Summary Report
Tłı̨chǫ Wildlife Research Workshop
February 20-21, 2013
Gamètì, NT

Background

The Wek'èezhìı Renewable Resources Board (WRRB) is responsible for wildlife, plants, forests and protected areas in Wek'èezhìı and makes decisions and recommendations on an ecosystem basis, as per Chapter 12 of the Tłı̨chǫ Agreement. As one of its duties as a management authority, the Board takes steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion (Section 12.1.6 of the Tłı̨chǫ Agreement). In an effort to solicit advice from both Tłı̨chǫ communities and scientists, the WRRB, in partnership with the Tłı̨chǫ Government's Tłı̨chǫ Lands Protection Department (TLPD), the Wek'èezhìı Land & Water Board (WLWB), and the Government of the Northwest Territories' Department of Environment & Natural Resources (ENR), conducted a Tłı̨chǫ Wildlife Research Workshop on February 20-21, 2013 in Gamètì, NT. The purpose of the Workshop was to provide an opportunity for Tłı̨chǫ communities and scientists to share information while developing a sense of ownership in research and management planning activities. The information shared will be used by the various agencies for management planning and priority setting as well as further implementing the Tłı̨chǫ Knowledge Research and Monitoring Program.

Six participants from each Tłı̨chǫ community attended the Workshop (Appendix 1). The participants included men and women and were a mixture of elders, harvesters, and youth. Additionally, participants included ENR Biologists, Bruno Croft and Dean Cluff, WLWB Technical Staff, Brett Wheeler, TLPD Tłı̨chǫ Knowledge Researchers and Staff, Kerri Garner, Albertine Eyakfwo, and Ritalene Gon, and WRRB Staff, Susan Beaumont and Jody Snortland Pellissey.

With the assistance of a Tłı̨chǫ facilitator, Mike Nitsiza, the Workshop was conducted primarily in the Tłı̨chǫ language to help guide the discussions and to ensure an effective dialog between community members and scientists. Translation was provided by James Rabesca and Francis Zoe.

The Workshop focused on four main themes over the two days: Water/Fish, Wolves, Caribou Health, and Caribou Collaring (Appendix 2). During each session, relevant presentations for each theme were given for background information. The participants were then divided into breakout groups to discuss specific questions related to the main theme. Typically, Tłı̨chǫ workshop discussions are with the entire group; however, to ensure that all individuals had an equal opportunity to provide input, the breakout group method was employed. Notes from each breakout group's discussion were taken. At the end of each session, each group reported their discussion back to the whole group.

Session Summaries

Theme 1 – Water/Fish

Brett Wheeler, WLWB Technical Staff, gave a presentation, entitled *"Monitoring Water Quality and Fish Health for Effects from Industry: Introduction to a community-based aquatic effects monitoring program in the Marian Watershed: K'ia Goti to Įhdak'èti"* (Appendix 3). The presentation described the proposed Marian Watershed Aquatic Effects Monitoring Program, which would monitor water, fish and aquatic life and sediments and provide a link between community and industry monitoring.

The four breakout groups (elders, harvesters, women and youth) were provided with a map of the area and asked to discuss the following questions regarding the proposed Regional Aquatic Effects Monitoring Program, with the understanding that funding will be limited:

1. What are the areas of importance and concern within the Marian Watershed, including K'ia Goti (Hislop Lake), Gòlo Tì Deè (Marian River) and Įhdak'èti (Marian Lake)?
2. Where monitoring should be done within the Marian Watershed?
3. What should be monitored?
4. How can the proposed Aquatic Effects Monitoring Program and its results be effectively communicated to Tłı̨chǫ Citizens?

All breakout groups identified, on the maps (Appendix 4), the following areas as important traditional and fishing areas within the Marin Watershed and as priority monitoring areas:

- Gòlo Tì Deè in area north of Įhdak'èti;
- Where Gòlo Tì Deè enters Įhdak'èti;
- Where Lac la Martre River meets Gòlo Tì Deè;
- Narrows and islands near outlet to Gòlo Tì Deè;
- Where K'ia Goti flows into Gòlo Tì Deè; and
- Where Ray Rock mine site drains into Gòlo Tì Deè.

Additional monitoring areas recommended by the breakout groups included:

- Up and downstream of Fortune Minerals NICO site;
- Lakes along Marian River, e.g. Rat Lake area near Lac La Martre River; and
- Throughout Įhdak'èti, including Frank's Channel.

Fish, water quality, and sediments, including blasting residue, were identified as things that must be monitored to ensure early detection of possible contamination and early warning of any cumulative effects. Secondary lines of investigation recommended were aquatic mammals, including beavers and muskrats, dust deposition on snow and possible groundwater contamination.

Effective communication of the Aquatic Effects Monitoring Program and its results to Tłı̨chǫ Citizens is critical to its success. Community meetings and radio were identified as the best way

to engage elders and harvesters while websites and social media were acknowledged as good ways to engage youth.

Detailed notes from this session can be found in Appendix 5.

Theme 2 – Wolves

Dean Cluff, ENR Biologist, gave a presentation, entitled *"Monitoring Wolves in the North Slave Region"* (Appendix 6). The presentation described the ongoing wolf monitoring programs in the North Slave Region, including wolf den monitoring, wolf collaring program and wolf carcass collection.

The four breakout groups (Behchokǫ̀, Gamètì, Wekweètì and Whatì) were asked to discuss the following questions regarding the collection of information about wolves and wolf harvest:

1. We have heard from you there are more wolves around. How many are more wolves?
2. Where have you spotted wolves? What times of year? Are most of the wolves around the community or on the land?
3. How have your observations changed over time?
4. What can communities do to ensure fewer wolves hang around the community?
5. You have told us most Tłı̨cho harvesters don't kill wolves. What can be done to increase the number of wolves killed by Tłı̨cho?

All communities noted that wolves are very sacred, spiritual animals and, as such, Tłı̨cho Citizens must be respectful and cautious. Typically, Tłı̨cho communities do not harvest wolves. While communities would like to see wolf populations reduced, no one wants to see them completely wiped out.

Community members from Behchokǫ̀ reported encountering wolves during both the summer and winter months chasing after caribou, along winter roads and close to dumpsites. In the past, when there were dog teams, few wolves or wolf tracks were seen; today, packs with up to 20 wolves are seen, usually at night. Dogs are often killed by wolves and there are concerns for the safety of community members, particularly children. The Behchokǫ̀ group recommended installing fences around dumpsites, monitoring timber wolves in addition to tundra wolves, particularly in the Grandin Lake area and along nodıı, the plateau which runs from Whatì to Fort Providence, hiring Rangers to shoot wolves in and around the community and developing community action plans.

The Gamètì group noted increased sightings of wolves and wolf tracks, primarily at dumpsites, during the summer months. Once it gets colder, wolves leave the dumpsites and are found near K'ia Goti, Edna, Grana and Hottah Lakes in packs with up to 30 animals. Dogs are often killed by wolves and there are concerns for the safety of community members, particularly children. Community members from Gamètì recommended building cabins away from communities where wolves can be prepared, increasing fur prices for wolf pelts and supporting the implementation of tags for resident and outfitted hunting.

Wekweètì community members indicated that there are wolf dens within 15-20 km of the community. In the last ten years, wolves and pups can be found close to the community during the summer months, in particular, near the dump. There are recent reports of 22 wolf pups sighted at the dump by the lake shore. During the fall, wolves leave the community and scatter all over as caribou are plentiful. Wolves get into large packs in March, e.g. a pack of 52 wolves was seen in the 1990s. There are concerns for the safety of community members, particularly children, as wolves today have no fear. The Wekweètì group recommended destroying wolf dens close to the community, increasing fur prices for wolf pelts, developing training programs for youth to learn how to snare/trap wolves and prepare the pelts, and building cabin/outpost camp away from community where wolves can be prepared. The camp would be managed by one person, who would be responsible for handling the wolf pelts.

Community members from Whatì stated that most wolves are seen near Grandin Lake, in packs with up to 20 animals. Large populations of wolves have also been seen around Lake Tatchia (Denshee Lake) and Casino Lake. Most wolf dens are found around lake areas, including Lake Tatchia. As many wolves are seen near the dump at night, there are concerns for the safety of community members, particularly children, as wolves today have no fear. The Whatì group recommended reducing wolf populations through the use of poison or bounties, monitoring timber wolves in addition to tundra wolves, establishing harvest programs where four to five people hunt wolves and give the entire wolf to ENR to prepare, developing training programs for youth, and creating community action plans.

Detailed notes from this session can be found in Appendix 7.

Theme 3 – Caribou Health Monitoring

Bruno Croft, ENR Biologist, gave a presentation, entitled *"Caribou Health & Condition Monitoring"* (Appendix 8). The presentation described why caribou health and body condition are monitored as well as how and what to monitor using CirumArctic Rangifer Monitoring and Assessment Network (CARMA) sampling methods.

The four breakout groups (elders, harvesters, women and youth) were asked to discuss the following question regarding caribou health:

1. What other information should be collected from a Tłı̨cho perspective?

Elders reported that caribou have always traveled great distances. In the past, most caribou were healthy; however, due to increased mineral exploration and use of faster machines (trucks, skidoos, planes), caribou are not able to rest and eat. Caribou fat and meat used to be oily and good to eat; today, the fat and meat are dry and taste differently. Healthy bone marrow was whitish pink; however, more and more, hunters are finding the marrow to be reddish in colour, lighter and watery. There are fewer warble flies seen today which is an indication of fewer caribou. Elders recommended monitoring the hooves, mouth, throat, organs (kidney, liver, and lungs), body fat, tongue, and blood of caribou. They also stated that Tłı̨cho youth should understand the nature of caribou as well as be able to collect samples scientifically. A final suggestion made by the Elders was to farm caribou and establish a meat factory so caribou meat would be available all year.

Harvesters noted that caribou travel long distances. In years with little snow, it is easier to dig for food and, therefore, caribou are healthier and have 'leisure time'. They recommended collecting the following information to help determine the health of caribou:

- Hooves and ankles should be checked thoroughly as the caribou use them to scrape for food; and
- Lungs, liver, kidney, tongue and brains should be examined for abnormalities.

Women provided descriptions of different abnormalities they have witnessed, such as sores on kidneys, sandpaper-like kidneys, and bluish or yellowish meat. They noted that the caribou tail tells if the caribou is fat or skinny and that bone density changes from summer to winter. Community members should be encouraged to send abnormalities found in meat, organs or bones to ENR biologists for testing. Posters showing caribou body parts in both Tłı̨cho and English as well as examples of healthy and unhealthy caribou should be hung up throughout the region. Youth should be out on the land as caribou monitors as they are able to record the information while learning how to properly skin and butcher caribou. Monitors should digitally record sampling techniques and have the recordings translated into Tłı̨cho. Workshops should be held at the end of every harvest season to allow caribou monitors to report back their findings to the community. Teaching should also happen in schools in the Tłı̨cho language.

The Youth group discussed the importance of training both young men and women about caribou and respect for the land. Young men need to learn how to harvest caribou properly; young women need to learn how to prepare the meat. On-the-land experiences were considered the most valuable ways to transfer Tłı̨cho knowledge as well as learn scientific collection methods. Each community has father-son teams that could pass on knowledge in schools, on the radio and out on the land. Youth also suggested having shooting competitions between communities to increase competence and accuracy.

Detailed notes from this session can be found in Appendix 9.

Theme 4 – Caribou Collaring

Bruno Croft, ENR Biologist, gave a presentation, entitled *"A Question of Balance: Gathering Information and Respecting Caribou"* (Appendix 10). The presentation described why and how scientists use collars to build knowledge about caribou. Information was also provided on research into the effects of collars on caribou.

The four breakout groups (elders, harvesters, women and youth) were asked to discuss the following questions regarding the:

1. What are the pressures facing caribou today?
2. What kinds of information do we want to know about caribou?
3. What else should we be doing?

Elders identified pressures such as mining, roads and predators as affecting caribou, particularly their migration. It is important to know where the caribou can be found and if they are joining other herds. In the past, Tłı̨cho harvesters spent a lot of time on the land and knew where the

caribou could be found; today, fewer harvesters are on the land. While the group agreed to a minimum of 20 collars for monitoring purposes, the Elders felt strongly that collars make the caribou suffer, e.g. the caribou are unable to eat and sleep, have difficulty running, and their neck hair is rubbed off. There are concerns about radiation from the battery, buzzing noise of the battery, and possibility of miscarriages when chased by helicopters. For one year, Elders suggested recapturing collared caribou to determine their health and condition. Elders also encouraged the youth to learn both Tłı̨cho and scientific knowledge and to go to school to become wildlife biologists for the region.

Harvesters reported a multitude of pressures, including mines, predators, climate change (deep snow events and thinning ice), forest fires, overharvest, and noise (mines and aircraft). Winter roads are too close to migration paths. Some caribou are mistreated, e.g. clubbed or witness other caribou parts (bones) on the land. Caribou are further stressed with collars as they are too heavy and there is radiation from the battery. These pressures and stresses make it difficult to raise the calves and to feed. Harvesters suggested collaring wolves instead of caribou, i.e. caribou migration routes can be determined as wolves follow the caribou. Additional suggestions included harvesters reporting their on-the-land observations upon return to the community, ensuring traditional laws for caribou are taught and followed, such as disposing of bones properly, and attending to forest fires immediately before caribou habitat is burnt.

Chemicals from mines, predators, forest fires, climate change (deep snow events and thinning ice), and collars were pressures discussed by the Women. There seems to be a lack of respect and knowledge about how to treat caribou properly. The Women recommended workshops to teach young people the traditional laws and how to harvest caribou correctly, such as what equipment to use when hunting and how to butcher the animal. This will ensure that caribou remain sacred.

While the Youth identified similar pressures noted by the Elders, Harvesters and Women, they also discussed the contamination of caribou food and water due to mine blasting and winter roads. Caribou migration routes are impacted by climate change, forest fires and predators. The group noted the importance of knowing where the caribou can be found and whether or not they are healthy. While caribou collars make it difficult for caribou to eat, due to the valuable information provided, it may be okay to increase the number of collars to 30-40 to help communities know if they are healthy.

Detailed notes from this session can be found in Appendix 11.

Appendix 1 –Participant List

Participant	Community/Affliation
Charlie Rabesca	Behchokǫ̀
Nick Football	Behchokǫ̀
Leon Ekendia	Behchokǫ̀
James Lafferty	Behchokǫ̀
Chris Black	Behchokǫ̀
Charlie Apples	Behchokǫ̀
Charlie Rabesca	Behchokǫ̀
Rosa Mantla	Behchokǫ̀
Jonas Lafferty	Behchokǫ̀
Robert Mackenzie	Behchokǫ̀
Benjamin Pea'a	Behchokǫ̀
Dora Migwi	Behchokǫ̀
Joe Mantla	Gamètì
Charlie Gon	Gamètì
Antoine Wetrade	Gamètì
William Chocolate	Gamètì
Joe Zoe	Gamètì
Chris Mantla Rabesca	Gamètì
Hunter Mantla	Gamètì
Lucy Black	Gamètì
Camilla Chocolate	Gamètì
Kevin Crookedhand	Gamètì
Isadore Washie	Wekweètì
Steven Dryneck	Wekweètì
Jimmy Kodzin	Wekweètì
Jonny Smallgeese	Wekweètì
William Quitte	Wekweètì
Joseph Judas	Wekweètì
Helen Rabesca	Wekweètì
Jimmy Nitsiza	Whatì
Bryan Nitsiza	Whatì
Joe Louie Moosenose	Whatì
Laiza Jeremick'ca	Whatì
Joseph Alexis	Whatì
Charlie Jeremick'ca	Whatì
Jimmy B. Rabesca	Whatì

Sophie Williah	Whatì
Dora Nitsiza	Whatì
Mike Nitsiza	Facilitator, Whatì
Francis Zoe	Translator, Whatì
James Rabesca	Translator, Behchokǫ̀
Dean Cluff	ENR, North Slave Region
Bruno Croft	ENR, North Slave Region
Brett Wheeler	WLWB
Albertine Eyakfwo	TLPD
Ritalene Gon	TLPD
Kerri Garner	TLPD
Susan Beaumont	WRRB
Jody Snortland Pellissey	WRRB

Appendix 2 – Agenda

Tłı̨chǫ Wildlife Research Workshop
February 20-21, 2013
Gamètì, NT

The Wek'èezhìi Renewable Resources Board has partnered with the Tłı̨chǫ Lands Protection Department, Wek'èezhìi Land & Water Board, and Environment & Natural Resources, Government of the Northwest Territories to share information, ask for input and advice from Tłı̨chǫ communities and develop a sense of ownership in research and management planning activities. The workshop will focus on four main themes: Fish/Water, Wolves, Caribou Health, and Caribou Collaring.

Day 1

Theme – Fish & Water

9:00 a.m.	Opening Prayer Introductions
9:15 a.m.	Presentation – Brett Wheeler, Wek'èezhìi Land & Water Board
9:45 a.m.	Breakout Session – Part 1
10:45 a.m.	Health Break
11:00 a.m.	Breakout Session – Part 2
11:30 a.m.	Report back on Breakout Sessions
12:00 p.m.	Lunch

Theme – Wolves

1:00 p.m.	Presentation – Dean Cluff, Environment & Natural Resources
1:30 p.m.	Breakout Session
2:45 p.m.	Health Break
3:30 p.m.	Report back on Breakout Session
4:00 p.m.	Closing Prayer

