours. Some species, once common to the area, are no longer seen in abundance, while sightings of novel species, such as cougars, mule deer, and new bird and insect species, are increasing. Community members are concerned that climate change-related events, such as the accelerated retreat of the Kaskawulsh glacier and the sudden diversion of water from the Slims River to an Alaskan river in 2016, could happen to landscapes locally.

Climate change was identified by the planning team as one of the three top priorities to focus on in this work plan over the next five years. Climate change is anticipated to affect not only fish and wildlife and their habitats, but also to have overarching impacts on our way of life.

Generally speaking, climate change impacts in Yukon are predicted to include increased average temperatures and changes to the amount of annual precipitation (both rain and snow). More extreme weather events like lightning storms, strong winds, flooding, and fires, along with melting glaciers and sea ice and thawing permafrost are also expected to occur. Changes to lakes, rivers and water quality are also anticipated.

Climate change is a complex issue, and will lead to changes in our interactions and relationships with fish, wildlife and their habitats. Traditional Knowledge is becoming more important than ever in allowing us a more in-depth understanding of how natural systems previously worked, what changes are happening and how we may be able to address them today. Traditional practices will be impacted, which could lead to food security issues and the need to look into alternative food sources. Wildlife species are predicted to move northward, and new species are expected to arrive. This is anticipated to limit the ranges of other local species, many of which are already experiencing impacts to their current ranges due to exploration and development.

The planning team also discussed the drivers of climate change and what changes could happen at a local level to contribute to mitigation and adaptation measures. The amount of change and associated impacts of climate change today, will depend on global efforts to decrease greenhouse gas emissions, as well as our ability to adapt to climate change. At a local level, integrating climate change mitigation and adaptation into fish and wildlife planning is becoming common practice to better prepare ourselves for future scenarios.



WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Integrate climate change into fish and wildlife management planning	Consider climate change in all fish and wildlife monitoring programs within the Traditional Territory.	All
	Map important wetlands within the Traditional Territory.	All
	Participate in the development of the new Strategy on Climate Change, Energy, and Green Economy.	All
	Engage with Elders and community members to record the changes community members are seeing on the landscape, and to fish and wildlife populations.	All
Explore funding opportunities to initiate climate change related projects within the community.	Explore the option of developing a community climate change adaptation plan, including food security measures.	Led by CRRC
	Hold a climate change mitigation and adaptation workshop.	All
	Identify and implement community green initiatives; such as creating potlach bags and decreasing plastic bag use.	Led by CRRC



Illustration
by Zarren Billy

HANDE/MOOSE

WHAT ARE THE CONCERNS?

Completing a moose range assessment and gathering a better understanding of the cumulative impacts of harvest pressure, climate change, predation, competition with other species, and industrial development on moose populations within the Little Salmon/Carmacks First Nation Traditional Territory was identified by the planning team as one of the top three priorities to address over the next five years. Community input highlighted the urgent need to better understand the habitat needs of moose as to best manage for healthy and sustainable populations. Moose are a very important species to the Little Salmon/Carmacks First Nation and to the wider community. As with caribou, community members voiced concerns about new and expanding mineral exploration projects and residential development around Mt. Nansen, Freegold, and Little Salmon Lake and how they may be changing areas traditionally used by moose, for foraging and calving.

Other comments received from community members included concerns about harvesting pressure on cow moose, as well as the need for more enforcement by conservation officers and game guardians on hunters coming into the community. There are ongoing concerns about respectful hunting, including proper meat handling.

Moose populations are grouped into moose management units that encompass, to the best extent possible, biologically meaningful moose populations. Licensed harvest is evaluated at a moose management unit scale. Traditional and local knowledge together with aerial surveys are currently used to assess the status of moose populations within the Little Salmon/Carmacks First Nation Traditional Territory. There are six moose management units that overlap within the Traditional Territory. Refer to Figure 2 for the boundaries of the moose management units and when moose surveys were last completed for those areas.

There are four operating outfitting concessions that overlap the Little Salmon/Carmacks First Nation Traditional Territory. Three of the outfitters have a quota for moose, one does not. Yukon government, the Carmacks Renewable Resources Council, and the outfitter each have a role in discussions to determine moose quota allocations and terms for those concessions.

Harvest levels on all moose populations are monitored closely by Little Salmon/Carmacks First Nation and the Yukon government. Harvest information is discussed annually at May Gathering.



Illustrated by Lonnie Skookum

MOOSE MANAGEMENT UNITS FOR MONITORING WITHIN THE LITTLE SALMON/CARMACKS FIRST NATION TRADITIONAL TERRITORY.

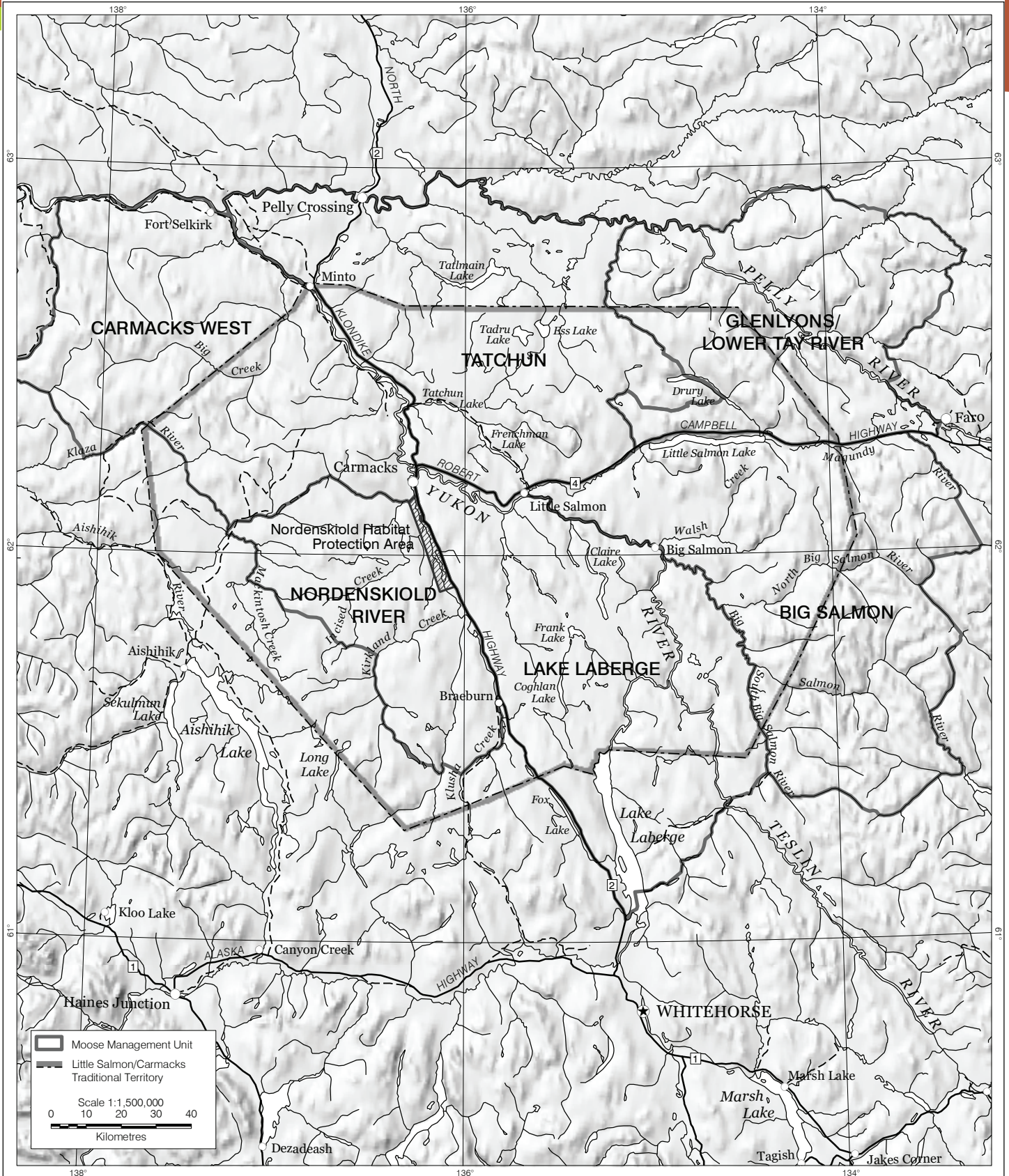


Figure 2: Moose Management Units for Monitoring within the Little Salmon/Carmacks First Nation Traditional Territory.

