Nı hat'nı – Watchıng the Land:

Results of 2003-2005 Monitoring Activities in the Traditional Territory of the Łutsël K'e Denesǫłıne

FINAL REPORT

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STUDY SUMMARY

The traditional territory of the Łutsël K'e Denesǫłıne, encompassing the boreal forest and barrenlands of the Northwest Territories, Canada, continues to be under tremendous pressure from industrial development activities. Over the past few years, the Łutsël K'e Dene First Nation designed and has been implementing a community-based program to monitor environmental and socio-economic changes within the traditional territory and the community of Łutsël K'e.

This program was initiated through the *Community-Based Monitoring* and *Traditional Knowledge in the Kache Tué Study Region* projects. In 2002-2003, these projects were amalgamated into one, the *Ni hat'ni – Watching the Land* program, to better examine cumulative effects and the interplay between environmental and socio-economic changes and impacts.

Indicators developed under the previous projects continue to be utilized. Results were presented to Elders, land-users, community organizations, and leadership for interpretation and recommendations on action. All results have been incorporated into the database and Geographic Information Systems (GIS) program. This report presents the results of 2003-2005 monitoring activities under the *Ni hat'ni – Watching the Land* program, as well as implications of this knowledge for Denesǫłıne Nëne and the community of Łutsël K'e. This knowledge will help the Denesǫłıne of Łutsël K'e assess the changes happening within their traditional territory and their community, and provide direction and recommendations for change and action.

Environmental monitoring cycles in 2003-05 continue to show that most animal species are healthy and in good condition, with the exception of the Bathurst caribou herd and the fish in Stark Lake, which are undergoing significant and drastic changes. Some species are exhibiting rises and falls in population numbers, but this conforms to the natural cycles that people have been observing for years.

Socio-economic monitoring cycles continue to show that use of the Chipewyan language and knowledge of traditional skills is rapidly decreasing among the younger generation, and drastic measures need to be taken now to prevent this trend from continuing. There are very few people participating in traditional recreational activities such as drum dances and hand games, and there are still low levels of people who attend public meetings and volunteer for community events. Youth are not satisfied with the quality of education they receive in Łutsël K'e, and feel they are not well prepared when they move to bigger centres to further their education. There is little community support for youth activities, and very few recreational opportunities available (although an arena is planned for next year). The community is currently dealing with massive financial problems and a leadership crisis.

This report also presents some of the unique circumstances, financial and otherwise, which affected the implementation of the *Ni hat'ni – Watching the Land* program in 2003-2005 . Implications of these circumstances on the quality and quantity of research are discussed, and recommendations for future incarnations of the program are presented.

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1.0 STUDY DESCRIPTION

The *Ni hat'ni – Watching the Land* community-based monitoring program has evolved over the last approximately seven years, and is the result of the amalgamation of two previously distinct projects: the *Traditional Knowledge in the Kache Tué Study Region (KK)* project, which focused on environmental monitoring, and the *Community-Based Monitoring (CBM)* socio-economic monitoring project.

The 2002-2003 *Ni hat'ni – Watching the Land* final report submitted to WKSS gives a detailed description of the various phases of research which evolved into the current project. Readers are directed to that report for more background information. This report will present the results generated by the *Ni hat'ni – Watching the Land* program during its second (2003-2004) and third (2004-2005) years of implementation, wherein environmental and socio-economic monitoring results are presented and analyzed together.

This report will also discuss several issues which arose during the course of 2003-2005 which affected both the quality and quantity of data collected for the *Ni hat'ni – Watching the Land* program. We present this information in order to address deficiencies in results as related to our original proposals, to reflect the realities of many small communities (limited human resources, financial difficulties, and high staff turnover rates), to offer suggestions and recommendations to other community groups wishing to engage in similar community-based monitoring initiatives, and to look ahead to the future.

2.0 THE STUDY REGION – THE DENESǪŁINE TRADITIONAL TERRITORY

Note: The study region and Denesǫłıne traditional territory for the *Ni hat'ni – Watching the Land* program were excellently detailed in the 2002-2003 final report submitted to WKSS. As neither have changed since that year, we have chosen to simply reproduce that section here.

The north shore of Kaché Tł'azí (McLeod Bay) in the East Arm of Great Slave Lake is the Kache Tué region, part of the homeland of the Denesǫłıne people. The Kache Tué region is within the greater landscape of the Kakınëne – the rich land. The Kakınëne is described by the Elders as a region "beyond the end of the lake" – in other words, the area including and beyond Kaché Tł'azí, the north shore of the East Arm. The Kakınëne extends from Nıdítagh Tué (MacKay Lake) and Tł'a Gaı Tué (Aylmer Lake) in the north to Kaché Tł'azí in the south, from? edacho Tué (Artillery Lake) in the east to Łu Tué (McKinlay Lake) in the west (**Figure 1**). Straddling the transition between the boreal forest and the barrenlands, the Kakınëne is a diverse ecosystem rich in wildlife, plants, and the camps and trails of the Denesǫłıne people.

Tu Nedhe (Great Slave Lake), to the south of the Kakınëne region, forms another critical component of the Denesǫłıne traditional territory, particularly the East Arm. This lake serves as a major transportation route in summer and winter, the source of the fish that constitute much of the Denesǫłıne diet, and the people's relationship with this great lake forms a major part of the culture. Its southern shores are where the Denesǫłıne spend the greater portion of their lives, where their camps, cabins, and burial sites are concentrated. Tu Nedhe and its southern shores, along with the Kakınëne, is Denesǫłıne Nëne, the traditional territory of the Denesǫłıne people.

Denesǫłıne Nëne is the heart and spirit of the Denesǫłıne way of life. Within this area, cultural and environmental features of value to the Denesǫłıne people are represented, existing today much as they were in the days gone past. It is here that the Denesǫłıne people have lived,

laughed and loved over the centuries. The Elders describe this region as rich with resources. People would always go to this area to harvest caribou, to trap for furs, to gather berries, etc. – travelling by dog team, by canoe, and on foot. People always knew they could find food in this area. This is the breadbasket of the Denesǫłıne people.

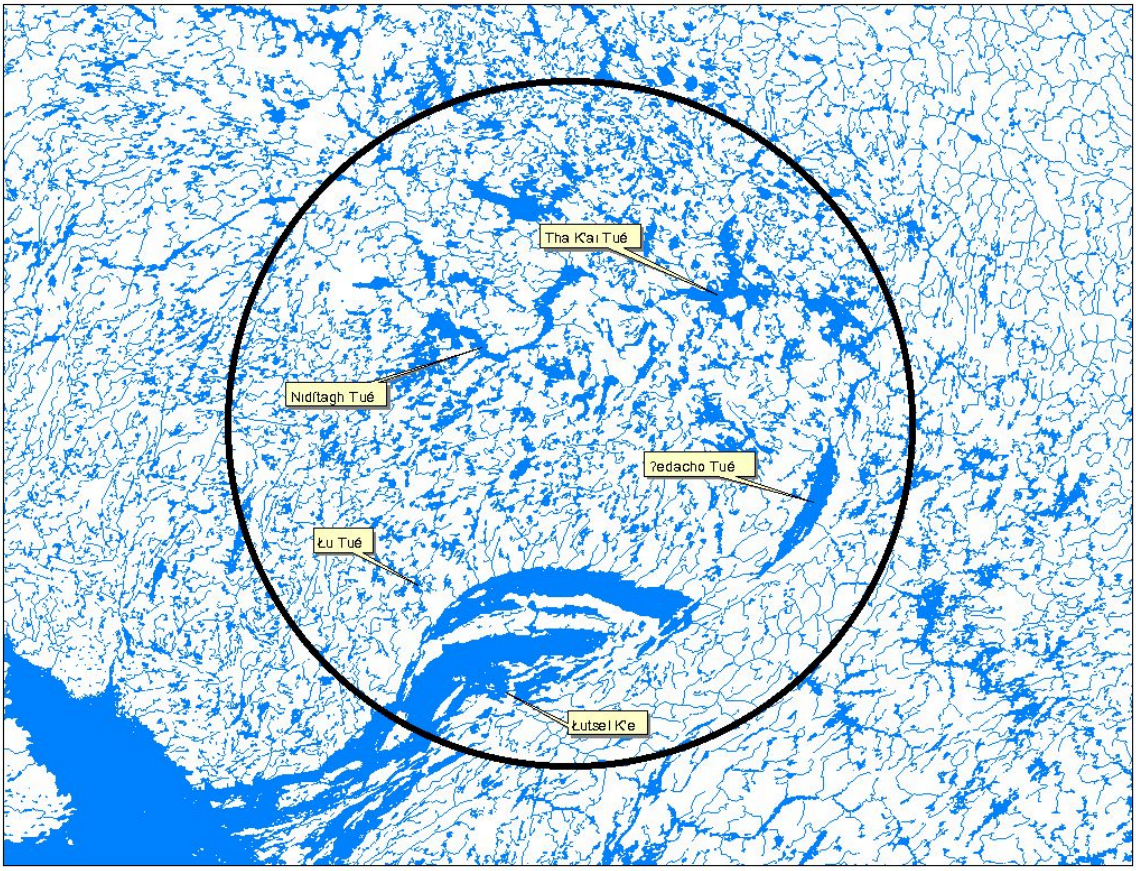

Figure 1. Denesǫłıne Nëne (northerly regions)

Within the greater landscape of the Kakınëne, the Denesǫłıne recognize many different regions, each unique in the roles they play relative to water flows (watersheds), animals and plants, and the traditional and current land-use practices of the people. The Denesǫłıne land regions of the Kakınëne, as identified and described by community Elders, are shown in **Figure 2**.

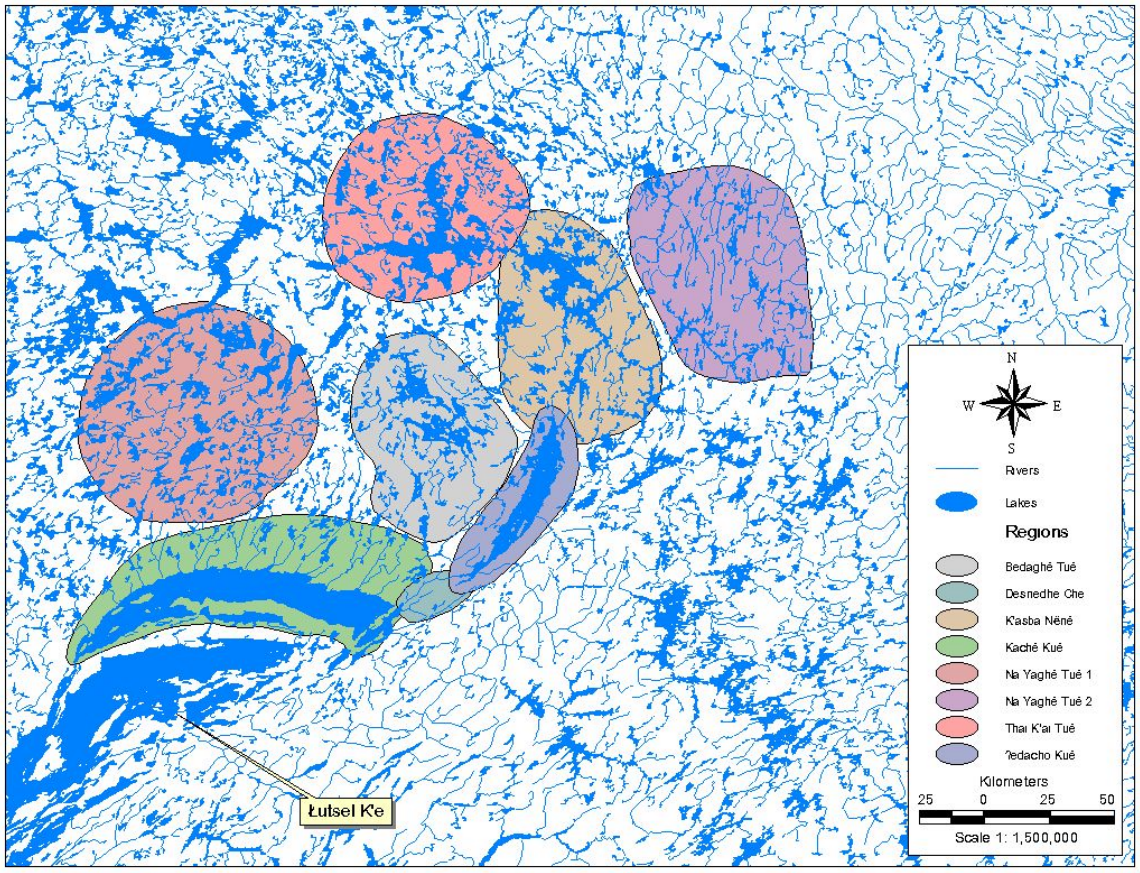

Figure 2. Denesǫłıne land region classifications in the Kakınëne

The Kache Tué region comprises the Kaché Tł'azí (McLeod Bay) portion of the East Arm of Tu Nedhe, as well as the watersheds of the smaller rivers (Indian Mountain, Waldron, Barnston, Hoarfrost) on the north shore of this large, deep bay. This area is known as one of the primary overwintering sites of the Bathurst caribou herd, and Denesǫłıne hunters often travel to this area to harvest caribou in the winter. This area is also renowned for trapping purposes, being an area where land-users often go in the winter to trap animals associated with caribou populations (i.e. wolf, white fox). The fish of the Kache Tué region are considered richer and more flavourful than those harvested elsewhere in the East Arm, largely due to the pure, cold waters that flow into this bay from the barrenlands. The Denesǫłıne travel these waters heavily in the summer months, especially in August during the spiritual gathering at Reliance.

Desnedhe Che, encompassing the Lockhart River between ? edacho Tué and Tu Nedhe, as well as Pike's Portage, is the spiritual and cultural heart of the Denesǫłıne people. Pike's Portage remains the main route used by the Denesǫłıne when travelling to and from the barrenlands. Seasonally migrating back and forth across the treeline allows the Denesǫłıne to access resources from three great ecosystems – the boreal forest, the barrenlands, and the deep water of Tu Nedhe. Relationships with these three ecosystems define Denesǫłıne culture, and the route of Pike's Portage is key to fostering these relationships.

The spiritual well-being of the Denesǫłıne centers around another profound relationship with the Desnedhe Che land region. T'sakuı Theda (Parry Falls), or the "Old Lady of the Falls", is the spiritual focal point for Denesǫłıne tradition and culture. People regularly visit this site to pray and heal, and the old lady continues to watch over the Denesǫłıne people.

Another land region of great significance to the Denesoɬıne is ʔedacho Tué, defined by the water, shores and areas inland of ʔedacho Tué (Artillery Lake) itself. It is here that the people go to harvest plentiful caribou as they return south from their calving grounds. Caribou from both the Bathurst and the Beverly herds tend to migrate into the land region in autumn, and spend time in the area fattening up for the winter. Due to the abundance of caribou, many Denesoɬıne used to live either seasonally or year-round in this region, as exemplified by the old community at Timber Bay on the northwest shore of the lake.

Legends abound about the ʔedacho Tué region. Elders tell stories about how this lake was created by the damming of the Lockhart River by a giant beaver, and geological landforms throughout the lake attest to an epic struggle between this giant beaver and the giant Hachoghe who sought to kill it. This land region is truly a land of legend, and fundamental to the identity of the Denesoɬıne.

To the north of Kache Tué and ʔedacho Tué is the land region called Bedaghé Tué. This region features one of the main routes used by the Denesoɬıne to access the barrenlands, second only to Pike's Portage in the Desnedhe Che region. Stories tell of how groups of Denesoɬıne families would travel together from Kache Tué into the Bedaghé Tué region, and then split off into smaller family units as they headed off in different directions towards their traplines and hunting grounds. In the springtime, these families would regroup in the region for the journey back to Tu Nedhe. The very name of this land region, which means "bag lake", tells of how families returning to this region in the spring could see the bags and sleds of other families waiting for them on the shores of the main lakes.

Central to this land region are the lakes called Tué Cho (Fletcher Lake), Datthı Tué (Walmsley Lake), and K'ezus Tué (Cook Lake). These lakes are renowned for their quality fish, and their clear waters feed the Hoarfrost River, largest of the north shore lakes that flow into Kaché Tɬ'azí. This land region contains some of the great migration trails used by the Bathurst caribou in their late summer travels from the Lac de Gras region to ʔedacho Tué. Many great caribou crossings are found on the bigger lakes in the region, with which are associated many Denesoɬıne camps and travel routes. In recent times, musk-ox have begun to be spotted making heavy use of the area, representing a westward shift from the traditional distribution.

The K'asba Nëne land region encompasses the big lakes of K'asba Tué (Ptarmigan Lake) and Łudaghe Tué (Clinton-Colden Lakes), and the barrenlands that surround them. Elders define this land region as an area that was used extensively in earlier times by Denesolıne white fox trappers. This land region also contains the headwaters of the Hanbury River, used by the Denesoɬıne to travel east towards the Thelon River valley. Muskoxen are known to be abundant in K'asba Nëne, and many a Denesoɬıne trapper has managed to overwinter in the area by hunting these resilient animals.

Northwest of K'asba Nëne lies the Tɬa Gaı Tué land region. Centered on the lake bearing the same name (Aylmer Lake), this region encompasses the headwaters of the great Lockhart River watershed, as well as those of the Back River flowing towards the Chantrey Inlet. The clean, pristine waters that flow through the K'asba Nëne, ʔedacho Tué, and Desnedhe Che regions originate in the Tɬa Gaı Tué, eventually spilling into the waters of Kache Tué. These are, in truth, the clean waters that provide life and vitality to the Denesoɬıne people.

Elders speak of this land region as rich in wildlife, with many sandy eskers providing habitat for grizzly bears, wolves, and other tundra mammals. Signs still remain of the Denesoɬıne trappers who lived in this area, getting thick winter furs from foxes and wolves around the little lakes immediately to the south of Aylmer. Bathurst caribou are also known to travel through this area in abundance, moving east and south from Lac de Gras in the late summer. While many of these

caribou are now hunted later in the year when they migrate further south into the ʔ edacho Tué ʔ region, the Denesǫłıne occasionally hold community hunts in this area.

The Elders described two other distinct land regions within the greater Kakınëne. One, to the north of Kache Tué and west of Bedaghé Tué, encompasses a very rocky region entitled Na Yaghé Tué. Much of this region is considered to be difficult to travel in due to the prevalence of boulders and sharp rocks. Elders tell that caribou tend to travel through much of this area in smaller groups. The exception is in the northerly reaches of this land region, where some great caribou migration trails exist to the south of Nıdítagh Tué. While the Denesǫłıne have not traditionally hunted or trapped in this region in any great number (except around MacKay Lake), Elders stress the importance of this region for maintaining the integrity of caribou migration patterns. Caribou overwintering in Kache Tué and westwards will normally move northwards towards their calving grounds through Na Yaghé Tué, crossing Nıdítagh Tué at its central narrows.

Another land region to the east of K'asba Nëne shares the name Na Yaghé Tué. This region is renowned for its rockiness, cited as virtually impassable by all but the most experienced and competent Denesǫłıne. This region, described by Elders as a "forest of sharp, tall rocks", is said to be traversable by only one tortuous route. However, those who make the journey are rewarded by lands to the northeast rich in musk-ox and migratory birds.

For further information about the history and legends surrounding the land regions of the Kakınëne, refer to the reports entitled *Denesǫłıne Land-Use in the ʔ edacho Tué and Desnedhe Che Region – Report # 1: Traditional Practice – The Land of Legend* (LKDFN and Ellis 2002b) and *Denesǫłıne Fishing Knowledge of the East Arm of Tu Nedhe (Great Slave Lake)* (LKDFN and Williams 2002).

The eight land regions described above, as defined by Denesǫłıne Elders, comprise the greater Kakınëne. The health and integrity of this rich, natural land is of tremendous importance to the Denesǫłıne way of life. The Denesǫłıne understand well that maintaining these land regions in as pristine a state as possible is critical for the survival of their identity as Aboriginal people. In this interest, Elders were asked to discuss some potential limits to acceptable change for each of the eight land regions in the Kakınëne, particularly in the context of industrial development.

Denesǫłıne Elders stressed that the land is a whole, and that each component from the greatest land region to the smallest individual plant has a role to play in maintaining environmental health and integrity. Elders were loath to assign different levels of importance to different land regions, stating that they all have an important role in maintaining the health and well-being of the land and its people. This connectivity is clear when we think of water flows in the Kakınëne. Tł a Gaı Tué, K'asba Nëne, Bedaghé Tué, ʔ edacho Tué, Desnedhe Che, and Kache Tué are all part of a system that brings water to Tu Nedhe, including the greater Lockhart River watershed. Each region is of equal importance for ensuring the pristine nature of the waters in the Kakınëne, and maintaining the integrity of one is as important as preserving the integrity of another.

In the end, Elders are unwilling to set varying limits to acceptable change for the land regions of the Kakınëne. They take a much more holistic view. They understand that while land regions may have different roles to play in maintaining environmental health and integrity, these roles are equal in their importance. As such, Elders assert that the whole of the Kakınëne, as opposed to its component regions, requires protection from rampant industrial development. Industrial development proposals will have to be examined by the Denesǫłıne people on a case-by-case basis in the context of the entire Kakınëne, if not all of Denesǫłıne Nëne.

3.0 OBJECTIVES

Note: The objectives of the *Ni hat'ni – Watching the Land* program were excellently detailed in the 2002-2003 final report submitted to WKSS. As the methods have not changed since that year, we have chosen to simply reproduce that section here.

The specific objectives of the *Ni hat'ni – Watching the Land* program are as follows:

1. To gather information around indicators of socio-economic and environmental change, as developed primarily through the *CBM* and *KK* projects previously funded by the WKSS (indicators from other projects initiated by the Łutsël K'e Wildlife, Lands and Environment Department, such as *Caribou Health and Movement* and *Stark Lake Fish Habitat Study*, are also incorporated). This information is gathered in a series of annual questionnaire cycles for socio-economic indicators (i.e. adult and youth community health questionnaires, mine employee & spouse surveys, etc.), and for environmental indicators in a series of seasonal cycles corresponding to the rhythms of the land and Dene life (i.e. spring duck hunting season, fall caribou hunting season, etc.).

2. To organize indicator information in a searchable (AskSam), geo-referenced (GIS) database currently under development by the Łutsël K'e Wildlife, Lands and Environment Department.

3. To analyze and interpret indicator information using previously developed *(CBM)* statistical methods for socio-economic indicators and elder/land-user workshops for environmental/land use indicators. This is done in order to determine the significance of perceived changes, with consideration of limits of acceptable change, cultural values, and historical context. As well, these workshops are used to form links between the measured effects of change and their probable causes.

4. To integrate the analysis and interpretation of socio-economic and environmental indicator information. Dene culture *is* nature, and thus both the socio-economic and environmental realities are intimately tied. The health and wellness of one mirrors the other.