Day 2

Theme – Caribou Health

9:00 a.m. Opening Prayer

9:15 a.m. Presentation – Bruno Croft, Environment & Natural Resources

9:45 a.m. Breakout Session – Part 1

10:45 a.m. Health Break

11:00 a.m. Breakout Session continued

11:30 a.m. Report back on Breakout Sessions

12:00 p.m. Lunch

Theme – Caribou Collaring

1:00 p.m. Presentation – Bruno Croft, Environment & Natural Resources

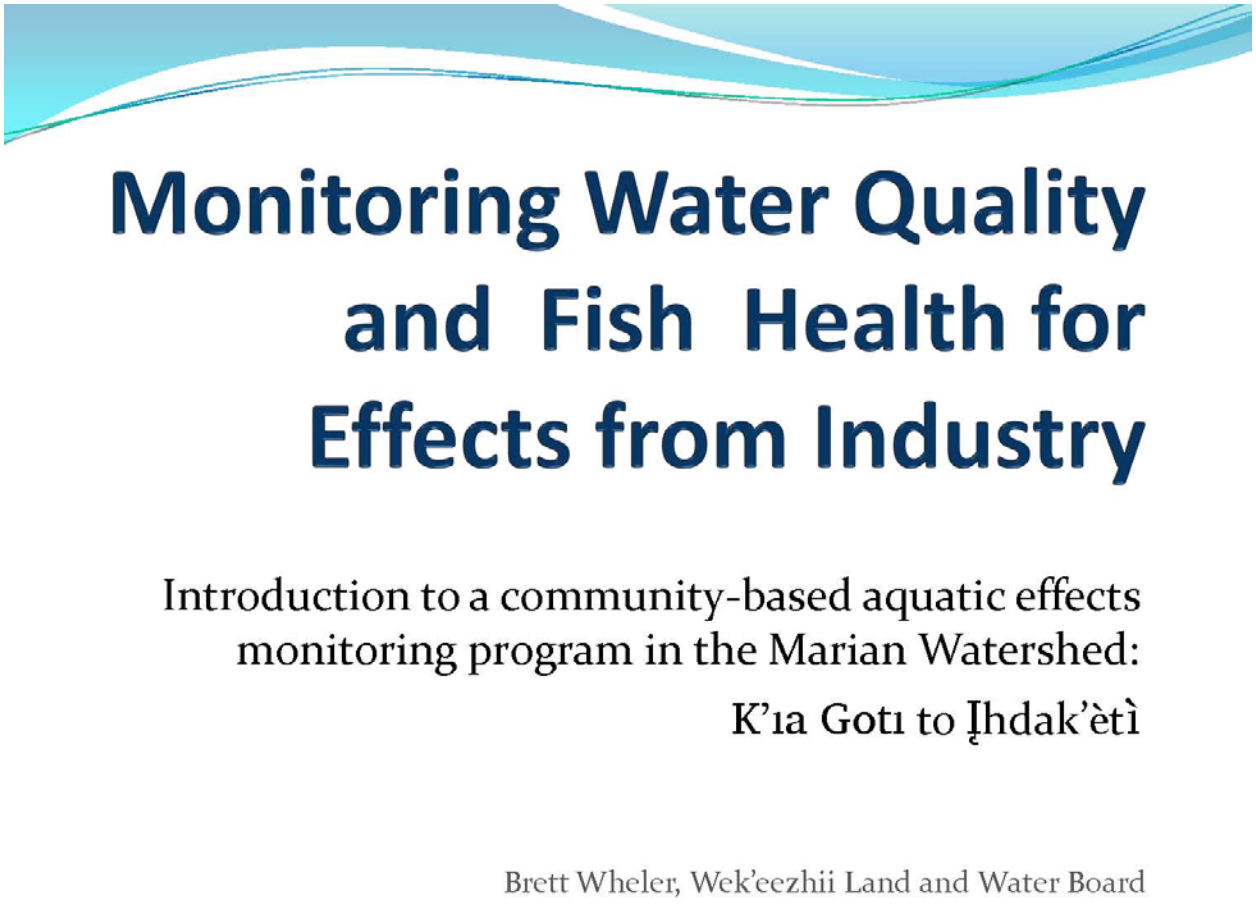
1:30 p.m. Breakout Session

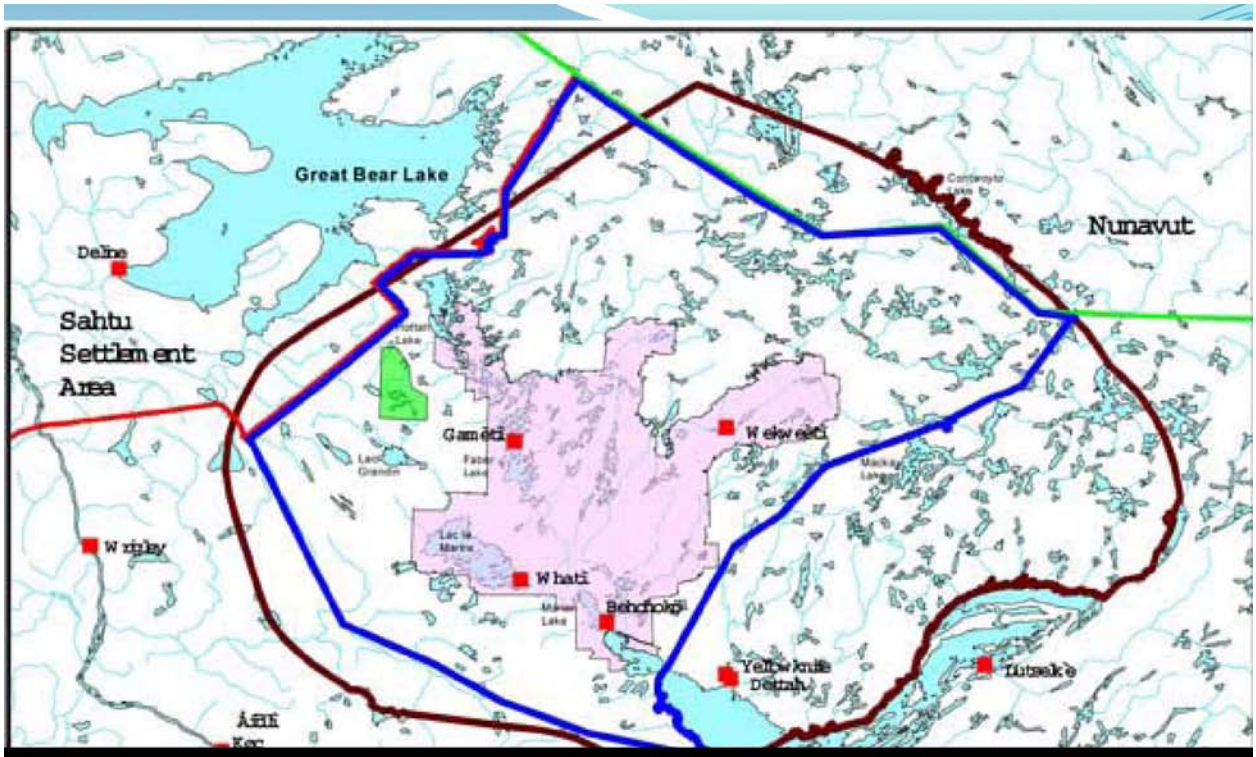
2:45 p.m. Health Break

3:30 p.m. Report back on Breakout Session

4:00 p.m. Closing Prayer

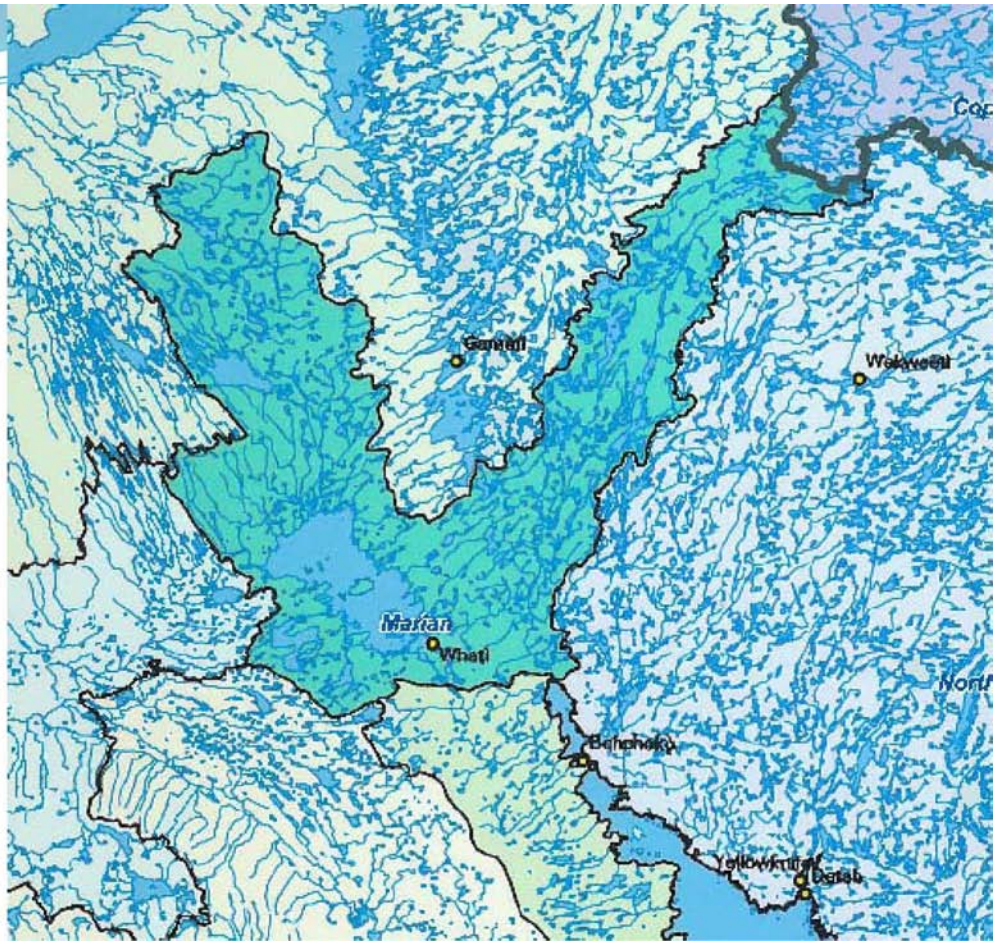
Appendix 3 – Water Presentation





- Tłı̨chǫ Lands surround traditional travel routes on rivers and lakes
- Watersheds: Great Bear Lake, Gòlo Tì Deè (Marian River), Snare
- Tłı̨chǫ Agreement: substantially unaltered in quality, quantity, and flow

- Gots'okati (Mesa Lake)
- K'ia Goti (Hislop Lake)
- Ezodziti
- Lac la Martre
- Įhdak'èti (Marian Lake)



Monitoring Water and Fish

- **Near Communities**
  - Drinking water (MACA)
  - Waste water (WLWB)
  - WRRB Tłı̨chǫ Aquatic Ecosystem Monitoring Program
    - Lakes near communities
    - Once every four years
    - Background conditions and general ecosystem health
    - Education, traditional knowledge, western science
  - Other community initiatives

Monitoring Water and Fish

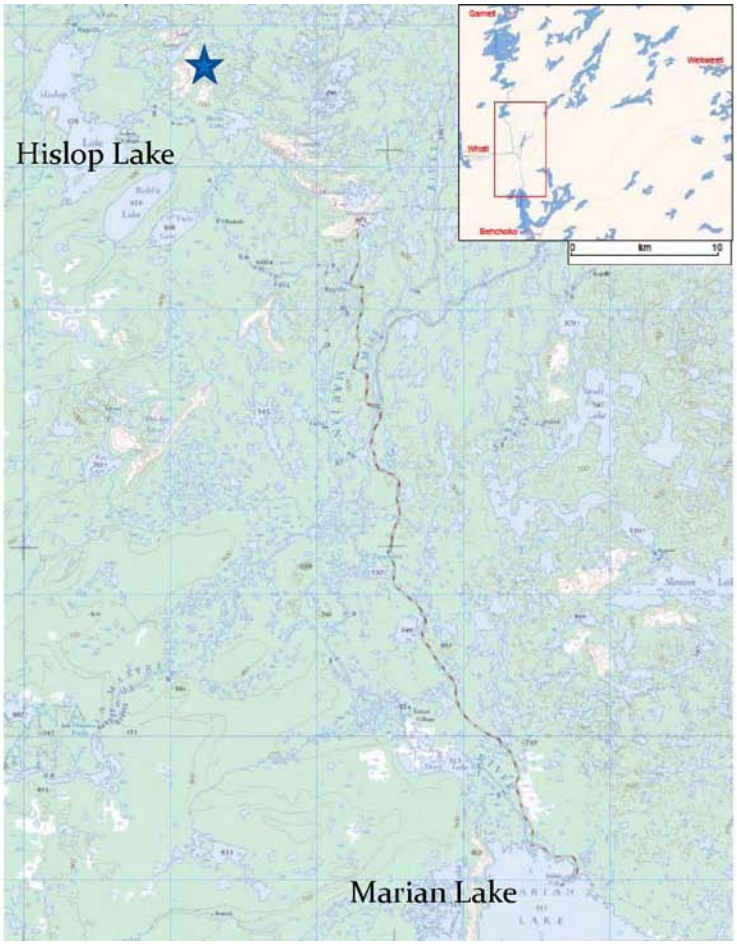
- **Near Industry**
  - Diamond mines
  - Contaminated sites (Ray Rock, Colomac)
  - Fortune Minerals proposed mine
  - Consultation and public results, but…
    - Program built and operated by industry
    - Communication? Perception of risk?
  - Thorough monitoring, but…
    - Focussed on direct effects near the mine

Linking Industry and Community Monitoring

- **NEW Regional Aquatic Effects Monitoring Program**
  - Effects focus (industry)
    - Monitor water, sediment, fish and aquatic life
  - Regional (cumulative and indirect effects)
  - Built and operated by the Tłı̨chǫ government and Tłı̨chǫ citizens
  - Partnership with Wek'èezhìı Land and Water Board, Renewable Resources Board, and other organizations
  - Results comparable to industry and community/WRRB programs

Marian Watershed

- K'ıa Gotı (Hislop Lake) to Įhdak'ètì (Marian Lake)
- **Effects** of Fortune Minerals & future development
- Training and field sampling with community members



Breakout Discussion 1: Marian Watershed Monitoring

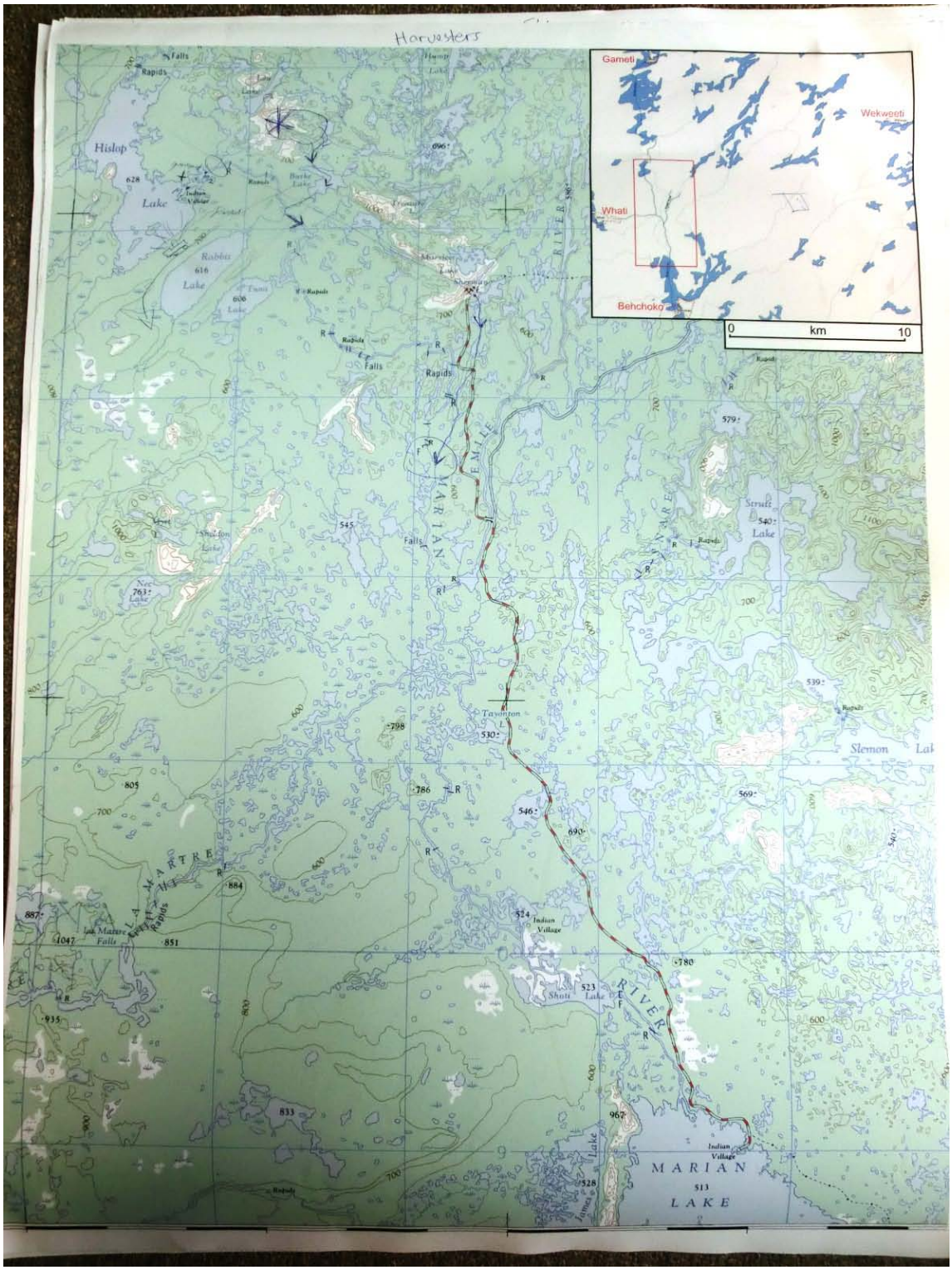
- Today we would like to hear from community members about **K'ia Goti (Hislop Lake) and Gòlo Tì Deè (Marian River)**
  - Where to monitor water, sediment, and fish?
  - Important areas?
  - Areas of concern?

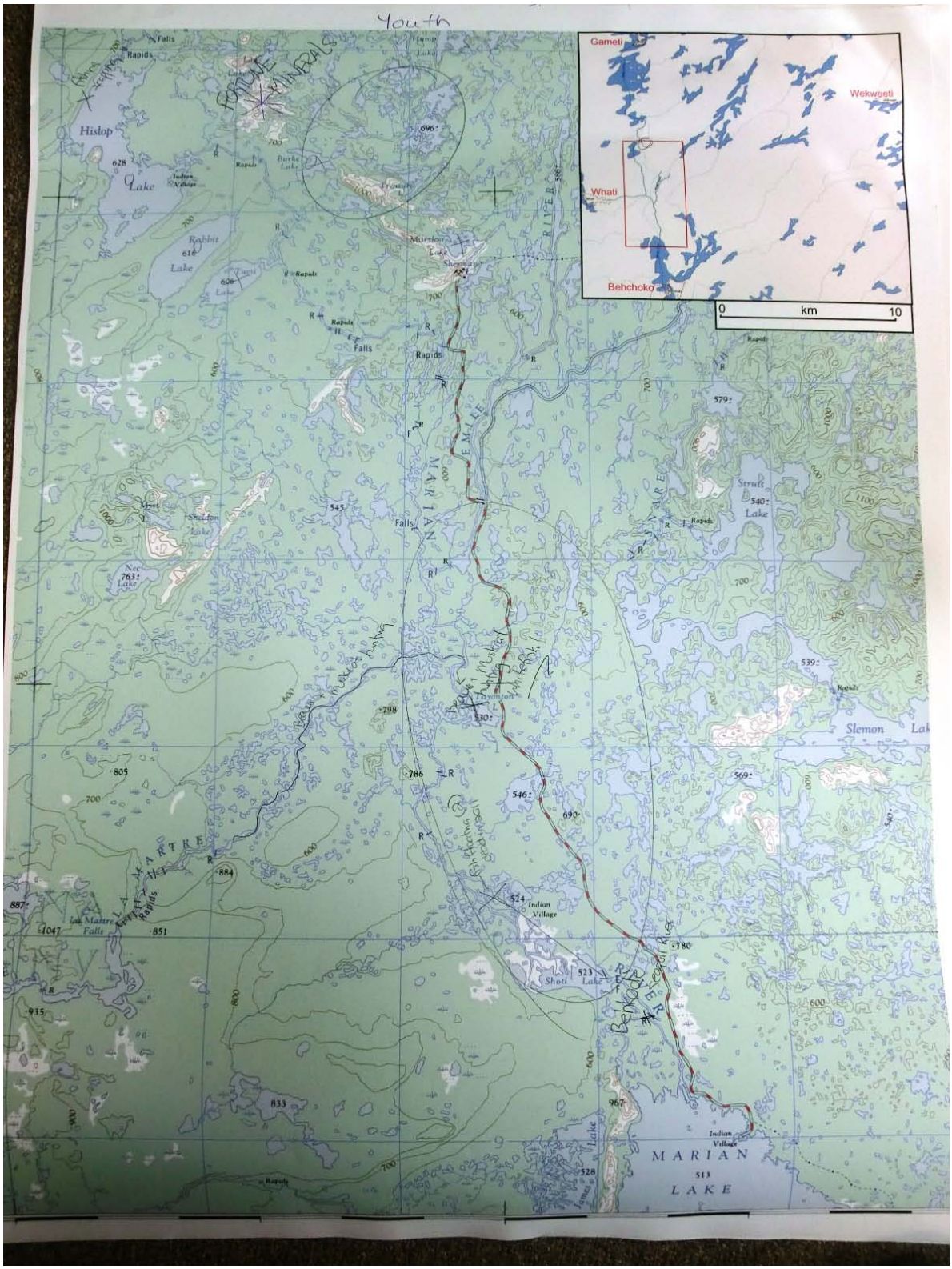
- Limitations – amount of monitoring will depend on $; focus on priority locations and effects of industry

Discussion 2: Communication Plan

- We want to hear from community members about how to communicate about the Marian monitoring program and results.
  - What methods to use to help people understand results and believe results?
  - How to make results meaningful (focus on fish? compare old and new information?)
  - How to communicate results (e.g. radio, website, poster, community meeting)?
  - How to learn from community members and improve the monitoring program?