PAST MOOSE SURVEYS:

Nordenskiold

- Surveyed in 2009.
- Results indicated low density, with a total of ~300 moose.
- It is thought that harvest is at the upper threshold that the population can sustain.

Carmacks West

- Last surveyed in 2007. Density low but increased since last survey in 1987.
- This area has been closed to licensed harvest since 1987, but there is some First Nation harvest.

Tatchun

- Surveyed in 2014.
- Results show low moose numbers for this area.
- Currently harvest in this area is at the maximum level.

Lake Laberge

- Surveyed in 2018.
- The status of the moose population in this area will be updated once the 2018 survey is completed.

Big Salmon

- Surveyed in 1998 and 1993.
- Numbers at this time were high with 200 moose per 1000 square kilometers.
- Recent population numbers are unknown.

Glenlyons

- Surveyed in 2000, portion surveyed in 2011.
- High numbers of moose were recorded here.
- There are no concerns about moose numbers in this area.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Better understand the cumulative impacts from industrial development, harvest, climate change, predation, and competition on moose populations within the Traditional Territory.	Complete a moose range assessment, focusing on the area north-east of Carmacks, that identifies culturally and ecologically important areas for moose within the Traditional Territory to better prepare for future land development.	LSCFN & YG
	Continue community monitoring of moose in the Carmacks area.	All
	Continue to collect moose harvest information and share the information at May Gathering.	LSCFN & YG
Regularly communicate moose related projects and survey results with the community.	As new information becomes available, hold moose management workshops.	LSCFN
Carefully manage moose populations within the Traditional Territory.	Priority areas for moose census surveys in the Traditional Territory are Carmacks West and/or Big Salmon.	LSCFN & YG
	Communicate concerns with local outfitters about meat handling and improving ways to share meat and other moose parts (hide, bones, etc) within the community. This could be part of the regular quota meetings.	LSCFN & CRRC

HUDZI/CARIBOU

WHAT ARE THE CONCERNS?

There are four caribou herd ranges that overlap with the Little Salmon/Carmacks First Nation Traditional Territory including the Klaza, Tatchun, Pelly, and Aishihik herds. The Klaza and Tatchun herds are distinct local herds and were the focus of caribou-related concerns brought up during community engagement activities.

As proposed in the 2012-17 Work Plan, a five-year study on the Klaza caribou herd was initiated in 2012 due to concerns regarding the level of industrial activity taking place in the herd's range. This study involved collecting extensive Traditional, local and scientific information. As part of this study, adult female caribou were radio-collared, and a full herd census survey was conducted in 2012 for the first time since 1993. A full range assessment was completed; habitat mapping, lichen distribution, ground disturbance and fire risk mapping were included are part of this study. Licensed hunting of the Klaza caribou herd is currently managed by permit, with an average of 7 bulls harvested annually. The 2012 census estimated the herd population size to be 1179. Another full census on this herd is not anticipated within the life of this work plan, unless development pressure increases substantially.

A full census of the Tatchun herd has not been completed to date, however annual composition surveys have been completed each fall. Licensed hunting on the Tatchun herd is limited due to the herd's remote range, most animals harvested are by the local outfitter. Forest fires in recent years have moved the herd out of some areas of their traditional range. There is ongoing interest in completing a full census survey to better understand the status of the herd.

As with moose, three outfitters in the Traditional Territory have a quota for caribou, one does not. Yukon government, the Carmacks Renewable Resources Council, and the outfitter each have a role in discussions to determine quota allocations and terms for those concessions.

Harvest levels on both the Klaza and Tatchun herds are monitored closely by Little Salmon/Carmacks First Nation and the Yukon government. Harvest information is discussed annually at May Gathering.

Community members continue to express concerns about new and expanding exploration projects within the Traditional Territory, specifically in the Mt. Nansen and Freegold areas. Community members are worried about how the caribou herds and their range distributions in these areas will be impacted. Specific concerns include disruption of calving grounds and the risk of caribou being pushed away from their current ranges. There is also ongoing concern about the cumulative impacts from development, hunting, and climate change on both of these herds.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Carefully monitor and manage the Klaza and Tatchun caribou herds.	Continue Tatchun caribou herd annual composition surveys.	LSCFN & YG
	Continue annual harvest monitoring of all caribou herds in the Traditional Territory.	LSCFN & YG
	The priority herd for a caribou census survey in the Traditional Territory is the Tatchun herd.	Led by YG with support from LSCFN
Increase communication about caribou population health within the Traditional Territory and the management structure currently in place with the community.	Develop communication materials to better communicate caribou and other wildlife population health and status with the community.	All