5. To design a system of Denesǫłıne land region classification for the traditional territory. Each land region will be determined based upon watershed limits, importance to plants and animals, and traditional and current land use patterns.
   Limits of acceptable change for each Denesǫłıne land region will be determined by Elders and land-users.

6. To draw implications and conclusions for the traditional territory of the Denesoł ıne and the community of Łutsël K'e, as well as the greater Akaitcho Territory and Slave Geological Province, from the analysis and interpretation of indicator information.

4.0 METHODS

Note: The methods used in the *Ni hat'ni – Watching the Land* program were excellently detailed in the 2002-2003 final report submitted to WKSS. As the methods have not changed since that year, we have chosen to simply reproduce that section here. Any substantial changes which did occur due to various circumstances are detailed in the next section (5.0).

The methods used to assess change through the *Ni hat'ni – Watching the Land* program arose from traditional ways of knowing and doing. These traditional ways of knowing and doing were adapted to the modern context of environmental and socio-economic monitoring, and are described below. A more comprehensive description of the design of these methods can be accessed in earlier reports of both the *KK* and *CBM* projects.

4.1 METHODS USED IN ENVIRONMENTAL MONITORING

The functional centrepiece of the environmental monitoring aspect of the *Ni hat'ni* program is the Denesǫłıne cycle of knowledge as developed by Elders, land-users, and WLE staff. This cycle is detailed in the report *Ni hat'ni – Watching the Land: Cumulative Effects Assessment and Management in Łutsël K'e* (LKDFN and Ellis 2001). The Denesǫłıne cycle of knowledge represents the flow of information through Denesǫłıne culture. It demonstrates how information is gathered and processed using Denesǫłıne values and techniques. This cycle of knowledge was integrated with environmental indicators into a cohesive, modern monitoring program, and is summarized in the subsequent paragraphs.

4.1.1 Information gathering

Dene ways of knowing are fundamentally experiential in nature. They only operate effectively when people engage in traditional activities on the land – hunting, fishing, gathering, travelling and camping. Having people in close contact with the land ensures that new information about the land is continually being generated through observation and experience. The closer to the land people are, and the longer they spend on it, the richer the information that is derived from experience. This is the fundamental "information gathering" aspect of the Dene way of knowing – people experiencing the land making empirical observations about it. This gathered information is transmitted orally to Elders, who validate and interpret the new information in light of their collective experience and history. This is essential for the continual evolution of Dene knowledge- without people on the land gathering information and sharing it with the Elders, Dene knowledge can simply stagnate and eventually become outdated.

The following means of data gathering were used:

- The gathering of information around indicators developed through the three phases of the *KK* project.
- The use of standardized question sets to gather environmental observations from community Elders and land-users. Environmental indicator questions will be asked of land-users in personal interviews (questionnaires) while they are on the land, or just after they have returned to the community after they have been on the land.
- The gathering of environmental observations from land-users participating in WLEC sponsored on-the-land activities, for example during the fall caribou hunt at Artillery Lake or the spring community hunt at Daisy Lake.
- The gathering of environmental observations from land-users after each different harvesting season. For example, information about fish could be collected after the fall fishing season, while information on fur-bearers could be collected after the winter trapping season. Different harvesting seasons corresponded with different monitoring cycles.

The methodology employed to gather information around environmental indicators primarily featured semi-directed, informal interviews with land-users. Environmental interview questions were based around issues of seasonal abundance, distribution, condition and context. Land-users were asked to talk and tell stories about the abundance, distribution and condition of animals, plants and people on a seasonal basis. Such questions sought to illuminate the population health, dynamics and resilience of animals, plants and people, as well as how they interact with each other across the greater landscape. These land-user observations are

important for detecting changes occurring in natural cycles and patterns, especially as a database of knowledge is built up season after season. Finally, contextual stories relating to the setting and circumstance in which observations are made are fundamental for the interpretation of land-user observations and the derivation of implications for the larger ecosystem.

Land-users were provided with an expert consultation fee for participation in indicator questionnaires. This varied between $25-50 depending upon time required to complete an interview.

4.1.2 Information organization

Once indicator information was gathered from land-users, it was organized and stored in an accessible fashion. In this interest, researchers designed a traditional knowledge database. In addition, gathered indicator information was put into a format that is conducive to Elder analysis and interpretation. The following means of indicator organization were used and tested:

- The recording of interviews on audio-disc or videotape.
- The transcription of interviews into English so they could be understood by people who may not speak or read Dene Yati.
- The input of interview transcripts into the traditional knowledge database.
- The mapping of spatial indicator information for comparison with subsequent years of information gathering. This was primarily done using a GIS system, effectively displaying the relationship between various spatial patterns upon the land.

Indicator information was also organized into general themes in preparation for analysis by Elders and land-users. In this interest, researchers simply studied indicator information transcripts for each cycle in order to assess what the *majority* of participants are saying in response to identical questions, as well as any particularly *unique* responses.

Upon organizing indicator information into thematic elements, community researchers assessed whether indicator information for a particular cycle indicated either *stability* or *change*, based upon the judgement of land-users who acted as respondents. If indicator information indicated stability, the information was simply input into the database as a baseline record, as concurrent with "what has always been" in the eyes of the Denesǫłıne. Information indicating change proceeded to the next level in the monitoring cycle: analysis and interpretation.

4.1.3 Information dissemination, analysis and interpretation

Indicator information revealing change was analyzed by Elders and land-users in Interpretation Workshops held at the end of every monitoring cycle (only if information indicating change was gathered, however). In these workshops, Elders and land-users compared indicator information with the collective experience and knowledge of the Denesǫłıne people, as held in the minds and stories of the older generations. This "database" of environmental knowledge holds a deep understanding of nature and its relationships, and comprehends well how ecosystems with integrity should look and function. These workshops also served to communicate new environmental information and incorporate it into the collective oral narrative of the Denesǫłıne people. Thus new knowledge is disseminated. This ensures that Denesǫłıne knowledge remains contemporary; otherwise, this knowledge could simply become a relic with only a historical relevance.

By comparing the information gathered with what is known to be true through the experience of the Elders, information can be determined to either fall within the natural cycles of nature or without. Information can be weighed against a collective environmental knowledge that has

withstood the test of time, knowledge about the land and how it changes that has proved time and time again to be reliable.

Indicator information representing change that corresponds to the collective experience and knowledge of the Denesǫłıne was deemed *natural change*, or in tune with the rhythms of nature. Such information was considered a record of baseline information ("what has always been") and was subsequently entered into the database. Some changes that were deemed natural would progress to the unnatural change designation if they persisted for a number of years. This type of change could be categorized as *potential unnatural change*.

Any indicator information that did not coincide at all with the Denesǫłıne record of time and history was perceived to represent *definite unnatural change*. Indicator information about unnatural change was interpreted in order to evaluate its meaning and consequence. Elders and land-users evaluated it against the experiential history of the people and the land. In such a way they began to explain the reasons for why things may be changing as they were. The Elders also took the new knowledge and evaluated it against the values and traditions of the Dene people. In such a way they began to determine whether the new knowledge represented a concern or a matter of little consequence to the land and its people.

The interpretation of knowledge was completed at the end of each seasonal cycle, if change was noted in participant responses. Specific workshops were held to interpret information gathered for each monitoring cycle that yielded indicator information potentially representing change. As well, Integrative Interpretation Workshops were held to compare environmental results with socio-economic results in areas of pertinence and interest to the community of Łutsël K'e.

4.1.4 Completing the knowledge cycle

Once the Elders and land-users interpreted knowledge about the land, it was communicated to the Wildlife, Lands and Environment Committee (WLEC) for decision-making and for providing further direction to the study process. Information representing unnatural change is a high priority, potentially revealing impacts to nature that need to be addressed by community leadership. This process of communication for action was facilitated by the fact that some Elders sit on the WLEC, and thus could share the new knowledge directly with the entire committee membership. The WLEC in turn provided the study with direction for further research and monitoring activities, as well as acted upon information of concern. This was a means to ensure that pertinent information about the community and land was being gathered and analyzed, and that specific issues of concern were being addressed. In such a way did the whole Cycle of Knowledge continue, from information gathering to evaluation and back around again.

4.2 METHODS USED IN SOCIO-ECONOMIC MONITORING

While the Denesǫłıne cycle of knowledge informed the format of assessing socio-economic change, these endeavours were primarily rooted in more conventional methods of social scientific inquiry. Socio-economic indicators developed by the community of Łutsël K'e were measured through the application and consideration of surveys/questionnaires, which encourage Łutsël K'e residents to supply information around indicators of socio-economic change.

4.2.1 Information gathering

Gathering of socio-economic indicator information revolved around the application of quantitative and qualitative surveys, applied at distinct intervals during the yearly cycle of monitoring. The centrepiece of socio-economic indicator information gathering is a highly quantitative "counting questionnaire" survey, administered at the start of every calendar year. This survey is very general and broad in nature, the results of which can be quantified to glean information about the overall state of community health. This *Community Health Survey* was developed with Dr. John

O'Neil from the University of Manitoba. The questionnaire was administered to all community members 10 years old and over. Because of issues related to literacy in the community and the relative unfamiliarity of community members with this kind of tool for information gathering, the community researchers visited each community member and filled out the questionnaire with them.

In addition to the more general *Community Health Survey*, other surveys were devised to elicit information of a more specific nature and of direct concern to the community of Łutsël K'e. A *Mine Employee and Spouse Survey* was specifically developed in order to explore in further depth the impacts of the mining economy upon families in Łutsël K'e. The *Youth Survey* explored issues of relevance to youth in the community, whereas the *Cultural Survey* addressed the overall vitality of Denesǫłıne culture, as perceived by the Denesǫłıne themselves. A *Leadership Review Survey* sought to evaluate the community's level of satisfaction with the leadership.

These specific surveys largely followed the format of the "counting questionnaires" developed for the *Community Health Survey*, though the questions were more focused around specific topics and in some cases required answers that were in sentence form (i.e. non-quantifiable).

4.2.2 Information organization and analysis

Community researchers entered indicator information into an Excel database specially designed with the guidance of Dr. John O'Neil and technical assistance from Tamarack Computers. This database allowed survey information to be sorted and categorized, with trends and patterns effectively displayed statistically using bar graphs and pie charts. By examining statistical results, the community researchers could answer questions about the community and the indicators using independent variables such as age, gender, employment status, and overall health rating.

4.2.3 Interpretation of knowledge

Indicator information already organized and verified must be interpreted in order to evaluate its meaning and consequence. Community researchers presented survey information to Elders and community leaders in Interpretation Workshops, where new information generated through the monitoring program was evaluated against the values and experiential history of the people and their community. In such a way, explanations and implications of socio-economic change began to be considered and explained. Interpretation Workshops were held at the end of each survey cycle with community organizations of pertinence. The community researchers conducted presentations in the community to present results of all survey cycles to the Wildlife, Lands and Environment Committee, the Chief and Council, and the public. Specific information related to various local agencies (i.e. Housing, Health and Social Services, Municipal Services, local Committees) was also presented to relevant organizations, so that they might offer their expertise in interpretation. As well, Integrative Interpretation Workshops were held to compare environmental results with socio-economic results in areas of pertinence and interest to the community of Łutsël K'e.

4.2.4 Completing the knowledge cycle

Once knowledge about socio-economic change was interpreted, it was communicated to the WLEC and the Chief and Council for decision-making and for providing further direction to the study process. The WLEC and Chief and Council, based upon survey results and their own agendas, could in turn provide the study with direction for further research and monitoring activities. This was a means to ensure that pertinent information about the community was being gathered and analyzed, and that specific concerns were being addressed. In such a way does the whole Cycle of Knowledge continue, from information gathering to evaluation and back around again.

4.3 CHRONOLOGY OF ACTIVITIES

The study objectives were met through a series of tasks and activities outlined in the following chronology (this was the visualized timing of tasks – see section 5.0 for details on actual timing).

April 2003

Musk-Ox Cycle
- Cycle of interviews around musk-ox indicators during and after the spring hunt at ? edacho Tué (Artillery Lake), as a spring on-the-land workshop

Community Health Survey (Cycle 16)
- Interpretation and dissemination workshops with various community organizations

May 2003

Muskrat and Beaver Cycle
- Cycle of interviews around muskrat and beaver indicators during and after the spring muskrat and beaver hunting/trapping season
- Transcription, organization and database input
- Verification and interpretation workshop

Community Health Survey (Cycle 16)
- Interpretation and dissemination workshops with various community organizations

June 2003

Duck and Goose Cycle
- Cycle of interviews around duck and geese indicators during and after the spring duck and goose hunting season
- Transcription, organization and database input
- Verification and interpretation workshop

Community Health Survey (Cycle 16)
- Interpretation and dissemination workshops with various community organizations

Integrative Interpretation Workshop
- Comparison of knowledge from the environmental and socio-economic cycles

July 2003

Summer Angling Cycle
- Cycle of interviews around angling indicators during the summer angling season
- Transcription, organization and database input
- Interpretation workshop

August 2003

Summer Caribou Hunt Cycle
- Cycle of interviews around caribou indicators during the caribou hunt for the Desnedhe Che Spiritual Gathering, as a summer on-the-land workshop
- Transcription, organization and database input
- Verification and interpretation workshop

Cultural Vitality Survey (Cycle 16)
- Cycle of interviews around the health of Dene culture and traditions at the Desnedhe Che spiritual gathering, as a summer on-the-land workshop
- Transcription, organization and database input
- Interpretation and dissemination workshop

Youth Survey (Cycle 16)
- Cycle of interviews around youth issues with exclusively youth participants
- Transcription, organization and database input
- Interpretation and dissemination workshop

September 2003

Leadership Review Survey (Cycle 16)
- Cycle of interviews around leadership effectiveness indicators
- Transcription, organization and database input
- Interpretation and dissemination workshop

Fall Caribou Hunt Cycle
- Cycle of interviews around caribou indicators during and after the fall hunt at ʔ edacho Tué (Artillery Lake), as a fall on-the-land workshop
- Transcription, organization and database input
- Verification and interpretation workshop

Berry Cycle
- Cycle of interviews around berry indicators during the berry-picking season
- Transcription, organization and database input
- Verification and interpretation workshop

October 2003

Rabbit Cycle
- Cycle of interviews around rabbit indicators during and after the rabbit hunting season
- Transcription, organization and database input
- Verification and interpretation workshop

Chicken and Ptarmigan Cycle
- Cycle of interviews around chicken and ptarmigan indicators during and after the chicken/ptarmigan hunting season
- Transcription, organization and database input
- Verification and interpretation workshop

Mine Employee and Spouse Survey (Cycle 16)
- Cycle of interviews around indicators specific to mining and its impact upon mine employees and their families
- Transcription, organization and database input

November 2003

Mine Employee and Spouse Survey (Cycle 16)
- Interpretation and dissemination workshop

Fall Fishnet Cycle
- Cycle of interviews around fish indicators during the fall gill-netting season
- Transcription, organization and database input
- Verification and interpretation workshop

Moose Cycle
- Cycle of interviews around moose indicators after the fall hunting season
- Transcription, organization and database input
- Interpretation and dissemination workshop

Integrative Interpretation Workshop
- Cross-comparison of knowledge from the environmental and socio-economic cycles

December 2003

Marten, Mink, Weasel and Lynx Cycle
- Cycle of interviews around fur-bearer indicators during the trapping season, as a winter on-the-land workshop

January 2004

Marten, Mink, Weasel, Lynx, Fox and Wolverine Cycle
- Transcription, organization and database input
- Verification and interpretation workshop

Community Health Survey (Cycle 17)
- Cycle of interviews around indicators of community health

Winter Caribou Cycle
- Cycle of field questionnaires with hunters about caribou condition
- End-of-month surveys about caribou herd status, movements and abundance with hunters
- Transcription, organization and database input

February 2004

Community Health Survey (Cycle 17)
- Cycle of interviews around indicators of community health
- Transcription, organization and database input

Winter Caribou Cycle
- Cycle of field questionnaires with hunters about caribou condition
- End-of-month surveys about caribou herd status, movements and abundance with hunters
- Transcription, organization and database input

March 2004

Community Health Survey (Cycle 17)
- Interpretation and dissemination workshops with various community organizations

Winter Caribou Cycle

- Cycle of field questionnaires with hunters about caribou condition
- End-of-month surveys about caribou herd status, movements and abundance with hunters
- Transcription, organization and database input
- Verification and interpretation workshop

The anticipated monthly timing of all surveys and workshops was repeated for April 2004 to March 2005.

5.0 UNIQUE CIRCUMSTANCES IN 2003-2005

The *Ni hat'ni – Watching the Land* program experienced numerous difficulties and setbacks in 2003-2005. As of May 2003, there was no funding in place for the program due to delays in completing the 2002-2003 final report. Stephen Ellis - the previous Wildlife, Lands and Environment Department (WLED) manager - was in New Mexico completing his Master's degree thesis. Monica Krieger, the new WLED manager, arrived in Łutsël K'e in late May 2003 and could obviously not complete the 2002-2003 report as she had no background with the program or the community. It thus fell to Mr. Ellis to complete the report, but due to delays in getting required information from community researchers, the 2002-2003 report was not completed and submitted to WKSS until October 2003. Although the funding for 2003-2004 was approved in principle, it could not be released until the previous year's report was completed and approved by WKSS. As such, we had no money to pay researchers in the interim. The Senior Administrative Officer at the time would not permit researchers to continue their employment until funding was in place. As a result, the six *Ni hat'ni* staff were laid off in June 2003. Two of the positions (the GIS & Database Technicians) were funded directly by BHP Billiton Diamonds Inc. Their new funding was released in July 2003 so we were able to re-hire them, but all other positions remained unfilled.

By October 2003, the 2002-03 report final report was completed, and we had to re-advertise for the other four researcher positions (Socio-Economic, Environmental/Land Use, Multimedia Technician, and Research Assistant). Several of the previous researchers, who had been involved for years in both the *CBM* and *KK* projects, had found other jobs by that time. This represented a huge loss in "corporate knowledge". It was mid-November before interviews were complete and all the positions filled again. Only about a month went by for training before Christmas holidays, which took up the latter half of December.

Because the researchers were all new staff except for the Multimedia Technician, much time and effort had to be spent on training and orientation in the early part of 2004. In addition, all of the surveys and interviews which would have been done from May to December 2003 were not completed. We spent an extraordinary amount of time trying to go back and catch up on these, but in most cases it was very difficult to ask people to remember details from months before, and the quality of the information thus suffered.

As well, due to the inexperience of new researchers and the new manager, several major errors occurred in the collection of data. These are detailed further in the next section of results. For example, a large number of interview transcripts and/or maps were misplaced by the researchers, and some interviews and surveys were not completed accurately. As well, in order to catch up on all the months of missed interviews, two additional people had to be hired on a temporary basis. Both of these people had previous experience conducting interviews for the WLE department, but with three different people doing the work, there were major variations in the quality of information collected and the organization of data. These errors should have been addressed by the manager, Monica Krieger, much earlier in the year, but she was also new to the job with little support and training on-site (the previous manager, as mentioned, was in New Mexico).

Ms. Krieger also had extensive other obligations to fulfill as part of her job duties. Several major issues arose in 2003-2004 with the diamond mines, which required huge amounts of time for research and preparation for public hearings. Most notably were Diavik Diamond Mines Inc.'s application for a water license amendment, BHP Billiton Diamonds Inc.'s application for a water license renewal, and the permitting and licensing process for De Beers Canada's Snap Lake project. There was also a major environmental assessment for diamond exploration in Drybones Bay and Wool Bay, where the Łutsël K'e Dene First Nation was an intervenor. This placed severe constraints on the amount of time she could spend directly supervising the *Ni hat'ni* work that was being completed. This is a constant dilemma for WLED managers in Łutsël K'e – their two main duties are coordinating the *Ni hat'ni* project (including supervision of six other staff members), and dealing with all land use issues and license/permit applications. Each is a full-time job in itself, and to focus on one means the other suffers. In addition, the manager is expected to coordinate community on-the-land activities such as caribou hunts, coordinate various other research projects, organize summer environmental fieldwork employment with various consulting companies and mining companies, organize all WLE Committee activities, and numerous other assorted duties.

The socio-economic surveys were all completed, but again due to a high staff turnover rate there were problems with completion of data entry and analysis of results. The Socio-Economic Researcher hired in November 2003 accepted a more senior position in another department in the community in the summer of 2004. Although all surveys were completed as required, there had been some confusion and use of the wrong survey forms. As well, most of the data entry was incomplete and none of the graphing and analysis of results was finished. This task fell to the manager to complete. The Research Assistant, also hired new in November 2003, completed all required surveys and interviews, but left on maternity leave in the summer of 2004. Again, analysis of data fell to the manager to complete.

Due to all these interplaying factors, the workshops normally held to present the results (listed in the proposed cycle of activities as *Verification and Interpretation Workshops* for the environmental monitoring cycles and *Interpretation and Dissemination Workshops* for the socio-economic monitoring cycles) were not completed in 2003-2004. For the first half of the year, we literally had no data to present to the community, due to the funding and staffing shortage described previously. During 2004, we planned to hold the workshops many times but due to other commitments of both staff and community members, they never occurred. This lack of formal community verification was a major break in the quality of research which has come out of Łutsël K'e in recent years. A final report for 2003-2004 was submitted to WKSS in January 2005.

For the 2004-2005 *Ni hat'ni – Watching the Land* program, we again suffered from delays caused by staff turnover. As mentioned above, in the fall of 2004 we again had to hire new Environmental/Land Use and Socio-Economic Researchers, and in addition both the Database and Multimedia Technicians decided to return to school to further their education. Once again we had to re-train for all these positions, and catch up on work that was missed during the break in staffing. In January 2005, our Socio-Economic Researcher decided to return to school, and we were not permitted to re-hire for this position due once again to funding issues. As well, in February 2005 the Manager unfortunately had to dismiss the Environmental/Land Use Researcher. There had been several major errors (including misplacing interview transcripts and maps, the failure to conduct interviews accurately despite extensive training, delays due to disciplinary actions such as suspensions, and personal issues limiting the amount of days actually worked) which we tried to deal with in the interests of maintaining continuity in staff. However, it eventually became overly detrimental to the integrity of the program itself. This caused a major gap in caribou interviews, and again we were not permitted to re-hire for this position due to funding issues.

The remaining staff members worked extremely hard to cover the extra workload of two people, including completing surveys, compiling and analyzing results, and conducting the interpretation

workshops. The timing for submission of final reports also played a role. After the submission of the 2003-04 report in January 2005, the WKSS Board requested several revisions, as well as the submission of the 2004-05 report by mid-March 2005. We suggested that instead a combined two-year report be submitted, giving us the opportunity to conduct interpretive workshops for both years' data and to address many of the deficiencies and inadequacies in the 2003-04 report. WKSS approved this request, but still required this 2003-05 report to be due in mid-March 2005. We estimated that we required approximately a month to compile results, prepare presentations for and conduct the interpretive workshops, and write the final document. Therefore (and because of the dismissal of the Environmental/Land Use Researcher at this time), the winter cycle caribou interviews stopped at the end of January. Interpretive workshops were held for each of the socio-economic and environmental surveys, with results presented and analyzed for two years of data collection. Preparing for and conducting these workshops was a massive amount of work in a very short period of time, and we collected some excellent comments and opinions. We did not conduct the *Integrative Interpretation Workshops* mentioned in our proposals (analyzing socio-economic and environmental results together) in either 2003-04 or 2004-05, due to time and staffing constraints.