Appendix 4 – Maps

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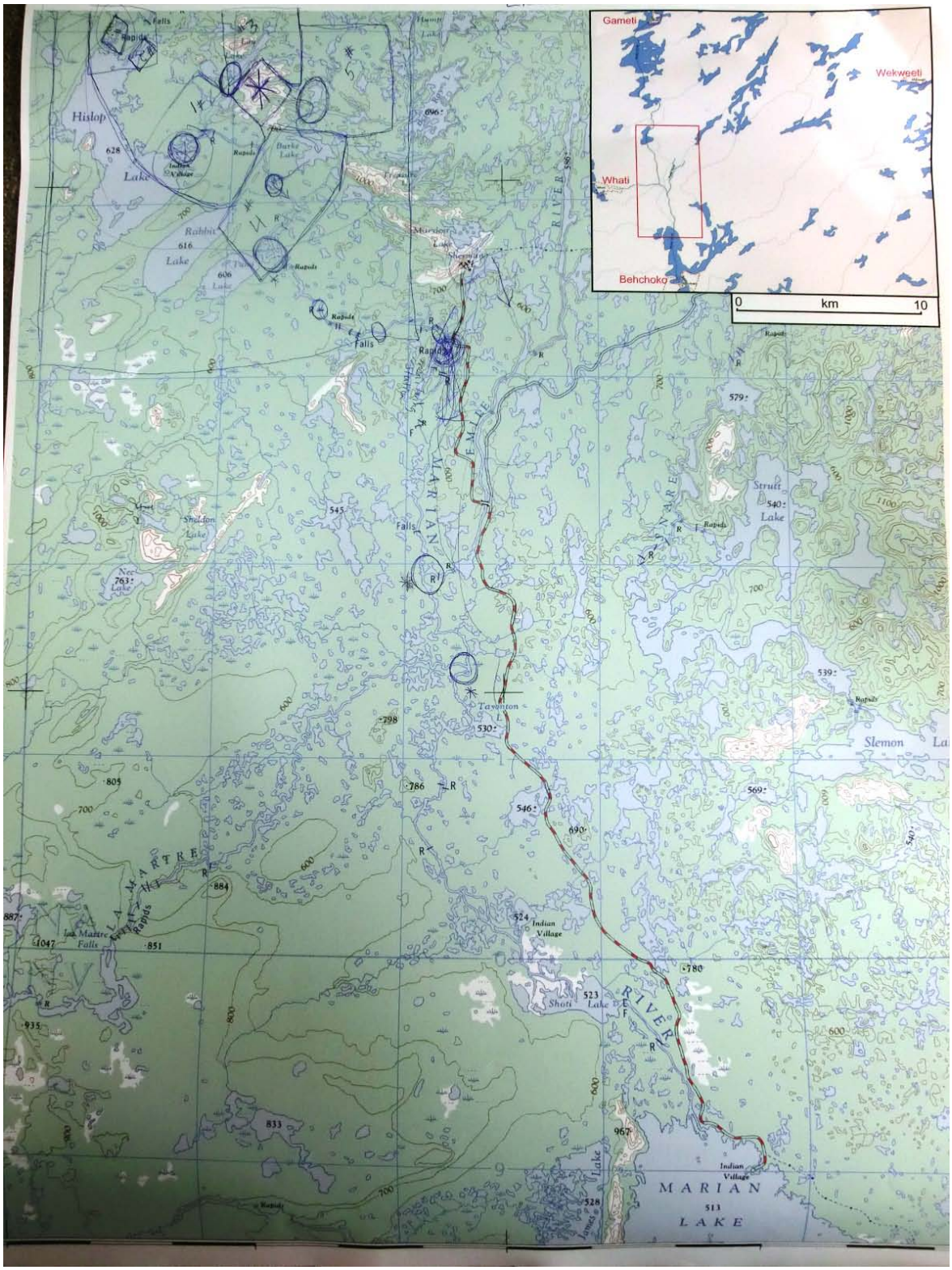
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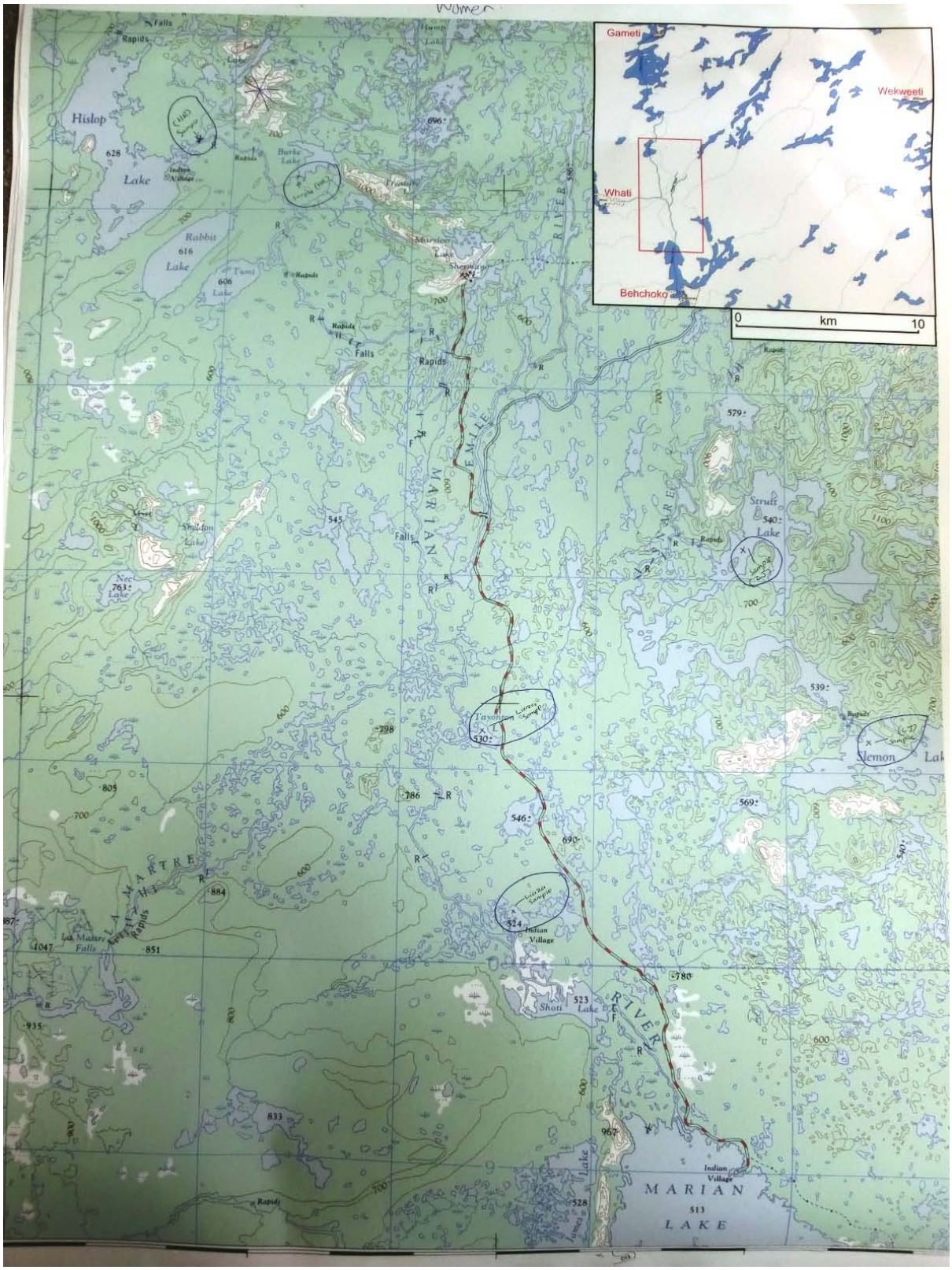
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Appendix 5 – Water Session Notes

Main Themes

1. What are areas of concern and important areas (in the Hislop Lake and Marian River area)?
    - Marian River in area north of Marian Lake and area where Lac la Martre River meets Marian River
        - Hunters come up the Marian river from Behchoko to hunt/trap beaver and muskrat; also come from Whati down Lac la Martre River to Rat Lake and Marian River area.
    - Where Marian River enters Marian Lake is an important fishing area.
    - Hislop Lake and narrows/islands near outlet to Marian River is an important traditional and fishing area.
    - Traditional trails need to be protected
    - Fish move around during their life and fall is an important fish spawning time
    - Connections between different animals and different parts of the ecosystem
    - People have long term concerns "it (e.g. impacts from a mine) might be ok for a few years, but what about 20, 30, 40 years later"?
    - Ray Rock – lots of concerns, from the past and continuing today about possible impacts, how good was remediation work, etc.
    - Blasting dust/residue in the air can fall on lakes
    - Contamination seeping through groundwater
2. Where monitoring should be done?
    - Mine only monitoring itself is not good enough
    - Up and downstream of Fortune Minerals NICO site.
    - **Hislop Lake**
        - **Where lake flows in to Marian River (area of islands near outlet, outlet itself)**
        - Possibly where Marian River enters the lake (north end)
    - **Marian River**
        - **Ray Rock area – a permanent monitoring station is wanted where drainage from Ray Rock area enters the Marian River.**
        - **At the mouth of the river where it enters Marian Lake.**
        - Lakes along Marian River, e.g. Rat Lake area near Lac La Martre River
    - Throughout Marian Lake
        - Monitoring where Marian River flows into Marian Lake will tell us the quality of water entering the lake downstream of Fortune Minerals.
        - Tlicho Aquatic Ecosystem Monitoring Program ('fish camp') monitors fish, water quality, and sediment quality in Marian Lake every 4 years.
        - Likely not possible to monitor many locations in Marian Lake for this initial phase of the Marian Watershed Project.
    - Frank's Channel
        - Already monitored by AANDC

- Additional monitoring by ENR begins this year (2013)
- Data will be shared and can be included in reporting and analysis as part of Marian Watershed Monitoring Program

3. What should be monitored?
    - Fish, water quality, sediment, maybe beavers and muskrats (perhaps beavers and muskrats could be a secondary line of investigation, dependent on results of wq monitoring)
    - Dust (on snow may be most feasible, and in spring (just before snowmelt) we can get an indication of how much dust has accumulated over the winter.
    - We need monitoring to have early detection of any possible contamination and early warning of any possible effects

Summary

Priority monitoring areas appear to be:

- Hislop Lake – where lake flows in to Marian River
- Marian River – where water from Ray Rock enters the Marian River
- Where Marian River enters Marian Lake

Priority things to monitor appear to be:

- Fish, water quality, sediment, dust (e.g. from blasting)

Notes From Each Breakout Group

Harvesters

1. Areas of Concern, Important Areas?
    - Hunters come up the Marian river from Behchoko to hunt/trap beaver and muskrat.
    - People have long term concerns "it (e.g. impacts from a mine) might be ok for a few years, but what about 20, 30, 40 years later?
    - Ray Rock
    - Colomac and several other areas that are outside the Hislop Lake / Marian River area.
    - Areas under 2, below, are also areas of importance and/or concern.
2. Where Monitoring Should be done?
    - Hislop Lake
        - Near outlet to Marian River (area of islands near outlet, outlet itself)
        - Possibly at inlet of Marian River (north end)
    - Marian River
        - Ray Rock area, such as where drainage from Ray Rock enters the Marian River.
        - At the mouth of the river where it enters Marian Lake (fish spawning area)
3. What should be monitored?
    - Fish and water quality
    - Maybe beavers and muskrats

Women

- Monitor outlet of Hislop Lake?
- Healing mud has been used from Hislop Lake, Marian River, Marian Lake [comment – so it is good that sediment monitoring is planned]
- Fish and water should be monitored
- Slemon Lake and other lakes are also important. Industry may come into these other areas eventually [like Fortune Minerals wants to come in to Hislop Lake area now] so these other areas should be monitored [before industry comes there]

Youth

1. Areas of Concern, Important Areas?
    - Rat Lake, important for whitefish fishing (esp. for people from Whati) and possibly muskrat and beaver hunting/trapping.
    - There are areas where dead fish have been observed, could be natural or maybe not...
    - Frank's Channel – important for fishing
2. Where monitoring should be done?
    - Should monitor lakes along the Marian River
    - Fish spawning areas – eg. Near mouth of Marian River, where it flows into Marian Lake.
    - Throughout Marian Lake
    - Kia Goti (Hislop Lake)
3. What should be monitored?

Elders

1. Areas of Concern, Important Areas?
    - Concern about dust from blasting – it can enter the air and fall on lakes. Blasting residue gets into the air and wind carries it around.
    - The mine does monitoring itself, this is not good enough for them to do their own monitoring [comment – seems to suggest that Tlicho do monitoring as well, instead of just relying on the mine to do its own monitoring].
    - Early warning, before contamination happens or has an impact, and early detection are needed and that is why we need to monitor (Alfons Apples drew a map).
    - We know there are linkages between different parts of the ecosystem and different types of animals.
    - Ray Rock!
    - There is a concern that contamination can seep through the ground, even upstream.
    - A culture camp and education opportunities are desirable
    - Fall is an important time for fish spawning and some fish move around to spawn or move around during different life stages. They may stay close to one area when they are small and then move to a different area when they mature.
    - Water is important – fish depends on water
    - Boat/canoe routes and traditional trails are important and need to be protected.

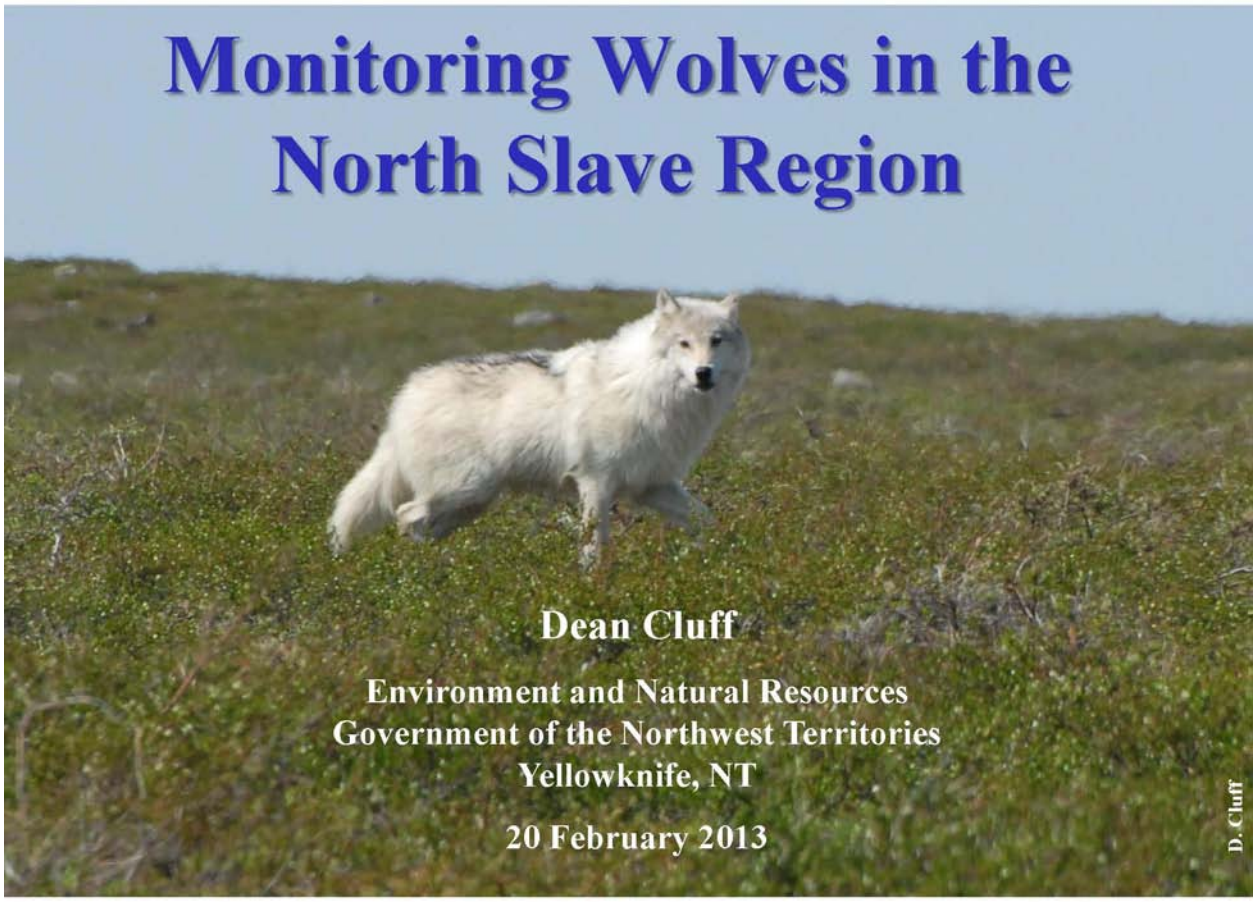
- What is the size of the land that Fortune Minerals has from Canada? What is the size of the mine they are planning?

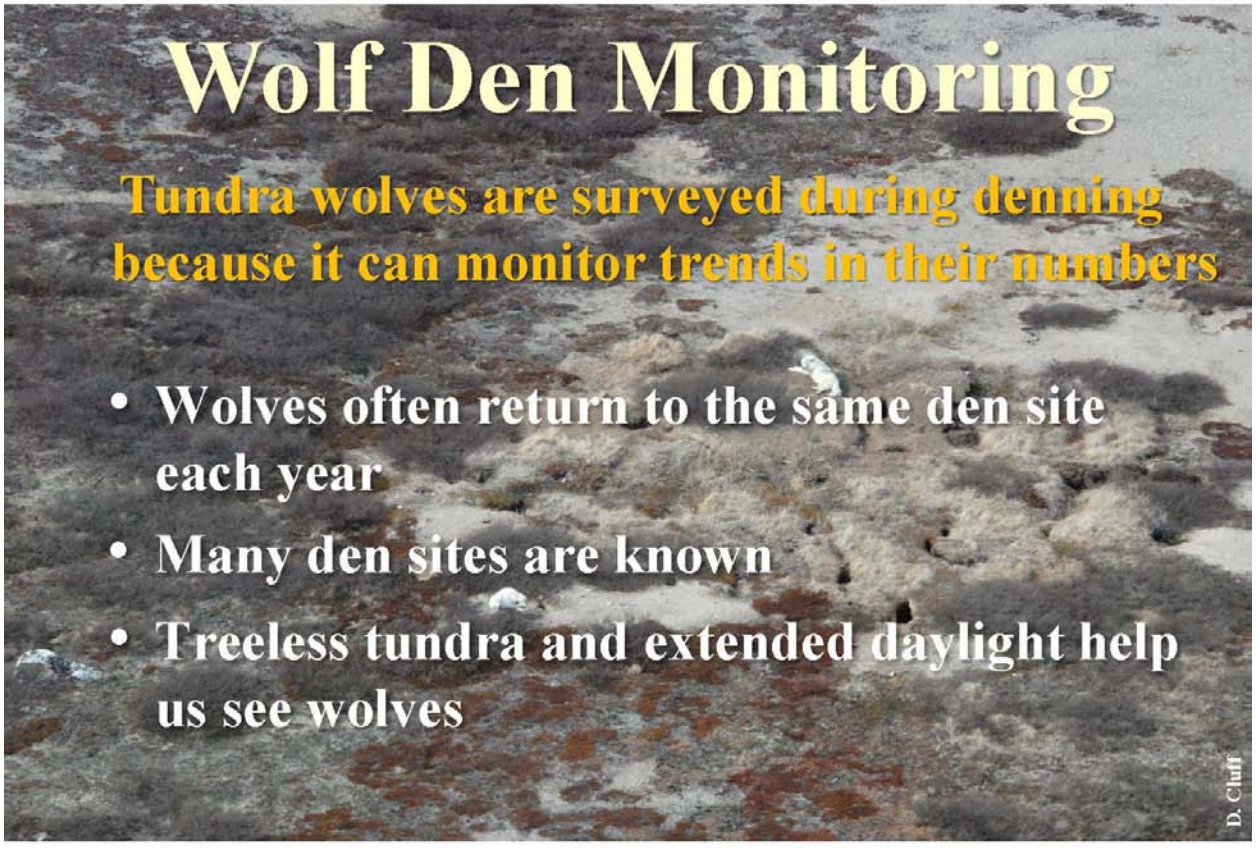
2. Where monitoring should be done?
    - Ray Rock – there should be a permanent monitoring station where water from Ray Rock flows into the Marian River. Also would like to monitor to see if remediation work was adequate.
    - Good whitefish fishing area [comment – I think near where Marian River Flows in to Marian Lake]
3. What should be monitored?

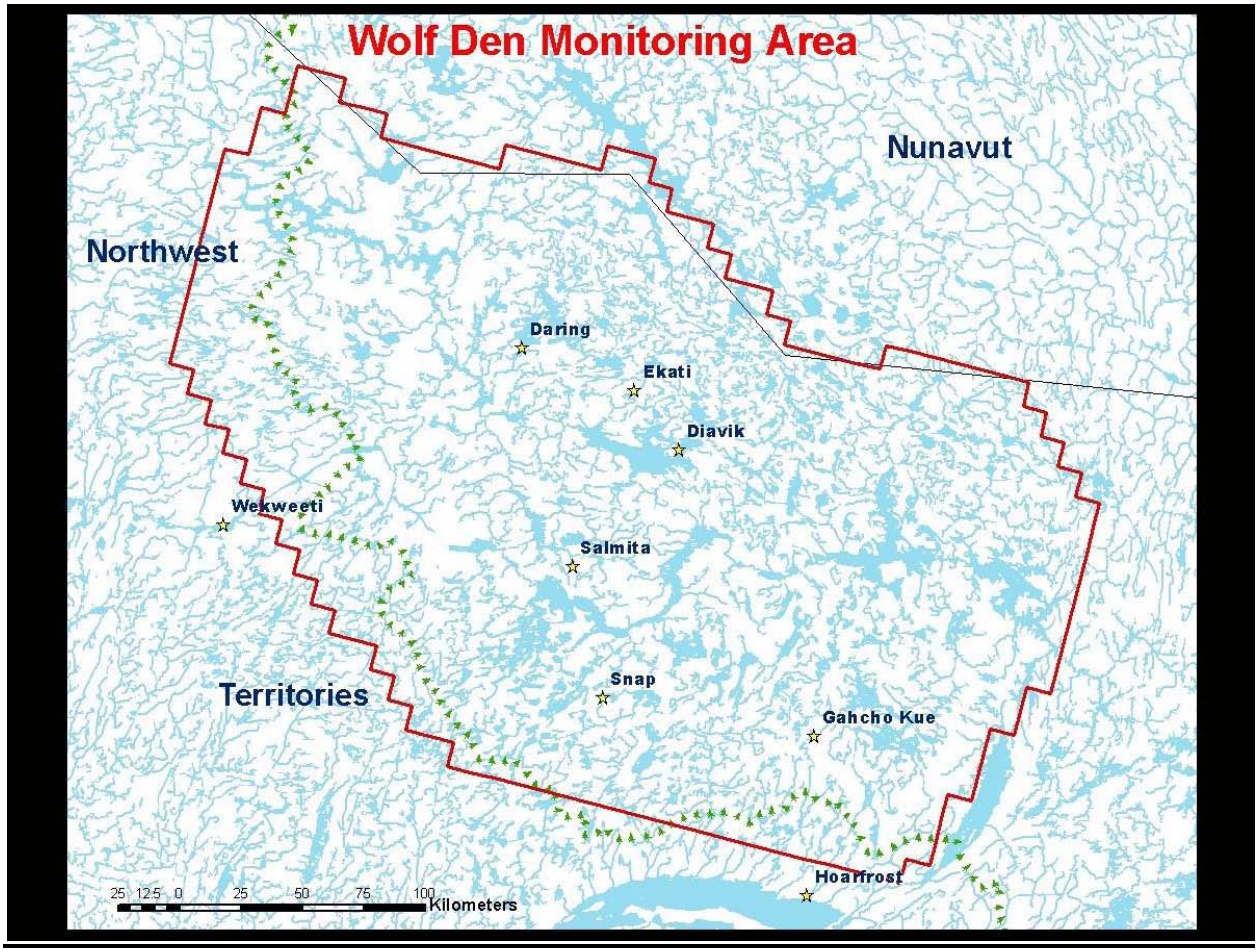
Wildlife Workshop – Feedback Regarding Communication Plan