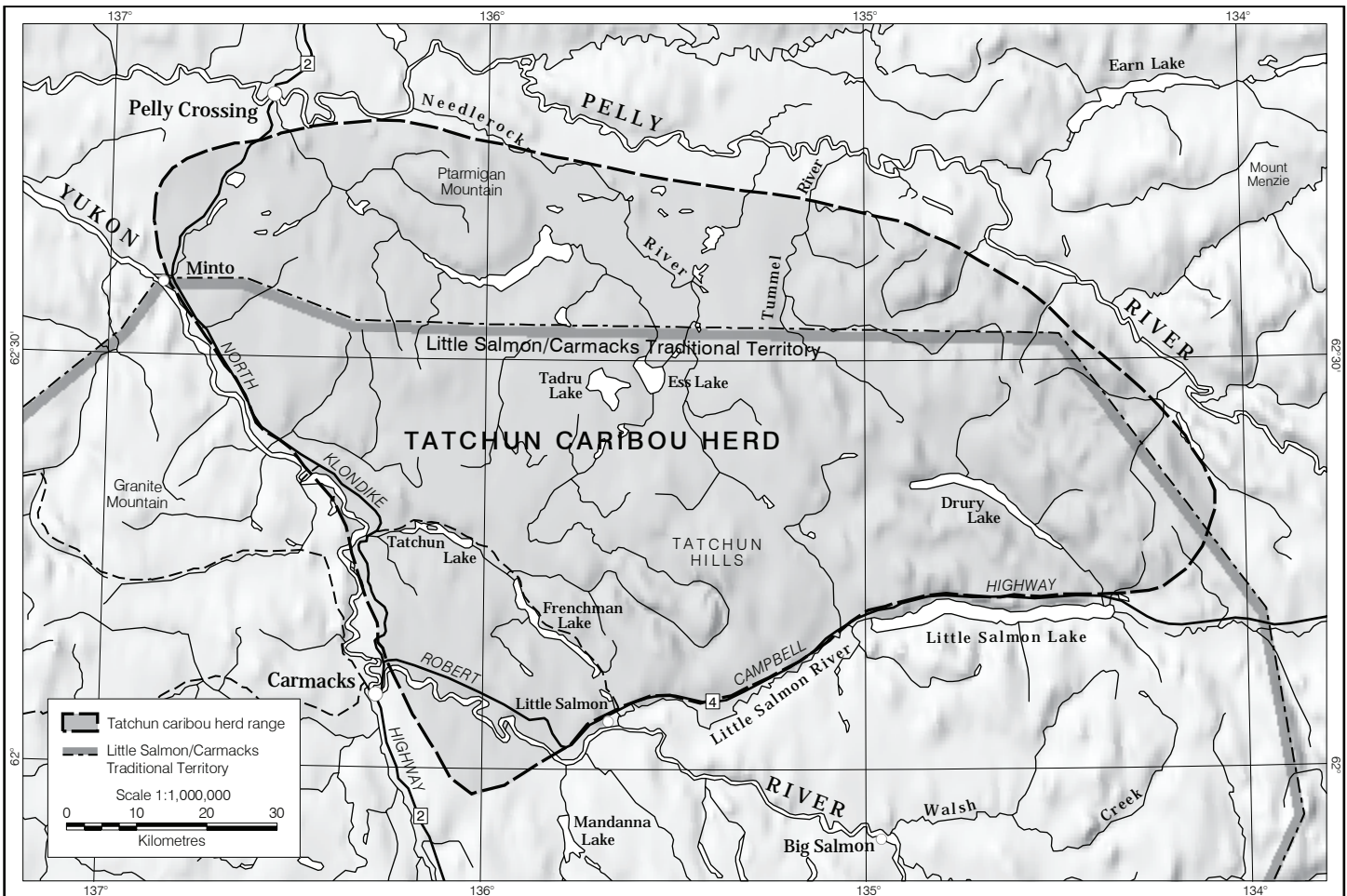


Figure 3 - Tatchun Caribou Herd Range

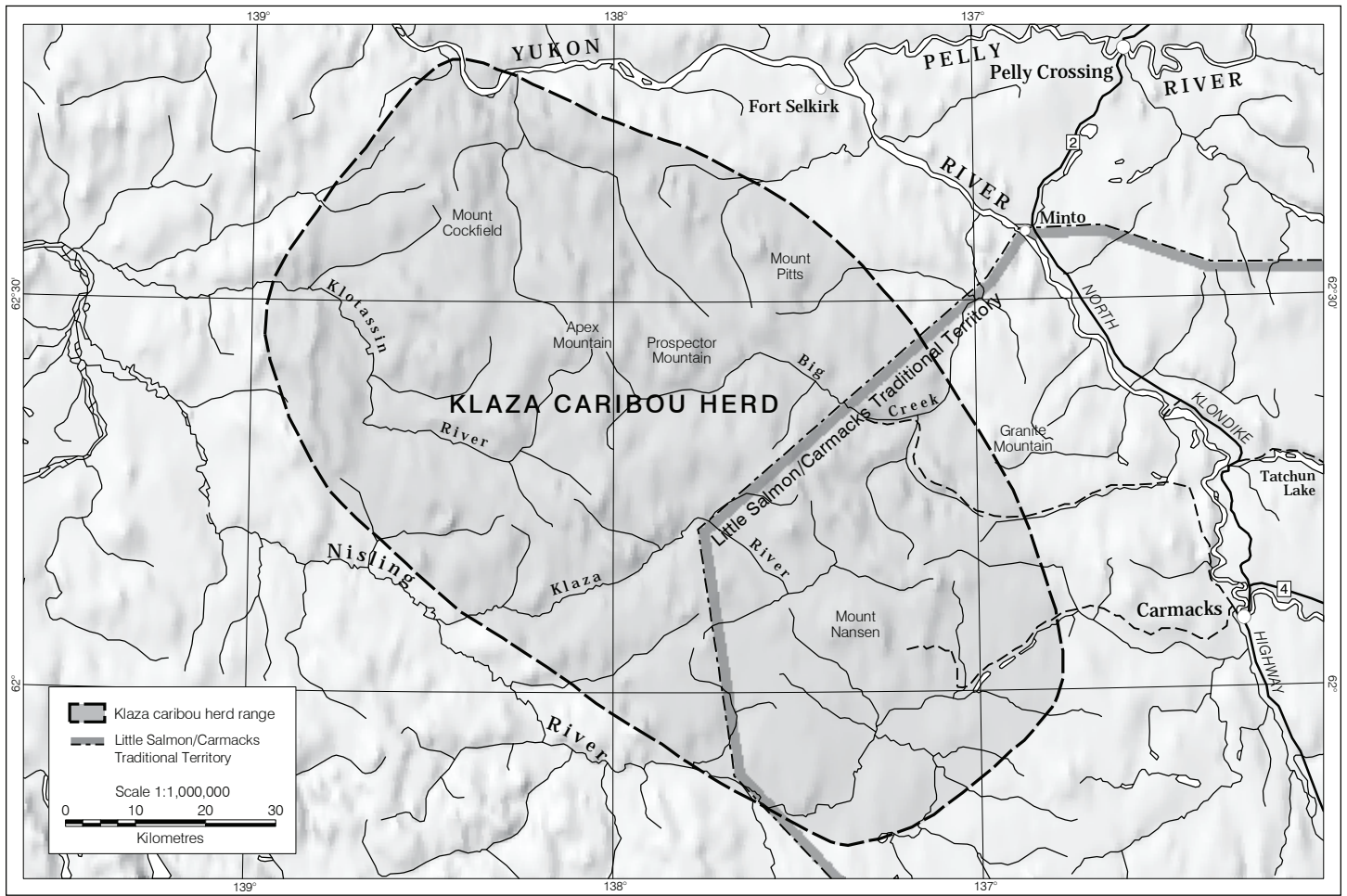


Figure 4 - Klaza Caribou Herd Range



*Illustrated by
Shalaya Blackjack*

YUK/FRESHWATER FISH

WHAT ARE THE CONCERNS?

Fishing in the Little Salmon/Carmacks First Nation Traditional Territory is an important and valued experience for local community members as well as other Yukoners and visitors. Monitoring of the health and status of the fish populations in the Traditional Territory continues to be a priority for the planning team and community.

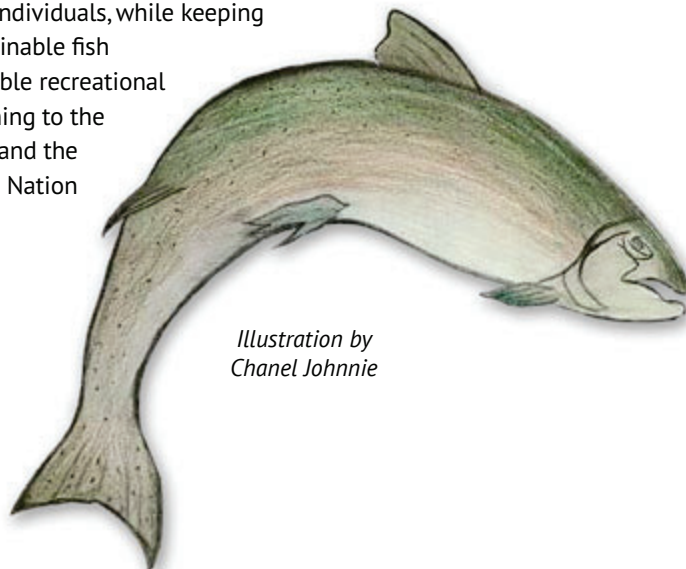
Monitoring activities proposed in the 2012-17 work plan to address concerns about fish populations in Frenchman Lake, Mandanna Lake, and Twin Lakes were completed. Results from this work led to regulatory changes on both Frenchman and Twin Lakes. Also, a proposed regulation change for Mandanna Lake is currently going through the regulatory change process.

Through the community engagement process, concerns continued to be voiced pertaining to angling pressures on fish populations in Frenchman Lake, Twin Lakes, and Mandanna Lake. In addition, concerns were also raised regarding Drury Lake, Little Salmon Lake, the fly-in fishing lakes south-east of Carmacks (Chain Lakes, Frank Lake, Claire Lake, and Coghlan Lake). Some of these lakes are due to be monitored while others require follow-up sampling to determine if past regulatory changes have been effective. Response by lake trout populations to changes in angling pressure because of a new regulation would not be visible until 5-10 years after the initial change.

The Government of Yukon stocks lakes situated near communities to provide for additional fishing opportunities. Stocked lakes in closed water systems offer good fishing opportunities and redirects some angling pressure from slow-growing wild populations such as lake trout. Within the Little Salmon/Carmacks First Nation Traditional Territory, Gloria Lake is stocked on a regular basis. Recently, the Government of Yukon has been investigating other lakes for their potential incorporation in the stocked lake program.

Other concerns and suggestions pertaining to freshwater fish were brought forward through the community engagement process. Local residents expressed the desire to encourage pike fishing at Tatchun Lake, utilizing family fishing events. Pike populations appear abundant in Tatchun Lake and it is felt that the activity a good way to encourage community members, specifically youth, out on the land. Community members also indicated continued concern about vehicles crossing Klusha Creek at the outlet of Braeburn Lake and the impact this could be having on whitefish spawning areas.

Finally, community members indicated the practice of live release angling was an ongoing concern. The practice of releasing larger spawning individuals, while keeping smaller fish for food, allows for a sustainable fish population and provides for a sustainable recreational opportunity. However, concerns pertaining to the impacts of live-release fishing remain and the practice may be inconsistent with First Nation and other Yukoners' values.