We recognize that the quality of research for these second and third years of the *Ni hat'ni – Watching the Land* program is deficient in some respects. However, we feel that we did the best we could given the situation, and that the researchers worked very hard and still collected some valuable data. With community-based monitoring programs such as *Ni hat'ni*, the continuity of information from year to year is vital. The essence of *Ni hat'ni* is the monitoring of environmental and socio-economic changes within the traditional territory, and comparison of trends and data with baseline information. This can only occur with consistent data collection. Even though the 2003-2005 data collected is obviously inferior compared to previous research projects conducted by the Łutsël K'e Dene First Nation, we feel we collected sufficient information to maintain the integrity of the program, and to carry it forward to a new year.

We present this section in the hopes of explaining the realities faced by the *Ni hat'ni* project research team in 2003-05, and to address deficiencies in data and analysis as compared to our original proposal. We hope this illuminates the realities faced by small communities in designing and implementing projects such as this. High staff turnover rates, lack of sufficient human resources to effectively complete all expected tasks (in the face of immense pressure from industrial development and the desire to complete other research projects deemed important to the community), and financial difficulties all present huge obstacles to effective implementation of projects, despite the best intentions and hard work of all involved.

We present the results achieved in the following section (**6.0**), and discuss our next year of studies, 2005-2006, in section **10.0.**

6.0 RESULTS

6.1 ENVIRONMENTAL MONITORING RESULTS

This section will detail the results of environmental monitoring efforts carried out during 2003-2005. Information gathered for each specific monitoring cycle is presented in individual sections, followed by a discussion of the analysis and interpretation of this information with consideration of Denesǫłıne traditional knowledge and oral history.

As detailed in the previous section (**5.0**), the majority of interviews in 2003-04 were conducted a number of months after harvesting activities had occurred. The reliability of the information collected is therefore somewhat suspect, but we found that for the most part, people remembered quite clearly where they had harvested and their general impressions for the year. As well, due to

time constraints and lack of human resources, it was not possible to interview absolutely everyone who harvested during these time frames. Researchers were instructed to select what they viewed as a representative selection of participants, from various age groups and families. We also include here several representative responses from participants for each set of monitoring questions. In early March 2005, a series of interpretive workshops were held to discuss results from 2003-2005. These workshops were designed by season, and results are presented in the appropriate section as *Spring, Summer, Fall* and *Winter Interpretive Workshops.* We had an excellent turnout for these workshops (28 people), which were conducted in one (very long!) day.

Due to intellectual property concerns, copies of questionnaires used during the environmental monitoring cycles are not provided in this report. They can, however, be obtained upon reasonable request by contacting: Chair Peter Enzoe; Wildlife, Lands and Environment Committee; Łutsël K'e Dene First Nation; PO Box 28, Łutsël K'e, NT, X0E 1A0.

6.1.1 Caribou (Etthën) indicator information

The indicators monitored during the caribou monitoring cycles were as follows:

- Numbers of caribou harvested by local hunters in the traditional territory
- Locations of caribou harvesting activities
- Presence and numbers of caribou at traditional lake/river crossings during peak crossing seasons
- Amount of fat noticed while dressing caribou
- Color and consistency of marrow
- Visual aesthetic of caribou
- Behaviour of caribou
- Movement ability of caribou
- Presence of discolorations or parasites in muscle and/or internal organs
- Quality of hide

Caribou indicator information was gathered during two distinct cycles each year during the 2003-2005 monitoring period. These two cycles were as follows:

- The *Fall Hunt Caribou Cycle* covers the period during the community fall hunt at the traditional caribou crossing at? edacho Tué (Artillery Lake), which took place in late August 2003 and September 2004.

- The *Winter Caribou Cycle* took place between the months of December 2003 to February 2004, and from November 2004 to January 2005. Caribou had returned to their wintering grounds around Tu Nedhe (Great Slave Lake), and hunters travelled at various times throughout these periods looking for caribou to feed their families. In previous years, a separate *Caribou Researcher* travelled with prominent hunters on the land during their harvesting activities, conducting caribou body condition surveys immediately after harvesting events. In 2003-2005, due to funding shortages, lack of trained personnel, and numerous other obligations of staff members trying to catch up on missed surveys, these field surveys were conducted by the *Environmental/ Land Use Researcher* only a few times each year. Interviews addressing the distribution and abundance of caribou were completed with hunters after their return to the community, and in some cases hunters also completed the body condition surveys if their memories served them well enough. The valuable information normally collected by the field surveys was thus not well documented these last two years, and therefore the results show more general information about the herd rather than the condition of individual animals.

The 2003-04 and 2004-05 proposals also called for a *Summer Caribou Hunt Cycle*, to be conducted as a summer on-the-land workshop during and after the caribou hunt for the annual Desnedhe Che spiritual gathering. Due to breaks in both funding and staff, concerns about the ability of hunters to remember details of harvesting activities months after they were conducted, and the necessity to focus on priority information-gathering, this survey was not completed in either year.

Fall Hunt Caribou Cycle

Hunters that participated in the *Fall Hunt Caribou Cycle* at? edacho Tué (Artillery Lake) were asked to respond to questions concerning the abundance and distribution of caribou in the area. Ten hunters were interviewed for fall 2003. Unfortunately, the interview transcripts were misplaced and only the maps remain. In September 2004, approximately 30 community members took part in the fall hunt, including the Environmental/Land Use Researcher (who conducted interviews at? edacho Tué and upon the return to Łutsël K'e). Again, the interview transcripts were misplaced and only the maps remain. We are therefore unable to offer a representative sample of responses to monitoring questionnaires.

The map in **Figure 3** shows the distribution of caribou harvesting activities during the fall hunt in 2003 and 2004 at? edacho Tué (Artillery Lake).

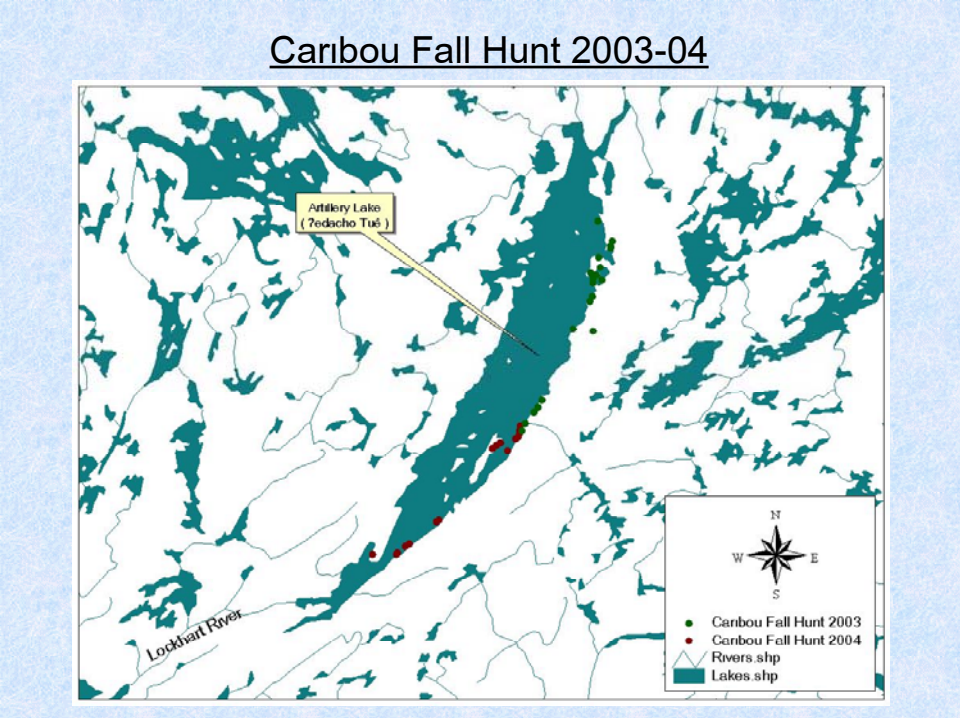

Figure 3. Caribou harvesting locations during Fall Hunt, 2003 and 2004.

Winter Caribou Cycle

Both the Bathurst and Beverly caribou herds over-winter in the forests of Denesǫłıne traditional territory. Harvesters are continually travelling in search of caribou, and continue to provide valuable food, clothing, and the opportunity to share cultural values and knowledge with the next generation.

As mentioned, field surveys were not conducted regularly as in previous years. Also, due to a lack of sufficient funding and equipment, the researcher did not travel on the land with harvesters as often, but rather interviewed the majority upon their return to the community. For the 2003-04 cycle, 29 individual interviews were conducted, reflecting a total harvest of 119 caribou. For the 2004-05 cycle, we have a record of 16 individual interviews, reflecting a total harvest of 64 caribou. We know that numerous other interviews were conducted from December to early February, but these were all misplaced by the researcher. As well, due to the dismissal of this researcher and time constraints for submission of the final report, there were no interviews conducted in February or March 2005 (but we will complete interviews for the rest of the winter caribou harvesting season and include them as part of next year's report). Results are presented in the figures below.

Figures 4, 5, and **6** are maps showing the distribution of caribou harvesting activities during the winter of 2003-2004. The map marked "February 2004" (**Figure 6**) also includes some caribou harvesting locations from early March. **Figure 7** is a map showing all caribou harvesting locations from late December 2003 to early March 2004.

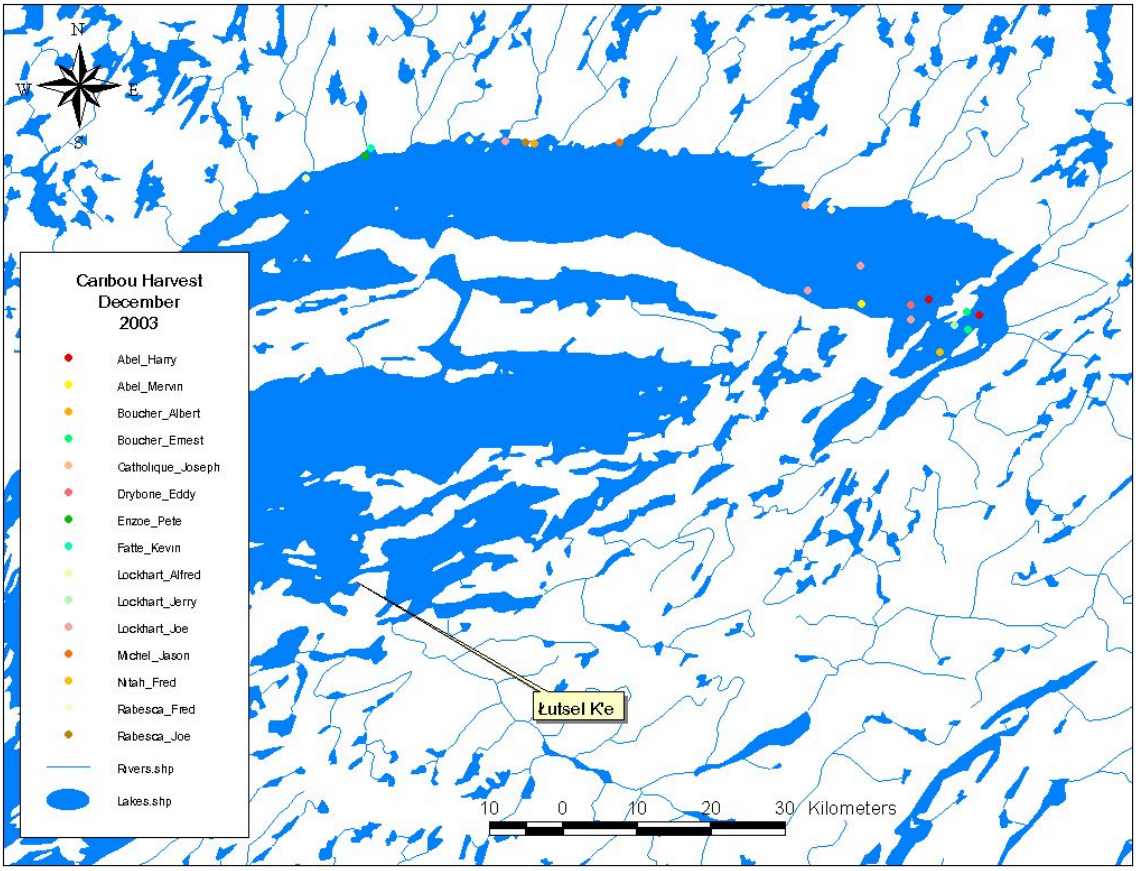

Figure 4. Caribou harvesting locations in December 2003.

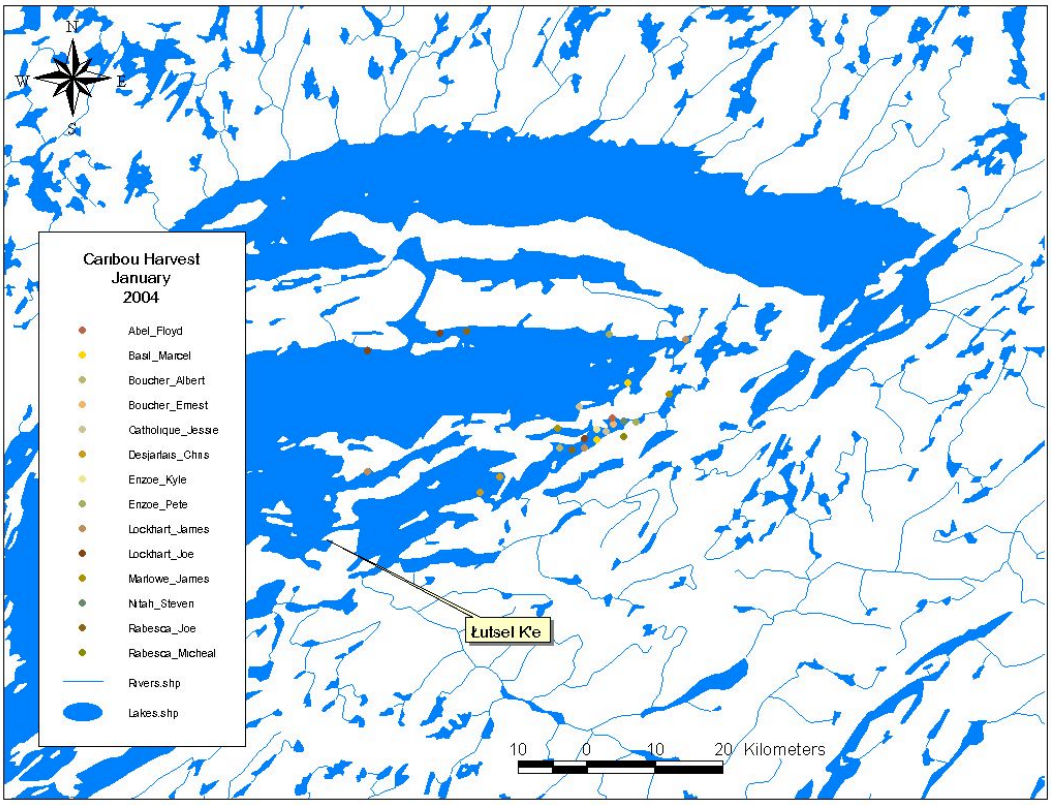

Figure 5. Caribou harvesting locations in January 2004.

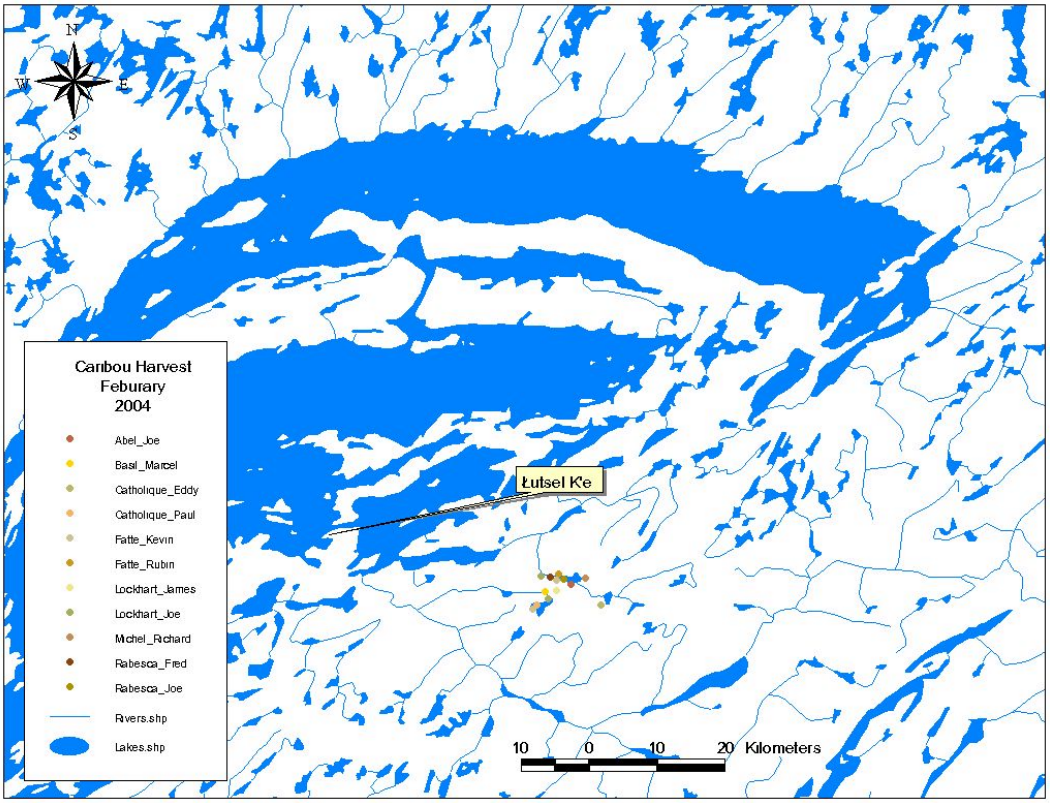

Figure 6. Caribou harvesting locations in February 2004.

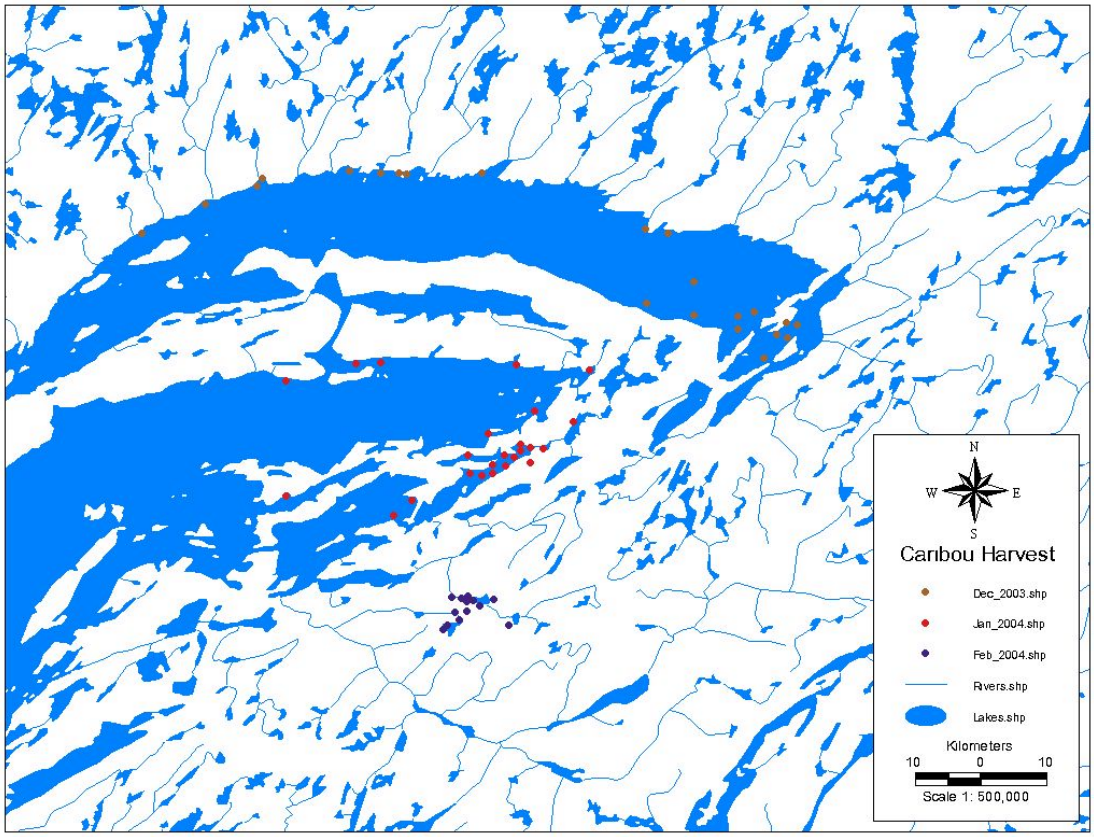

Figure 7. Caribou harvesting locations, late December 2003 to early March 2004.

The majority of caribou harvesting activities in 2003-04 took place on the north shore of the East Arm of Tu Nedhe (Great Slave Lake) and close to the community of Łutsël K'e. Caribou harvesting activities shifted in correspondence with the movements of caribou further inland later in the season.

For 2004-05, the remaining interview transcripts reflect harvesting activities in November 2004 (five interviews), December 2004 (one interview), and January 2005 (10 interviews). Maps were not completed by the researcher, but there are general descriptions of hunting areas in the interview transcripts. Harvesting activities early in the season (November and December) took place to the east of Łutsël K'e in the Gagnon Lake and Bigstone Lake areas, and hunters believed these caribou were part of the Beverly herd. There was also one hunter who harvested caribou at Francois Lake, on the way to Yellowknife. Later in December and in January, harvesting activities were focused on the Bathurst herd along the North Shore – specifically, Windy Island, McLeod Bay, and Taltheilei Narrows. Nine out of ten of the interviews for January were conducted during and after an organized youth hunting trip to Taltheilei Narrows. These are younger, more inexperienced hunters whose impressions of caribou condition perhaps need to be taken with some caution.

Denesoł ıne land-users typically had specific reasons for travelling to a particular area to harvest caribou. This information is detailed in **Figure 8**.