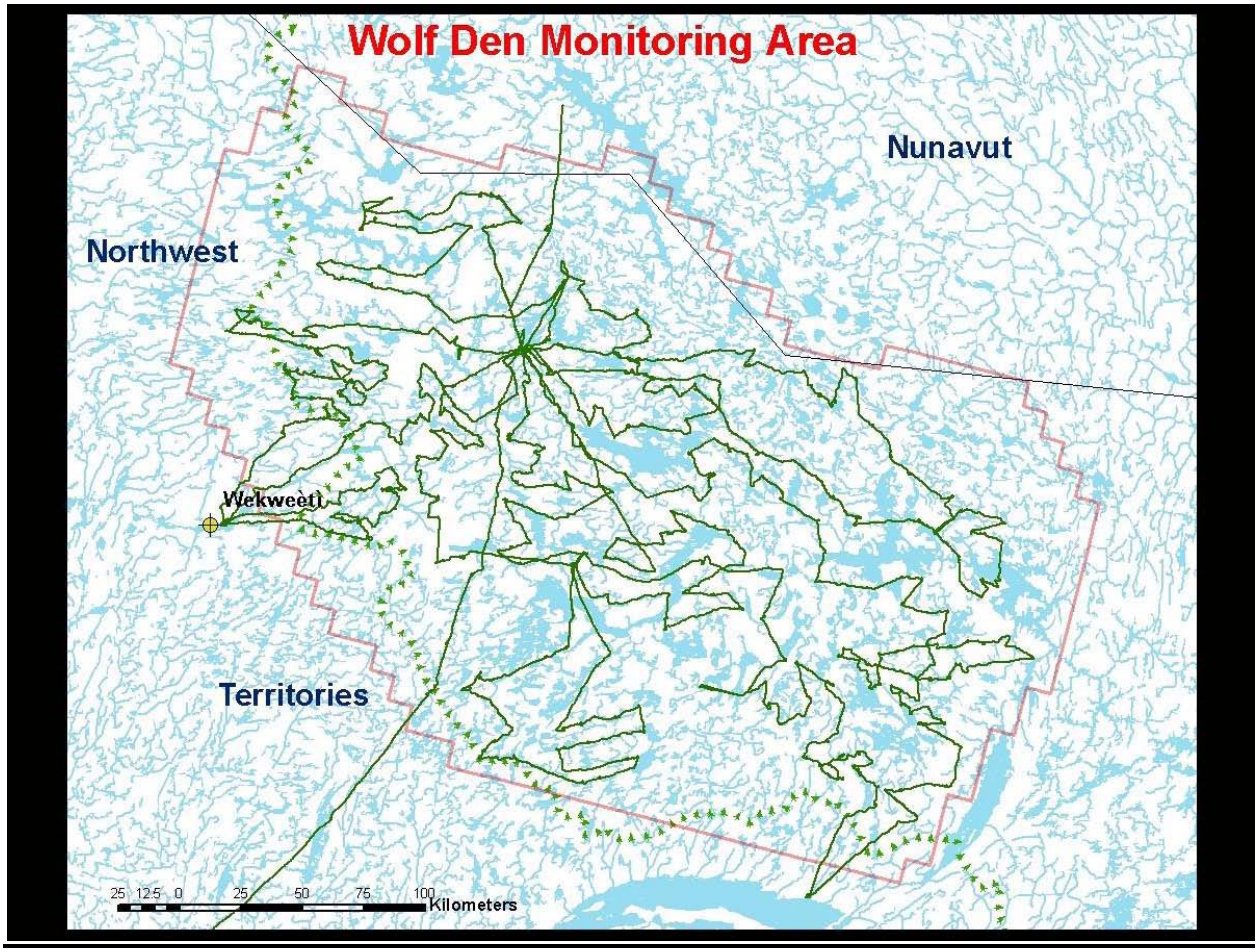
- Communication is very important – Tlicho citizens need the information
- Results need to be communicated to community members (community meetings is the example that was talked about here).
    - Russell Lake fish camp (WRRB Tlicho aquatic ecosystem monitoring program) communicated results back to community, this was good.
- Website is good for young people, but Radio is best for elders, they listen to it and especially the Regional news (9-9:30 cklb and 1-2 cbc).
- Could we see blasting being done with our own eyes, see for ourselves?

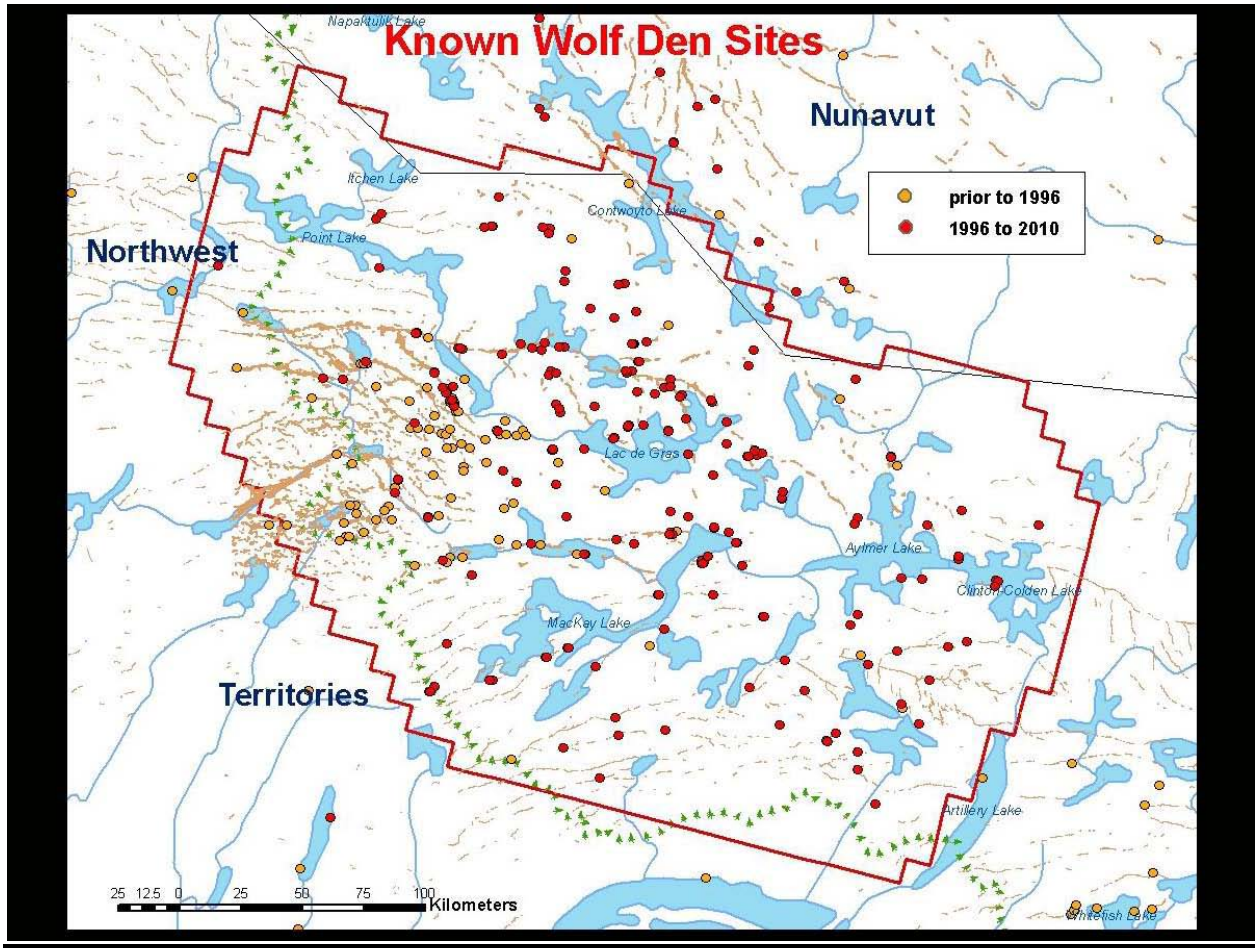
Appendix 6 – Wolf Presentation

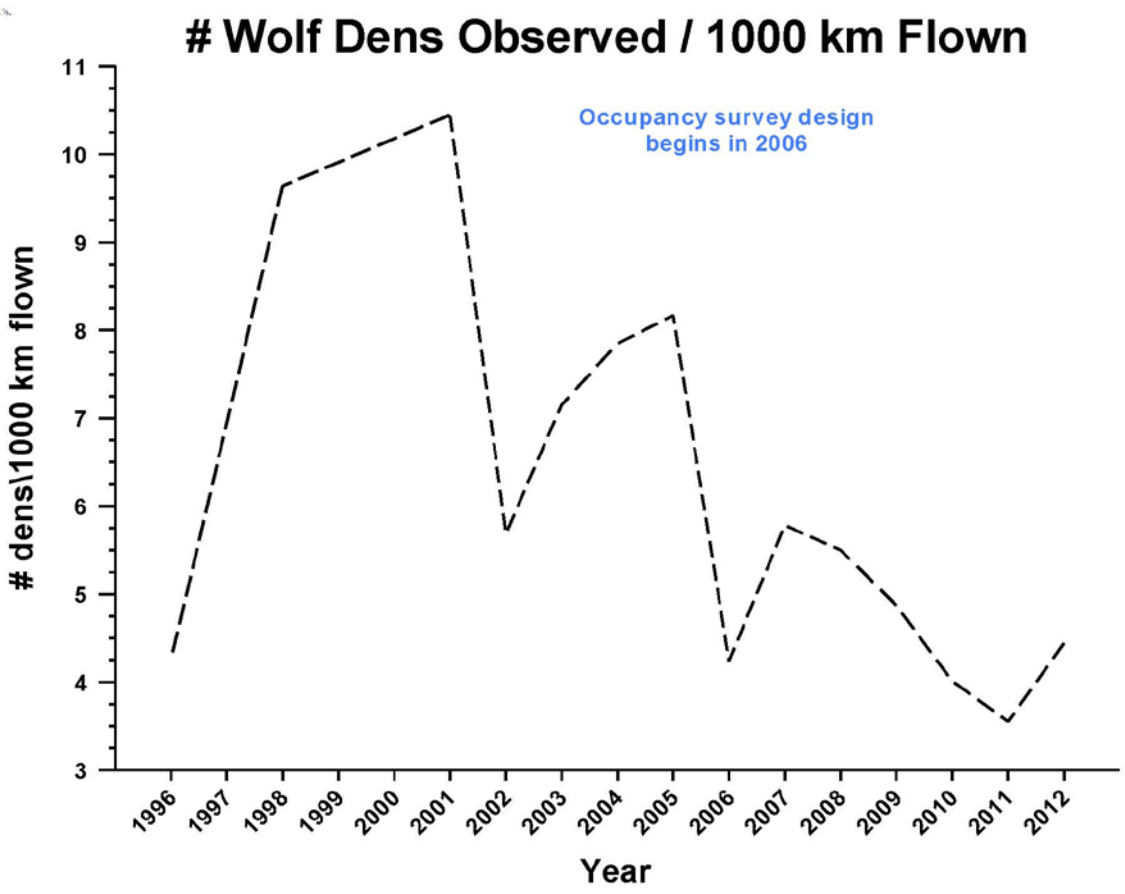


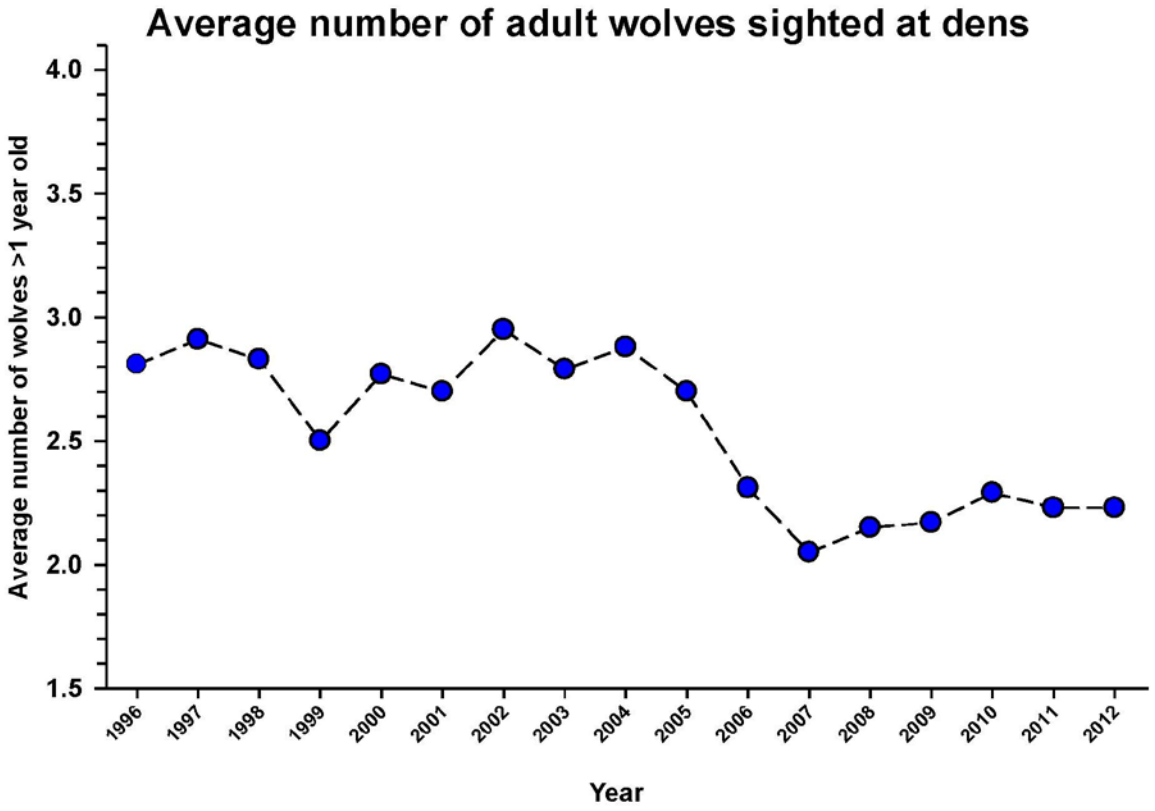

Wolf Den Monitoring
Tundra wolves are surveyed during denning because it can monitor trends in their numbers
• Wolves often return to the same den site each year
• Many den sites are known
• Treeless tundra and extended daylight help us see wolves
D. Cluff

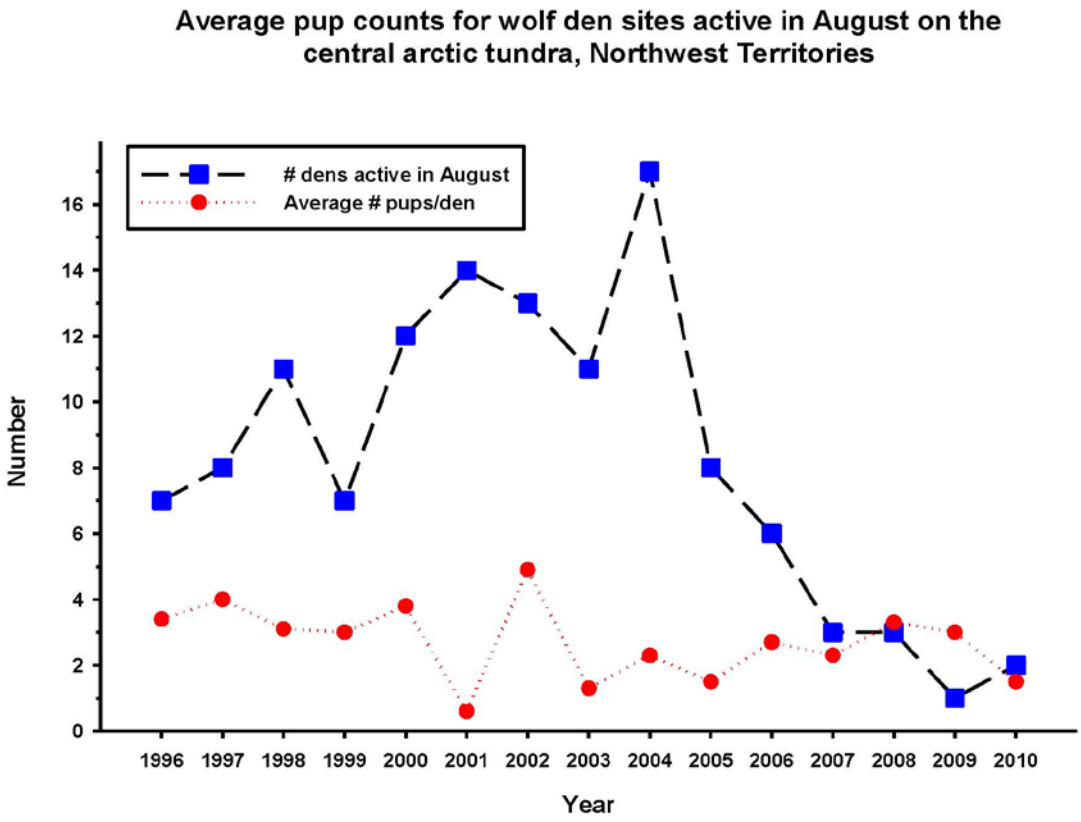

Wolf Den Monitoring Area
Nunavut
Northwest
Territories
Daring
Ekati
Diavik
Wekweeti
Salmita
Snap
Gahcho Kue
Hoarfrost
25 12.5 0 25 50 75 100
Kilometers


Wolf Den Monitoring Area
Nunavut
Northwest
Territories
Wekweètì
25 12.5 0 25 50 75 100
Kilometers


Known Wolf Den Sites
Nunavut
Northwest
Territories
prior to 1996
1996 to 2010
Napaktulik Lake
Itchen Lake
Contwoyto Lake
Point Lake
Lac de Gras
Aylmer Lake
Clinton-Colden Lake
MacKay Lake
Artillery Lake
Whitefish Lake
25 12.5 0 25 50 75 100
Kilometers

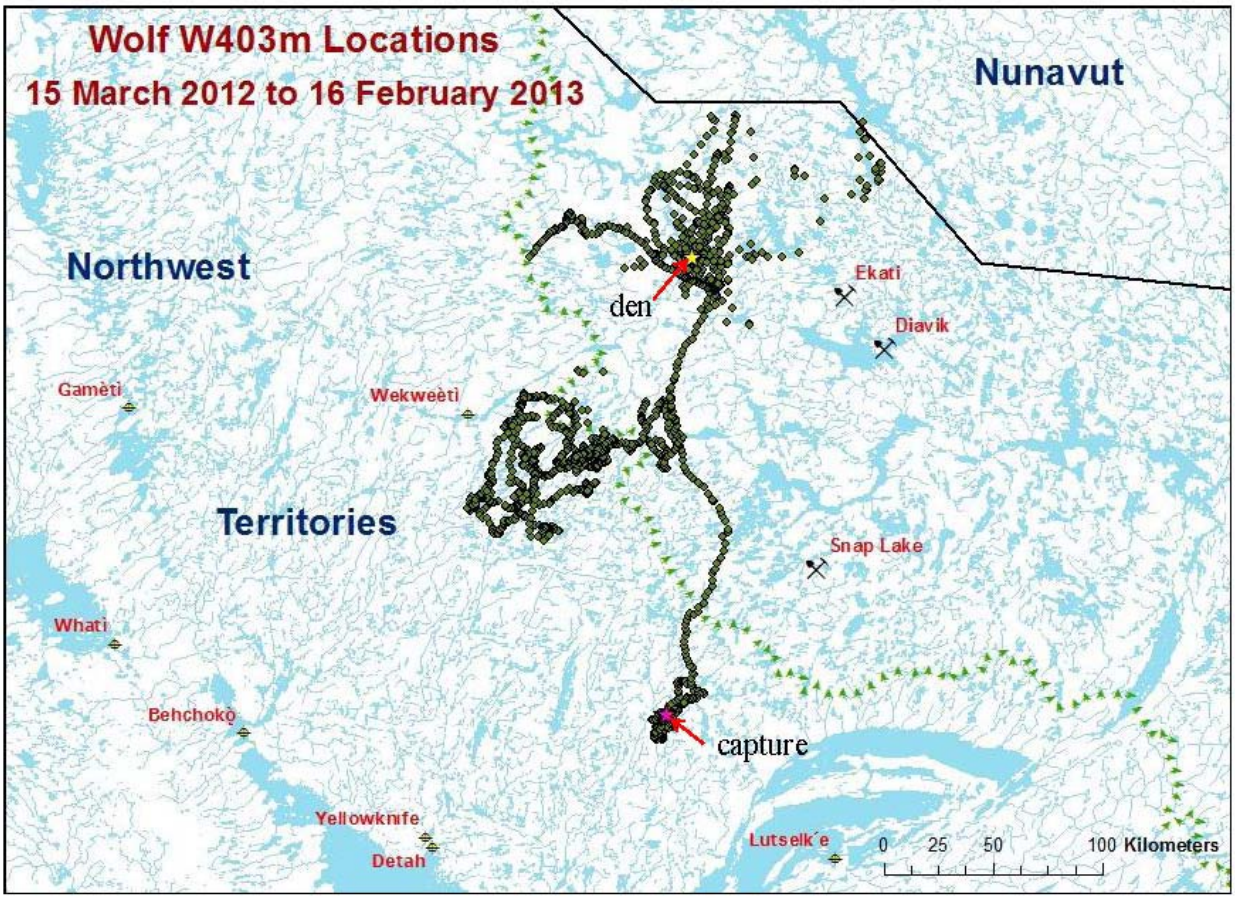

Wolf Dens Observed / 1000 km Flown
Occupancy survey design begins in 2006
dens\1000 km flown
11
10
9
8
7
6
5
4
3
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year