*Illustration by
Chanel Johnnie*

Łúthh'í Män/Frenchman Lake

Frenchman Lake is located near the Campbell Highway and is an important lake to the community. Frenchman Lake is medium-sized, with a small population of lake trout. There is a popular campground on Frenchman Lake and the area is easily accessible by road. The lake trout population has been assessed on Frenchman Lake in 2005, 2006, and 2012.

From the 2012 survey results, Frenchman Lake's designation was changed from a '*conservation water*' to '*special management water*' under the *Yukon Fishing Regulations*. Regulation changes included a decrease in the daily possession limits of lake trout from one to zero, and of arctic grayling from four to two.

Deghaw Cho Män/Twin Lakes

The Twin Lakes are both considered small and subsequently have small populations of lake trout. Being situated near a highway and adjacent to a campground, they also experience a great deal of fishing pressure. Netting surveys were completed on Twin Lakes in 1997, 2002, 2007, and 2013. The lake trout population assessment completed in 2013 led to a regulation change from a daily possession limit of one lake trout to a daily possession limit of zero. Twin Lakes continues to be designated as a '*special management water*' in the *Yukon Fishing Regulations*.

Taghál Män/Mandanna Lake

As mentioned previously, Mandanna Lakes has a specific management plan, identified under the Little Salmon/Carmacks First Nation Final Agreement. The current regulation for lake trout on Mandanna Lake is a daily possession limit of zero. A lake trout population assessment completed on Mandanna Lake in 2013 indicated that the population is increasing from the low levels found in 2001. The lake has been a popular fly-in fishing lake for tourists.

There is currently a proposed regulation change to allow anglers to keep one lake trout, while limiting the total daily catch to five fish, regardless of species caught or whether the fish are kept. This unique regulation has been proposed in recognition of the lakes special status within the Little Salmon/Carmacks First Nation Final Agreement and in acknowledgement of its cultural importance.

Sän Kay/Drury Lake

Drury Lake is accessible by snowmobile trail in the winter used by fly-in anglers during the summer. The lake trout population was last surveyed 2007. Drury Lake is designated as a '*conservation water*', with regulations in place that allow for a daily possession limit of 2 lake trout, 4 arctic grayling, and 4 northern pike.

Män Ndo/Chain, Deye Män/Claire, Män hek'o/Coghlan, and Łu Nétthäna Män/Frank Lakes

These lakes south-east of Carmacks are remote and mostly fished by fly-in tourist anglers. Lake trout populations were last surveyed in 2005 and 2007, and information on these populations is likely outdated. These lakes are designated as '*conservation waters*', with regulations in place that allow for a daily possession limit of 2 lake trout, 4 arctic grayling, and 4 northern pike.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
<p>Continue monitoring fish populations and adapt management strategies to ensure sustainable populations for the future (where appropriate).</p>	<p>The priority lakes for a lake trout populations assessments in the traditional territory are Frenchman, Twin, Little Salmon, Drury and the remote fly-in lakes south-east of Carmacks.</p>	<p>Led by YG with support from LSCFN and CRRC</p>
	<p>Create educational materials for anglers to help raise awareness of local fishery concerns.</p>	<p>Led by the CRRC with support from YG and LSCFN</p>
	<p>If new access routes or roads are developed, assess the impacts of increased fishing pressure on lakes that are not currently easily accessible.</p>	<p>All</p>
	<p>Investigate candidate stocked lakes within the traditional territory to help reduce pressure on frequently fished lakes. Continue to stock Gloria Lake.</p>	<p>All - in communication with the community.</p>
	<p>Create unique fish net identifiers/labels for Little Salmon/ Carmacks First Nation citizens.</p>	<p>LSCFN</p>
<p>Reduce the potential effect of vehicles crossing at Klusha Creek</p>	<p>Investigate mitigation measures for the Klusha Creek whitefish spawning area. Review past whitefish population data to determine if existing evidence warrants further investigation.</p>	<p>Led by LSCFN with support from YG and CRRC.</p>



HUMAN-WILDLIFE INTERACTIONS AND HUNTING

WHAT ARE THE CONCERNS?

Reducing negative interactions between wildlife and people continues to be an important topic for the planning team. As mentioned in previous sections, Northern Tutchone people follow Doòli for both animals and plants to show them respect, as well as personal Doòli for how people interact with each other. First Nation people have always had a distinctive relationship to the land and to wildlife, one of survival and one of kinship. With this relationship, respectful interactions are very important, especially when an animal is being harvested. This means to make sure to use all parts of the animal, and to treat the meat carefully as to not waste anything.

As more areas are becoming more accessible with new roads being created for exploration and development, the Little Salmon/Carmacks First Nation Traditional Territory continues to see a high number of hunters coming into the area from outside of the community. Hunting levels, as well as hunting practices, were raised as concerns during community engagement activities. Community members voiced the need for more game guardians and conservation officer efforts to be put into education and enforcement during the licensed hunting season, specifically around respectful hunting practices. There is also a need for more communication, such as meetings, workshops, newsletters etc., to provide the community with more regular updates on the status of wildlife health and population levels.

Another wildlife interactions concern that was mentioned during community engagement activities was the issue of bears, wolves and foxes continuing to come into the community. In the 2012-17 work plan, similar concerns were brought up. An electric fence was installed at the Carmacks dump which helped to deter wildlife from frequenting the area. There have also been ongoing efforts to encourage community members to attend bear aware courses. In 2017, WildWise came to the community to provide information and assistance in promoting bear safety through attractant management; they have indicated that this could be offered again in the future if there is support from the community.

Community members would like to continue to practice their cultural activities, such as storing food caches, tanning hides and drying fish, while feeling safe within their community. There is agreement amongst the planning team that there is an ongoing need to reduce the number of bears and other wildlife needing to be relocated or destroyed due to these interactions. Community members also voiced uncertainty or confusion about who should be contacted if a bear or wolf comes into the community, and indicated the need for a clear response protocol, especially when the safety of children is threatened.

With climate change bringing in new species to the Traditional Territory, concerns about how to interact with new species was also brought up; specifically, interactions with cougars. Community members would like more information about cougar behavior to better prepare for these potential interactions.



Illustration by Kaitlyn Jobin

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Reduce the number of wildlife-human conflicts in the community	Continue to provide educational materials, workshops and courses to reduce wildlife-human conflicts.	All
	Create a community waste management plan to help in reducing bear attractants within the community.	All - with the Village of Carmacks
	Create and provide educational materials on cougar behavior.	All
Encourage respectful hunting practices	Explore methods for educating the community and all hunters (including guides) about respectful hunting, including the use and handling of animal parts.	Led by LSCFN with CRRC
	Work with local guides and outfitters to communicate how animal parts not wanted by hunters (hides, bones etc.) could be gifted to community members.	Led by CRRC with LSCFN



Illustration by Thea Johnnie

MÄK/SHEEP

WHAT ARE THE CONCERNS?

There are scattered populations of thinhorn sheep throughout the Little Salmon/Carmacks First Nation Traditional Territory, including at Magundy, Little Salmon Lake, Tatchun, Division Mountain, and in the Dawson Range. Concerns voiced by community members regarding sheep included the effects of increased access to areas where sheep populations were previously harder to get to. With the popularity of bison hunting increasing within the traditional territory, people are becoming more familiar with the area and then returning for sheep, caribou and moose. Areas that were once unknown and hard to access are now being accessed more readily. Small sheep populations, such as those found in the traditional territory, are sensitive to disturbances and populations can be pushed out or eradicated very easily. Further understanding of sheep population ranges with the traditional territory, as well as ongoing monitoring of those populations, will continue to be important in order to continue to have healthy sheep populations on the land.