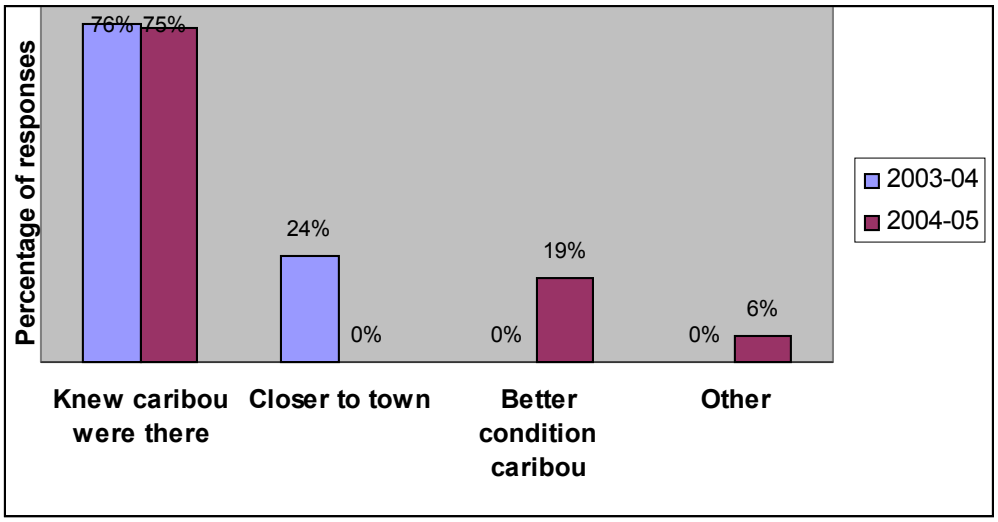

Figure 8. Selection criteria for caribou harvesting locations.

The most common reason for travelling to particular areas to harvest caribou is that hunters know the caribou are there (76% and 75% of respondents). This suggests that hunters rely on their own experience and on the sharing of information about caribou sightings between hunters. The other main reason given in 2003-04 was that these locations were closer to town (the other 24% of respondents). Hunters will choose locations closer to town if caribou are present there, rather than travelling further distances. In 2004-05, 19% of hunters responded that they chose a particular area because they thought the caribou there were in better condition. Interestingly, these same respondents (three out of 16 interviewed) were those that harvested the Beverly herd early in the season to the east of Łutsël K'e. This was the general impression of hunters all winter – that the Beverly herd was in better shape than the Bathurst herd.

The amount of fat observed on a caribou is a reflection of general health. The more fat, the healthier the caribou is deemed to be. A fatter animal has been able to spend more time feeding, has likely been harassed less by predators and/or parasites, and is more stress-free and thus in better condition. Participants were asked to rate the amount of fat as "none", "some" "quite a bit", "lots", or "not sure". **Figures 9** to **12** show the amount of brisket, back, stomach and kidney fat noticed on caribou cows harvested during the 2003-2005 *Winter Caribou Cycles*:

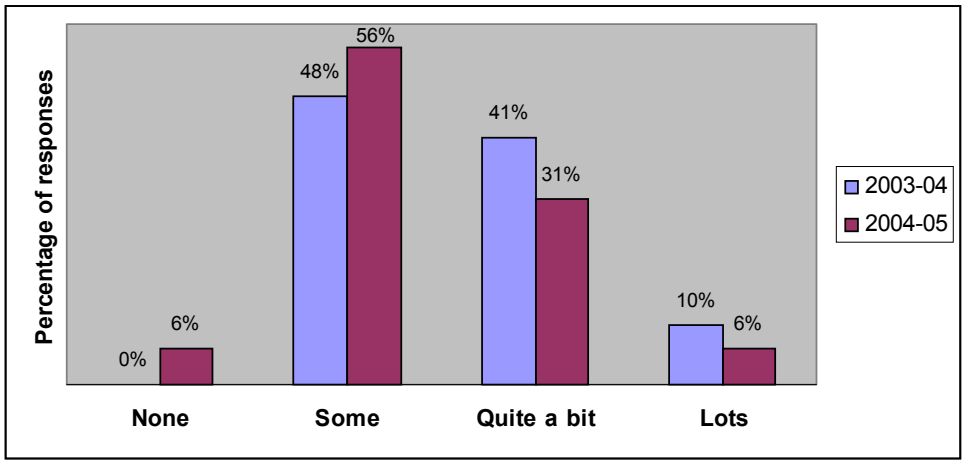

Figure 9. Brisket fat amounts in harvested caribou cows.

This figure shows that of the hunters interviewed in both years, the majority responded that there was either "some" or "quite a bit" of brisket fat on the caribou cows they harvested. Fewer participants responded that there was "lots" of fat, and in 2004-05 one respondent (6%) said he had harvested a very skinny bull with no brisket fat at all. This same respondent is reflected in the "none" answers in the following three graphs for back, stomach and kidney fat.

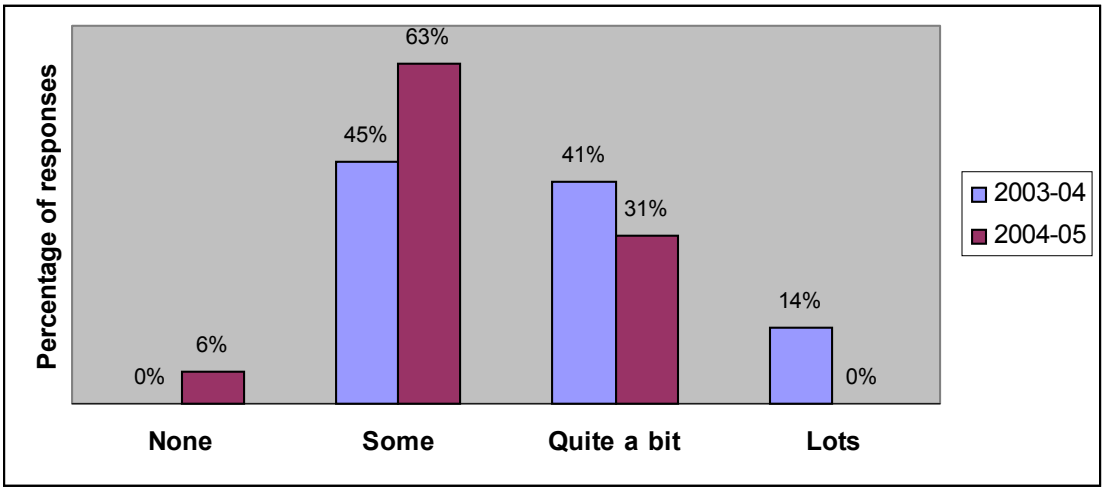

Figure 10. Back fat amounts in harvested caribou cows.

Similarly, the majority of hunters in both years responded there was "some" or "quite a bit" of back fat on the caribou cows they harvested. In 2003-04, 14% of hunters interviewed harvested caribou with "lots" of back fat, while in 2004-05 there was zero.

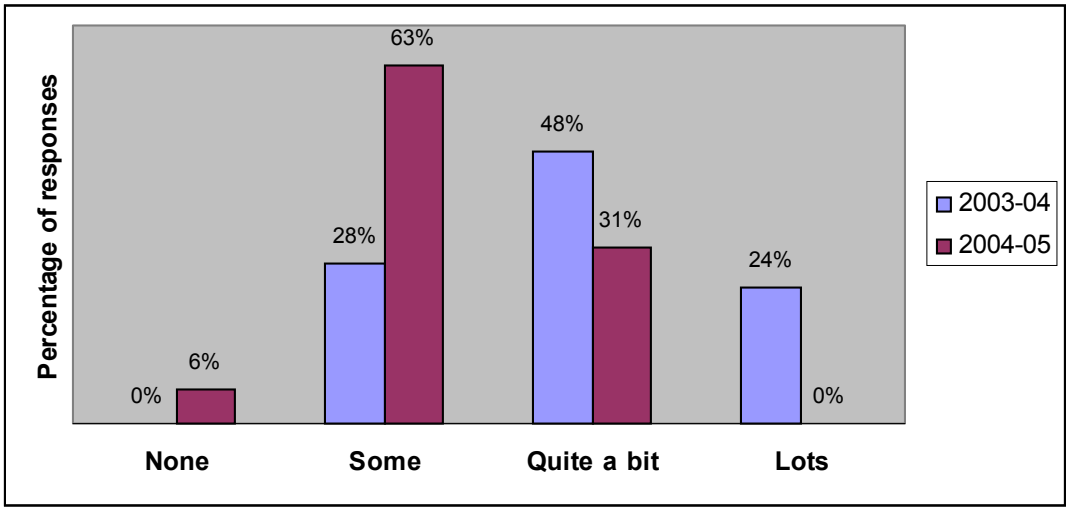

Figure 11. Stomach fat amounts in harvested caribou cows.

In the winter of 2003-04, approximately half of hunters (48%) responded that they observed "quite a bit" of stomach fat, with the rest of the responses divided fairly evenly between "some" and "lots" of fat. In the winter of 2004-05, the vast majority of hunters (63%) responded the caribou had "some" stomach fat, with all other respondents except one answering "quite a bit". These results suggest relatively healthy caribou over both winters, with some animals possibly suffering some type of stress due to malnourishment, harassment by predators and/or parasites, or other illness.

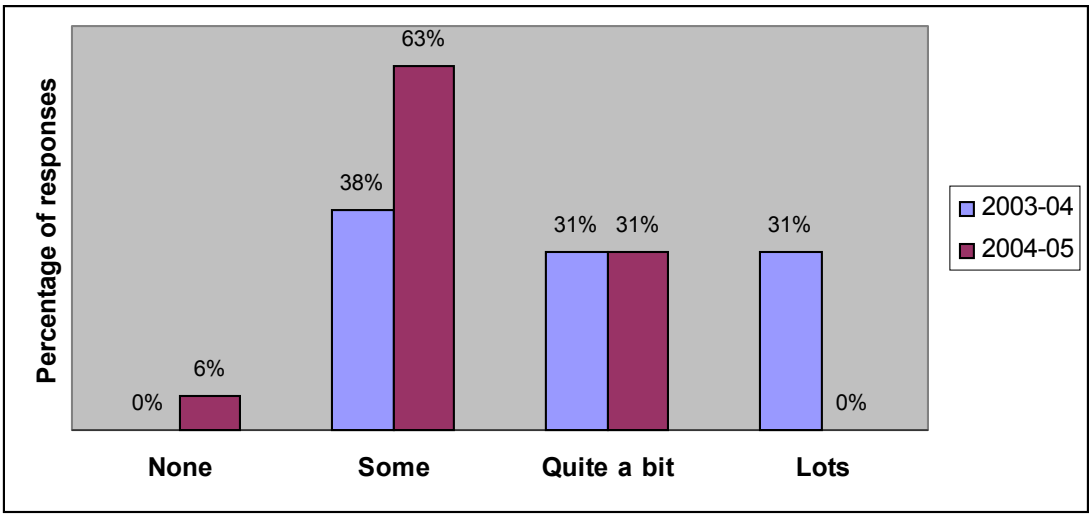

Figure 12. Kidney fat amounts in harvested caribou cows.

Similarly, the results for kidney fat amounts suggest relatively healthy caribou herds. In the winter of 2003-04, responses were fairly evenly divided between "some", "quite a bit" and "lots". In 2004-05, again the vast majority of hunters interviewed (63%) responded the caribou had "some" kidney fat, while all the rest except for one person responded "quite a bit".

The following figures show results from other observations made around indicators of caribou condition during the 2003-2005 *Winter Caribou Cycles*. **Figure 13** shows the proportion of caribou harvested from various herds, and **Figure 14** displays results of hunters' observations of the bone marrow.

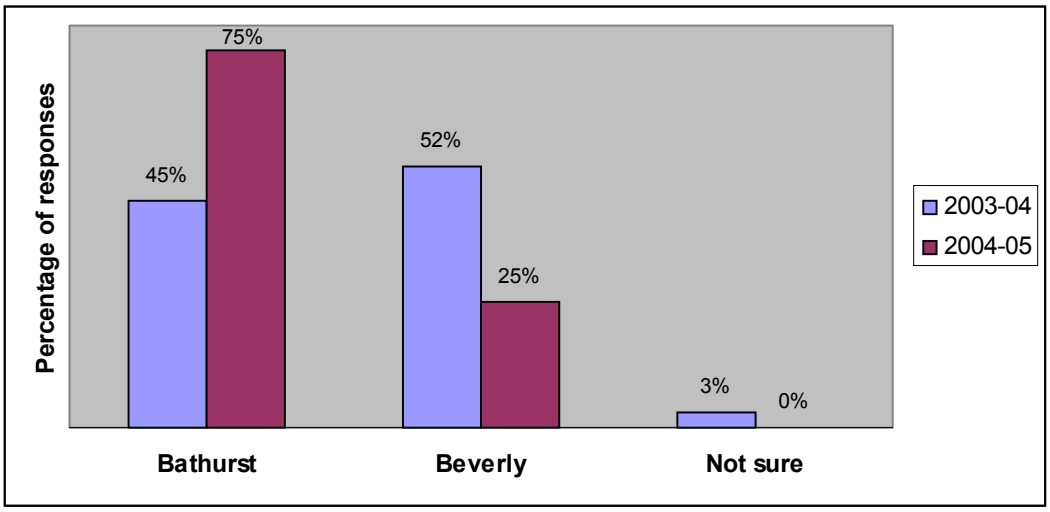

Figure 13. Percentage of hunters' responses regarding herds harvested.

In the winter of 2003-04, there was a fairly even split of harvesting activities between the Bathurst and Beverly caribou herds (45% and 52%, respectively). This is consistent with the overlap in range of both of these herds throughout Denesǫłiné traditional territory. A small percentage of hunters surveyed (3%) were not sure which herd the caribou they harvested had come from. In 2004-05, 75% of hunters harvested the Bathurst herd, while the remaining 25% harvested the Beverly herd, although this greater apparent division between herds may be a result of small sample size.

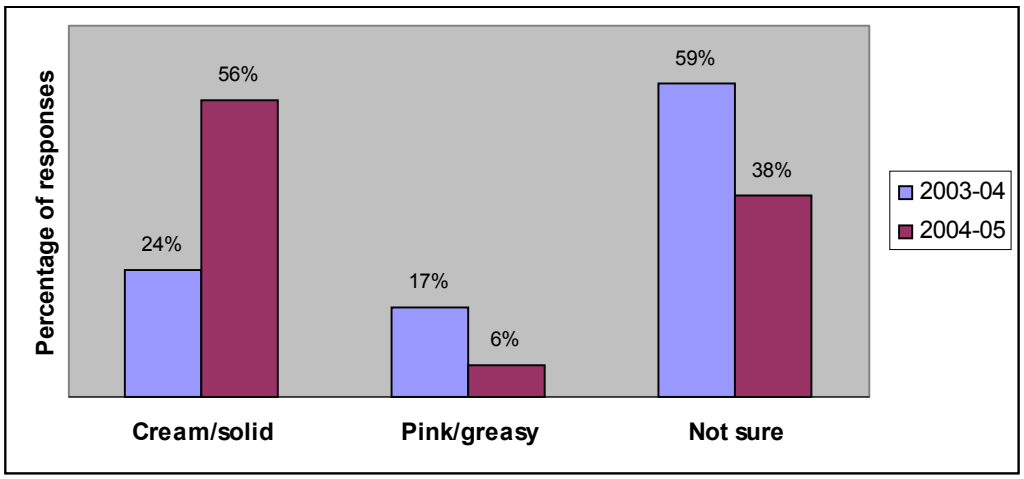

Figure 14. Bone marrow condition of harvested caribou.

Marrow that is a creamy colour and solid indicates a very healthy caribou. Marrow that is pink and greasy indicates a caribou that is in fairly good health, but may be under stress from lack of food, predator and parasite harassment, and/or illness. Red and runny marrow indicates an unhealthy caribou, malnourished and under severe stress from predators, parasites, and/or illness. In 2003-04, 24% of hunters interviewed said the marrow was creamy and solid, while another 17% responded that the marrow was pink and greasy. Over half of hunters (59%) responded that they were not sure of the condition of the marrow. This could be because they had not checked, there had been too long of a delay between harvesting activities and the actual interview so they could not remember, or they were not aware of how to judge marrow condition. In 2004-05, over half of hunters (56%) responded the marrow was creamy and solid, and only 6% (representing one out of sixteen hunters) responded it was pink and greasy. Again, we have a high proportion of respondents (38%) answering they were "not sure" of marrow condition, for any of the reasons outlined above. None of the hunters interviewed in either year saw marrow that was red and runny. This indicates that the all of the caribou harvested over the last two winters were in fairly good to good health.

Finally, all hunters were asked to provide their overall impression of the condition of the caribou they harvested. They were asked to classify the caribou into the following categories: "skinny" (indicating poor health), "not so bad" (acceptable health), "fat" (good health), "really fat" (extremely healthy and robust), or "not sure". **Figures 15** and **16** display these results, divided by cows and bulls.

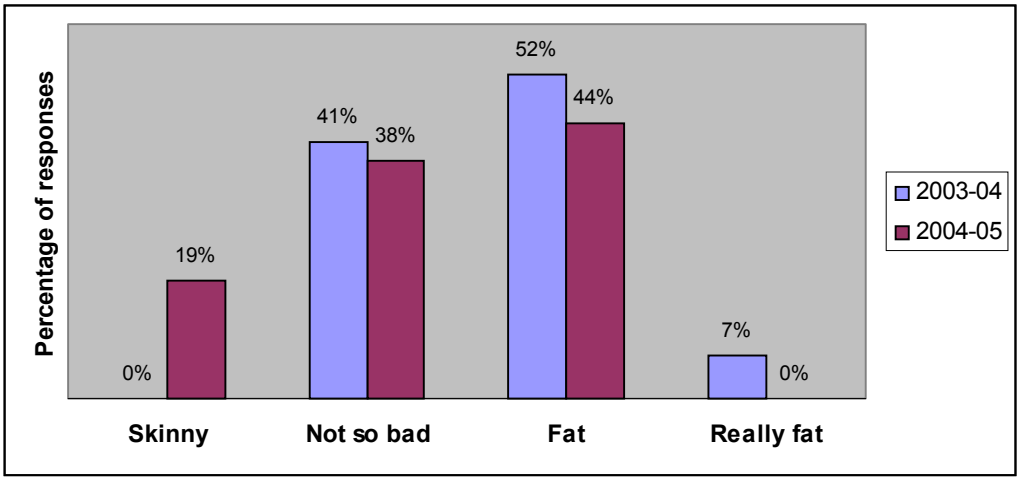

Figure 15. Overall hunters' impressions of harvested cow caribou condition.

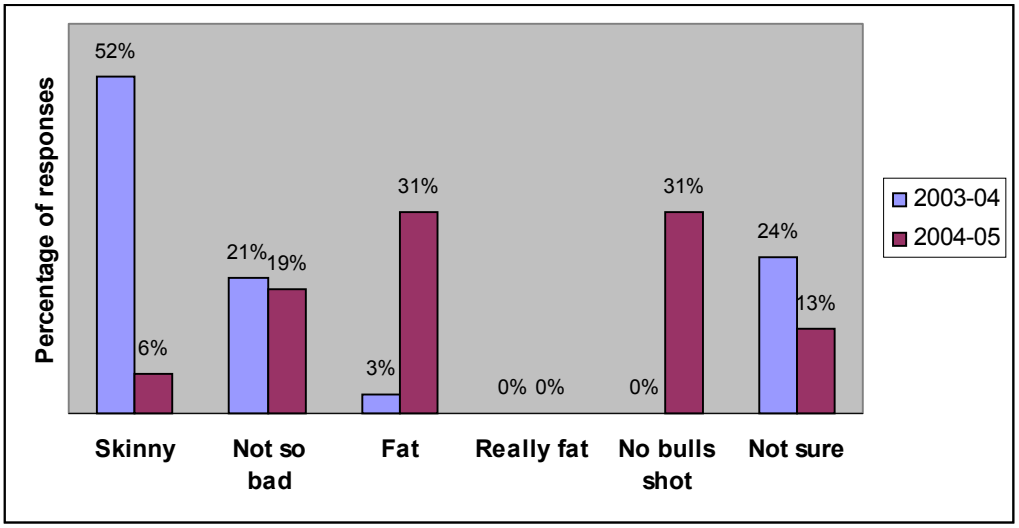

Figure 16. Overall hunters' impressions of harvested bull caribou condition.

Of the cows harvested in both winters, the majority were classified as "fat" or "not so bad". In 2003-04, a small percentage (7%) were classified as "really fat" and none were classified as "skinny". In 2004-05, no harvested cows were labelled "really fat", and 19% were labelled "skinny". Again, these percentages in 2004-05 are somewhat misleading due to the small sample size. 19% of hunters actually reflects only three people. In 2003-04, over half of the bulls harvested (52%) were classified as "skinny", with a lesser percentage being labelled "not so bad" and very few labelled "fat". The high proportion of "not sure" responses for the bulls this year reflects those people who either did not harvest bulls or could not remember what their condition was like. These results suggest that for the winter of 2003-2004, the cows were a lot healthier in comparison to the bulls. Bulls were likely suffering from malnourishment, stress from parasites and/or predators, illness or disease, or a combination. In 2004-05, responses for condition of bulls harvested were a lot more varied. 31% of hunters classified the bulls as "fat", 19% said "not so bad", and 6% said "skinny". 31% of hunters responded they had not shot any bulls, and the remaining 13% said they were not sure. This variation in responses may be due to the majority of interviewees in 2004-05 being younger, less experienced hunters. No hunters in either year classified bulls as "really fat".

Hunters were also asked to comment on whether they had noticed anything unusual about either the environment/climate or the caribou this year. In terms of climate, almost all hunters mentioned they were seeing weather changes, especially a warming trend and rapid changes in temperature.

> *It was warm some days and really cold the next day. This is not normal. (JM 17 02 04).*
>
> *There is less snow on the ice and the climate is getting warmer. (WD 18 02 04)*
>
> *There was more snow this year, and there's really odd weather patterns. It keeps shifting between warm and cold. (DM 21 01 05)*

There were also some differences noted in caribou behaviour, location, and health. One hunter in 2003-04 noted the caribou seemed very "jumpy". Some hunters said the caribou were closer to town than they had been in recent years, while some others made the following comments:

> *The caribou don't hang around as they used to. Now they tend to be far away. I believe this is due to the environmental mix-up by the mining companies, destroying their migration and food. (JM 17 02 04)*
>
> *The migration route is changing. It's getting harder to tell where the caribou are going to be. (AM 25 01 05)*

Several hunters also commented on the presence of disease or sickness in the caribou they harvested.

> *One caribou was sick, it had pus or something around its heart. (RM 15 02 04)*
>
> *One caribou I saw had some strange lumps on its lungs. (AC 18 02 04)*
>
> *I did not see any signs of sickness in the caribou I harvested, only white small cysts, which is normal I think. (JM 23 01 04)*
>
> *I got one cow which had a bruise on its thigh. (RE 04 02 04)*
>
> *I saw some warbles on the inner coat. (JM 28 12 03)*

Some other general comments from caribou hunters were as follows:

> *The gas provided by the Wildlife, Lands and Environment Department was a good idea. I was able to harvest caribou five separate times. (MB 05 01 04)*
>
> *The Bathurst herd is way skinnier than usual this year, compared to the Beverly herd. They must be running into a lot of disturbances. (PE 25 01 05)*

6.1.2 Fish (Łu) indicator information

The indicators monitored during the fish monitoring cycles were as follows:

- Species and number of fish harvested by local people in the waters in the region
- Locations of harvesters' gill nets and/or angling activities
- Fatness
- Parasite load

Fish indicator information was gathered during two distinct cycles during the 2003-2005 monitoring period. These two cycles are as follows (again, there were delays in conducting these interviews in 2003-04, so comments are more general in nature).