Average number of adult wolves sighted at dens
Average number of wolves >1 year old
4.0
3.5
3.0
2.5
2.0
1.5
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year


Average pup counts for wolf den sites active in August on the central arctic tundra, Northwest Territories
dens active in August
Average # pups/den
Number
0
2
4
6
8
10
12
14
16
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
Year


D. Cluff


D. Cluff


Wolf W403m Locations
15 March 2012 to 16 February 2013
Nunavut
Northwest
Territories
den
capture
Ekati
Diavik
Snap Lake
Gamèti
Wekweèti
Whati
Behchokǫ̀
Yellowknife
Detah
Lutselk'e
0 25 50 100 Kilometers

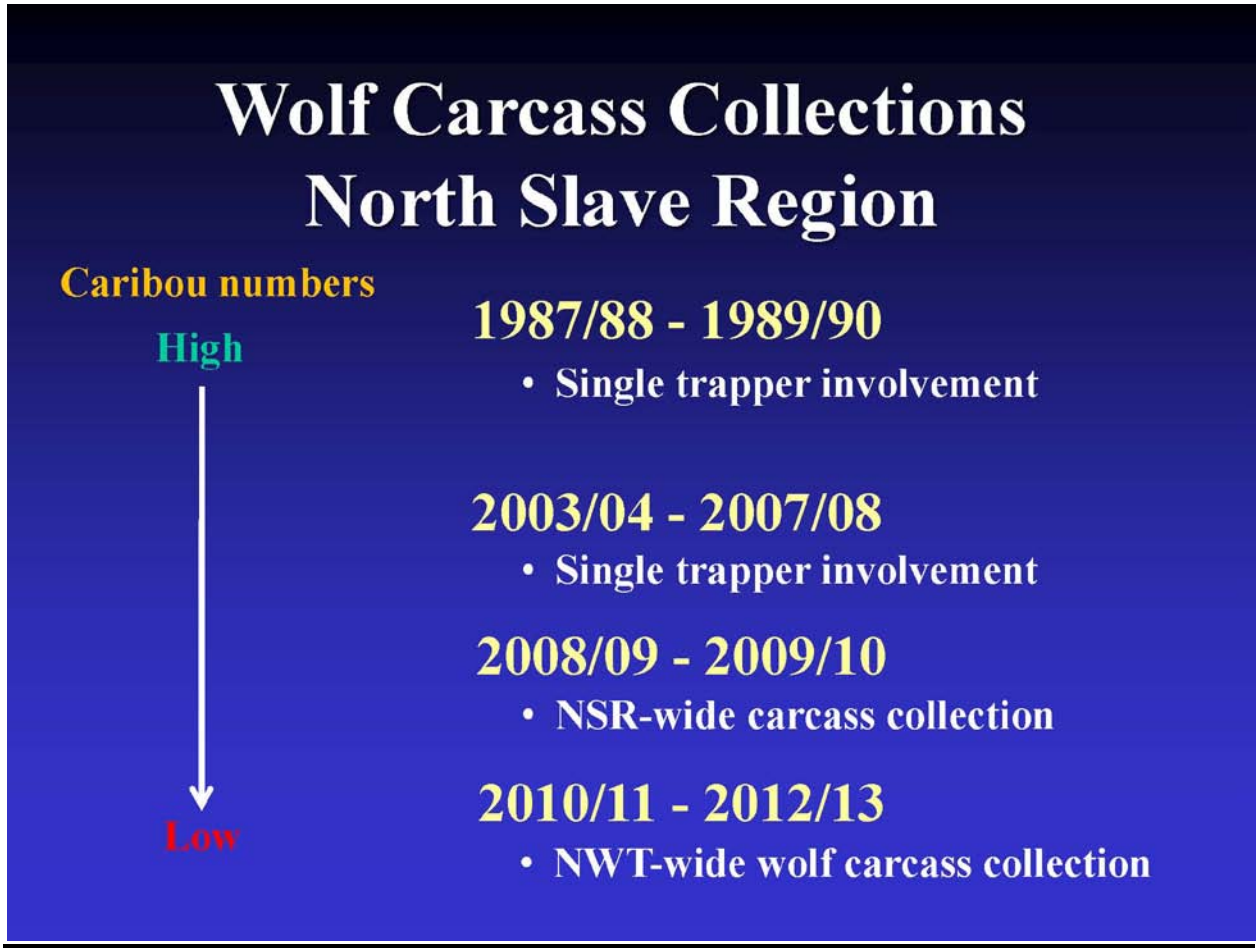
Northwest Territories Environment and Natural Resources

Wolf Carcass Study

GNWT – Environment & Natural Resources is requesting from resident hunters and trappers, their skinned carcasses of wolves harvested from the North Slave Region.

From 01 November to 30 April

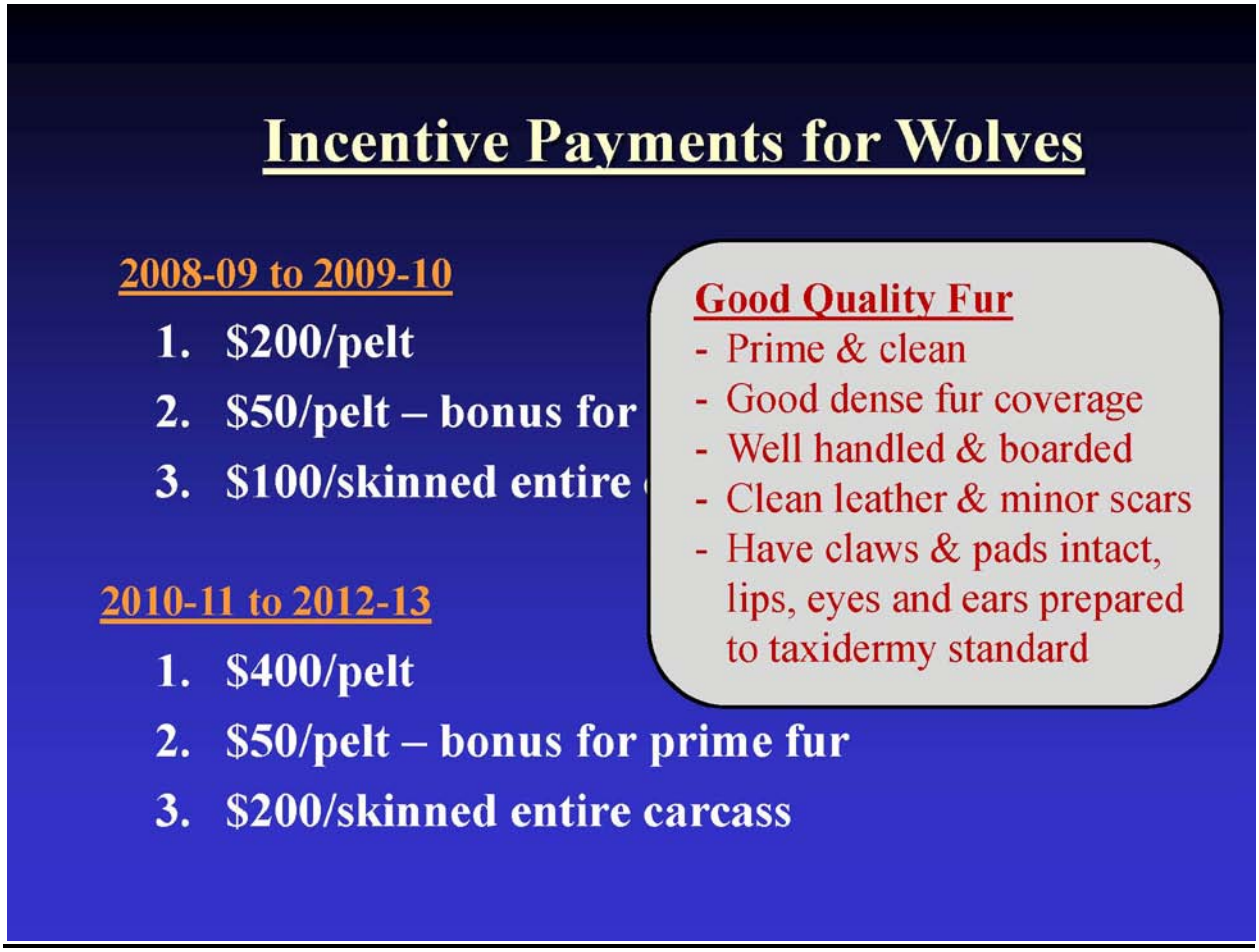
North Slave Region resident hunters or trappers who legally harvest wolves will be paid $200 for each complete carcass they bring to the regional ENR office in Yellowknife, Behchoko, or Lutsel K'e.


Wolf Carcass Collections
North Slave Region
Caribou numbers
High
Low
1987/88 - 1989/90
• Single trapper involvement
2003/04 - 2007/08
• Single trapper involvement
2008/09 - 2009/10
• NSR-wide carcass collection
2010/11 - 2012/13
• NWT-wide wolf carcass collection

What we collect

1. Reproductive tract of females
   - determine potential litter size
2. Teeth
   - examine age relationships for samples taken
3. Body condition
   - fat index and measurements
4. Genetics
   - tissue samples (hair, muscle, liver)
5. Contaminants
   - tissue samples (kidney, muscle, liver)
6. Diet linkages
   - stable isotopes (liver/muscle, hair, bone)
7. Parasites & disease
   - tissue samples (blood, muscle, small intestine)


D. Cluff


Incentive Payments for Wolves
2008-09 to 2009-10
1. $200/pelt
2. $50/pelt – bonus for
3. $100/skinned entire
2010-11 to 2012-13
1. $400/pelt
2. $50/pelt – bonus for prime fur
3. $200/skinned entire carcass
Good Quality Fur
- Prime & clean
- Good dense fur coverage
- Well handled & boarded
- Clean leather & minor scars
- Have claws & pads intact, lips, eyes and ears prepared to taxidermy standard

Average Wolf Pelt Prices 2006-10

GHL & S-GHL licenses

Category	Pelts	Average $	Total Sales $
Wolf, Boreal	204	133	27,199
Wolf, Arctic	27	139	3,747
Wolf, Tundra	42	245	10,304
	273		41,250
5 year average	54.6	151	8,250

Wolf Carcass Collection in the North Slave Region

Year	Carcasses	Male:Female
2003/04	52	30:22
2004/05	17	8:9
2005/06	105	55:50
2006/07	5	3:2
2007/08	40	22:18
2008/09	25	10:12
2009/10	19	11:8
2010/11	41	23:17
2011/12	80	45:35
2012/13		

Breakout Questions

Collecting Information on Wolves

1. We have heard from you there are more wolves around. How many are more wolves?
2. Where have you spotted wolves? What times of the year?
   Are most of the wolves around the community or on the land?
3. How have your observations changed over time?

Wolf Harvest

4. What can communities do to ensure fewer wolves hang around the community?
5. You have told us most Tłı̨cho harvesters don't kill wolves. What can be done to increase the number of wolves killed by Tłı̨cho?

Appendix 7 – Wolf Session Notes

Theme – Wolves

- Wolves are not going to wait around to be monitored; they are very smart and fast.
- They should monitor the nodii (plateau which runs from Whati to Fort Providence).
- If they are going to monitor wolves they should have students/youth to be involved too.
- The elders listen only to harvester/trappers.
- Grandin River to Grandin Lake is a lot of wolves.
- There are two types of wolves – Timber and Tundra.
- If wolves have a hard time finding food they go to the communities and dump.
- Two people trapping around the dump area and earning profit from it.
- Hunting on Grandin Lake saw mostly wolves, about twenty of them.
- Traditional and culture camps along highway 3, they see about 5 to 6 wolves together. The wolves killed a dog at the camp.
- At night they travel in the community. One guy who went home after card game was attacked by a wolf luckily there was a vehicle going by and help the person out.
-
- **Whati Report:** Many wolves in Grand lake and granite [sp? Grandin?] lake
- **Request to monitor population of boreal wolves:**
- Saw about 20 Living together 20 Wolf in tundra – we have timber land wolves; we do know that wolves kill caribou; ones living in lake tatya, we normally trap in that area; we have trapped; big populations, 1988 when my late uncle was alive, Joe Zoe was there, had a trapline cabin out there; spent fall and winter there; know that wolf were populating that area; they don't normally mix with our caribou..**seems that timber wolves are not really monitored seriously**; we know they travel a great distance; **if it was to travel great distance, possibly in spring with chopper, it would be good to monitor in that area; we would like to know the population in that area**;
- **asked Bruno who would be responsible for wolves** – if they could assist us; is that correct Bruno? As board members, we know that wolf has a great spirit and we respect it; we know we are able to kill it, but people with children, can't take a chance to kill it; **maybe an option is setting up places for animals?**
- **Community Petition for Poison Baiting**
- We also want to do a **petition from our community to see what can be done --poison baiting these animals**
- **ENR Assistance for Hunting Wolves**
- People who are biologists, hunters, we talk to them, they don't like to hunt them; they respect bad omens and taboos; even white people are reluctant to kill them; if we had 4-5 to hunt, ENR to assist with fuel, maybe a good chance we could harvest; a **recommendation** not a decision made here; we're worried about this; sometimes not wise to shoot one animal,

could attack; have respect for certain family members-how they react to wolf..not everyone can hunt them; must be 3- 5 animals we could see; prepare my rifle, but little wind and snow blowing. I saw not caribou but wolves, got afraid; there might be more wolves around, didn't want to be alone with wolves; so joined others on the lake … hunters; path going through trapline, came across 5 wolves; approached and they came towards him so he fled on skidoo; if you don't understand animal behavour..we live in midst of treeline; you're not looking at timber wolves, you're concentrating on tundra wolves; I went north of ..saw 3-4 wolves chasing caribou; there must be more. Wolves living in trees..I'm sure they're active, hunting the caribou; many wolf dens in lake area**; I would be glad to pinpoint dens and where the wolves are populating**

-
- **Wek'weeti Report: (Joseph Judas)**
- **<u>Wolves living close to community</u>**
- people used to walk on snowshoes, at that time, furbearers were trapped; so wolf did not go to the communities or approach people but today, last 10 years, **living close to community ; hang around dump;** our dump is like a Wal Mart for them;; **today, seem to be more wolves**; our youth say the wolves will hang around the caribou; the wolves are with caribou. Why are we saying that wolves can travel fair distance..wolves in Gameti and Whati..don't go close together. We don't know..so **wolves hang around community that's what we're basically saying**; dean is caribou biologist. We live right next to dump, but in summer **wolves hang around,** maybe because we have dogs, female dog in heat – 15-20 km around the community; Wolves raise their pups in summer; so hang around community; children playing, going to community; not afraid of humans; safety; they might think wolf is a dog;
- there are wolf dens all year round near the community
- right now wolves are around the community (Wek'weeti) because caribou are close by
- There seems to be more wolves getting closer to community..is it because of the dump?
- We see wolves near the dump but we can't shoot them there –too close to the community
- Around 15 years ago, we didn't see many wolves; they stayed out of the community. Trappers could shoot everything for fur-that's why they stayed away. In the old days, animals feared humans but today they have no fear.
- A youth wondered whether it was harder for the wolves to hunt caribou because they move around so the wolves come to the dump. Maybe the caribou are not settled because of skidoos, etc
- **A question was raised: How many caribou does a wolf take in a year?**
- **<u>When are wolves seen?</u>**
- In summer around community; not in fall when they hunt caribou; wolves hide then
- When there is no caribou, they are close to the community; but when there are lots of caribou, they scatter all over
- In March, they get into packs –pretty dangerous to disrupt the wolf pack; you can't take 1. Wolves are survivors and attack as a group. We see lots gather together in March.
- In the 1990s, someone saw 52 wolves coming from an island
- **<u>What can be done to discourage wolves around the communities?</u>**

- **what if we destroy the dens**..what do you think? Can we do away with them, Dean? Wekweeti, close to community, some litters could be lots every year, a wolf den,
- find the wolf dens within a 10-15 km area around the community; the airport is about 7 km from community; maybe focus on this area
- we see lots of pups around dump; one person saw 22 pups beside the dump by the shore, cross the river
- **Raise price of pelts to encourage wolf harvest:**
- Takes a number of hours to clean pelt..not enough money, we come from a high cost of living. Cost of fuel is high; in Wekweeti; a way for youth to have an income, raise self-esteem
- **Support to build a place to prepare wolf pelts away from the community:**
- can we build a cabin a fair distance from community, where we can clean the wolves
- Build some sort of outpost camp
- it's not the same for each individual; there are people who are capable of working with a wolf after it is killed, they can do that;
- **Are wolf pelts purchased in summer too?**
- there could be a wounded wolf, what can we do..would the fur pelt still be bought in the summer.. if it can't be bought in summer, what can we do with the carcass?
- Raise their pups in summer; so hang around community; children playing, going to community; not afraid of humans; safety; they might think wolf is a dog;
- Inuit also concerned about wolves
- **Training for snaring or trapping wolves**
- **Have a person responsible for handling wolf pelts and looking after the cabin – identify someone**
- **Traditional Beliefs about wolves: -**not good for even Tlicho men to clean the wolf (women are forbidden and even some hunters); they have a sensitive spirit; body odour from wolf; big spiritual animals; ancestors have said sometimes you can't overkill the wolves; aboriginal people could get sick; have to be cautious how we handle the wolf. Forbidden to bring wolves into the community; we have to be concerned about the health of the community. Our ancestors used to tell us stories – wolf is sacred.
- Wolves are pretty smart; they stay away from humans; they know the hunting season
- Wolves are not the same as dogs; they have a more powerful sense than dogs. They are hunters; even their smell is powerful – people could get sick from it. In the old days, our ancestors used to handle this situation; right now, we're not prepared for it. We have to use caution.
- **Wolf Movements**:
- Wolves want to follow caribou. Perhaps they go as far as their territory goes – other wolves might chase them out.
- **Wolf Behaviour:**
- Mike: Sometimes wolves get sick – other wolves won't attack it because they know it's contaminated
- If you injure a wolf, the other wolves will attach and eat it to stay alive especially in cold weather

- **Wolf breeds** – a youth asked how you can tell when a wolf mates with a dog. An answer was given: pups will howl. Mike had a dog team and wolf breed on his team; a woman told him he would have a sore leg from having the wolf breed on his team and he did end up with a sore leg
- Question raised: When Dean was counting wolves, was he using fixed wings or a helicopter? Maybe he has mistaken bear dens for wolf dens?

- **Gameti Report: (is this correct?)**
- We have concerns too, about 2 years ago, we talked about this in Yellowknife
- Wolf can be prepared in a cabin- can something be done?
- We spoke ..Hottah lake..we wanted cabins to be built around..maybe get money to build cabins; we're hoping we can see things happen, make a proposal – I know stories about this..Hislop lake, we go hunting out in this area, can see many wolf tracks crossing our trail; I'm' sure the population is increasing – caribou?-that's why wolves increasing; we hope ENR can do some surveying ; go out on land; I'm sure we can do things together; sometimes wolves kill dogs in our community; what can we do about this problem? I hope we can find solutions; grandchild noticed a wolf following him to school; we have to look out for our children
-
- **Gameti Report: Ritalene**
- Charlie missed some points I'd like to add..maybe we could have a **wolf workshop**; maybe how to solve problems; we should **increase the prices**; we have outfitters nearby in Barrenlands, black duck camp; other one? We know the population of buffalo is decreasing**. How can we support outfitters – maybe they could do the wolves;** maybe **white people can have a license so they can hunt wolves;** and **establish a cabin near community** so they can prepare wolf pelts
-
- **Behchoko Report : Charlie Rabesca**
- – we live on a major highway; whenever we hunt in Wekweeti in the past we used dogs; but we don't go there like we once did but when we go to Whati and Gameti, we always see wolves; something we see with our own eyes. we hear them howling at night; killing pups and dogs for a number of years; as tlicho people, we are scared to kill wolves according to a story we have heard from our elders; only 2 people who do kill wolves ..they earned 10-15000 dollars worth trapping wolves; according to our stories, we are afraid to kill, clean, trap wolves; down south, coyotes..we seem to have a lot of coyotes to this day; newspaper – read about coyote being seen in Yellowknife, but we know there are some coyotes in the community; something like cougar are seen; cougar wasn't trapped, on highway not far from Behchoko; Dean is a wolf biologist; he knows how to handle [wolves]; he only does the monitoring for wolves out on tundra; but people in this area [think] **there should be a monitor done around Grandin Lake area;** out on the barrens, open area, can be easily spotted; we talk about the problem, but it is still there, no follow up; **let's make an action plan so we definitely do something about it.**

- We know that wolves are right in our 4 communities;
- Lot of little kids going to school. What if they were mangled by wolves; our people do not hunt wolves; **how many wolf dens do we have close to our community**? ; Albertine can fill in the rest of the information
- We have a sniper in each of our community ; these rangers can be hired; have a target practice at the wolves
- Albertine – **where do they actually see wolves?** Sometimes chasing after caribou, about 20 in a pack; in summer, they continue to see wolves; close to dumpsite; winter roads; mostly at night – more at night; in past, when there were dog teams, they didn't see many wolf tracks but they see more tracks today; we saw lots of tracks coming into this community; many of the wolves stay close to dumpsite; hope to **create fencing around dump to not attract wolves**

<u>Wolf</u>

Hunting to Grandin Lake

Lots of wolf tracks

Saw 18 wolves

2 weeks ago (winter)

Casino Lake – next door had tent set up

18 wolves (2 weeks ago)

Coming closer to tents

20 years ago (1988) last trapping, Lake TachiaDenshee Lake (past Grandin) Louie Simpson went trapping. This side of river for the first time he saw 70-80 wolves.