More recently, the potential for pneumonia outbreaks in thinhorn sheep populations has been of increasing concern. Domestic sheep and goats can pose a high risk for transmitting harmful microorganisms. Wild sheep have little resistance to bacteria and viruses found in the respiratory tract of healthy domestic sheep and goats. Pneumonia outbreaks have caused major die offs of bighorn sheep in western Canada and the United States can reduce lamb survival for years following outbreaks. There are concerns about the potential for wild sheep to come into contact with domestic sheep and contract illnesses. The Government of Yukon's control order for domestic goats and sheep will come into effect on January 1, 2020. This order is pursuant to the Animal Health Act to balance the responsible development of a domestic sheep and goat industry while protecting the health of wild thinhorn sheep and mountain goats.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Maintain healthy sheep populations	Continue to map and monitor wild sheep populations throughout the Traditional Territory.	LSCFN and YG
	Using educational materials and engagement with domestic sheep farmers to reduce the risk of contact between domestic sheep and wild sheep, thereby reducing the risk of spreading harmful microorganisms.	Led by YG with LSCFN and CRRC

UTTHÌ CHO/BISON

WHAT ARE THE CONCERNS?

Between 1988 and 1992, 170 bison were reintroduced in Yukon from an enclosure in the Nisling River Valley. This effort successfully established a herd of wood bison that now ranges in the Aishihik area. The core range of this herd extends eastward to the North Klondike Highway, southward to the Dezadeash River, northward to the Nisling River, and westward to the Ruby Range (*Map X*). The Aishihik bison herd population is currently estimated at 1255.

There were continued concerns voiced by community members about the bison herd population increasing too much and continued expansion of the herd into the Braeburn and Mt Nansen areas. Community members voiced concerns about the impacts of increased numbers of bison hunters on the landscape, as well as the interactions between bison and other wildlife, particularly moose, and caribou. There is ongoing concern about bison pushing moose and caribou out of their current ranges. Bison found in the Nordenskiöld Valley were a particular problem as people feel moose are being pushed out of areas that are important for calving. Some community members said they had no desire to hunt or eat bison, while others value the opportunity to hunt bison and feel that they take the pressure off moose and caribou populations. More generally, community members would like more information on the status of the bison herd, more information on their behaviour and if and how they compete with other wildlife.

Hunting practices, and ethical hunting, were brought up as issues specific to bison. There seems to be limited information shared on bison biology. The overlap of bison hunting season and bison calving season is also of concern and should be addressed.

Recommendations regarding the Aishihik wood bison herd are addressed through the Yukon Wood Bison Technical Team; all of the planning team members sit on this Technical Team. *The Management Plan* or the *Aishihik Wood Bison Herd in Southwestern Yukon (2012)* will be reviewed and updated in 2018-2019. The management plan will include recommendations regarding harvest management, herd range, and social impacts.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Communicate regularly with the community about bison management	Share information about bison impact studies and other research with the community. Hold a bison information-sharing workshop.	All
	Continue to bring forward community interests and concerns to the Yukon Wood Bison Technical Team.	All
	Continue to work towards limiting herd growth using harvest management while reducing the impact of hunters on the land and on other wildlife.	All

ELK

WHAT ARE THE CONCERNS?

In the late 1950's, the Yukon Fish and Game Association successfully lobbied for the introduction of elk into southern Yukon. The goal of this was to provide new hunting opportunities for local hunters and to reduce hunting pressure on other ungulates. Nineteen elk were released near Braeburn Lake in 1951, followed by another 30 animals in 1954. In the 1990s another 73 elk were released near Braeburn Lake, 28 were released at Hutshi Lake and 19 at the Takhini River Valley area. Today, the Braeburn and Takhini Valley herds are considered two separate herds. It is not well known if animals move between the two herds.

The Management Plan for Elk in Yukon was updated in 2016. All of the planning team members sit on the Yukon Elk Technical Team. Similar to bison, community members voiced concerns about elk within the Traditional Territory. There are questions about whether elk are pushing moose and caribou out of their habitats. There are also ongoing concerns about ticks from elk being transmitted to other ungulates and how climate change may increase the occurrence of ticks in Yukon. Some community members voiced interest in more hunting opportunities, or the possibility of a community hunt for elk.

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Communicate regularly with the community about elk management.	Provide the community with updates on elk herd size and management Share information about ticks on elk and other research with the community. Hold regular elk information-sharing sessions.	All
	Little Salmon/Carmacks First Nation, Government of Yukon, and the Carmacks Renewable Resources Council will continue to bring forward community interests and concerns to the Yukon Elk Technical Team.	All
	Continue to work towards limiting herd growth using harvest management.	All

BRAEBURN ELK HERD RANGE

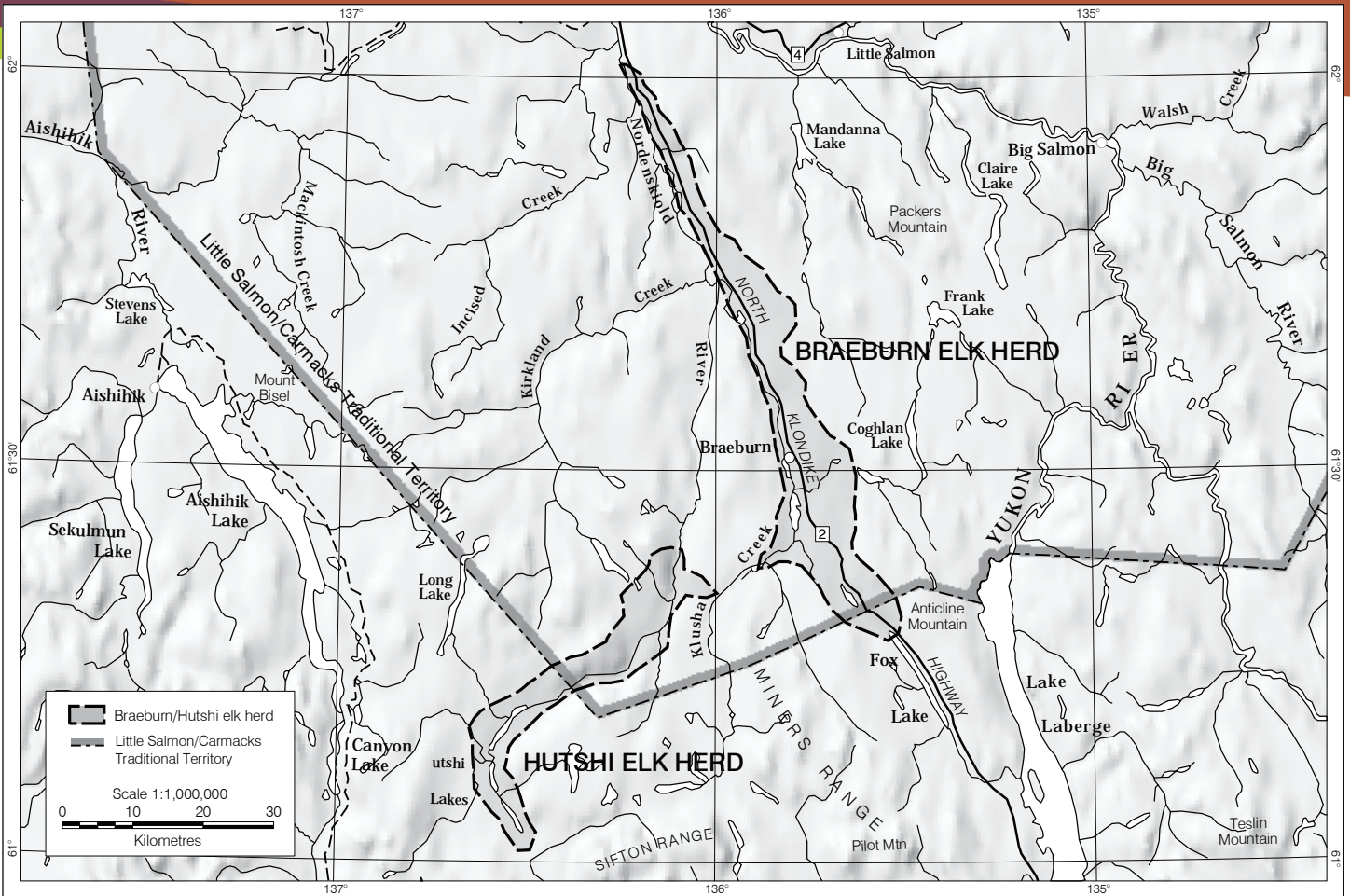


Figure 5 – Braeburn Elk Herd Range

NAKHYAL ZHAY/TRAPPING

WHAT ARE THE CONCERNS?