- The *Summer Angling Cycle* focuses upon fish harvesting activities using a rod and reel. 36 individual harvesters provided comments for the summer of 2003, while 15 harvesters were interviewed for the summer of 2004.

- The *Fall Fishnet Cycle* reflects information gathered from harvesters' gill net setting activities in the fall of 2003 and 2004. For the fall of 2003, 17 individual harvesters participated in this monitoring cycle, and 14 harvesters were interviewed for the fall of 2004.

Summer Angling Cycle

During the *Summer Angling Cycle,* harvesters were asked about the abundance of fish in the traditional territory. A representative sample of their responses is as follows:

> *Fish were very easy to catch because we still follow our great grandfathers' ways. (MA 31 05 04)*
>
> *Fish were not so hard to catch. I was just lucky or I was using the right hook, who knows? (DE 29 05 04)*
>
> *After fish spawn, it's easier to catch them. Before fish spawn, they're harder to catch. (DC 31 05 04)*
>
> *The fishing was good this year. I was catching fish like crazy. (TE 31 05 04)*
>
> *I found fish harder to catch because of the barbless hooks. (AH 31 05 04)*
>
> *We found fish hard to catch because we didn't really have bait or maybe because the timing wasn't right, it was either too early or too late in the day. (MC 31 05 04)*
>
> *Fish are always easy to catch around here, you can go anywhere. Anyplace you go where there's water, you'll catch a fish! (HA 08 08 04)*
>
> *I noticed there was a lot of fish, there seemed to be more fish this summer. (PA 14 09 04)*

Distribution of fish during the summer months is reflected in the distribution of angling activities, displayed in **Figures 17** and **18**. Favourite fishing spots include the mouth of the Stark River near the Frontier Fishing Lodge, Snowdrift River, Pearson Point, Murky Channel, Basile Bay, Fortress Island, Duhamel Lake, the Gap, and Fort Reliance.

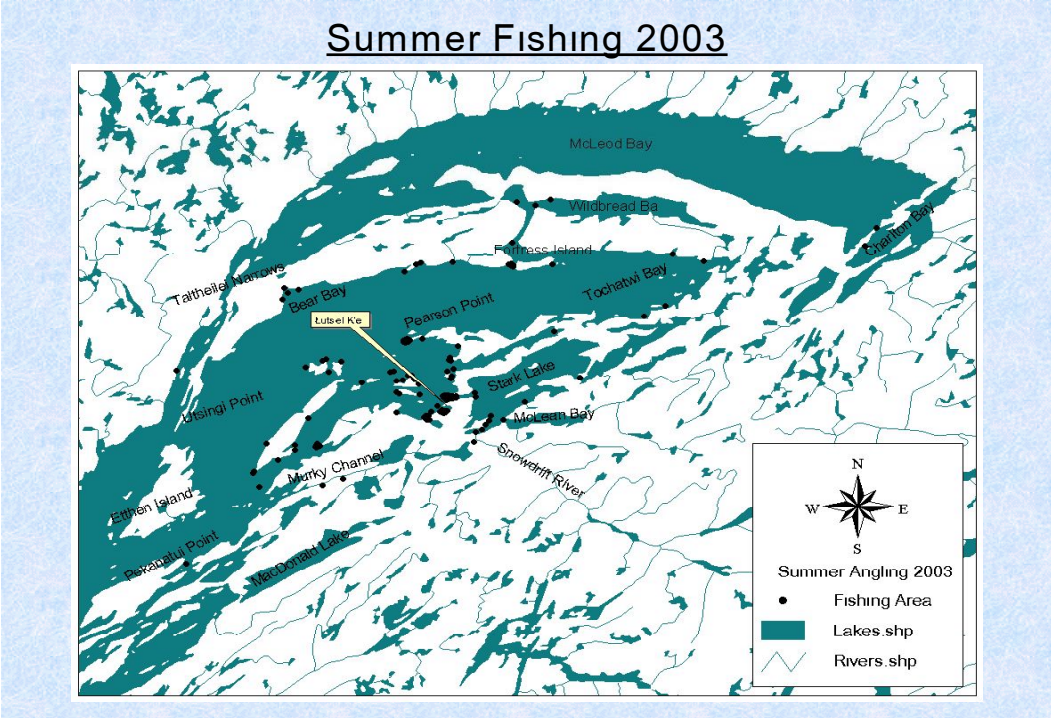

Figure 17. Distribution of angling activity in summer 2003.

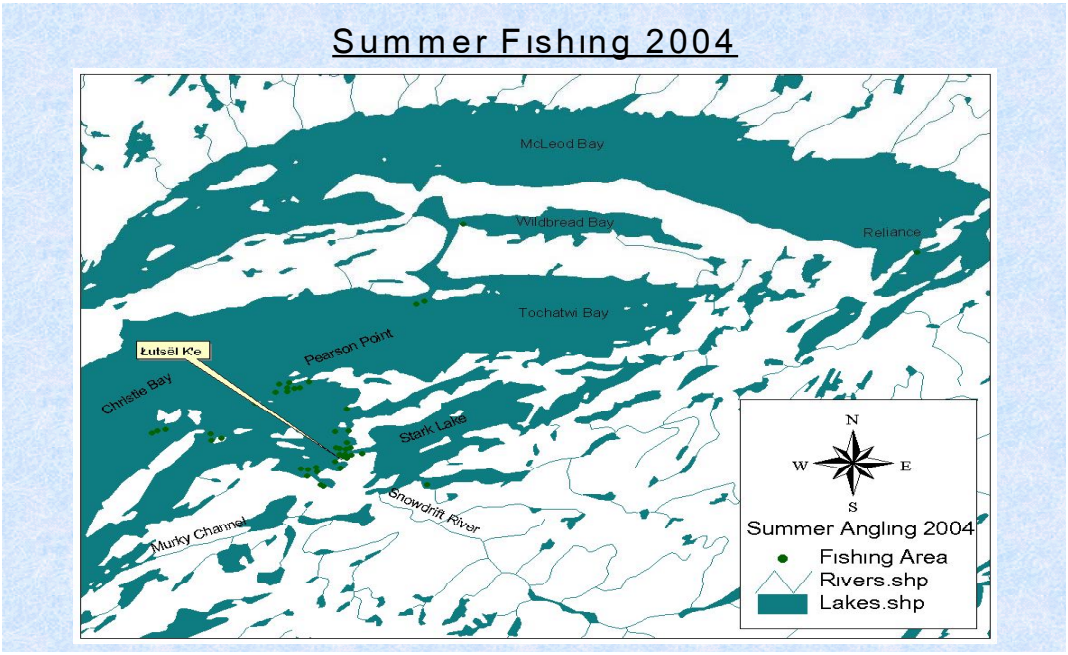

Figure 18. Distribution of angling activity in summer 2004.

Comments about fish condition were also gathered:

> *Some fish looked like they had been caught with a hook. (RE 30 05 04)*
>
> *I caught one fish that had bite marks on the fins. (JC 18 09 04)*
>
> *Some fish I caught had pus on the inside and guts. I did not see this before in the past. (MM 31 05 04)*
>
> *One fish I caught had a scab on it, that's the only time I've seen that. (FR 15 09 05)*
>
> *The back on this one trout was bent in a very funny way. (AH 31 05 04)*
>
> *Some fish are really skinny and other fish are fat. I'm not sure why. (BC 31 05 04)*

Other general comments were also gathered. Several people mentioned that the weather had been hotter than usual in both summers, and that the summer of 2004 was very short.

Fall Fishnet Cycle

During the *Fall Fishnet Cycle,* harvesters commented on the abundance of fish and general fish condition. Favourite harvesting locations continue to be many areas around Łutsël K'e, such as towards Dog Island, Big Island Gap, Snowdrift River, Nu Cho, and behind the Frontier Fishing Lodge. A representative sample of responses is as follows:

> *If you put nets in the water, you will always catch fish, no matter where. Even in the bush on these ponds, like at Rutledge Lake there are really lots of fish, same with Nonacho Lake. (NA 27 04 04)*
>
> *I saw some fish that had been caught by hooks and released. They have deformed mouths. (AL 27 04 04)*
>
> *When I was a kid I used to fish every day for dogs. It was lots of work. (GA 27 04 04)*
>
> *I caught mostly whitefish this year, not much trout, but there was a lot of fish. (PA 15 11 04)*
>
> *Once an elder was out on the land hunting beaver. He came across a stream and could see fish running up the river to spawn, so he made a hook out of a clothespin. He made it sharp and hooked himself a fish. (EB 15 11 04)*

Figure 19 shows fishnet locations used by local harvesters in the fall of 2003 and 2004. Since harvesters generally use the same locations throughout the year, the maps can be considered representative of fishnet locations for all of 2003 and 2004.

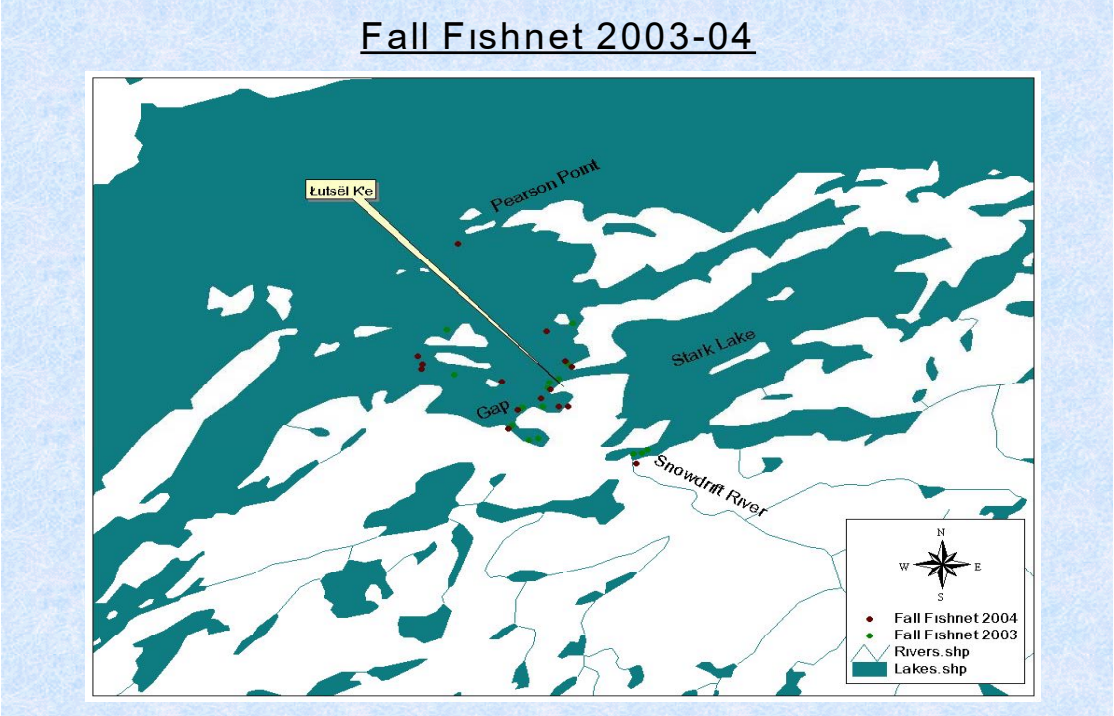

Figure 19. Location of fishnets around Łutsël K'e, fall 2003 and fall 2004.

In both the *Summer Angling Cycle* and *Fall Fishnet Cyle,* numerous people commented on the poor condition of fish in Stark Lake (see LKDFN and Williams 2002 for a detailed analysis of this situation). For example:

> *I saw some deformed fish this year. They had a skinny body, big head, and wrinkled skin. They were at the Stark River and Stark Lake mostly. (BS 27 04 04)*
>
> *At Stark Lake, I saw fish which had a big head and small body. (AE 28 05 04)*
>
> *In Stark Lake the trout don't look like trout. That satellite fell down in Stark Lake and that uranium mine has deformed the fish. (PM 27 04 04)*
>
> *In Stark Lake, there were lots of fish with skinny bodies and lots of worms. (RN 27 04 04)*
>
> *The only fish I've seen that are deformed are in the Stark Lake area. They have big heads and long narrow bodies. (RM 22 11 04)*
>
> *I caught one fish that had a big head and a skinny long body, and it also had scars. (PC 18 09 04)*

6.1.3 Small fur-bearing animals (Tsa Thath) indicator information

Small fur-bearing animal indicators were monitored during the *Beaver and Muskrat* cycle in the spring, the *Rabbit Cycle* in the fall, and the *Marten, Mink, Weasel, Lynx, Fox and Wolverine Cycle* in the winter. The indicators monitored included the following:

- Number and species of fur-bearing animals harvested during the trapping season
- Location and extent of traplines used by Denesoł ıne harvesters

- Fullness and shininess of fur-bearing animal pelts
- Thickness of fat deposits found between a fur-bearing animal's pelt and body

- The *Beaver and Muskrat Cycle* interviews were conducted in the spring of 2004, but participants were asked to reflect on both the previous year's trapping season and the current season. When the weather gets warmer and the lake ice begins to melt, many harvesters set traps for beaver and muskrat near the lodges and push-ups of these animals. The trapping season lasts as long as the ice remains relatively solid, but can provide rewards in pelts and meat. 21 trappers participated in this monitoring cycle for 2003-04, and 15 trappers for the winter of 2004-05.

- The *Rabbit Cycle* interviews were also conducted in the spring of 2004, but covered fall 2003, when rabbits are actively being snared during the first winter snowfalls. This cycle was also conducted on schedule in fall 2004. Snaring rabbits does not represent a large investment of time or money, so it is an easy activity to undertake. However, rabbits were again scarce in the falls of 2003 and 2004, and very few people actively trapped rabbits in either year. 15 people participated for each of fall 2003 and fall 2004.

- The *Marten, Mink, Weasel, Lynx, Fox, and Wolverine Cycle* was completed with 26 individuals in late spring 2004, towards the end of the trapping season that generally begins with the first snowfall. Interviews were also conducted with 15 individuals in the winter of 2004-2005. However, they were conducted in December 2004 and January 2005 due to deadlines for submission of this final report, so responses are very preliminary as trapping season had just barely gotten underway. Trappers from Łutsël K'e typically establish traplines soon after the first winter snowfall, and continue trapping during the prime fur months of November to February.

Beaver and Muskrat Cycle

The number of beaver and muskrat trappers continues to decline in Łutsël K'e, but these animals continue to provide valuable pelts and meat for those who do. There were 21 interviews conducted for spring 2003, and 15 for spring 2004. Trappers shared the following information about the distribution, abundance, and condition of animals:

> *I harvested less than in other years. I'm not really trapping seriously,, just for enjoyment and to keep the culture alive. (FA 01 06 04)*
>
> *The best place to harvest beavers is in small ponds with streams. Muskrats can be found in small lakes, large bays, and swampy areas. (JM 01 06 04)*
>
> *I harvested less beavers and muskrats this year than in other years. I had to work Monday to Friday, nine to five, all the time. I usually do this [trapping] on weekends and evenings as a sport. (JM 01 06 04)*
>
> *I harvested seven muskrats and ate two of them. They were all really fat, I guess because none went to that place for a long time. It was good because I had only set two traps. I got some older rats this time, they had bigger pelts. (KD 01 06 04)*
>
> *I got less this year, there seemed to be less muskrat dens and push-ups. (FN 11 06 04)*
>
> *It's a good place for muskrats at the Lutsel K'e river [Stark River], and the sewage lagoon is good for beavers. I hardly went out this year because I had no transportation. (WB 01 06 04)*

At Basile Bay I got 20 muskrat on a small pond. They were all fat, I guess they were feeding well. (FR 12 06 04)

The weather was really cold, and it was a very late spring this year. (RM 11 06 04)

In 2004-05, numerous other trappers commented that it was a very late spring (there was still ice on the lake in mid-June 2004), and all trappers remarked that the beavers and muskrats they harvested all appeared healthy, with thick and shiny furs.

Figures 20 and **21** show beaver and muskrat harvesting locations during the spring of 2003 and 2004. Common harvesting locations include McLean Bay, Mud Lake, Jackfish Lake, Murky Channel, Narrow Lake, Back Bay, Basile Bay, Whitefish Lake, Snowdrift River, Stark Lake, and various other small ponds and lakes.

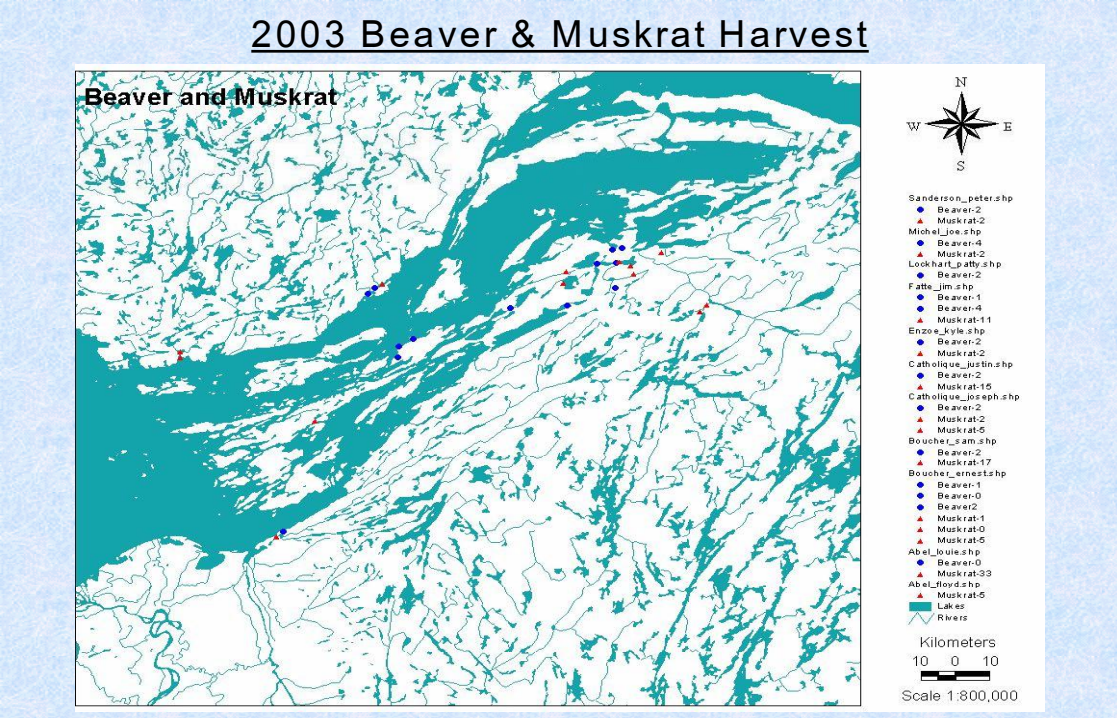

Figure 20. Locations of beaver and muskrat trapping in spring 2003.

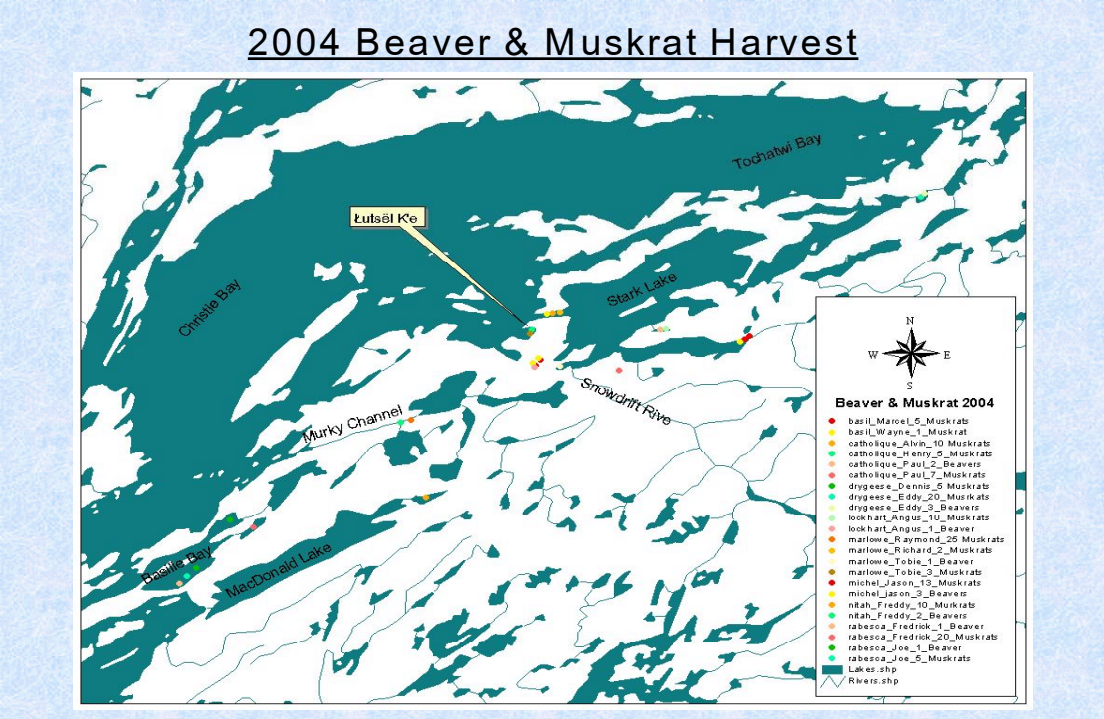

Figure 21. Locations of beaver and muskrat trapping in spring 2004.

Rabbit Cycle

In the fall of 2003 of 2004, a few individuals did set rabbit snares, mostly in close proximity to Łutsël K'e and not on a steady basis. Most participants revealed small numbers of rabbits were snared, generally less than six per person, although one respondent said he caught 20 rabbits around Murky Lake. Several people also said they set snares, but were not successful in catching any. Interviews were conducted with 15 people each year, and a sample of representative responses follows:

> *There used to be a lot more rabbits around. There was lots back then, like about four years ago. There's been a big change, it's not like before. (JC 28 04 04)*
>
> *When there's a fresh snowfall, that's when the rabbits like to come out. (JD 28 04 04)*
>
> *I snared less rabbits this year because I was working in the mines. If I had more time, I'd go out on the land more often. (FA 28 04 04)*
>
> *The rabbits I got had some fat on them. In the past, they were juicy and fat, very tasty. There weren't many around this year. (BC 28 04 04)*
>
> *I snared less rabbits this year. There were lots of caribou, so there was no need for rabbits. (DM 28 04 04)*
>
> *I set less snares this year because my Skidoo was broken. (JR 28 04 04)*

I got three rabbits at the Snowdrift River. There was more rabbits around, maybe there's not much animals killing them. They are good eating! (MR 18 10 04)

I've noticed there's more rabbits coming into town. I don't know if that's good or bad. (RM 19 10 04)

I got three rabbits on the other side of the hill by town and nine at the gap. They were not too fat and not too skinny, so it was just right. I just started setting snares, though. (WD 20 10 04)

It was an okay fall for me, it was an early fall though. I got two rabbits on the other side of the bay, two at Snowdrift River, and one on the upper Snowdrift River. They weren't really fat, but I think it's because they were young rabbits. (AE 19 10 04)

In relation to the above comment, several other people said that the fall of 2004 was very early, with early snowfall and cold temperatures. As well, a number of other harvesters who said the rabbits they caught were skinnier thought it was because they were probably young rabbits. None of the people interviewed in either year observed any sick or injured animals, and said all the ones they harvested were healthy.