Winter – November. Shot 5 wolves. Easy to kill on Lake.

Jan/ Feb went back; wolves followed trail to Grandin Lake

Same pack of wolves. Bush

Lake Tatchia – Shallow current doesn't fear others take fish out & the wolves take fish from otter.

- ❖ Should be monitoring for dens in this area

<u>In Community</u>:

Dump at night lots of wolves. Need to monitoring for dens in region.

<u>Jimmy:</u>Packs not afraid of humans. Even when use skidoos, not scared of it. Taking small dogs, pups, big problem in Whati.

2009: saw lots of wolves pup Grandin Lake once break a trail ten wolfs follows you.

Not only hunting season in November they also a problem Nov – March.

Jimmy:Bounty on wolf – should, ten # of wolves go down.

Wolf doesn't destroy caribou population wolf pray on all kinds of animals – small, large.

When hunting with dog team. Team got excited followed. Found 10 wolves attacking moose. Dog became frightened. Wolf killed moose. Just starting to take out intensives. Even after they chased team away to wolves howled after team.

More wolves kill more caribou.

We don't want to wipe out. Have to do something to bring down # wolves have to kill them. If # go up then young men might go hunt them.

Difficult to skin wolves. Stinky and smelly. Doesn't fit what people catch. Not helping achieves down motivation to trap.

If increase bounty will help population.

Joe Moosenose: could hire group of hunter to harvester to hunt wolves.

- Get few people to do it , supply gas etc,

Charlie J:Believe the animals have a spirit. Toe is a taboo so people will not kill it. Need to add TK, how to kill animals, how to prepare the animal. If don't do it proper can lose children's.

When 16, went out on land near Whati, used dogs for safety. Tied team outside to keep safe. Heard wolfs outside, eventually father shot through the door. Had female tied up, wolf coming to get it, shot the wolf. Silent after this.

Boundary to $1000.

Get guys to harvest, don't clean it, give whole thing to ENR.

Charlie J:Many people starting to follow our ways even while people will refuse to kill the animals out of respect for our beliefs.

Joe Moosenose: 5-6 hunter go kill wolves, then give to ENR. Give to ENR they can prepare it.

Charlie J:ENR said would supply food, traps, plane to go trapping.

Jimmy N:Why doesn't ENR deal with it if the wolves, then we can contact ENR.

Men with children can't kill wolves.

Poison?

Big pack of wolves near Grandin Lake 18 wolves.

Believe there den at Lake Tachia

Saw then in last few weeks.

- ❖ ENR needs to check dens in this region.

<u>Sam Mantla:</u>

- Train our young people to
- Need training
- Don’t bring in other people to kill them, do it ourselves
- Good to find solution

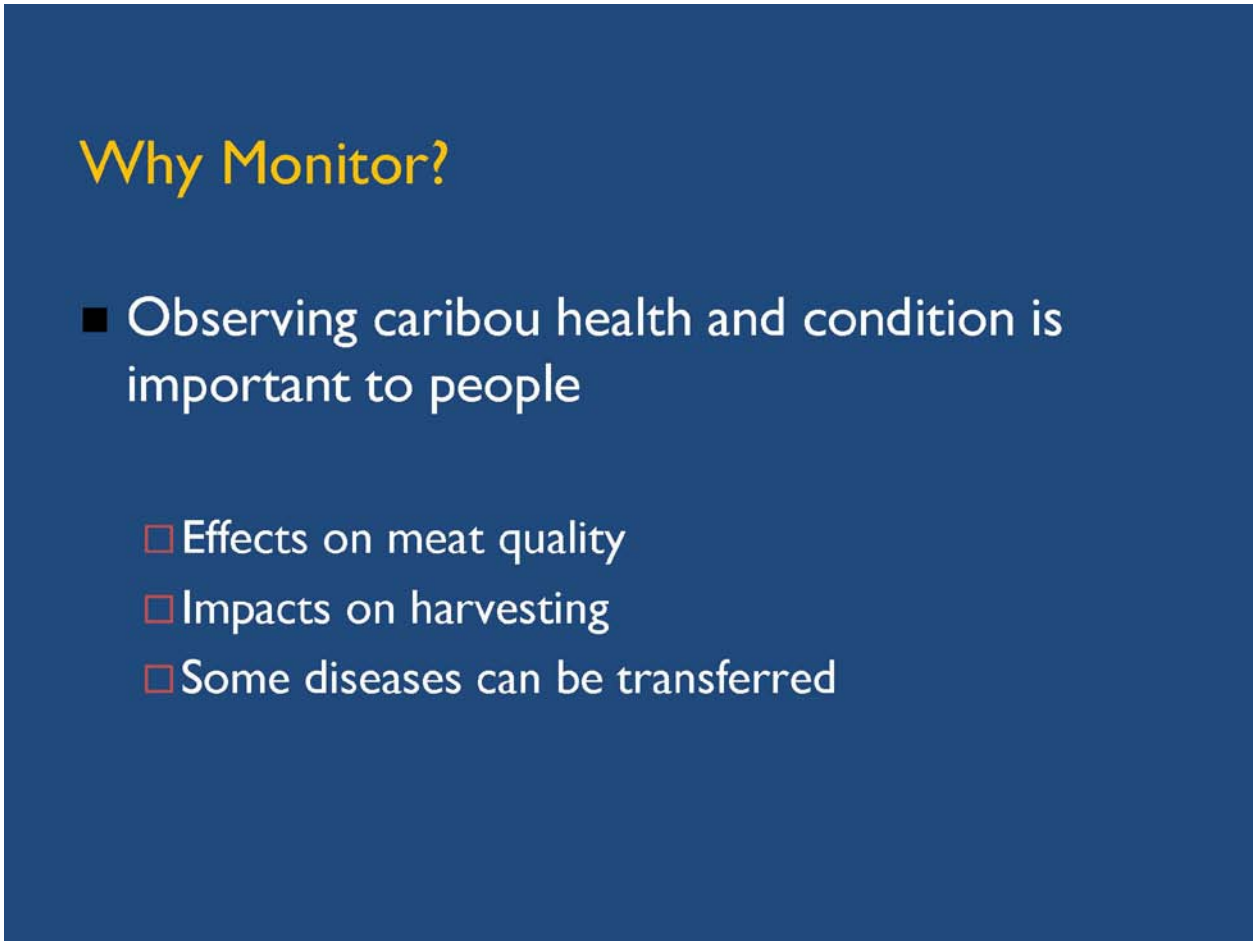
Appendix 8 – Caribou Health Monitoring Presentation

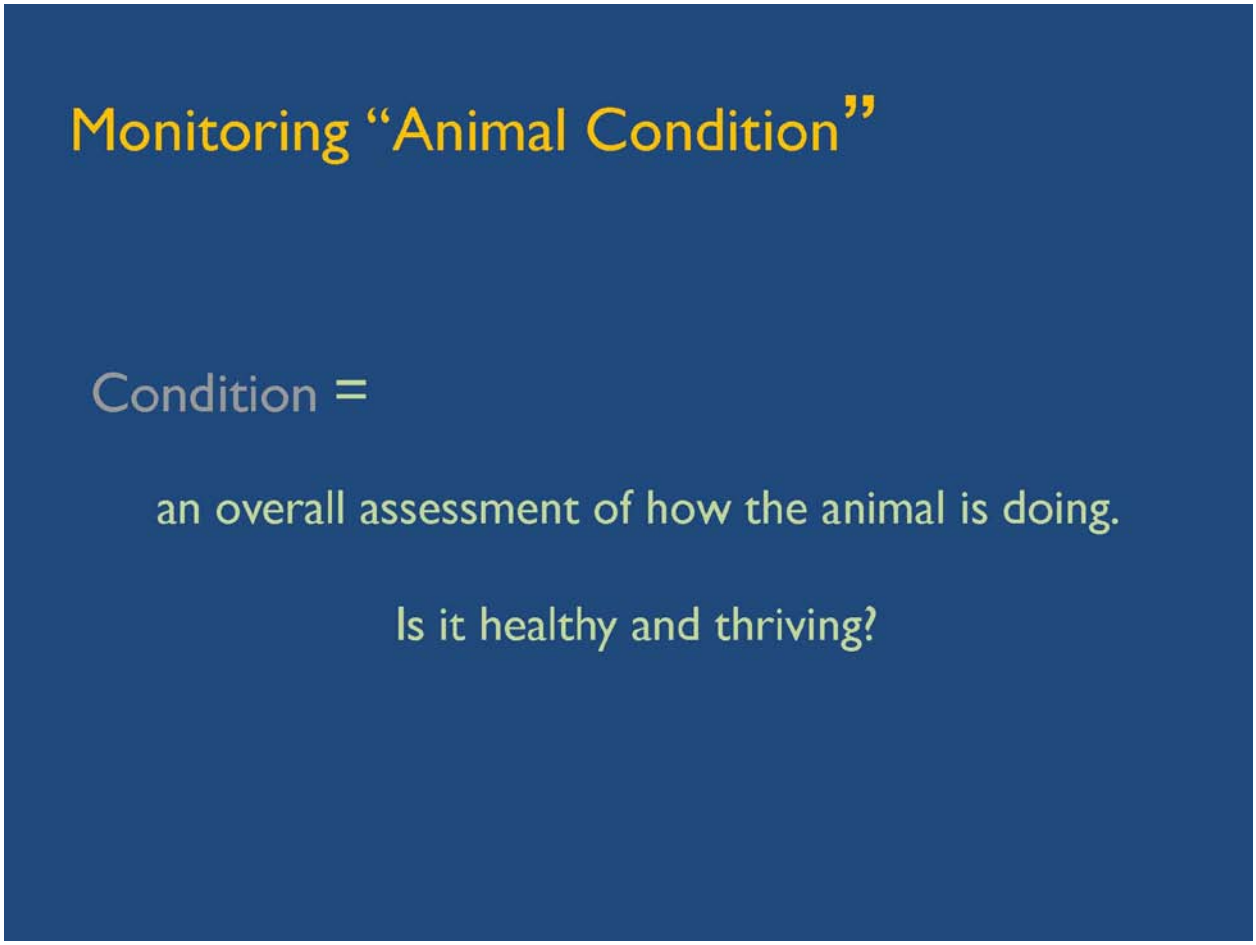
Why Monitor?

Monitoring =

- Observing health and condition now and watching for changes over time

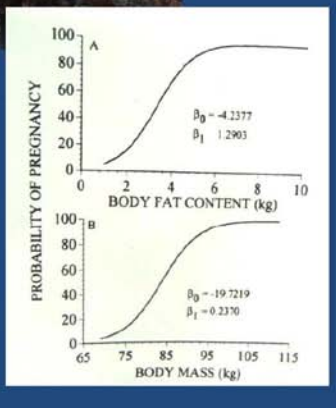

Why Monitor?
Watch for possible changes in animal health that can result in
Reduced body condition
Vulnerability to predators
Disease and death
Reduced fertility


Why Monitor?
Observing caribou health and condition is important to people
Effects on meat quality
Impacts on harvesting
Some diseases can be transferred

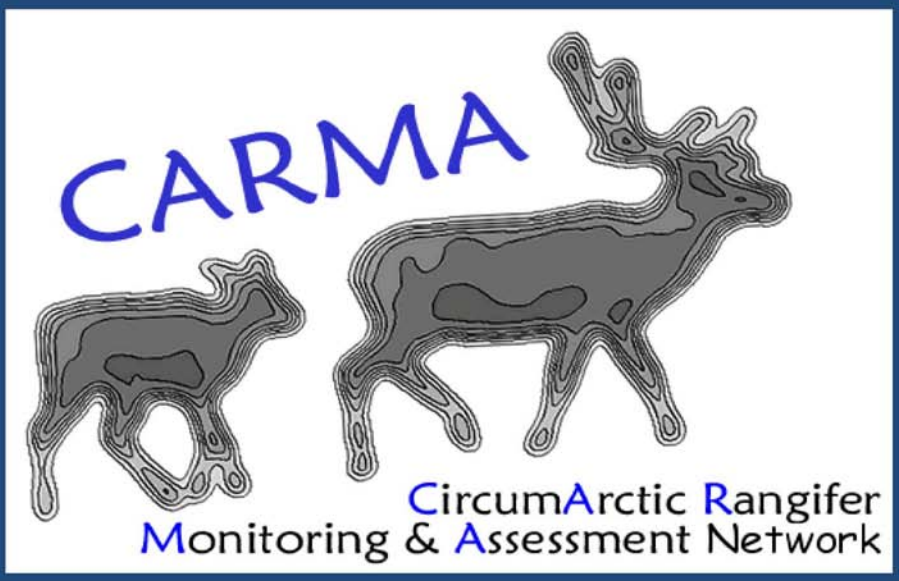

Monitoring "Animal Condition"
Condition =
an overall assessment of how the animal is doing.
Is it healthy and thriving?

Monitoring "Animal Condition"

- Reflects **nutritional** status
- Influenced by **environmental** conditions & other factors
- Can affect **health & survival**
- Can affect **reproduction**
- **Compare** between years, seasons, sex & age classes, populations



How we Monitor

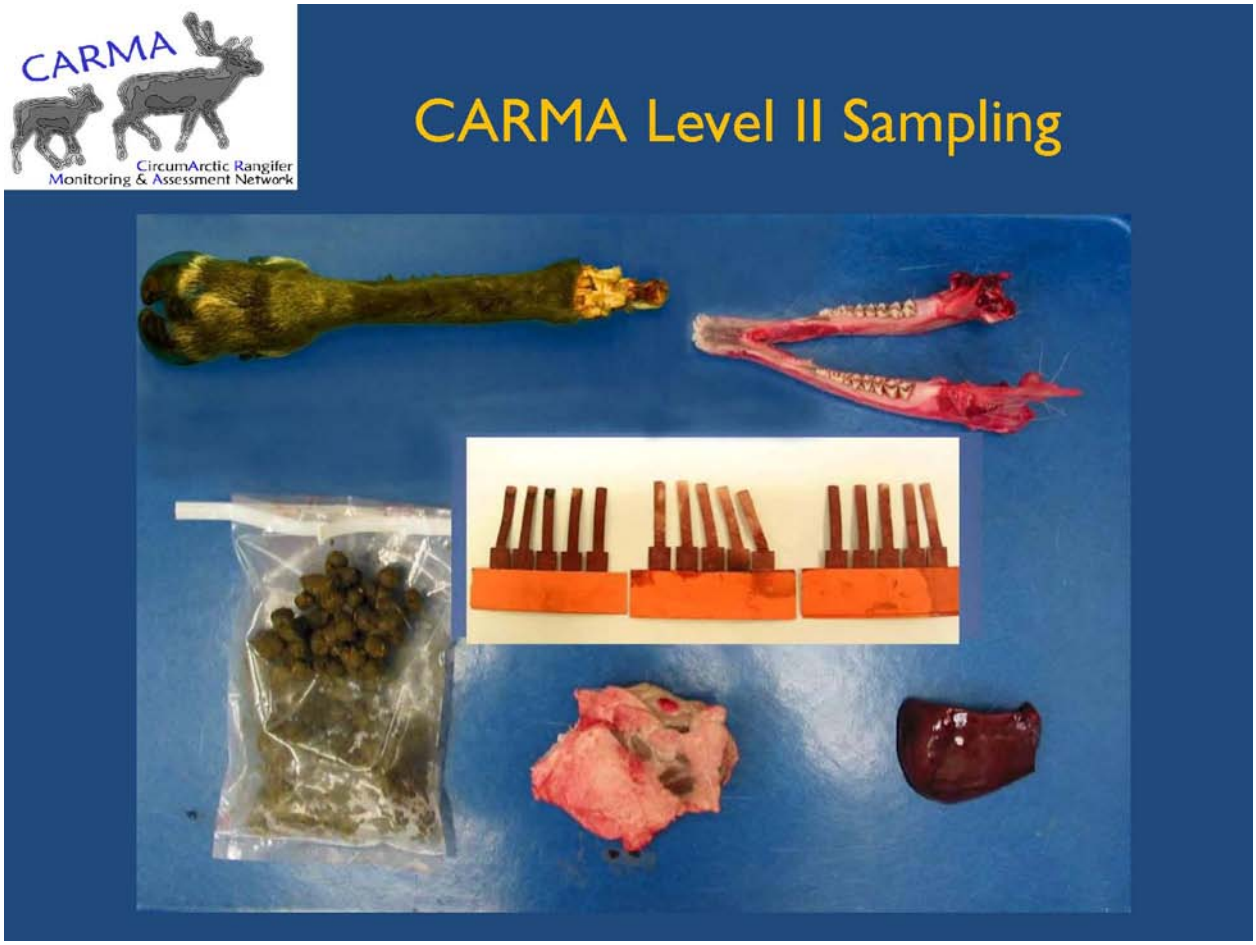


How we Monitor

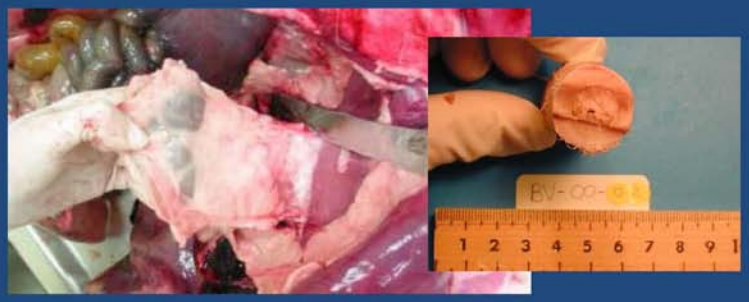
- Use the same methods each time
- Hunters and researchers work together
- Sample in different ways and at different levels based on what information is needed
    - For example, more intensive sampling can answer more questions but may not be required all the time

How we monitor

- Compare between herds & over time
- Detect changes in caribou & health
- Look for signs that indicate more detailed investigation is needed


CARMA
CircumArctic Rangifer
Monitoring & Assessment Network
CARMA Level II Sampling