Trapping is an important traditional activity and is important to families that have passed down their traplines for generations. In recent years, it has become more difficult to make a living from trapping, and the administration of traplines continues to be complex and often confusing. Community members would like to see more youth learning about trapping and getting out on the land.



Illustration by Miley Staples

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Support trapping as a traditional lifestyle and provide opportunities for youth to experience trapping.	Explore opportunities for youth to learn about and appreciate trapping from interested trapline concession holders.	Led by CRRC.
	Explore options for trappers to help in areas where beavers are impacting important fish habitats.	Led by LSCFN with CRRC.
	Share information about existing incentives and discounts with trappers. Consider what other areas in Yukon are doing to increase trapping activities.	All
	Complete review of the trapline renewal guidelines and share with trapline holders.	CRRC

MONITORING AND STEWARDSHIP

WHAT ARE THE CONCERNS?

Keeping an eye on overall ecosystem health and monitoring, as well as regular communication back to the community on these initiatives is an important interest of the community and planning team. Climate change, invasive species, and species at risk, mushroom picking, and water monitoring were all discussed during the community engagement activities and amongst the planning team.

Community members voiced the need for more people to be out on the land, ensuring people are being respectful to the land and following the rules and regulations. The planning team discussed focusing efforts on a few individuals in the community to become 'young grandpas' or 'young grandmas'; that is, community members who could teach youth about traditional values and practices and how to connect and understand changes on the land, this could support and tie into current programs like the annual Northern Tutchone Aunties and Uncles camps.

Biodiversity

The Little Salmon/Carmacks First Nation Traditional Territory has rich regional biodiversity and contains some of the highest densities of Canadian endemism (native species found nowhere else in the world). For instance, the Dawson Range contain high densities of globally rare species (mostly plants and insects that are Critically Imperiled to Vulnerable) in Canada. Nearly half of Yukon's species assessed as at risk under the Federal *Species At Risk Act* (19 of 42) occur within the Traditional Territory and the Yukon Conservation Data Centre has mapped twenty species of conservation concern. Some examples include low elevation grasslands contain many rare plant and animal species including Yukon Draba, Yukon Goldenweed, and Siberian Wormwood. Wetlands contain regionally rare species such as the Ocellated Emerald Dragonfly and Spiral Ditchgrass. Unglaciaded alpine habitats are home to many species of concern including Collared Pika, Yukon Podistera, and Ogilvie Mountain Spring Beauty. Of particular interest is the Klaza Draba, a small herbaceous plant, which is endemic to the Traditional Territory.

Water Monitoring

The Government of Yukon has a Yukon Water Strategy and Action Plan (2014) in place for Yukon. This plan recognizes the need for a comprehensive approach for addressing water issues and management, including sustaining water quality and quantity and addressing climate change.

Community members voiced concerns around water quality in relation to mining exploration and development, as well as how to address specific water quality concerns. The planning team discussed the need to understand what information already exists to answer these questions.

Recreation and Wildlife Viewing

Two key principles for the Government of Yukon's wildlife viewing strategy include the promotion of stewardship and Yukon's wildlife and important habitats, and the encouragement of respect for traditional, subsistence, and harvest values. Future wildlife viewing events in the traditional territory will be focused on advancing important wildlife and habitat conservation messages.

A continuing concern that was included in the 2012-2017 work plan is unethical behaviour by some visitors travelling along the Yukon River corridor. There are still instances where people leave behind garbage and waste at campsites and seem unaware of culturally important areas. Materials could be developed to highlight respectful, zero impact and no trace river trips. This could be done in partnership with Little Salmon/Carmacks First Nation River Guardians.

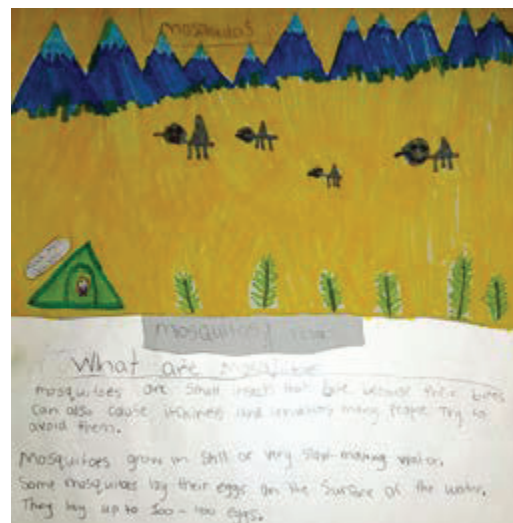
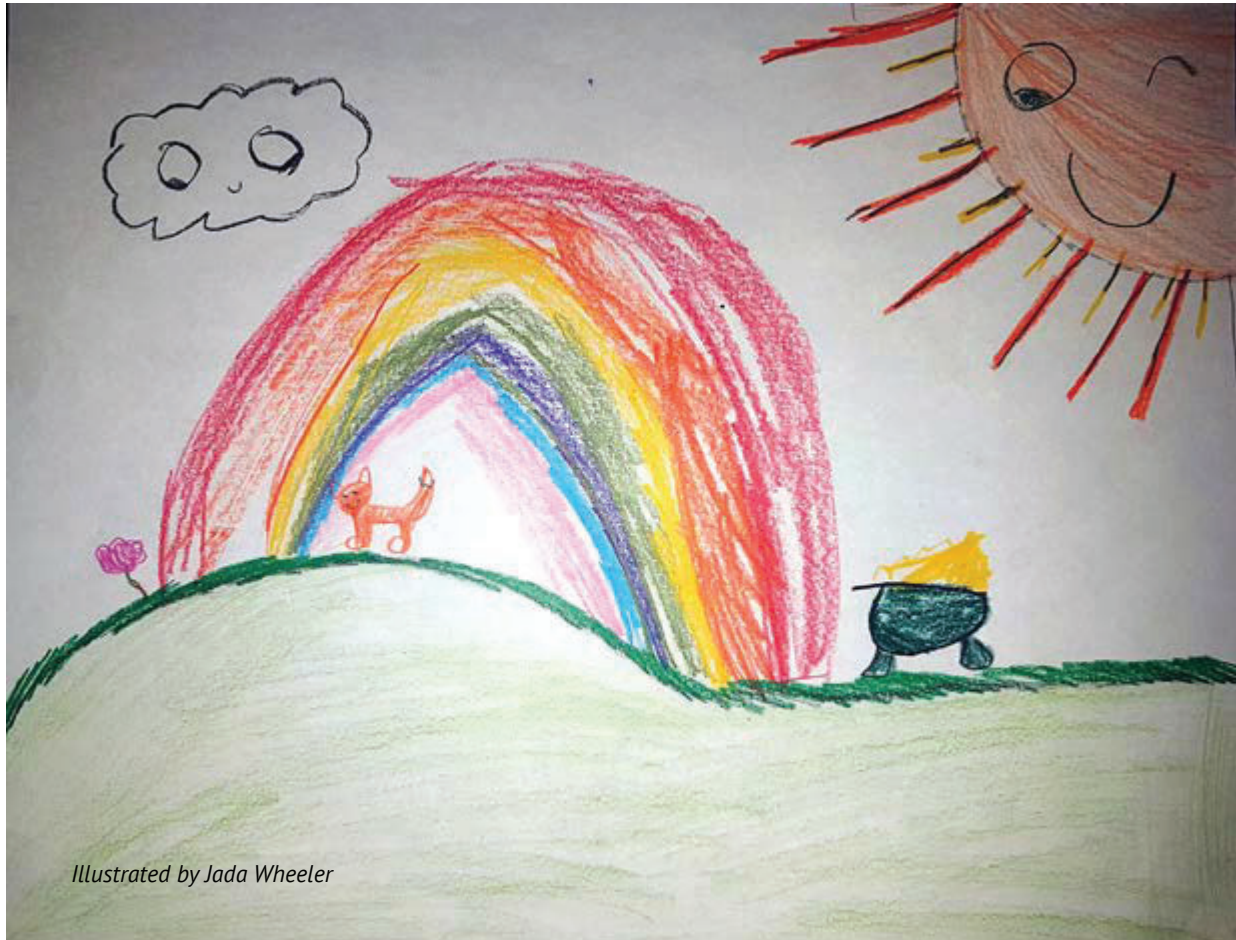


Illustration by Alayna Hartling

WHAT WILL WE DO?