Figure 22 shows the locations of rabbit snaring activities in the fall of 2003 and 2004. People generally set snares in close proximity to Łutsël K'e**.** Some favourite snaring locations are Murky Lake, the Gap, Łutsël K'e Bay, Stark River, Snowdrift River, and the hills and trails directly around town (for example, "up the road" or "behind my house").

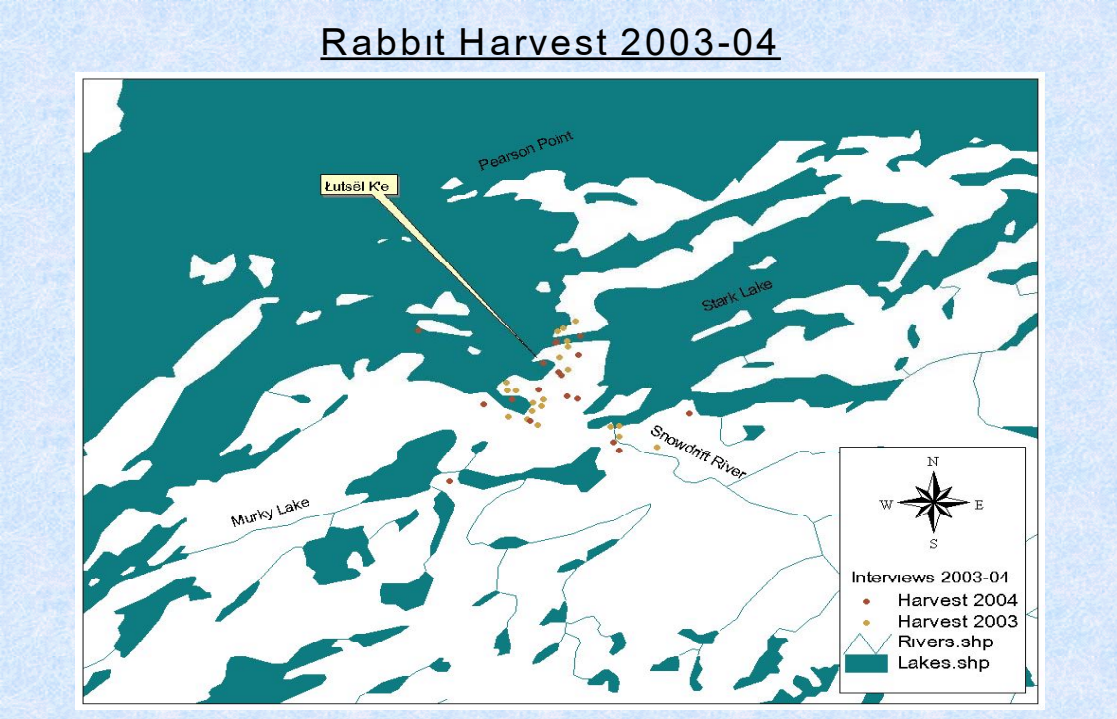

Figure 22. Locations of rabbit harvesting, fall 2003 and fall 2004.

Marten, Mink, Weasel, Lynx, Fox, and Wolverine Cycle

There were 26 trappers interviewed for the 2003-04 cycle, and 15 for 2004-05. Trappers were asked about the numbers, species, and quality of fur-bearing animals they harvested. Here are some of their comments:

> *The weather was really good, not too cold, not too many storms, just regular winter weather. I set traps just around the community in November to January. I haven't noticed any changes in the quality of fur since I last trapped, it's still okay. Just around the community, there were a lot of martens and minks. By the river, by Charlie Catholique's cabin, and in the big bay where the kids go swimming. I trapped less because I had to work nine to five, Monday to Friday, 365 days a year. I only trapped for fun and to show my kids how to trap animals. I had to change my lifestyle to fit the trapping into my life, by going out only on holidays and weekends. (JM 28 04 04)*
>
> *I trapped less this year because there was too much fire. The animals were not as fat, maybe they didn't have enough food because there was too much fire. (JC 28 04 04)*
>
> *The weather was cold this year, so I hardly caught anything…Where I used to trap by Thubun River, it burned, all my country burned, so it's kind of slow now. Trapping changed after conibear traps came in. There's hardly any trappers now, it's too dangerous, a lot of people trapped their hands. (PS 28 04 04)*
>
> *I trapped more this year because I covered a lot more area. There's not many people taking an interest in trapping. The fur prices are not good and there's less animals like marten and mink. (AL 28 04 04)*
>
> *I trapped less this year because I have hardly any traps. Also, there was hardly any fur-bearing animals because of the cold weather. The weather patterns have changed, there's weird weather now. (KD 28 04 04)*
>
> *I trapped less because I hardly went out. There was too much snow, the prices went down, and gas is too expensive. You only break even. (NM 28 04 04)*
>
> *It was a good year, all the animals looked healthy. There was no signs of unhealthy martens or minks. All the martens and minks that my brother caught around Gagnon Lake were really good, he had a really good year because he didn't trap there last year. It was nice just to be there. (PE 06 04 04)*
>
> *The furs of the animals I got had good winter coats. The northern lights make the fur good. (FN 29 04 04)*
>
> *Everything has changed. There's no more dog teams, it's all modernized and people use Skidoos. (RF 28 04 04)*
>
> *Climate change is dramatically changing things, it's not good these days…Where there's lots of rabbits, it's also good for trapping lynx. I trapped less this year because I have no interest in it anymore, but trapping kind of prepared me for the future. It taught me survival skills and how to fend for myself without supervision. (DD 28 04 04)*
>
> *The weather was normal this winter, but towards spring I notice the cold is staying longer than in previous years. I trapped less this year because there's no money in it, you can't make a living from it, but trapping will always be in my blood. (RM 29 04 04)*

I set traps up the big hill this year. I got 14 marten, one fox, and two squirrels. The best places to go are where there is no burnt parts. (FN 12 02 04)

I trapped more this year because I have a Skidoo now. (PL 12 02 04)

The most common animals trapped were marten and mink, although people also set traps for weasel, otter, lynx, wolverine, wolf, fox, and squirrel. Trappers set between two and 50 conibear traps, with an average of 15 to 20. A typical example of trapline results is as follows: 50 marten, 6 mink, 4 weasel, 15 wolverine, 8 wolf, 3 red fox (*AL 28 04 04)*. The majority of the trappers interviewed said they went on same-day trips and didn't stay at any outpost camps or cabins out on the land. Those that did stay out overnight said they just set up wall tents with stoves. Trappers also consistently said they sold their furs, but they don't make any real profits from trapping, just enough to break even and to pay for their gas and oil.

Figure 23 shows the distribution of traplines for 11 of the 26 individuals who participated in this monitoring cycle for 2003-2004. Unfortunately, the maps for the rest of the respondents were misplaced. For 2004-2005, all of the maps were misplaced. However, from the interview transcripts we know that locations of trapping activities included Christie Bay, McLeod Bay, along the north shore of Great Slave Lake, McDonald Bay, Stark Lake, Regina Bay, Moose Bay, Austin Lake, Fort Reliance, Gagnon Lake, Basile Bay, Murky Channel, Murky Lake, Duhamel Lake, Bigstone Lake, Snowdrift River, Back Bay, and the narrows on the North Shore.

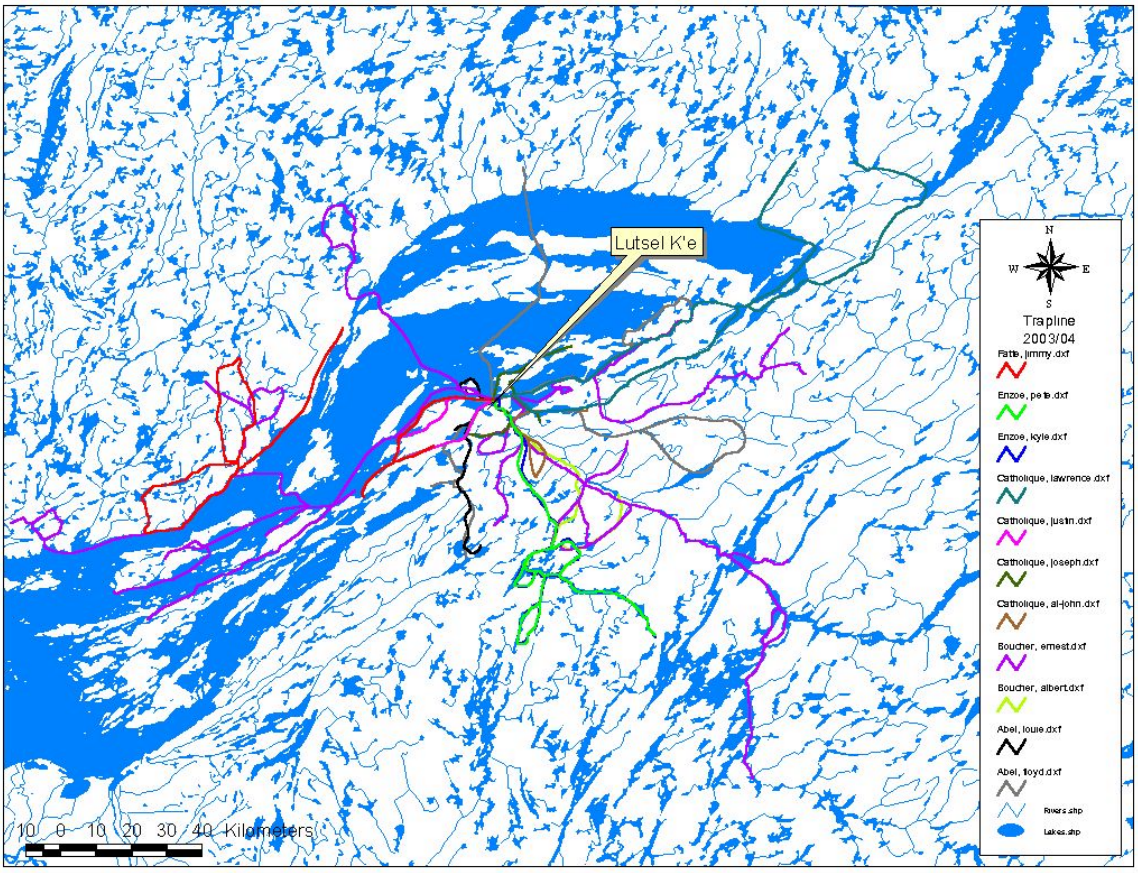

Figure 23. Small mammal traplines for winter 2003-2004.

It is interesting to note the changes in trapping activities over the years, particularly how far from the community of Łutsël K'e trappers are travelling. Despite the introduction of Skidoos, which enable trappers to go further and faster than when travelling by dogteam in the past, the extent of trapping activities has actually decreased. **Figure 24** is a comparison map, showing the historical extent of traplines in relation to the traplines of 2003-2004. A similar map was included in the 2002-2003 Final Report for the *Ni hat'ni – Watching the Land* program (LKDFN and Ellis 2003), and we feel it is useful to demonstrate the comparison again this year. As noted in several of the previous comments, many people trap less and go less far if they do not have a Skidoo or cannot afford the gas to run one.

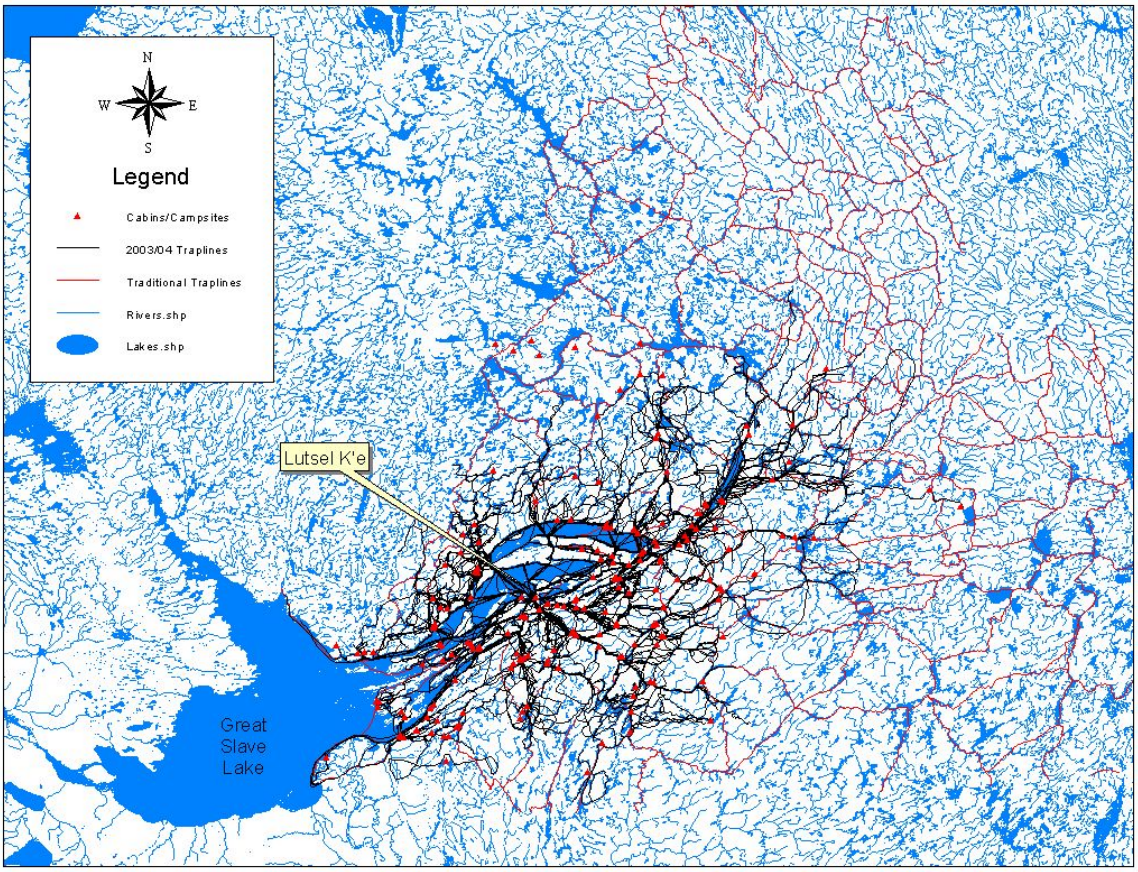

Figure 24. Historical traplines and cabins/campsites vs. 2003-04 traplines.

6.1.4 Duck and goose (Chëth, ʔ ınghes) indicator information

Every spring, ducks and geese migrate through Denesǫłınе traditional territory in large numbers. They often stop to feed at ice-free areas throughout Tu Nedhe (Great Slave Lake), such as river mouths or areas with fast currents. Some of the waterfowl actively harvested during this season are Canada Geese (Det'an), Northern Pintail (Kél cheth), Scoter (Túlzı), and Old Squaw (Hą́ k'al). 20 harvesters were interviewed during the *Duck and Goose Cycle* for spring 2003 (interviews were conducted in spring 2004), and 16 harvesters for the spring of 2004. Questions were based on the following indicators:

- Species and number of waterfowl harvested by local harvesters in the region
- Visual observations of numbers of waterfowl in the area (especially near open water areas)

- Level of noise coming from ducks and geese in open water areas and flying overhead
- Numbers of different waterfowl at traditional harvesting areas in the spring (i.e. Thubun River, Rocher River, Basile Bay, Reliance)
- Extent and thickness of fat deposits in harvested waterfowl

Participants observed a wide variety of waterfowl, including black ducks, pintails, mallards, Canada geese, snow geese, swans, and loons. People generally harvested only a few at a time, enough to feed themselves and their families.

A sample of responses relating to duck and goose harvesting follows:

> *Ducks and geese are resting and feeding in the marsh areas around Łutsël K'e. They were right on time this year, they probably know when to come back. (MB 01 05 04)*
>
> *Ducks and geese always come here, it's the way it has been since time began. (FA 01 05 04)*
>
> *It's good to hunt at night, for geese anyway, otherwise they can see you. (JL 01 05 04)*
>
> *You can tell when they're going to come back by the nice south wind blowing. (Unknown 01 05 04)*
>
> *I've been to the river a few times and there were hundreds of ducks, all kinds of ducks. There's still lots of ice further north…I shot four black ducks and they were good and fat. It was really fun, we stayed out on the land all night long hunting and cooking ducks and geese over an open fire. (JM 01 05 04)*
>
> *This year I hunted ducks and geese in the fall too. I got some black ducks around Pekanatui Point and Basile Bay. Duck hunting is very exciting and fun, especially when you shoot them. The meat was good, but plucking is sometimes hard in the fall. (DD 01 11 04)*
>
> *You can hunt ducks and geese in April, May, and June and in the fall time too. This year I got some black ducks, some mallards, and some geese. Every year it seems to be about the same numbers, and it's always good meat. I see no difference in the meat. If there's any that are sick, you find out when you clean it. You could know the difference. This year was a good year for me, but it was a short spring this year. (SM 06 06 04)*
>
> *This year I hunted on the other side of the bay, I got some mallards and black ducks. They were fat and the meat was really good! It was a good experience, keeping my tradition going. The ducks were pretty fast and challenging. (AC 12 07 04)*
>
> *This year I noticed there were lots of ducks and not enough geese. (WB 15 06 04)*

When asked if they had seen any birds that weren't supposed to be here, several people mentioned magpies. No one in either year noticed any sick or injured birds.

Figures 25 and **26** depict duck and goose harvesting locations for spring 2003 and spring 2004, respectively. For spring 2003, the map shows harvesting locations for 14 of the 20 respondents. Unfortunately, the maps detailing locations for the other respondents were misplaced. Main locations mentioned in interview transcripts are Stark River, Snowdrift River, the Gap, Łutsël K'e Bay, McLean Bay, Basile Bay, Stark Lake, Murky Channel, Back Bay, and Pekanatui Point.

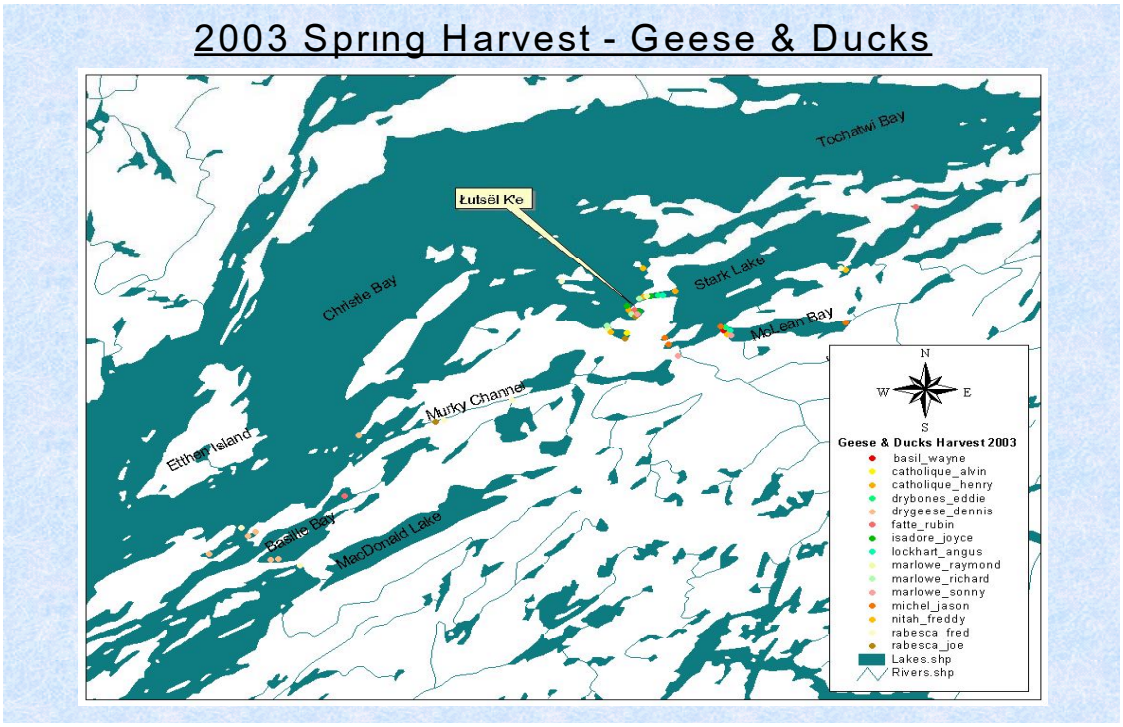

Figure 25. Duck and goose harvesting locations in spring 2003.

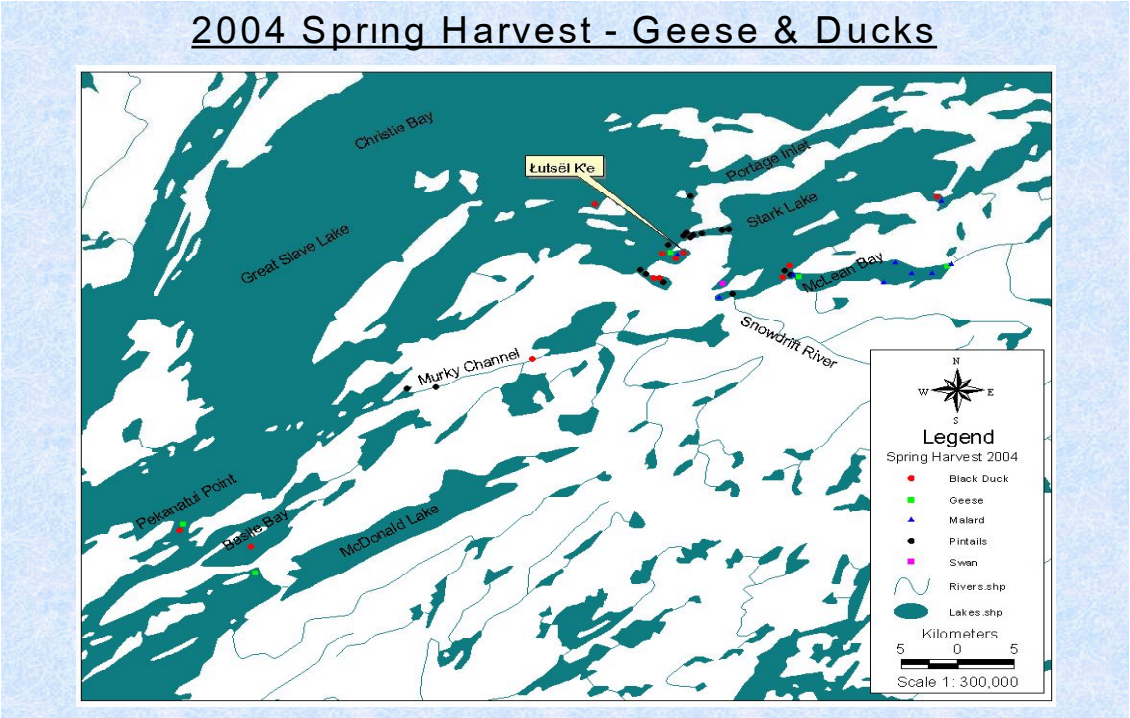

Figure 26. Duck and goose harvesting locations in spring 2004.