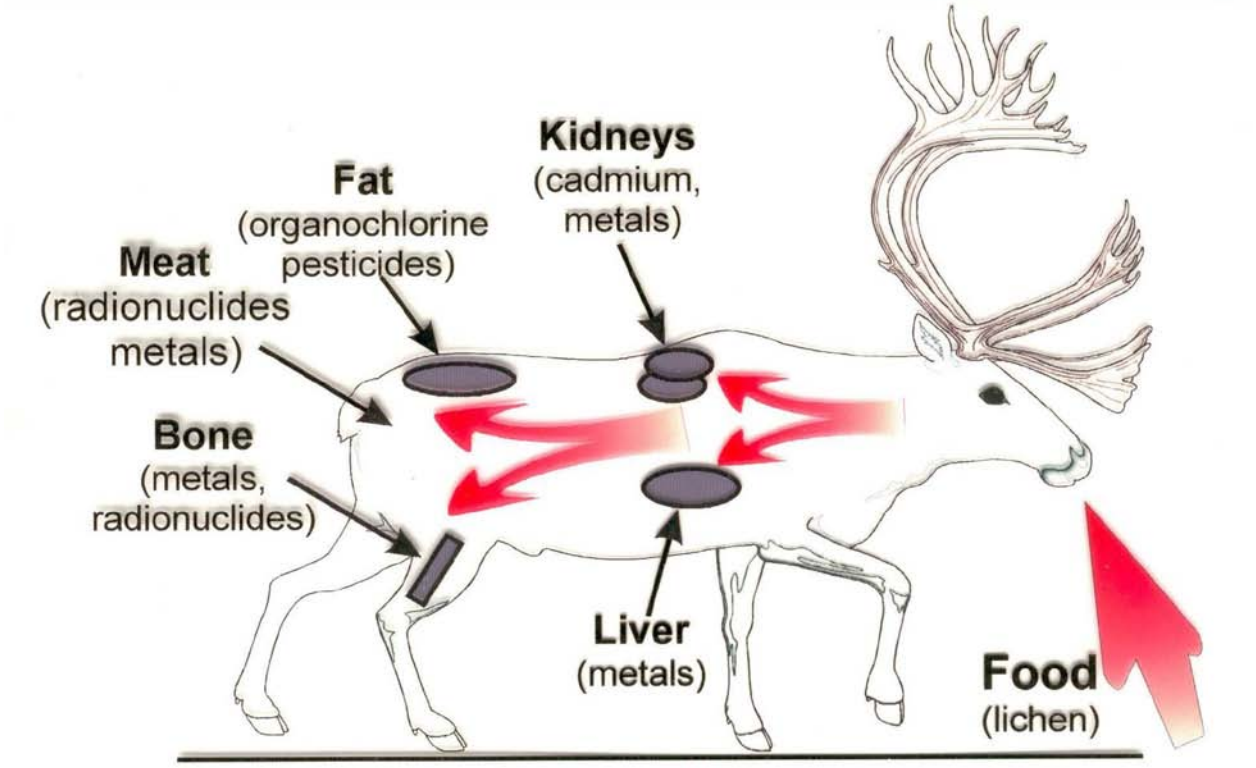
Measuring Body Condition



Fat

- Back Fat
- Kidney Fat - test for Contaminants
- Marrow Fat

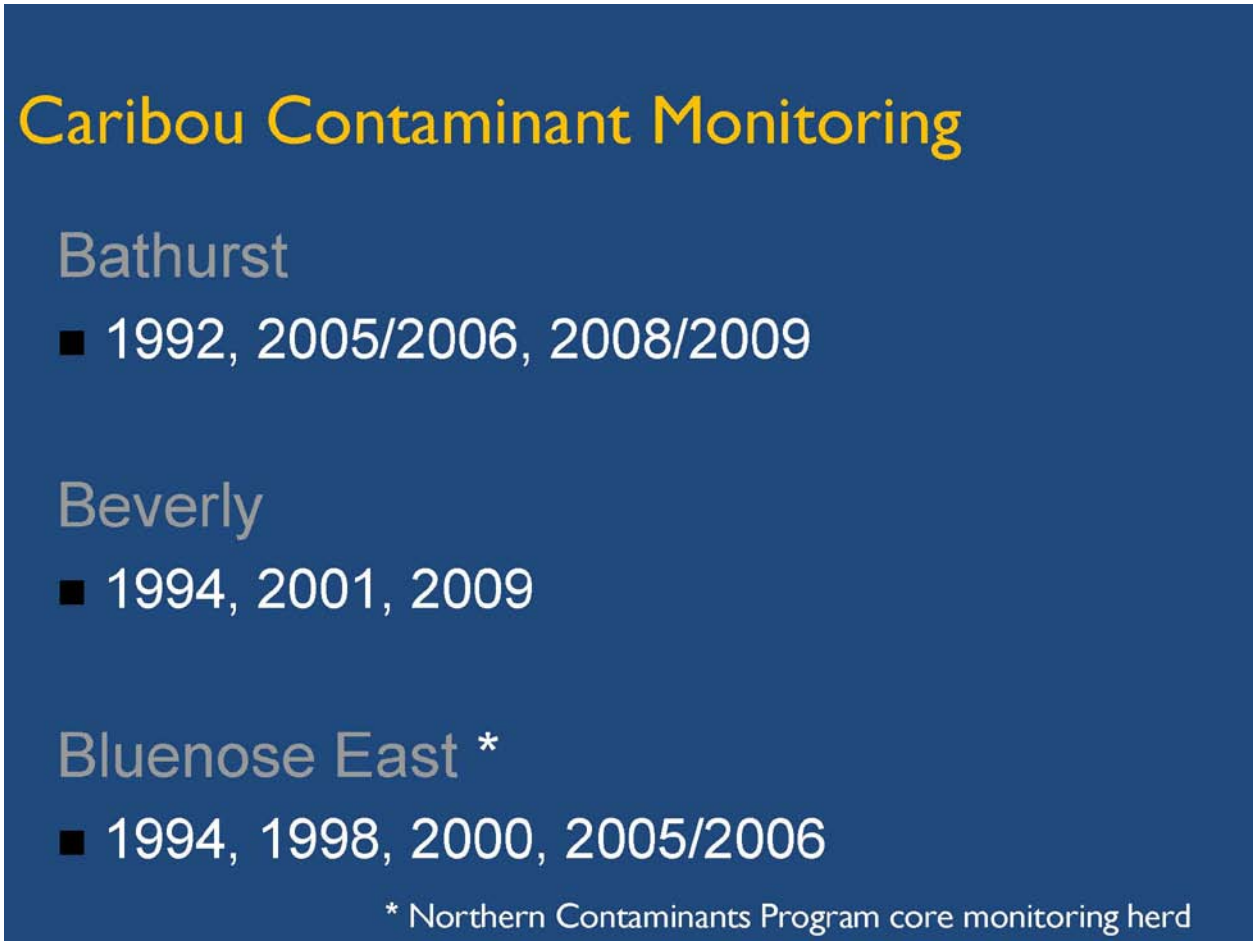
Testing for Contaminants



Contaminants in Caribou

- NWT-wide survey
- Looked at levels of metals,
- radionuclides & organochlorines
- Very low levels of all contaminants
- No effects on caribou health
- Need to monitor over time:

  possible changes in types or levels


Caribou Contaminant Monitoring
Bathurst
1992, 2005/2006, 2008/2009
Beverly
1994, 2001, 2009
Bluenose East *
1994, 1998, 2000, 2005/2006
* Northern Contaminants Program core monitoring herd

Blood

Diseases:
- brucellosis
- toxoplasma
- others….

Genetics

Nutrition

Pregnancy

Stress

Fecal Pellets

Parasites

Diseases

Diet Analysis

Pregnancy

Hind leg

Marrow fat

Body size

Bone density

Stress proteins

Besnoitia

Foot Rot

Setaria
Onchocerca

Jaw

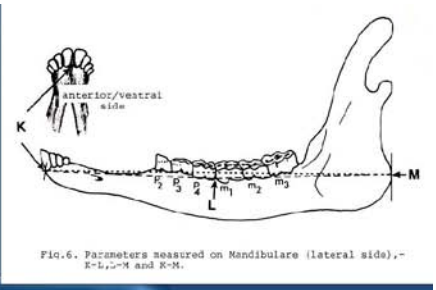


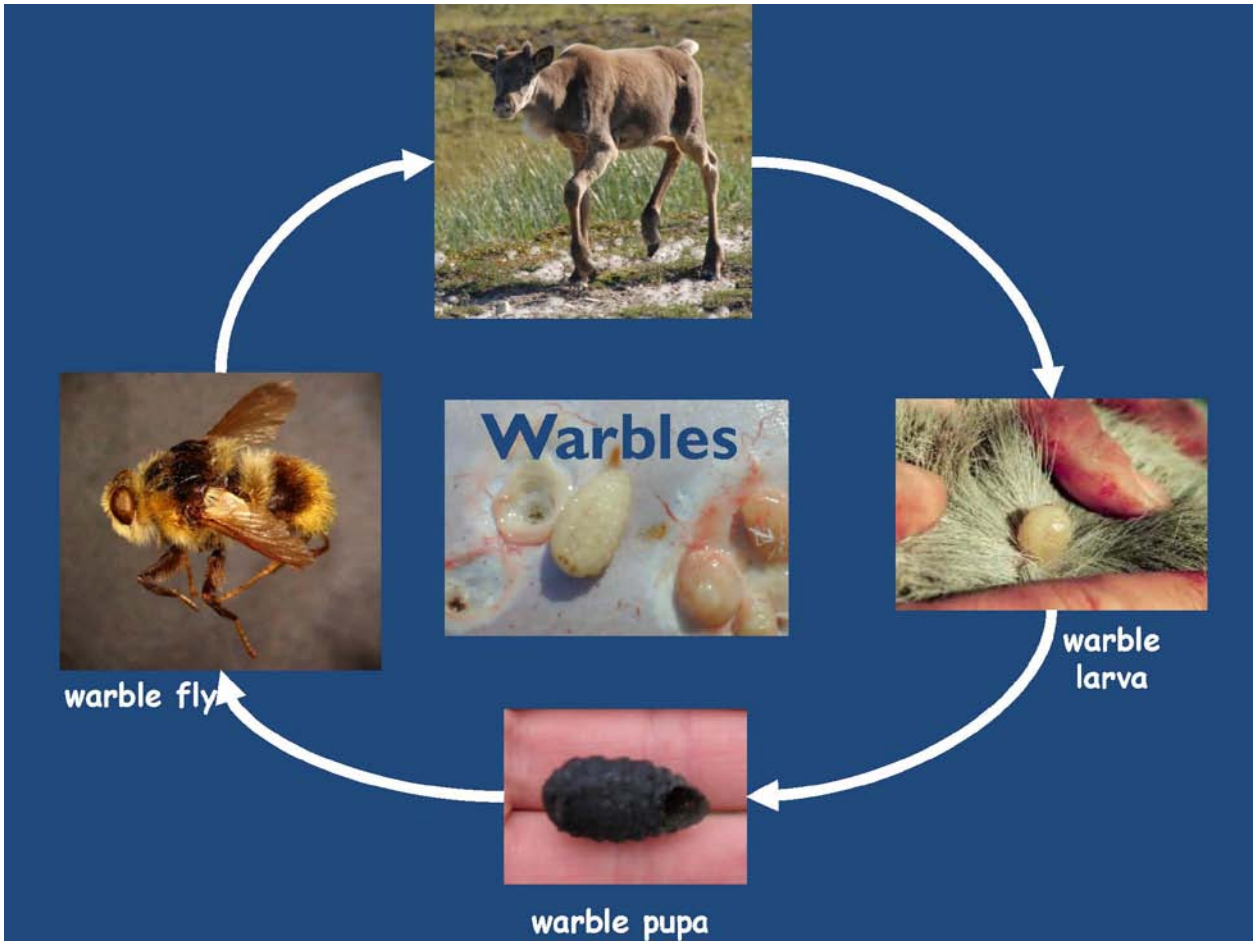
Fig.6. Parameters measured on Mandibulare (lateral side),- K-L,L-M and K-M.

Tooth for aging

Current Disease & Parasite Monitoring

Examples:

- Brucellosis
- Besnoitia
- Toxoplasma
- Stomach (abomasal) Parasites
- Intestinal Parasites
- Lungworms & Cysts
- Muscle Cysts
- Warbles & Nose Bots


Warbles
warble fly
warble larva
warble pupa


Range Expansion of Wildlife Species:
New Diseases & Parasites?

Hunter Reports & Samples

Provide important information
on health and condition of caribou

Breakout Question

What other information should be collected from a Tłı̨cho perspective?

Caribou health and Condition Monitoring program

CARMA Level II sampling protocol designed to be carried out at the community level by caribou monitors.

Tłı̨cho Government will be holding workshops in March 2013 to train 2-3 people from each community on these scientific sampling methods

A core set of trained monitors makes sure that the sampling is done the same way each time

Appendix 9 – Caribou Health Monitoring Notes

Group reports

Harvesters: Charlie Rabesca: all the things, we know animal comes from great distance; we need to **keep testing hooves and ankles**; caribou use hoof and legs to scrape for food; check thoroughly; **lungs should be tested; liver, kidney**; sometimes when we butcher animals; try to look into lungs; Bruno will do that and he will give us info after they do testing; this year, not much snow; gives caribou leisure time, doesn't have to dig deep in snow for its food; gives ease to animal; head and brains; take a look, **test brains**; at times when you butcher, sometimes we find internally the caribou is not normal; tongues; **abnormalities**..any part of animals should be brought to office, Bruno, will test it; Bruno will tell us what's wrong; every part of animal we didn't talk about but other people will bring out info

Find a way for caribou to be saved; Bruno will talk about collaring; we know it hampers the animal and becomes healthy but then again it gives us good information on its travels

Elders: Joseph Judas–caribou travel a great distance to live; some animals are not equal; make greater use of animal; we never take time ; we never disturb migration; kidney, heart, lungs, we use; **we have seen caribou healthy in the past; not many sick; recently changes with mine, prospectors, surveyors, faster machines, trucks, skidoos, caribou seem not t o rest**, marrow is lighter, watery; the caribou doesn't have time to eat because they are always chased by planes, machines; animal depends on food-- all based on food chain; behavior; we eat with our hands; but animal feeds using its mouth and hooves to clear the snow and eat; **we have to look at hoof and mouth**; and mines,.each has its way of doing its blasting, carries particles, and chemicals in air; sometimes we shoot unhealthy caribou; **but if it's not too unhealthy, we still make use of its meat; we also look at organs, kidney, liver, lungs, all the parts** – if not too unhealthy, we will make sure of meat for food; we assume animal travelling about, things are too fast in today's world. Animals never have time to idle; **parasite in throat and in back**; whitish; animal lives with it, it continues to do this; travels all from Barrenlands to tundra; **we used to see many caribou in our area; animals have started to move away from our area..the mine**? **March and April, the animal would reach our area, would see them pass our community but that has reduced dramatically**; my son works with ENR to monitor, close to winter road, a place near…? Where caribou had been battling, assumed they would try to untangle their hooves; one was alive, one weak; must have been fighting for days; marks in snow; assumed they were both tired, the other wandering about, couldn't untangle its antlers (not hooves), we should do monitoring with each community; **we would like the young people to understand the nature of caribou;** young lady stated **we should bring young people out on the land; shoot and take some samples;** many harvester s have taken the time to take parts when they butcher; **..we need to see this with our eyes, see how sampling is done;** they might want to select 2-3 people from each community

Jody – monitor body fat, tongue, blood, they don't make blood soup as often; bone marrow; hooves; dry, rough, they have to boil it with caribou; hind quarters rough like sandpaper; one caribou shot where lungs stuck to ribs; question for testing bulls and cows and disease;

Other notes:

Caribou are on the go, not relaxed; lots of deep snow, struggling to eat. Caribou fat used to be oily, nice to eat. Today the body fat is totally different from what it was years ago, even the tongue –a delicacy the elders would eat. You can tell the condition from the tongue; sometimes it would be satiny in texture, fat would dribble from it when it was cooking. It tastes different today. Changes in bone marrow – reddish in colour. (whitish pink if it's healthy) The caribou seem to be afraid.

Beliefs: people used to go to Barrenlands by boat; portages around Mesa Lake area. Hardly any caribou around. Hunters were told not to come back empty handed – and were told to not let the caribou get their scent. Once the caribou was down, you were supposed to leave it for a few minutes. The only time to skin it was when it was totally dead. The meat was tastier. Today, young people chase the caribou with skidoos and drag it to a certain spot – it doesn't taste the same. Now the caribou aren't on the lakes, they run into the trees. We shouldn't be chasing the caribou with skidoos – makes the caribou struggle.

Jimmy Kodzin: 40 years ago, the caribou were in good condition. Our elders, parents used to say even by looking at hooves to see if it's travelled a fair distance. In the days of the dogteam, caribou were always in good condition.

Joseph – mining has a huge impact on our caribou. Hide is rough on the inside, like sandpaper (like when you take fish eggs out) and bone marrow not the same. Even the moose they shot one time, bluish in colour and on the side, like a bruise.

The meat doesn't have as much fat –we have to boil it with bacon sometimes

Charlie Jeremick'ca: he went hunting last month and shot 5 caribou. Out of the 5, 2 were not in the right condition. One of the caribou –lungs were stuck to its ribs; the other's hind leg was broken and twisted in the wrong way. Why were the lungs stuck? Answer given was that if you shoot a caribou, until it heals itself, it sleeps on one side – hardly any hair on one side

A question: can caribou biologists do a test to determine diseases that might affect the fetus? Some cows produce a fetus, others don't. Can mating cow and bull be tested for disease that could cause deformed fetus. Answer (Jody): intense sampling is done every 3 years; at that time they do blood sampling and test for diseases.

Joseph: there weren't many flies on caribou in the last couple of years –before there were many; can tell there are not many caribou. Tlicho call these flies (throat and nose bots) "bees"

A suggestion from one of the group members:

A meat factory could make caribou meat available all year rather than just during hunting season. You could farm the caribou and people could go to the store and buy some meat. This could create jobs and we wouldn't have to worry about wolves. This would provide something good for youth.

Question 2: Who would be good to go on the training and do the sampling over time?

Joseph(in response to Q 2): young harvesters; they can record it and write it down – e.g. piece of kidney, record what's been taken. He will talk to people in the community next week to see who could go.

Youth Report: (Steven)

Nice to have ENR in each community; how we can communicate; we should be talking on the radio; bring meat home, women work on the meat; ladies should also be part of these discussions; kids in school should be taught how to talk about caribou

Kerri: the need for more youth involvement and more hunters and elders; so much they still need to learn from their elders; how they're here at workshop; young men; young women often don't attend these workshops, the ability and understanding to handle meat. Value of going out on the land and working with ENR and monitors; I planted the seed to get into the schools and teaching the kids about going out on the land; these are the ones that need to be trained and work with students along with the elders; and to help encourage the younger youth to get out and learn how to harvest caribou properly

We got some specific names in communities; father-son teams might be valuable to pass on knowledge; different instances when people have been on land and seen diseases and not sure what it was and how to deal with that; get more people involved in community so there is somebody here in community to work with, talk to, get better understanding ; the need to be… in Wekweeti, we need … with other harvesters not necessarily Tlicho harvesters who have come into Wekweeti; respect for the land and communicating respect for land; we need to look to elders for direction for question 2; they (youth) want to be more involved

Women's Report: (Albertine)

Harvester, trapper, rangers..know the land. A lot of us can't read or write; one youth should be there at the workshop to record things out on the land; caribou monitor, should have more youth, rotate youth to monitor things out on land, taught properly how to skin and butcher caribou at the same time; if a caribou is known to be unhealthy, it should be recorded, if we go out on land, condition will be looked into; one lady making dry meat, working on hind quarter, greenish on the joint, threw it away; it would have been nice to send to ENR for further testing; if something is wrong with meat or bones, send it to ENR, to lab, to do some tests on some of the meat brought home; in winter and summer, the caribou are in different shape; in winter, lot of snow, when caribou are in deep snow, sometimes they would have sores. If the caribou has a lot of body fat, they know it's in good condition ; one lady said her husband came back from hunting, one side of kidney inside caribou but

only one side was inside; so disposed of it but would have been nice to send to ENR; have seen sores on kidney on caribou when hunting close to mine; rough, sandpiper, rough looking kidney; one of lady's husband, when he brought meat home, one hind quarter was bluish, like it was bruised; the arm had yellowish ,pus-sy [colour is like pus] looking in colour, shoulder blade, arm, when the men go out hunting caribou, they should not dispose of hide, bring home for ladies to teach young ladies how to work with hide; many rely on hide; don't throw it away on land;

Workshop for youth – Ritalene—we can speak in English; we are stronger in our language, talked about having a **workshop-- bring young boys and girls together, put photos up of caribou in terms of health so they can tell if they're healthy**, all kinds of photos of caribou out on the land; we should teach young ladies while in school to prepare caribou meat

List of name for caribou monitors that were suggested during the workshop

Whati

1. Joe Moosenose – Hunter/Trapper/unemployed/Knowledge on land.
2. Gilbert Nitsiza – Experience in monitoring caribou.

Gameti

1. Charlie Wetrade – Hunter.
2. Edward Gon – Hunter.
3. Jimmy Black – Hunter.

Behcho'ko

1. Harry Rabesca – Hunter/Traps/Knowledge on land.
2. Joe Chocolate – Hunter/Traps/Knowledge on land.
3. Joseph Pierre Mantla – Hunter/Trapper.
4. Wesley Mantla – Hunter/Trapper.
5. George Drybone – Hunter.
6. Hardy Mantla – Hunter/Trapper/Knowledge on land/Ranger.
7. Rex Lamouelle – Hunts/Traps/Knowledge on land.
8. Victor Huskey – Hunt/Traps/Knowledge on land.
9. Gilbert Rabesca – Hunts/Traps/Knowledge on land.

Wekweeti

1. Roy Judas – Hunter/Traps/Knowledge on land.
2. Johnny Boulin – Tapper.

Monitors should:

- Tape or digital record caribou health and have the Lands Department to translate it.
- Have youth participate to document caribou health with the monitor.

- Have a workshop for the caribou monitors to report back on their findings and what they have collected.
- Have poster up in each community on a healthy/unhealthy caribou for people who don't know how to read.
- Have caribou body parts posters up to educate the community.
- Take pictures of caribou health.
- Once when fixing caribou leg its knee was green pussy so they got rid of the meat.

Other monitoring that should be happening:

- Fish which was harvested from Behcho'ko area had a hump back so an elder suggested too throw it away.
- Prospectors/water monitors should be monitored too; no one knows what they are doing on the land. They could be adding or contaminating the waters if they want people to buy water for profit.

What other information do we need to know about caribou?

- Winter time hind leg is hairy. Summer it loose hair, looks kind of bare.
- Bone density – winter change.
- Poster showing summer and winter hair – winter the hair is spikey and hairy.
- Fall time caribou hair changes thicker.
- Roads that were built by Mine Company are mostly built by gravel and rocks which cause caribou leg to twist its ankle or they break there leg. Sometimes caribou don't heal or it would turn into a puss.
- Spring time when caribou walk on ice with icicle sticking out cause to form sores on their feet.
- Caribou tail tells us if it is fat or skinny caribou.
- A hunter witnesses a caribou with half a kidney.
- Caribou liver felt like salty and sandy, the caribou was harvested at Cole Mac.
- Caribou leg harvested in the winter time had sores that were blue.
- Seen a caribou arm that was affected by a puss.
- Hunter should bring home caribou hides and give it to someone who can benefit from it.
- If a caribou hide is green it is not healthy.

Caribou Health plus Monitoring:

Who to do this?

Hunters who work with ENR – Ray.

Benjamin P**:** Elders and youth to monitor caribou in town.

Communicating – telephone and radio, FB, Northbeat.

Behchoko – elder, youth, hunters

Women – handle the meat etc, 7 bring women to on the leaders, land camp.

Women losing there knowledge in BKO in particular.People losing language, TK skills.

- Hard for team to get caribou.

Whati: Bruno used to take kids out on Barrenlands.

Storm of bull caribou shot, had grave or burn on leg. Didn't want to touch it (need more longer workshops.)

Gameti: men, hunt, youth.

- School hunts

Joe Zoe, Charlie Gon: youth hunt with dad, elders know if healthy.

Competition between youth. Makes more fun.

Classes in school about hunting etc.

- Need youth to go in: tech

School need to teach kids about being on the land.

- On the land camps – budget are hard to find.

What can we collect from Tlicho perspective?

Mining – broken leg, would shoot it, don't want it to suffer

Before ban, had to clean up after other hunters who came in and hunt too much.