OBJECTIVE	PROPOSED ACTIVITY	WHO?
Monitor for ecosystem health and change.	Include questions about invasive species, and changing habitats in local knowledge interviews to help monitor for their presence and abundance.	All
	Identify 'young grandpas' or 'young grandmas' to teach youth about traditional and cultural practices.	LSCFN
	Explore initiating a fish, wildlife and habitat monitoring log program. Engage with mining companies on this initiative.	All
Explore options for water quality monitoring in the traditional territory.	Explore water monitoring needs within the Traditional Territory with the Water Resources Branch and other interested parties.	All
Promote wildlife viewing events and activities within the Traditional Territory.	Work with the Wildlife Viewing Program to provide input to wildlife viewing events and opportunities in the traditional territory.	All
Provide educational materials for visitors travelling on the Yukon River corridor.	Create educational materials for tourists travelling along the Yukon River corridor with information about zero impact and no trace camping.	All



Illustrated by Jada Wheeler



WHAT IS NEXT?

This work plan is intended to be a record of fish and wildlife issues in the Little Salmon/Carmacks First Nation Traditional Territory and a description of proposed, cooperative approaches for addressing these issues.

Over the next five years, members of the planning team will focus efforts on trying to address as many of the priority issues as they can under existing budgets.

However, changes can occur and new priorities can emerge. Recognizing this, the planning team will review this work plan annually to check in on what work has been completed, and identify any new developments that need to be addressed. A final work plan review will be completed in 2024 and at that time the planning team will begin work towards a new work plan.

Illustrated by Nicole Cochrane



Appendix

Status of proposed work from the 2012-2017 community-based fish and wildlife work plan.

2012-17 MANAGEMENT ISSUE/CONCERN	PROPOSED WORK	WHO?	2012-2017
BEARS			
There are a lot of bears coming in to the community.	Increase education and enforcement to reduce potential human-bear conflicts.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> Continued efforts to get more local resident to attend bear aware courses. The local Conservation Officer Services Branch has up to date information on bear and other wildlife conflict information. Ongoing concern within the community. Concern to be brought forward to 2019-2024 work plan.
BISON			
Increasing numbers and expanding range of the Aishihik Wood Bison Herd concerns local residents.	Harvest Bison to control their numbers to a socially acceptable level, while minimizing impacts of bison hunters on the land.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> A Review of the Management Plan for Aishihik Wood Bison Herd in Southwestern Yukon will start in 2018/19. Government of Yukon (YG), Little Salmon/Carmacks First Nation (LS/CFN) and the Carmacks Renewable Resources Council (CRRC) are on the Yukon Bison Technical Team, and LS/CFN is also on Yukon Bison Management Team. Ongoing concern. Concern to be brought forward to the 2019-2024 work plan. Find the 2012 Management Plan at http://www.env.gov.yk.ca/publications-maps/documents/bison_management_plan.pdf
CARIBOU			
TATCHUN HERD			
Close monitoring of harvest of the Tatchun caribou herd and range use will be important in the next five years.	Continue with composition surveys each year in the fall.	LS/CFN, YG	<ul style="list-style-type: none"> Annual composition surveys (rut counts) conducted. Annual composition surveys brought forward to 2019-2024 work plan.
	Conduct a full census on the herd.	LS/CFN, YG	<ul style="list-style-type: none"> Not yet completed. Full census survey brought forward to 2019-2024 work plan.
	Close monitoring of harvest levels.	LS/CFN, YG	<ul style="list-style-type: none"> Harvest levels of the Tatchun caribou herd monitored and communicated annually at May Gathering. Monitoring of harvest brought forward to the 2019-2024 work plan.

2012-17 MANAGEMENT ISSUE/CONCERN	PROPOSED WORK	WHO?	2012-2017
--	---------------	------	-----------

CARIBOU

KLAZA HERD

Understanding the potential impacts of industrial development and human activities on caribou would be valuable for this area as we may be nearing harvest thresholds and increased disturbance and access to the area may cause detrimental effects to the health of the herd.	Full census survey of the Klaza caribou herd.	LS/CFN, YG	<ul style="list-style-type: none"> A full census survey for the Klaza caribou herd was completed in 2012.
	Conduct composition surveys, if the full census cannot be completed.	LS/CFN, YG	<ul style="list-style-type: none"> Composition surveys (rut counts) were completed in 2012, 2013, 2015, and 2016.
	Collect baseline information and conduct ongoing monitoring of the Klaza caribou herd.	LS/CFN, YG, CRRC	<ul style="list-style-type: none"> A five-year study of Klaza caribou range was completed involving monitoring radio-collared caribou, habitat mapping, lichen mapping, ground disturbance mapping, and fire risk mapping. Final results of this study were written into <i>A Range Assessment for the Klaza Caribou Herd in the Dawson Range of West-Central Yukon 2016</i>. This is available at - http://www.env.gov.yk.ca/publications-maps/documents/KlazaCaribouRangeAssessment.pdf
	Update habitat information on the Klaza caribou herd.	LS/CFN, YG	<ul style="list-style-type: none"> As above, a five-year study of Klaza caribou herd range involved monitoring radio-collared caribou, habitat mapping, lichen mapping, ground disturbance mapping, and fire risk mapping. Final results of this study were written into <i>A Range Assessment for the Klaza Caribou Herd in the Dawson Range of West-Central Yukon 2016</i> – which includes recommendations on land management to limit negative cumulative effects. This is available at -http://www.env.gov.yk.ca/publications-maps/documents/KlazaCaribouRangeAssessment.pdf
	Continue close monitoring of harvest levels	LS/CFN, YG	<ul style="list-style-type: none"> Harvest levels of the Klaza caribou herd monitored and communicated annually at May Gathering. Monitoring of harvest brought forward to the 2019-2024 work plan.

2012-17 MANAGEMENT ISSUE/CONCERN	PROPOSED WORK	WHO?	2012-2017
--	---------------	------	-----------

ELK

<p>Elk ranges are expanding and their population may be increasing in some areas.</p>	<p>Engage with the Yukon Elk Technical Team to increase focus on the Braeburn elk herd.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • <i>The Management Plan for Elk in Yukon</i> was reviewed in 2015, and an updated plan was completed in 2016. • YG, LS/CFN and the CRRC are on the Yukon Elk Technical Team. • Find the 2016 Management Plan at http://www.env.gov.yk.ca/publications-maps/documents/elk_management_plan.pdf
	<p>Review harvest policy with the Yukon Elk Technical Team to limit elk numbers and range.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • Discussion of harvest policy were central to Yukon Elk Technical Team discussions of during 2016 management planning process.
	<p>Meet with CAFN on mutual concerns regarding elk management.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • Meetings were held as part of the 2015 review of the <i>Management Plan for Elk in Yukon</i>.
	<p>Provide more information to the community about the status of the Braeburn herd including the status of ticks in Yukon .</p>	<p>LS/CFN, CRRC, YG</p>	<ul style="list-style-type: none"> • Meeting on ticks held in Carmacks in 2018. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.

FRESHWATER FISH

<p>Local residents have concerns about fish populations in areas where there is high fishing pressure and easy access, and where there is commercially guided fishing.</p>	<p>Frenchman Lake - fish population assessment focusing on lake trout and an angler survey to determine status of the resource and harvest sustainability.</p>	<p>LS/CFN, YG</p>	<ul style="list-style-type: none"> • Lake trout survey and angler harvest surveys were both completed in 2012. The outcome resulted in new regulation to limit licensed harvest in 2015.
	<p>Mandanna Lake - Follow the management plan.</p>	<p>LS/CFN, YG</p>	<ul style="list-style-type: none"> • The <i>Mandanna Lake Management Plan</i> was reviewed in 2013. A lake trout survey was completed in 2013 following the management plan recommendation. • The <i>Mandanna Lake Management Plan</i> used in response to plans for wood harvest in newly burned areas around lake. • Review of regulations for anglers completed in 2017; regulation change proposed. • Find the management plan here - http://www.env.gov.yk.ca/publications-maps/documents/Mandanna-Lake-Management-Plan.pdf
	<p>Braeburn – Investigate mitigation measures for the Klusha Creek whitefish spawning area.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • Project outstanding. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.