6.1.5 Chicken and ptarmigan (Dı, ʔ ełk'aıth, K'asba) indicator information

Information on chicken and ptarmigan indicators was collected for the fall of 2003 (interviews actually conducted in spring 2004) and the fall of 2004 during the *Chicken and Ptarmigan Cycle.* In early November, prior to the first snowfall, these birds are active in the woods with their mating rituals and ptarmigan are gaining their winter plumage. Harvesters pursue these birds, shooting them with shotguns or .22 rifles. 23 harvesters were interviewed for fall 2003, and 15 were interviewed for fall 2004.

The indicators monitored during the *Chicken and Ptarmigan Cycle* were the following:

- Species and number of chickens and ptarmigans harvested
- Presence and numbers of chickens and ptarmigans at traditional harvesting areas in the fall (chicken) and spring (ptarmigan)
- Extent and thickness of fat deposits in harvested chickens and ptarmigans

The following comments in relation to chicken and ptarmigan abundance, distribution, condition, and harvesting locations were collected from harvesters:

> *I didn't get much because I didn't really hunt. I just shot the ones along the road. (MB 27 04 04)*
>
> *The chickens I got were fat, they must be taking good care of themselves. They tasted good. (DC 27 04 04)*
>
> *It was crazy weather this fall. I hunted chicken and ptarmigan up from my house. People don't care much for ptarmigans anymore. (ED 27 04 04)*
>
> *I got three chickens at Snowdrift Bay. I got less this year because I'm going to school in Fort Smith and don't get out on the land much. (SC 27 04 04)*
>
> *I got three chickens on the side of the road up by Duhamel Lake. They were not too bad, but I missed the fat one! I should do this more often. (AM 27 04 04)*
>
> *I went hunting in McLean Bay, Snowdrift River, wherever there's willows. I noticed there were less ptarmigan than in other years. (EC 27 04 04)*
>
> *I got four chickens on the road to the airport, but I hardly saw any around this year. (DD 27 04 04)*
>
> *I got two chickens, but I didn't go out much this year. It seems like they're getting less every year. (JL 27 04 04)*
>
> *Fall times are strange now, sometimes it gets cold fast or it doesn't get cold at all. There were not many ptarmigan this year. (NA 27 04 04)*
>
> *It was an early fall, and cold. I got two chickens at Duhamel Lake, but they were kind of skinny. Maybe it's because of the weather and climate change. There seems to be less around now than in other years. (RA 15 10 04)*
>
> *I saw some chickens and ptarmigans at Snowdrift River, Duhamel Lake, and up the main road, but I didn't harvest any. They're getting too smart for the gun to shoot them! (HA 15 10 04)*

> *It was an early fall, not too much warm weather and cloudy lots. I got two chickens on the road to Duhamel Lake by the Snowdrift River cemetery. For ptarmigans, I got eight by Jepot Bay (?), six in Snowdrift Bay, and four at the airport. The chickens I got looked and tasted normal to me, except these birds were youngling chicks. I went out less this year, I did not have time to hunt due to employment responsibilities. I have too much work and not enough time to go hunting anymore. (JM 18 10 04)*

Several people mentioned that the fall of 2004 was very early, and temperatures got cold very soon. No one in either year mentioned they had seen any sick or injured birds. Everyone harvested small numbers, generally two to five, or "just enough for lunch".

Figure 27 shows chicken and ptarmigan harvesting locations in the fall of 2003 and 2004. Favorite hunting spots include Stark River, Murky Lake, Łutsël K'e Bay, Duhamel Lake, and various hills and trails in close proximity to town (for example, "up the road" or "beside Lawrence Catholique's house").

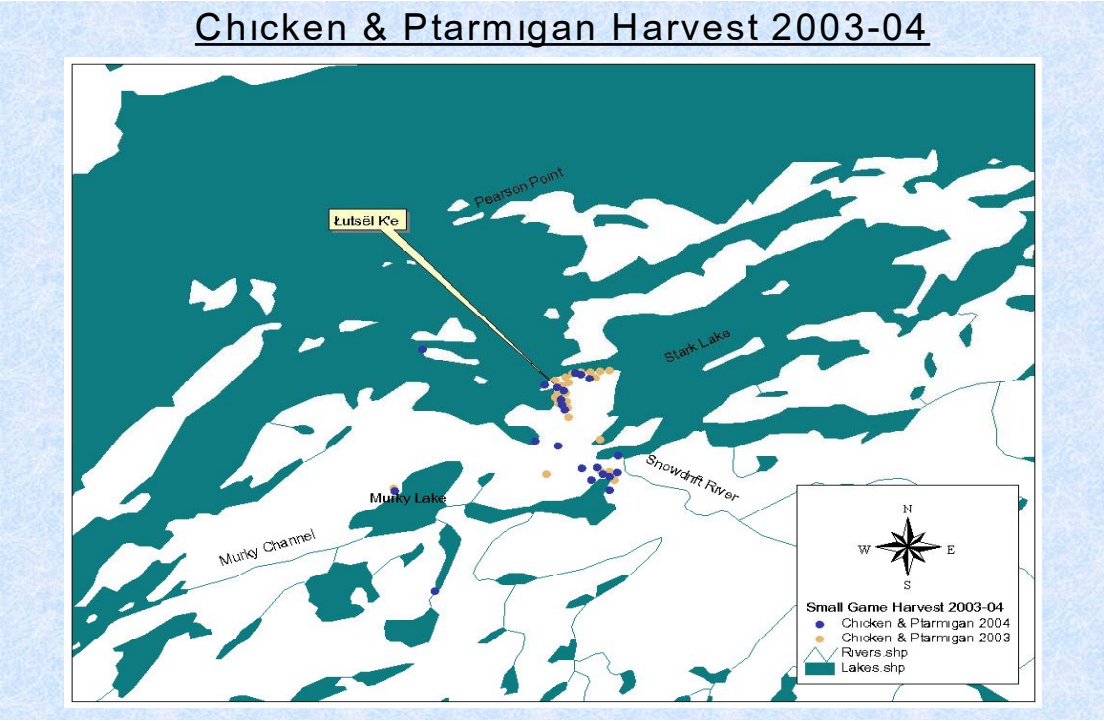

Figure 27. Chicken and ptarmigan harvesting locations, fall 2003 and fall 2004.

6.1.6 Moose (Denıye) indicator information

The *Moose Cycle* interviews were conducted for the fall of 2003 and 2004, during the time when caribou have not yet reached their over-wintering grounds near Tu Nedhe (Great Slave Lake). Moose provide large quantities of meat and thick hides which continue to be used for making traditional Denesǫłıne clothing and crafts. 19 harvesters participated in this monitoring cycle for fall 2003, and 15 harvesters were interviewed for fall 2004. Hunters were asked for information surrounding the following indicators:

- Number, sex, age and location of moose harvested or sighted by local hunters in the traditional territory

- Amount of fat noticed while dressing moose
- Colour and consistency of marrow
- Movement ability
- Presence of discolorations or parasites in muscle or internal organs

A representative sample of harvester responses to monitoring questionnaires follows:

> *I harvested less moose this year because we were too slow and they ran into the bush. (JR 01 06 04)*
>
> *I saw six moose, but I only got two, I let four go. The young cow was fat all over, and the young bull was not so fat. (EB 02 06 04)*
>
> *I went hunting with my dad. The moose we got was not too fat, probably because it never had enough food. (PC 02 06 04)*
>
> *There is good moose country all around us, but mostly there are more tourists than moose now. Sometimes I would see moose, lots of them, when I was doing the East Arm Monitoring Patrol. Now I hardly see anything. Many tourists come from all over the country and they are killing our moose and other animals. It's still happening. (RM 01 06 04)*
>
> *I was out on a picnic, plus going for a ride around Wildbread Bay when we saw a moose standing in the water. The moose was healthy and must have been eating good. (TE 31 05 04)*
>
> *I know there is moose in that region or area, that's why I went there. It's moose country. The moose I got was just right to eat, not too fat or too skinny. (RE 30 05 04)*
>
> *Moose hunting is a part of my culture…July is the best time to hunt moose because the bugs chase them into the water. The moose we got were very fat all over, there was lots of food for moose this year. (DC 31 05 04)*
>
> *I got moose at Caribou Island. I went there because in the past, my father said that this area was very good for moose hunting. The area was not burned, and it's good eating for moose. I went moose hunting less this year because there was lots of caribou. (MA 31 05 04)*
>
> *The weather was windy and lots of bugs, that's the reason why moose go to water. I hunted moose less this year because I was busy working. (BC 02 06 04)*
>
> *The moose I got was not so bad, I don't think I got a really fat moose. It was probably less fat because of movement – staying in one area too long makes them fat. (MB 28 05 04)*
>
> *I went hunting in the fall time, late September, just when it got a little dark. The moose was not very fat. It was a two year old moose, young, just standing on its own. (AE 28 05 04)*
>
> *I saw a cow moose in Basile Bay, but I didn't shoot it. I was just cruising around and saw one. (AR 19 10 04)*
>
> *I shot one cow at Haystack Island. I went there because it's moose country! There's a lot of bays and a lot of weeds, it's a good hunting area. (RM 19 10 04)*

I got a young bull in Basile Bay, and there was another young cow in the same area that I didn't shoot. It's a good area for moose, and the one I got was really fat, especially the backstrap and the brisket had lots of fat. I guess the moose was getting ready for winter and eating really well. I didn't notice any sick or injured moose, but I didn't get out much this year. (HC 14 10 04)

I shot a young bull in Basile Bay. It was cold weather this fall, but I went hunting because I needed meat. (DD 14 10 04)

No respondents in either year mentioned seeing any discolorations or parasites in muscle or internal organs. Moose harvested were all perceived to be healthy and in good condition, although some were less fat than others. Again, several respondents noted that the fall of 2004 was very early and very cold.

Figure 28 shows moose harvesting and sighting locations in the fall of 2003 and 2004. Favourite spots include McLean Bay, the North Shore, Wildbread Bay, Basile Bay, Regina Bay, Stark Lake, Duhamel Lake, and various other places with lots of bays and weeds.

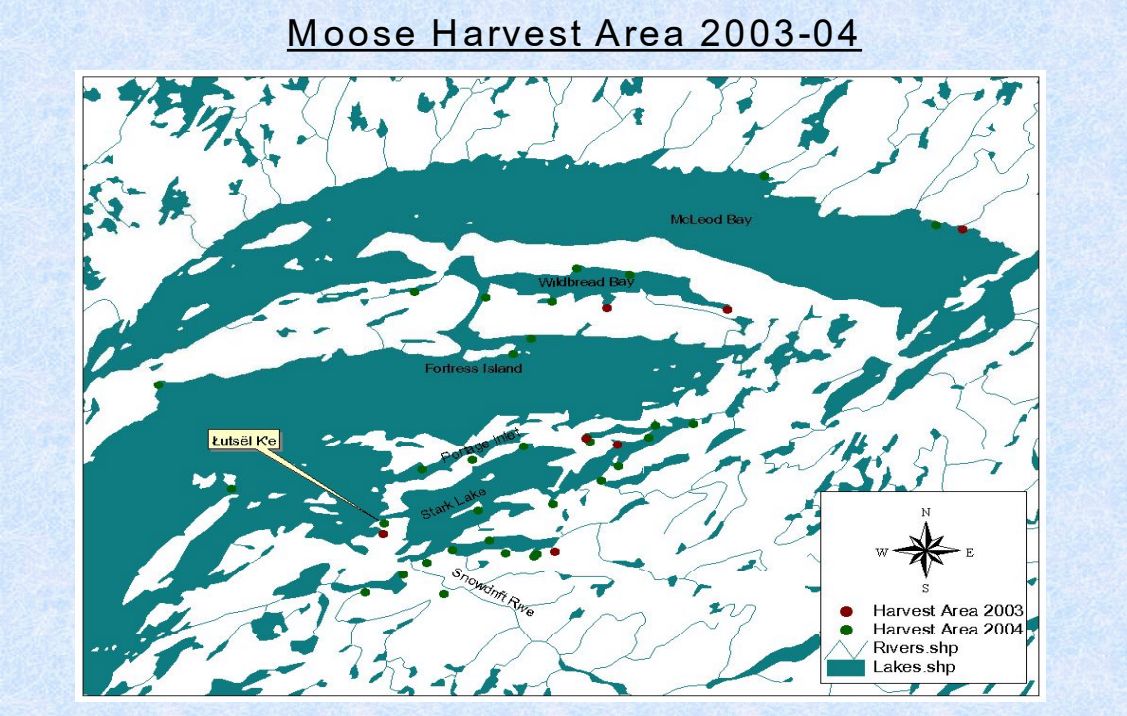

Figure 28. Moose harvesting and sighting locations in fall 2003 and fall 2004.

6.1.7 Berry (Jí) indicator information

The *Berry Cycle* interviews were completed for the summer and fall of 2003 (interviews actually conducted in spring 2004) and 2004. Berries harvested include raspberries in mid-summer, blueberries and cloudberries in summer, and cranberries and crowberries in early fall. Berry-picking continues to be an activity undertaken primarily by women. 21 harvesters were interviewed for 2003, but only seven were interviewed for 2004 (this was primarily due to the reluctance of the researcher, a male, to talk with the women).

Berry-pickers were asked to comment on the following indicators:

- Type and abundance of berries in traditional berry patches
- Location of berry harvesting activities
- Levels of rain during the spring and summer months
- Temperature during the spring and summer months
- Forest fire activity in the region

Some of the representative responses are as follows:

> *I enjoy picking berries. They taste good and they're healthy, and you get some time out on the land. (VD 01 06 04)*
>
> *I enjoy being outdoors and enjoying the fresh air. I used the berries I picked to make jam, and just ate them. (MF 01 06 04)*
>
> *Berry picking is a family tradition, and I get to go outdoors. I ate them, and used them to make jam and for other baking. (LA 01 06 04)*
>
> *This year there was less berries. There's more if there's a lot of water. I used my berries for jam and ate them plain with sugar. (ME 10 09 04)*
>
> *This year I picked blueberries and cranberries. There was less this year because it was a late summer. (NC 10 09 04)*
>
> *I like to use my berries for jam, or eat them with ice cream, or mix them in my bannock or pancake mix.. (ML 10 09 04)*

Figures 29 and **30** show berry-picking locations in the summer and fall of 2003 and 2004.

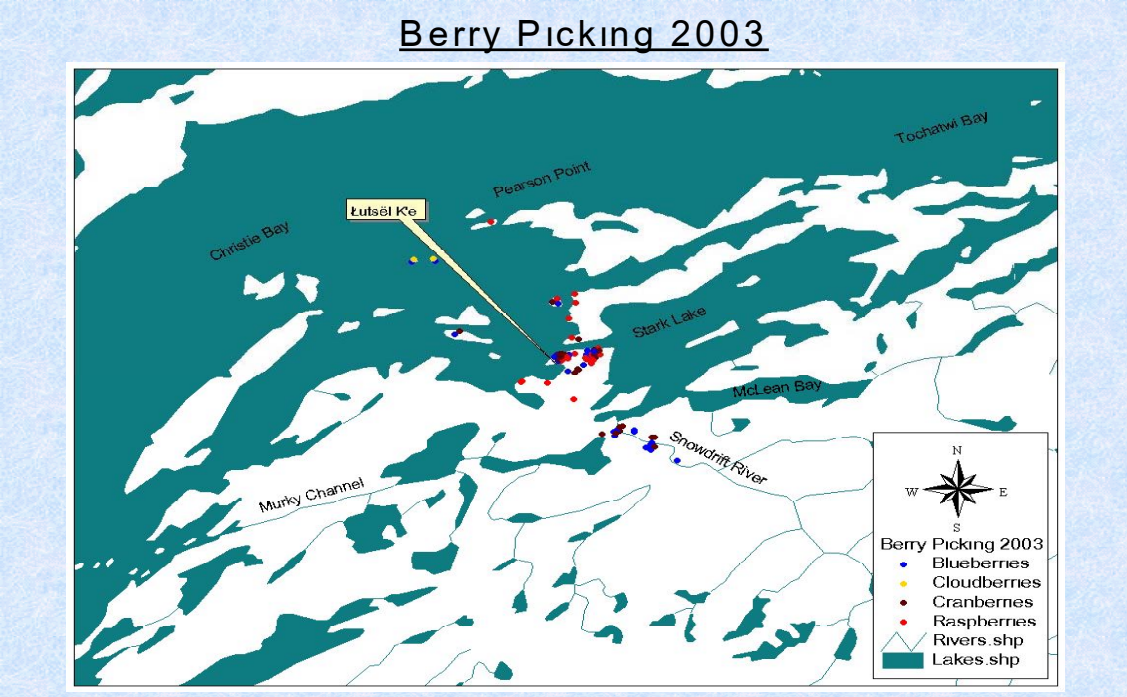

Figure 29. Berry-picking locations, summer and fall 2003.

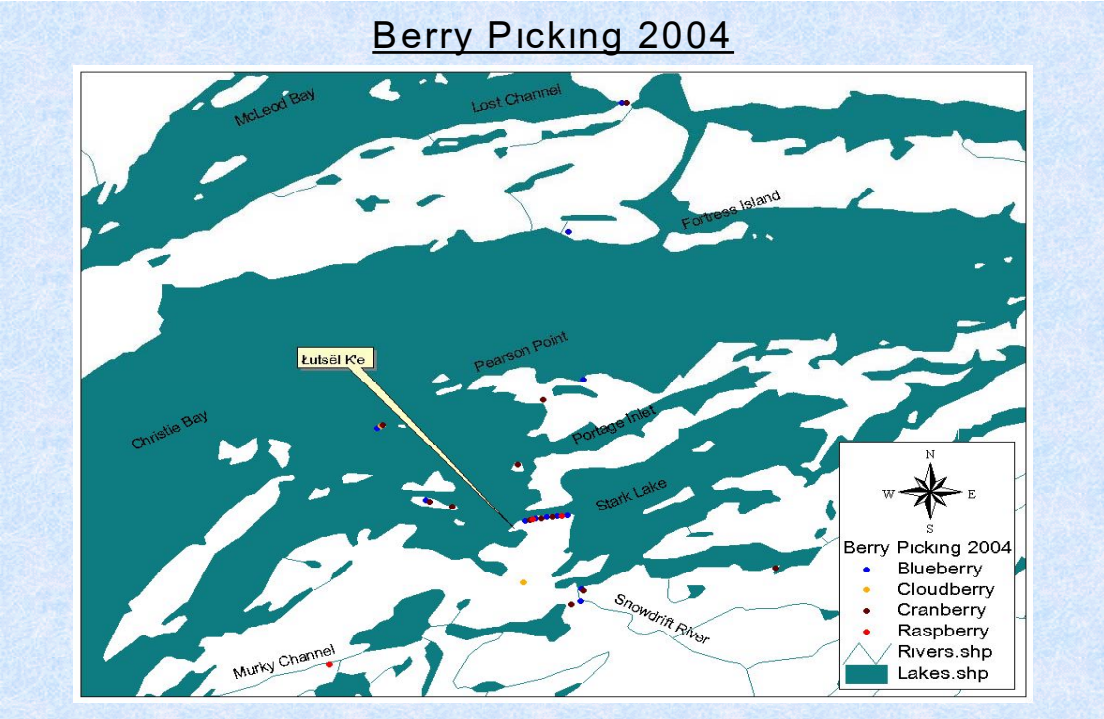

Figure 30. Berry-picking locations, summer and fall 2004.

6.2 ANALYSIS AND INTERPRETATION OF ENVIRONMENTAL MONITORING RESULTS

Verification and interpretation workshops were included in both the 2003-2004 and 2004-2005 proposals, and were scheduled for the end of each specific monitoring cycle. Researchers would study the interview transcripts, summarize the data, and present it to the monitoring cycle participants and Elders. Overall themes and trends would be identified, and workshop participants would classify the information in the monitoring cycles as indicating no change (i.e. what "has always been" in the Denesoł ıne experience), natural change or potential unnatural change, or definite unnatural change.

Due to various delays discussed earlier in this report, no workshops were held in 2003-2004. For the first part of the annual cycle, there was literally no information to present and no researchers on staff to present it. During the second half of the cycle, efforts were concentrated on training new staff, catching up on all the missed monitoring cycles, and finishing the monitoring cycles already scheduled for those months. There was literally no time to conduct the workshops. In 2004-2005, we again suffered delays due to similar problems, so interpretive workshops were not held at the end of each season when they were scheduled. However, we did conduct a series of four workshops in early March 2005, wherein we presented the results of the environmental monitoring cycles from both years. The *Spring Interpretive Workshop* discussed results of the *Beaver & Muskrat* and *Duck & Goose* cycles. The *Summer Interpretive Workshop* discussed results of the *Summer Angling* and *Berry Picking* cycles. The *Fall Interpretive Workshop* discussed results of the *Fall Fishnet, Moose, Rabbit, Chicken & Ptarmigan,* and *Fall Caribou Hunt* cycles. The *Winter Interpretive Workshop* discussed results of the *Winter Caribou* and *Trapping* cycles.

The discussion and responses from the workshops is summarized below in categories indicating whether information from a particular monitoring cycle represents no change, natural

change/potential unnatural change, or definite unnatural change in the opinion of Elders and land-users.

6.2.1 Monitoring cycles indicating no change

During 2003-04 and 2004-05, some monitoring cycles indicated there was no change in species numbers, behaviour, or habitat. Respondents did not offer any comments that indicated anything particularly unique or unusual, and classified these species as fitting with what they considered to be "normal". The following monitoring cycles indicated no change in both 2003-04 and 2004-05:

Beaver & Muskrat Cycle

- *Spring Interpretive Workshop* participants noted that the animals they harvested were all healthy.
  They've been nice and fat and juicy! (RE 14 03 05)
- Animals were found in the usual areas, and there had been no major changes in locations of trapping. Some people noted there were less muskrat push-ups and beaver dens in some locations than in other years, but thought that this was within the normal range of habitat variation.
- Harvesters said there were definitely less people trapping beavers and muskrats than in the past, mostly because of dropping fur prices and the fact that conibear traps are more dangerous than the old leghold traps. Other people mentioned that there are other sources of income which take precedence.
  In the old days, you had to trap for your money. Now there's old age pensions and welfare. It's not so much a matter of survival nowadays. (PM 14 03 05)
- Some prominent harvesters and Elders noted that lately there appeared to be more beavers and muskrats, but agreed this was probably due to the reduction in trapping pressure.