Caribou Health

Condition Monitoring

1. How much caribou meats do we want, daily or hunting season only.
2. How about meat factory
3. Will be healthy caribou
4. Lots of work for the future
5. It won't decrease
6. When it comes to hunting season, how much money do we throw away. (lots of money)
7. Wolves won't kill much caribou
8. When we go to YK we see people go to KFC to eat chicken; we don't hear chicken are sick or decreasing

9. Also when we go hunting and take meat and some hide, but some hide are left behind, how much money do we throw away. If we have meat factory, and all these hide could be fixed, by some women and they could teach school kids. There will be training program for future kids.

Mining winter road

Winter road comes only on winter.

Who news what leaks on winter road in the land and on the lake, rivers and others.

What are the pressure facing caribou today?

1. Mining, human activity, winter road, wolves
2. What kind of information do we want to know about caribou

- ❖ About their health
- ❖ About where they go
- ❖ About the birth

What else should we do?

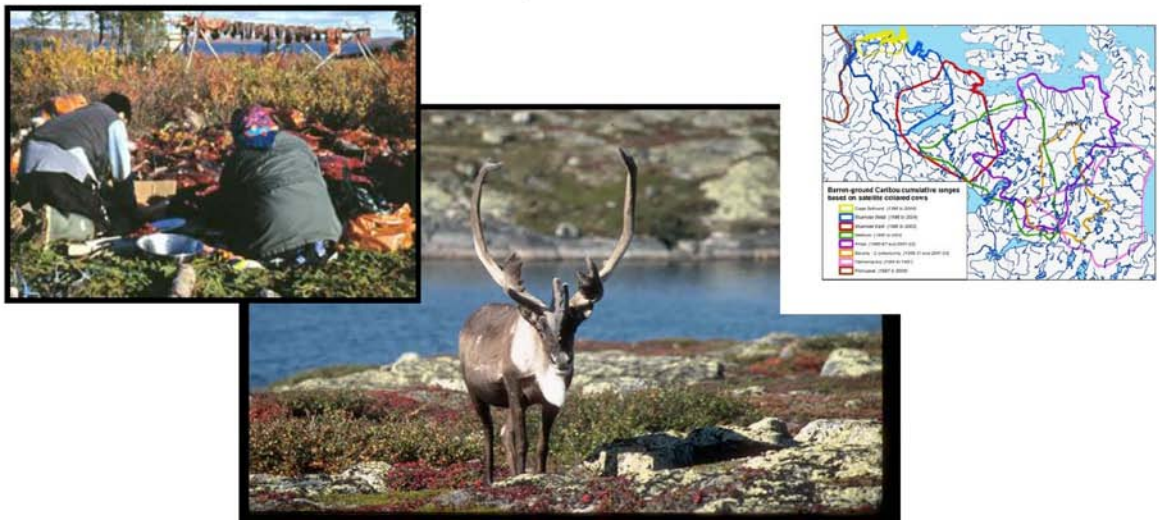
- ❖ Start to tell how they should go hunting, like in the past, how our dad toll ask and how they teach to go hunting.

When I went hunting with my dad, in the past, he told me when you go hunting you should not carry or bring caw hide or meat from the store, but today is different. Now days hunters carry or bring cow hide gloves or meat, because my dad said caribou are secret of cow.

Appendix 10 – Caribou Collaring Presentation

A QUESTION OF BALANCE:
GATHERING INFORMATION AND RESPECTING CARIBOU

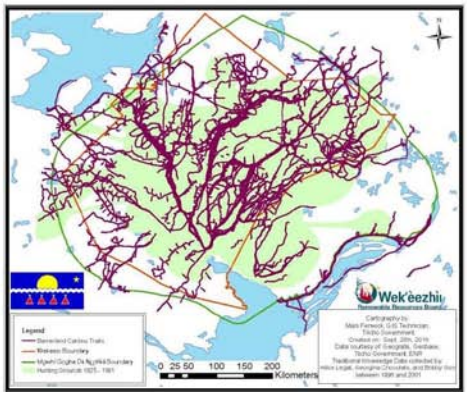
Tłı̨chǫ Regional Wildlife Workshop
February 20 & 21, 2013

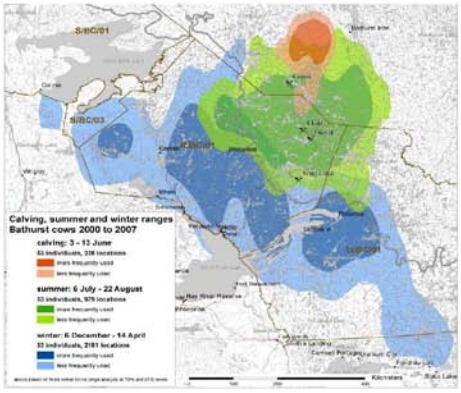


Gathering Information

2

- We need both science and traditional Tłı̨cho knowledge to give us a complete picture of what is happening on the land
- There are different ways to see and build knowledge





Satellite Collars

3

- This presentation will show one way that scientists use to build knowledge about caribou
- We know that there are community concerns about some scientific methods
- We are here today to talk to you about collaring and listen to your advice

Why do we use satellite collars?

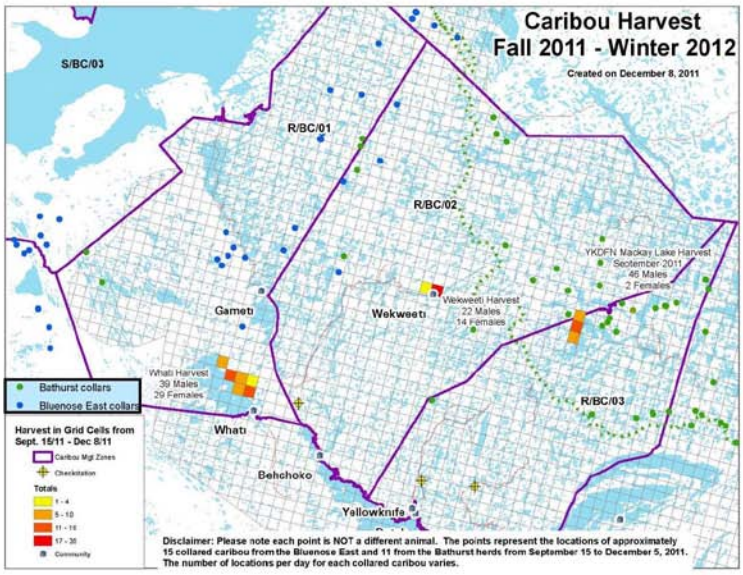
4

- **Key Information Needs**
  - To help fill some of the gaps in our scientific knowledge by providing data to help better understand caribou populations
  - Support well-informed decisions for managing caribou

How do we use the data?

5

- Monitor herd movements (when & where do caribou travel?)
- Manage harvest (able to tell people where to harvest)



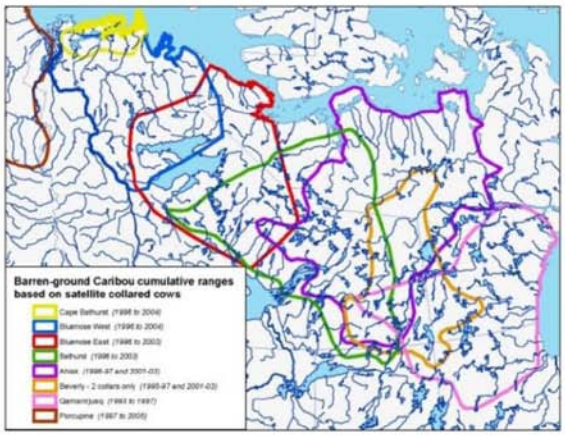
How do we use the data?

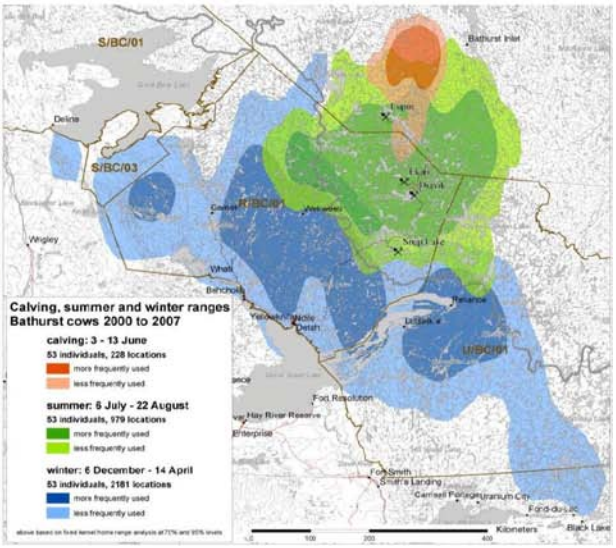
6

- Define seasonal ranges and activities (including calving, summer, rutting & winter ranges)
- Identify individual herds and movement between herds

Annual and Seasonal Range

7





How do we use the data?

8

- Understand the type of habitats caribou prefer
- Understand how caribou respond to human activity

How do we use the data?

9

- Monitor cow survival rates
  - Important for assessing population trends
- Support population surveys
  - Calving ground surveys
  - Spring and fall surveys
    - Number calves
    - Number of bulls

What we've heard in the past

10

- Not respectful to caribou
- Stress or injury during capture
- Wearing collars reduces health/condition
- Collars make caribou vulnerable to predation
- Too much research

What we've heard from the Tłı̨cho

11

- In 1990s - approval for 10 collars and later, 20 collars
- In 2008, Elders' Advisory Committee recommendation to the Assembly
  - To keep collars at 20 until the collars are redesigned

Collars – Satellite

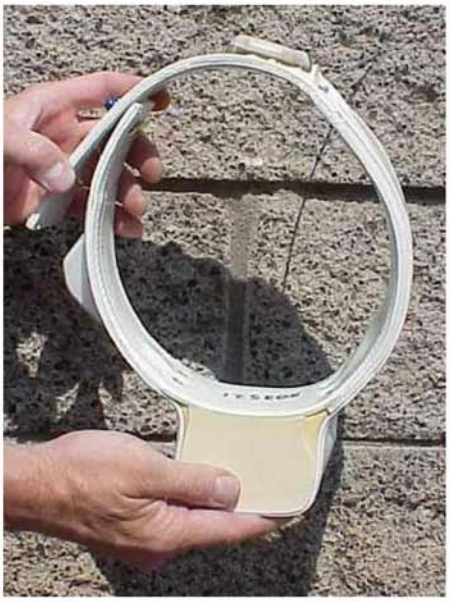
12

- 600 grams
- shaped to fit neck
- Last 5 to 6 years
- Accurate within 150 to 1000m

Collars – GPS

13

- 1000 grams
- more rounded
- Last 2 to 3 years
- Accurate within 8 – 15m
- locations several times a day



What are the Effects of Collars?

14

- Move with the herd and have calves
- Very few are injured during capture
- Very few show signs of stress in the months after capture

Research into Effects of Collars

15

- ENR pilot project (1990s)
- Effects of collars on hair & skin wear
- 17 caribou & 15 muskox
- Hair:
  - Matted hair common
  - Some broken hair seen
- Skin:
  - No visible skin lesions
  - Some mild microscopic changes

Research into Effects of Collars

16

- Looking at effects of wearing collars
  - Stress
  - Survival
  - Reproduction

- Collaborative study:
  - University of Alaska
  - University of Saskatchewan
  - GNWT ENR
  - Nunavut Tunngavik Inc.
  - Midnight Sun Reindeer Ranch

Improvements in Collar Design

17

- A drop away mechanism is built in
- A tear-dropped shape for better fit
- Research is underway

What other improvements can be made?

18

- Batteries are made smaller and lighter
- Caribou wear the collars for shorter period of time
- Continue to monitor the effects of the collars on the caribou
- Others?

BREAKOUT Questions

19

What are the pressures facing caribou today?

What kinds of information do we want to know about caribou?

What else should we be doing?

Appendix 11 – Caribou Collaring Notes

Joseph asking Bruno questions – when we gather much like here; we had meetings in respect with respect to animals and how they are not cared for properly, mines etc..samples from animals, we do realize that animals travel a great distance to get to our area, bypass many obstacles; we took samples from area where we killed them, and where they enter into treeline; **is there a difference when you test animal from tundra and in boreal forest?**

Maybe if we shoot an unhealthy caribou, should we send a sample to ENR, where it was shot, **we need to get feedback** from Bruno, we continually say they are not healthy, and they haven't given us answers; **is the caribou picking up chemicals from mine, winter road, community? What is it being affected by?** We know animal that come by wekweeti come by the mines; when they come from treeline, they are not healthy, not fat, **what is the cause of unhealthy animals?** Is it closer to our community>? **Why is the population so low**? ***we need answers**; we haven't heard from science, ENR people collect information for us; **what are the diseases? what is the cause of it all? so we understand what we're dealing with**

Joseph – let the people know what we're here for; studies we do so if we take piece of lung, to be tested, they should give us test responses and **let us know..Tlicho people know a lot about wildlife, when the youth want to be taught how to harvest, hunt**, ..we cannot always rely on presentations by white people, **we can have young people, encourage ourselves to be biologists, 2** things..with help alongside, we can teach Traditional Knowledge and scientific knowledge; Bruno is here, Dean, both are biologists; the students can see if we can encourage our people to be wildlife biologists; todzi – what is the name of the antler in Tlicho, parts inside, intestines, kidneys, all those things are written in Tlicho, about half..all the body parts on inside..lungs, heart, liver, kidney, all the intestines all have different parts. **We have traditional names; it should be shown on poster in English and Tlicho;** maybe could encourage them to be wildlife biologists; elders were saying, wouldn't say it was hard to identify body parts but if we want to teach each other on inside of caribou, I go to wildlife conference in Vancouver, all the body parts has a name; also in English language; they should be taught all the parts but I heard elders didn't want to talk about the body parts. The caribou has body fat, intestine, inside caribou all have different names; even to identify age ; we should encourage our young people to be traditionally knowledgeable;

To encourage people to learn scientific and traditional knowledge and to be wildlife biologist as well

Elders – (Jody presenting on behalf of group): pressures mining, roads to major and smaller sites, roads are built up really high and often in way of migration paths; impact of predators – wolf, bear, wolverine; winter roads; when caribou migrate, there are times when caribou are walking on thin ice and can drown; we heard that they do not like collars but they have agreed to the idea of 20 collars, helps them know where the caribou are and if they are joined with other herds; the caribou can't eat, sleep, harder to run, caribou are suffering; collars are put on loosely so collars move up and down when they move their heads

When asked what could be used In place of caribou, the elders said people spent a lot more time on the land in the past, when they did and travelled by dog team, they knew where the caribou were; their dogs could get the scent of caribou and help them find the caribou

Concerns about the battery, radiation, noise? When chasing with helicopter, possible miscarriages

Other notes:

Some of the mining roads are really high – where will the caribou pass?

Question raised about why the caribou aren't where the map shows their location. "If it moves from lakes to land, they wouldn't know where they are." Jody explained that that the probable reason is the maps are given out on delay. The satellite map is created to help us manage harvest, to know where they are –there is a concern about overharvest. The delay is done on purpose- we were told to do that --harvesters in 2007. Recommendations that satellite maps were not going to be given out anymore.

Comment made that the number of collars shouldn't be more than 20.

Jody explained that every year they have to put 10-12 collars on to keep the number at 20 as they are always losing some. The fewer the collars, the less information you have.

Jimmy Codzin said that he didn't like the collars at all. "Our people don't really like the collar. It is struggling, suffering, doesn't eat, rest, maybe it's cold." Maybe the battery makes a buzzing noise.

Elders have told them to not take anything from the cow, not even leather from it. If you approach a caribou, it would take off from them. Even if it's woodland caribou, you can't wear the hide or it will take off. There are three things 1. Cow hide 2. Woodland caribou hide 3. If a dog whip is misweaved or your snowshoe, the caribou will take off.

Suggestion: [have a collar on] For one year, recapture the same caribou and see what the health of the caribou is.

Jody explained that there was a different way, we would probably use it. We probably don't have the technology yet. Collars have improved over time; the main weight is from the batter. The bigger the battery, the longer it lasts. They used to put the collars on for 5 years but are now putting them for less time.

Question raised about whether caribou herds mix. Jody explained that there is mixing but it's considered so low. They are able to tell on the computer when the collar stops moving and they try to get [retrieve] the collar as quickly as possible so they can tell if the caribou was killed by a bear, etc. Right now there's a box that pops open and falls off so the caribou is only stressed one time. They're doing research now on reindeer (same family) to see how they are being affected. They're always working on making it a better design.

Youth:

Identified the same pressures. Also the **caribou drinking contaminated water from mines**, **contaminated food.;** direct impact..of mines, roads, **broken legs as they cross roads**, blasting, **dust eventually goes on ground and they eat lichen** –has an impact

How to get more information from mine workers; they might not listen

Predators, climate change -how it can impact migration routes, changing paths because of climate, forest fires; have fires increased ? One of the youth told how they killed a caribou wearing a collar; he kept In his house for a while, the caribou was skinny, the collar was loose, falling off. He killed it..eventually gave collar back to ENR. The **collars are making it hard for caribou to eat properly**; What information do we want to know about caribou? —**where they are** so we can go hunting; **are they healthy?**

potentially raise them like reindeer that could help us in time of decline; did they think collars were good? – **collars are providing us with some valuable info; maybe increase a little bit to 30 or 40 to help us know if they are growing right and eating right**

Women:

Pressures – **chemicals from mines**; **wolves; collar**; battery if damaged or leaking might cause trouble; we know caribou have a lot of **stress from hunters and prey [predators]**; the caribou **doesn't seem to be stable**; forest fires; notice ..? **ice very thin**; caribou not able to cross lakes, some fall through and drown**; if too much snow**, cause a lot of stress when travelling; hunters – shoot caribou and they try to avoid people; **they don't respect the animal and don't treat the animal properly** ; sometimes they throw away bones, without respect; young men hunting – how they prepare , cutting up the animal. **Young people should be taught how to prepare the animal, have proper equipment when they hunt and butcher animal; certain clothing**; **how you bring sacred animal home so you keep it sacred;** bulls and ice roads; how the ice is not thick enough for vehicles; mines

Harvesters:

Charlie Rabesca– [my pants falling down with energy I have lost walking back and forth]; thank you for entire day we sat together; stress on animal: **sometimes we don't treat animal properly**; **winter roads too close to migration path; hampers from traveling; go way around, new path**, put more stress by putting **collar- it is heavy; [we talked about]finding a new system, lighter collar**; maybe **collar wolves instead of caribou;** we know wolves are in both tree line and tundra, different places to live but all [follow the] same pattern, they follow the caribou; we will understand where the caribou migrate if they collar the wolves; hoping we can collar the wolf not only the caribou; **pressure on cow cause stress on raising calf, feeding itself**

Mike: thank you everyone of you. Special thank you..we are all on similar ground; we have shared so much information with each other; we have consideration. we try to help each other; not supposed to put stress on you; by shortening time; or questions ; the first step we've done, young people to be with us, we'll try as much as we can; we want everything we have to pass to our young people; one

day again, we will sit with one another; what we have done today will be done again in future; training our young people we talked about; caribou health and collaring; if no further comments, close with prayer; ask one of our elders from Gameti wanted to speak with us, Joe Mantla from Gameti

Joe: we as elders have experienced many things, we all have thoughts, didn't take notes but it seems; we have gained grade 12 in our traditional life; we are taking the time to go out on the land; 2-3 times; camped out on lake towards Behchoko spring camp, with harry, local member, followed me on this journey. In those days hunted for muskrat and beaver, travelled all the way to Behchoko area; spent spring towards Rae Lake towards Behchoko; entering the lake, I was ahead of Harry, I ran into a caribou as I was canoeing; one standing on shore; paddled towards it; it was large; I shot with a 22 , long shot rifle? Came to shore and walked to it saw harry come towards me with canoe; said this is fortunate, pleasing we can have a good camp, feasting on carcass; why did you touch it? I took bag, knife, cut the head off, large bull, told me not to skin it, just cut with hair, but when I started cutting, noticed a bad smell, cut off legs; in between arms and body, really bad, sort of pus, a bag containing pus; put a knife through it; it was suffering; assumed it was going back to tundra but with this special animal, we couldn't get close to the animal; the animal was surviving on that area; parasites, worms, came out of animal alive; bag containing parasites

What are the pressure facing caribou today?

- Radiation from the batteries on the collars.
- Scared of choppers.
- Wolf chasing caribou.
- Noise from the mines.
- Caribou habitat around mines tastes different.
- Predators.
- Climate change.
- Heaviness of collars.
- Restless.
- Forest fire causing caribou to travel long distance.
- Thick snow makes it harder for travelling.
- Caribou wait for spring time to travel on ice, during winter icicle sticking out cause sores on their foot.
- Over harvesting.
- Mistreated caribou example clubbing.
- Caribou seeing other caribou parts on land.
- Pick up caribou bones around the community and dispose it properly.

What kind of information do we want to know about caribou?

- When caribou has an accident at the mine they just cover it with gravel.
- What happens to people who consume a sick caribou what type of sickness it causes?

- How come caribou has a lot of parasite? What cause it?
- There are caribou that have strong odour and what cause it?

What else should we be doing?

- Hunters telling there hunting story when they get home.
- Make sure first time women hood don't go over caribou blood or hide clothing.
- Disposing bone at one location.
- Respecting bones.
- Have someone go around town to collect bones and dispose it properly like the old ways.
- Workshop for the youth.
- Take good care of caribou clothing.
- Attend to forest fire right away before it burns caribou habitat.
- Pick up caribou bone in the community.