2012-17 MANAGEMENT ISSUE/CONCERN	PROPOSED WORK	WHO?	2012-2017
--	---------------	------	-----------

FRESHWATER FISH cont.

<p>Local residents have concerns about fish populations in areas where there is high fishing pressure and easy access, and where there is commercially guided fishing.</p>	<p>Twin Lakes – fish population assessment focusing on lake trout and an angler survey to determine status of the resource and harvest sustainability.</p> <p>Erect signage letting anglers know about the small size of lake trout.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • Lake trout survey and angler harvest surveys were conducted in 2013. • The outcome resulted in regulation change to limit angler harvest in 2015. • Signs explaining the fishing regulations and lake trout population status placed at Twin Lakes.
	<p>Fly-in commercial guided fishing lakes – Invite owner to meet with CRRC to discuss catch and release methods and harvest levels.</p>	<p>CRRC</p>	<ul style="list-style-type: none"> • Project outstanding. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.

FOXES

<p>The number of foxes in town are increasing and there is a concern about people feeding them. The foxes are becoming more bold and aggressive.</p>	<p>Increase education and enforcement to reduce foxes in town.</p>	<p>LS/CFN, CRRC, YG</p>	<ul style="list-style-type: none"> • Electric fences was put in place at the Carmacks dump which has reduced the number of foxes in the community. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
--	--	-------------------------	--

HABITAT

<p>There have been a number of applications for land and industrial activity in important wildlife habitats.</p>	<p>Continue to collect information and explore options for assessing the protection of the area along the Yukon River between Tatchun Creek and Minto.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • Project outstanding. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	<p>Identify and where appropriate investigate the need and the potential for a local area plan for planned land development to address concerns around development on Magundy River, Little Salmon River, and Little Salmon Lake.</p>	<p>LS/CFN, CRRC</p>	<ul style="list-style-type: none"> • Project outstanding. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	<p>Communicate with the local Dept. of EMR on inspections of exploration and mining activity.</p>	<p>LS/CFN, CRRC, YG</p>	<ul style="list-style-type: none"> • Completed and ongoing when there are specific wildlife issues. • Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.

2012-17 MANAGEMENT ISSUE/CONCERN	PROPOSED WORK	WHO?	2012-2017
--	---------------	------	-----------

HABITAT cont.

There have been a number of applications for land and industrial activity in important wildlife habitats.	Maintain involvement in environmental assessments.	LS/CFN, YG, CRRC	<ul style="list-style-type: none"> Completed and ongoing. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
Understanding the potential impacts of industrial development and human activities on moose would be valuable in the area northwest of Carmacks.	Continue to map important habitat of moose in the Carmacks west area.	LS/CFN, YG	<ul style="list-style-type: none"> Workshops to map local knowledge of important moose habitats in the Carmacks West area held in Carmacks in 2012 and in Pelly in 2014. Aerial surveys to map late-winter moose habitats were carried out in 2012 and 2013. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Collect baseline information and conduct ongoing monitoring on moose in the area northwest of Carmacks (in the Klaza caribou herd range).	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> Surveys to map and monitor late-winter distribution of moose within 10 km of Freegold Road and its proposed extension conducted in 2012 and 2013.

POPULATIONS

Moose population numbers are low or are unknown throughout the LS/CFN Traditional Territory.	Hold a moose management workshop.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> Moose management workshops held in Carmacks in 2013 and 2015. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Monitor moose harvest information.	LS/CFN, YG	<ul style="list-style-type: none"> Annual harvest monitoring by YG and LS/CFN and communicated annually at May Gathering. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Increase and encourage the ground-based monitoring program.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> Carmacks Community Moose Monitoring Project active in all years of work plan. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Survey the Tatchun moose population.	LS/CFN, YG	<ul style="list-style-type: none"> A census survey of the Tatchun moose population was conducted in 2013.

RECREATION

There are concerns that river travelers and employees of exploration companies are causing disturbance to fish and wildlife.	Provide information about the Yukon River corridor to tourists.	LS/CFN, YG	<ul style="list-style-type: none"> Project outstanding. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Work with project proponents to reduce the impact of personal off-road vehicle use by employees of exploration and mining camps.	LS/CFN, YG	<ul style="list-style-type: none"> Permit conditions for no hunting by mining camp employees is standard for most environmental assessments through Yukon Environmental and Socio-Economic Assessment Broad (YESAB) process. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.

2012-17 MANAGEMENT ISSUE/CONCERN	PROPOSED WORK	WHO?	2012-2017
--	---------------	------	-----------

SHEEP

Disturbance to sheep is a concern at Magundy, Little Salmon Lake and Division Mountain due to increased access to these small populations.	Identify ranges of sheep at Magundy and Little Salmon Lake.	LS/CFN, YG	<ul style="list-style-type: none"> A survey of sheep ranges in Magundy and Little Salmon Lake areas were conducted in 2014, 2015, 2016, and 2017. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Evaluate use of access into Division Mountain and recommend mitigations if negative effects on sheep are likely.	LS/CFN, YG	<ul style="list-style-type: none"> A survey of sheep ranges in the Division Mountain area was conducted in 2017 to evaluate important habitats.

TRAPPING

Due to the high operating costs involved and low fur prices, trapping activities in the LS/CFN Traditional Territory have continued to decrease in recent years.	Closely monitor trapline administration.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> LS/CFN, CRRC, and YG all closely involved in trapline administration, information is communicated annually at May Gathering.
	Use traplines to educate youth.	LS/CFN	<ul style="list-style-type: none"> Project outstanding. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Review criteria for trapline renewal.	CRRC	<ul style="list-style-type: none"> The CRRC has completed a review of the trapline renewal and allocation guidelines.
	Explore measures to increase trapline activity.	LS/CFN, CRRC	<ul style="list-style-type: none"> Project outstanding. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.

WOLVES

Wolf predation in and around town continues to concern local residents.	Address wolves that are causing problems near town.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> Electric fences were put in place at the Carmacks dump which reduced the number of wolves in the community. Concern is ongoing. Concern to be brought forward to the 2019-2024 work plan.
	Review Traditional Territory specific wolf conservation and management issues following the completion of the WCMP review.	LS/CFN, CRRC, YG	<ul style="list-style-type: none"> Implementation measures laid out in the Conservation and Management Plan for Wolves in Yukon 2012 will be reviewed in 2018/19. Engagement on this planning process will involve YG, LS/CFN and the CRRC. Find the 2012 Management Plan here – http://www.env.gov.yk.ca/publications-maps/documents/yukon_wolf_conservation_and_management_plan.pdf



Illustration by Tyanna Silverfox

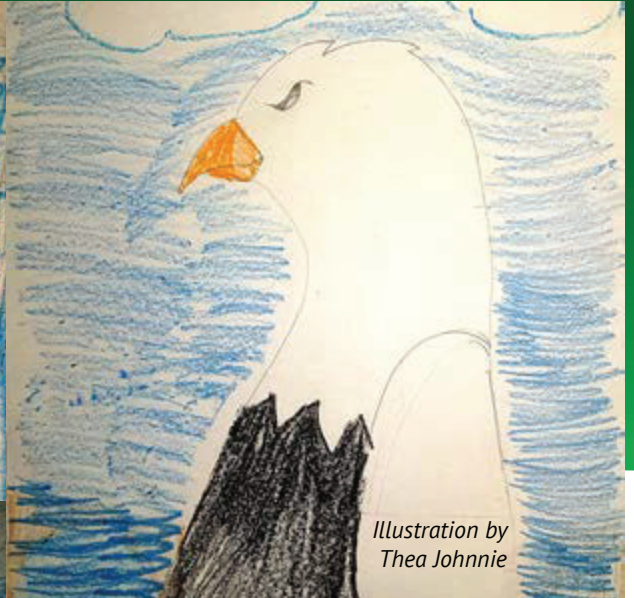


Illustration by Thea Johnnie



Illustration by Lonnie Skookum



Illustration by Nigel James Roberts