Moose Cycle

- *Fall Interpretive Workshop* participants indicated that there had been no noticeable changes in moose population numbers, harvesting locations, or general health of the animals.
- Elders commented that moose population numbers do rise and fall over the years, for various reasons, but that these slight variations are considered normal.
  Some years there's lots of moose, some years there's not. Same as with berries, some years they're plentiful and some years there's not much. That's just the way it is, it's reality. Sometimes it's because of forest fires, how much food they have. (JBR 14 03 05)
- Several participants mentioned that they thought people were harvesting more moose than they used to, because they have access to faster boats that can get them further distances.

Winter Trapping Cycle

- *Winter Interpretation Workshop* participants agreed that all the animals harvested had been healthy, and there were no signs of sickness or disease.
- People are trapping less than they used to – low fur prices, the dislike for the conibear traps (perceived as more dangerous for the trappers themselves), the inability to actually make a profit, and just plain "laziness" were all given as reasons.
- One major change people are noticing is the weather. In the winter of 2004-05 especially, trappers noted there had been a lot of snow and overflow.

6.2.2 Monitoring cycles indicating natural change or potential unnatural change

Duck & Goose Cycle

- *Spring Interpretive Workshop* participants noted that although ducks and geese continue to migrate through the Łutsël K'e area, there have been some changes in the last couple of years.
- The spring of 2004 was extremely late (there was still ice on the lake in mid-June), and the arrival of migrating waterfowl was correspondingly late as well. Those birds that did arrive earlier had a hard time finding areas of open water in which to feed.
- Elders and land-users agreed that numbers of waterfowl have been declining over the last couple of years. They especially notice there are less geese.
- The ducks and geese harvested were all perceived to be healthy. However, several people expressed concerns over possible contaminants in waterfowl, and suggested the WLED should pursue partnership studies with other organizations (Ducks Unlimited, Canadian Wildlife Service, World Wildlife Fund, etc.) to do more extensive studies.

  I think we should have a closer look at the waterfowl…do a study on the migration routes, see what kind of environment they go through. And kill a few, examine their stomach contents and do studies on toxins, the rate of toxins being released from their system…It's a safety thing, I'm always concerned about consuming ducks nowadays. They go a long ways. I don't know how many tailings ponds and sewage sites there are between here and Timbuktu. (SN 14 03 05)

Berry Cycle

- *Summer Interpretive Workshop* participants noted that good berry-picking locations remained the same as in previous years, and the berries picked were all in good condition.
- There were less berries in the summer and fall of 2004 as compared to the previous year, and several people commented that the berries were also smaller. This was deemed to be natural change due to the weather. It was an extremely late spring in 2004 and a very early fall, so the berry growing season was very short. There was also not much rain, compared to the summer and fall of 2003 when the ground was much wetter.

Summer Angling Cycle

- *Summer Interpretive Workshop* participants noted that although there hadn't been any major changes in fish numbers or condition other than in Stark Lake (see Section 6.2.3), and the majority of the fish caught are healthy, there were some minor changes they had noticed.
- Several participants said the fish meat is softer than before, more "soggy", especially when compared to the taste of the fish in areas like Kache (Fort Reliance). With more discussion, most people agreed this was probably due to an increased water temperature in the lake, likely because of global warming and climate change.
- One participant said it takes longer now to catch a fish. This may suggest that population levels are decreasing, but requires more investigation.

  You don't catch them as fast, it used to be one right after another. (SN 14 03 05)
- Numerous people expressed concerns about possible overharvesting, due to the increasing numbers of people sport fishing in the East Arm.

Fall Fishnet Cycle

- *Fall Interpretive Workshop* participants all agreed that fish continue to be abundant.

  You still catch lots, even if you just leave them [the nets] out overnight. (NA 14 03 05)

- Participants agreed that people were harvesting less fish in nets now than they used to. The main reason given was that there are no more dog teams to feed. Other reasons were that people have no nets or equipment, have no Skidoo, or simply have no interest in it.
- Other than the fish in Stark Lake (see Section 6.2.3 below), the majority of fish harvested are perceived to be healthy. However, as with the *Summer Angling Cycle,* people said they were starting to notice differences in the taste and texture of some fish meat. This is a factor that will be examined more closely next year.

Rabbit Cycle

- *Fall Interpretive Workshop* participants noted that all the rabbits harvested had been healthy, and there was no indication of sickness or disease.
- Rabbit numbers are perceived to be on the rise again in the last couple of years, and people are seeing a lot more tracks around. This is seen to be natural change, part of the usual rise and fall in rabbit numbers.
- There are still not many people setting snares, but this was perceived to be because of the availability of other sources of food like caribou, and also a lack of interest.

  In the past, people used to live off rabbits. We also used to sell rabbits to our Hudson's Bay manager. I used to sell rabbits three for a dollar. (JBR 14 03 05)

Chicken & Ptarmigan Cycle

- *Fall Interpretive Workshop* participants noted that the chickens and ptarmigans harvested were all healthy.
- All participants said that there were definitely less of both species in the last couple of years, but were not sure why. They could reach no consensus on whether this was natural change or potential unnatural change.

6.2.3 Monitoring cycles indicating definite unnatural change

Fall Caribou Hunt Cycle

Due to the problems with missing interview transcripts (see Section 6.1.1), we are unable to offer definitive comments from hunters in this section. However, during the *Fall Interpretive Workshop,* participants noted the following:

- Although caribou were harvested on the eastern side of Artillery Lake in the fall of 2003 and 2004, there is still perceived to be less animals than there used to be in that area.
- Caribou are crossing at different locations than they used to, migrating more towards the north shore of Artillery Lake and not through the traditional crossings.
- The caribou were late in coming to the Artillery Lake region in both years, making it difficult to organize fall hunts. Cold temperatures and high winds mean that less people will participate (especially elders and families with young children), and the unpredictable weather often delays the plane charters.
- Changes in caribou migration routes are overwhelmingly thought to be caused by the diamond mines, with caribou avoiding those areas with high levels of disturbances.
- The caribou harvested were thought to be healthy and in good condition, and hunters at the workshop could not remember seeing any animals that were sick or injured the last two years. However, one participants made the following observation:

  The people at home might only see the good stuff. Hunters may see unhealthy animals with injuries or pus, but they probably don't bring it home. That's why it's important to get

> *both perspectives – do the interviews out on the land with the hunters, and also interview the women at home who fix the meat and hides. (SD 14 03 05)*

The trends noticed in the last few years in regards to changing caribou migration routes appear to be continuing. This causes great concern for all community members.

Winter Caribou Hunt Cycle

Similarly, people continue to notice drastic changes in caribou migration routes and body condition during the winter harvesting period. This is of grave concern to people who rely on caribou for subsistence. *Winter Interpretive Workshop* participants made the following observations:

- Caribou have been harvested less in the past couple of winters due to their increasing distance from Łutsël K'e. Those families without access to Skidoos and/or money for gas find it difficult to participate in harvesting activities, and rely on other family members or the community freezer for meat. Although mining activities are seen to be the main cause of the changes in migration routes, forest fires were also mentioned as contributing to this change.

  > *We've also noticed every spring when the caribou migrate up to the barrenlands, when all the snow melts on the land, that's when the caribou used to pass through here, but not anymore. The caribou don't come through* Łutsël K'e *anymore. (JBR 14 03 05)*

  > *One of the reasons that we don't get as much caribou around our area is because of the forest fires, they've burnt all the caribou's food. (NA 14 03 05)*

- Those caribou harvested were seen to be in generally good condition, with the exception of the bulls in the winter of 2003-04. There were a few cases noted in the interviews themselves (see Section 6.1.1) of caribou that showed signs of disease or sickness. Some had cysts on the meat or internal organs, some had higher incidences of warble flies, and some were observed with leg injuries such as bruises. As well, participants noted that in the winter of 2004-05, the Beverly herd was in much better condition than the Bathurst herd. The Bathurst caribou were thought to be extremely skinny this past winter, and people are attributing this to the greater numbers of disturbances they have to migrate around (ie. diamond mines). The animals are spending more time running away from disturbances and are having to travel great distances to go around or otherwise avoid these disturbances, which means they spend less time feeding and are more stressed.

  > *Now we're seeing a lot of caribou that are sick, that have pus on their hooves and have swollen hooves. They're also really skinny. (PM 14 03 05)*

  > *Amongst all the animals, the caribou are the ones we notice have changed the most in the last few years since the development of the mines. Every year we notice there are more unhealthy caribou. Out of all the wildlife, the caribou are the ones that are changing drastically and fast…In the olden days, people who could see into the future used to say that people are going to suffer and the caribou are going to disappear. They're going to be lost. And when people see the tracks where caribou used to pass by, they're going to cry…That's what's happening now. (JBR 14 03 05)*

Stark Lake Fish

- In both the *Summer Angling* and *Fall Fishnet Cycles,* workshop participants continued to express concern over the condition of the fish in Stark Lake. Fish in this area are described as deformed (big heads and skinny bodies), having funny colours, having sores with lots of pus and fluid in them, and generally "scary looking".

- Fish in this condition continue to be caught only in the direct vicinity of the Stark River and Stark Lake, but people are keeping a close watch on whether these characteristics are being found in fish caught in the greater Tu Nedhe (Great Slave Lake).
- We are still awaiting the results of testing for the fish samples that were collected from the Stark Lake area in the summers of 2001 and 2002. The graduate student who was given this project quit her program about halfway through analyzing the data. We are currently investigating other options for completing the analysis. Once we have the results, we will be better able to determine the next steps for the project. We anticipate there will be another field season in the summer of 2005.

6.3 SOCIO-ECONOMIC MONITORING RESULTS AND INTERPRETATION

This section will detail results from socio-economic monitoring activities carried out during 2003-2004 and 2004-2005. Five different surveys were completed in 2003-2005, detailed in separate sections below. Due to various delays discussed earlier in this report, no workshops were held in 2003-2004. For the first part of the annual cycle, there was literally no information to present and no researchers on staff to present it. During the second half of the cycle, efforts were concentrated on training new staff, catching up on all the missed monitoring cycles, and finishing the monitoring cycles already scheduled for those months. There was literally no time to conduct the workshops. The 2004-2005 workshops were not conducted on schedule due to similar delays. However, a workshop for each of the five surveys was conducted in late February and early March 2005, wherein results for both years were presented. Analysis and interpretation provided during these workshops is included in each appropriate section below.

Due to intellectual property concerns, copi es of questionnaires used during the socio-economic monitoring cycles are not provided in this report. They can, however, be obtained upon reasonable request by contacting: Chair Peter Enzoe; Wildlife, Lands and Environment Committee; Łutsël K'e Dene First Nation; PO Box 28, Łutsël K'e, NT, X0E 1A0.

6.3.1 Community Health Survey

Beginning with the *Community-Based Monitoring* project in 2000 (see LKDFN and Parlee 2001b), quantitative data has been consistently collected around indicators of community health. Separate questionnaires were used for adult and youth respondents, and the survey was conducted with all community members (as many as were available) over 10 years old. Because of issues related to literacy, researchers visited each community member and filled out the survey form with them.

Information collected was entered into the Excel database, developed under Dr. John O'Neil. A total of 192 people (138 adults and 54 youth) were interviewed in 2004, and in 2005 we interviewed 158 people (125 adults and 33 youth). We also held an *Interpretive Workshop* in early March 2005 to discuss both years of results, and comments gathered from the 12 participants are included in the relevant section. In previous years' reports, the majority of results were presented with adult and youth responses compiled together and total percentages given. For 2003-2005, we decided to try separating the adult and youth responses for each survey where possible, as we felt we might get a better idea of where the variations in responses occurred. A selection of results for 2003-2005 is detailed below. In the interests of reducing the size of this document, not all graphs are presented, but results are detailed for those that are not included.

Several questions relate to economic development, including employment status over the past year, whether people were employed in the mineral development sector, where people's employment interests lie, and whether people have made major equipment purchases or home improvements. These results are displayed in **Figures 31** to **36.**

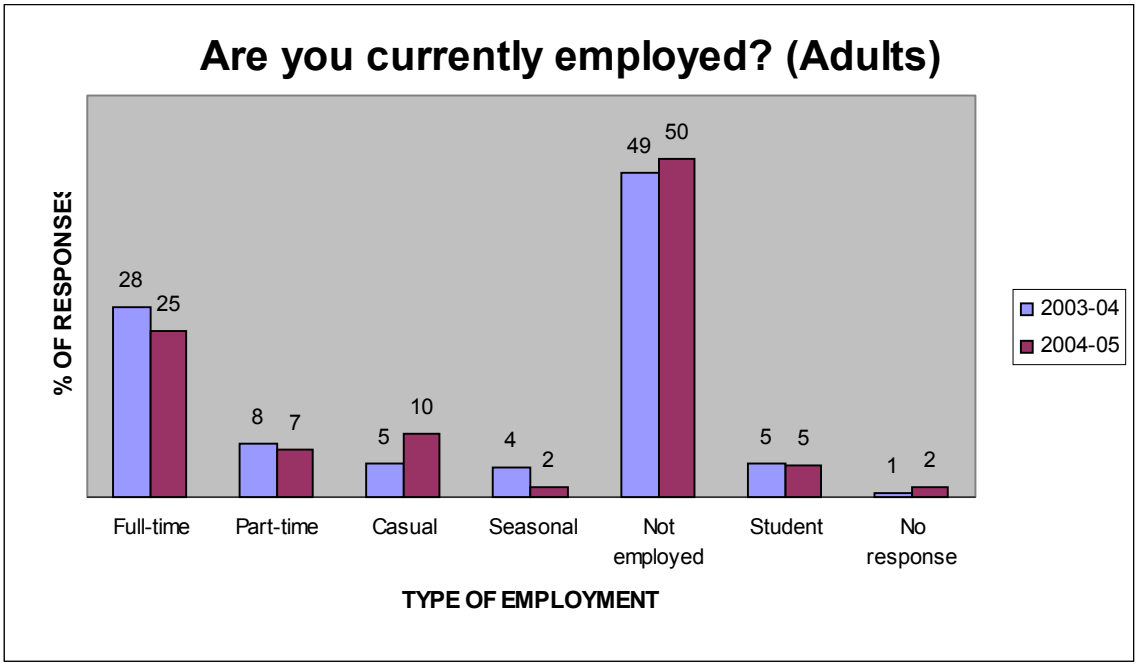

Figure 31. Employment status in the community of Łutsël K'e, 2003-2005.

In both years, approximately half of the adults surveyed had not been employed over the last year. The majority of those who were employed (25-28%) were full-time, with the rest divided into part-time, casual or seasonal employment. A small proportion of respondents were students or did not answer the question.

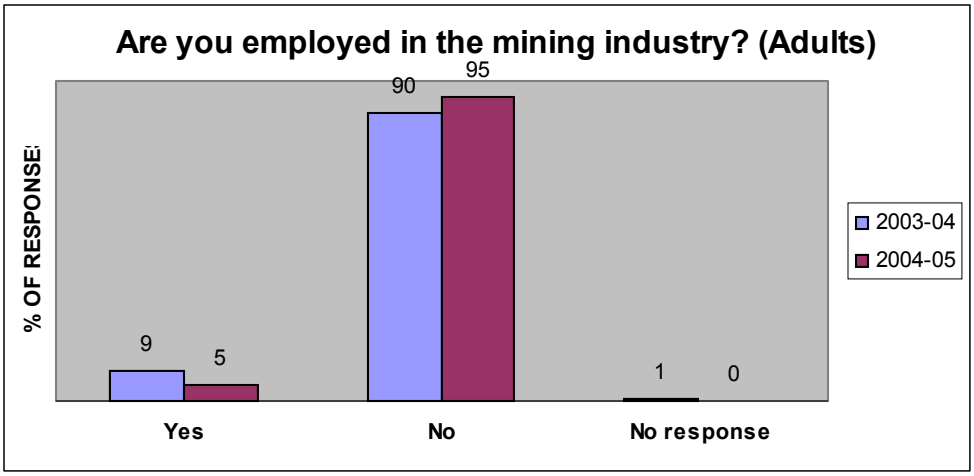

Figure 32. Employment in the mineral development sector, 2003-2005.

Figure 32 clearly shows that almost all of the adults interviewed (90% in 2003-04 and 95% in 2004-05) were not employed in the mining industry. This type of employment includes direct employment at an operating mine, as well as in related occupations such as prospecting, staking, camp help, and general labour. *Interpretive Workshop* participants mentioned various factors

which may be preventing more people from working in the mining industry, many of which were echoed in the *Mine Employee and Spouse Survey* (see Section 6.3.2). These included criminal records, the inability to successfully pass employers' mandatory drug testing, lack of qualifications, inadequate training and education, and the dislike for spending long periods of time away from home.

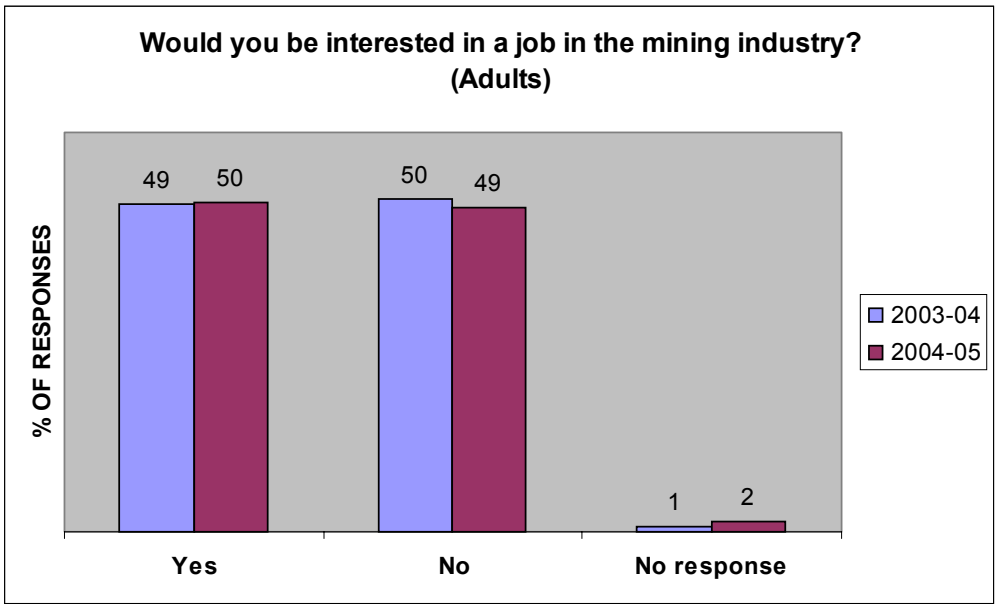

Figure 33. Adult employment interests, 2003-2005.

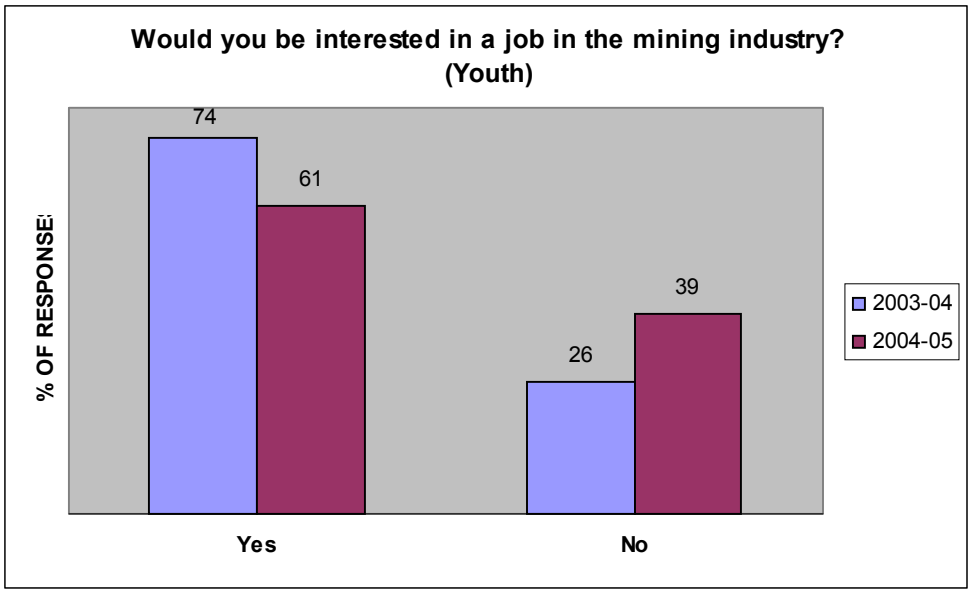

Figure 34. Youth employment interests, 2003-2005.

Figures 33 and **34** show some interesting comparisons. For adults in both years, there is an even split between those who would be interested in a job in the mining industry and those who wouldn't. When the same adults were asked if they would be interested in a job in Łutsël K'e,

approximately three-quarters of respondents in both years (73% in 2003-04 and 74% in 2004-05) answered yes. Clearly, most adults would prefer to work in the community if there were jobs available. For the youth, there is a higher proportion who would be interested in work in the mining industry, although the percentage drops slightly from 2003-04 (74%) to 2004-05 (61%). Similar to the adults, a high proportion of youth (73-80%) in both years would also be interested in a job in the community.

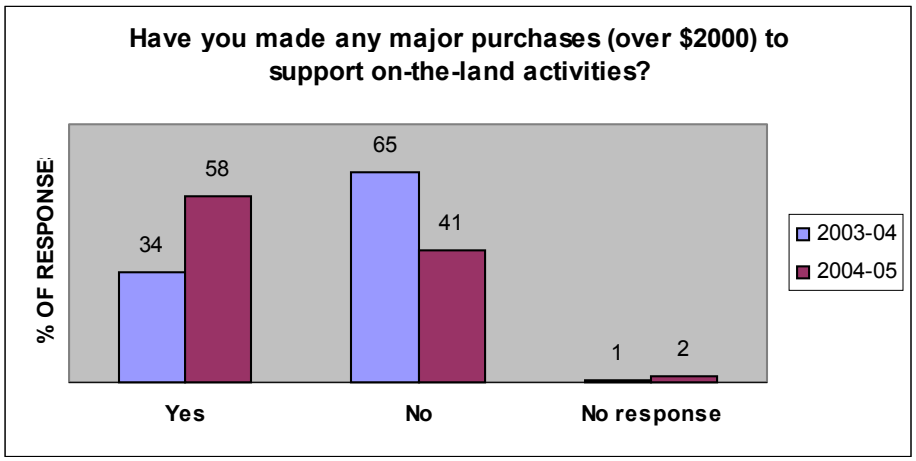

Figure 35. Major equipment purchases by adults, 2003-2005.

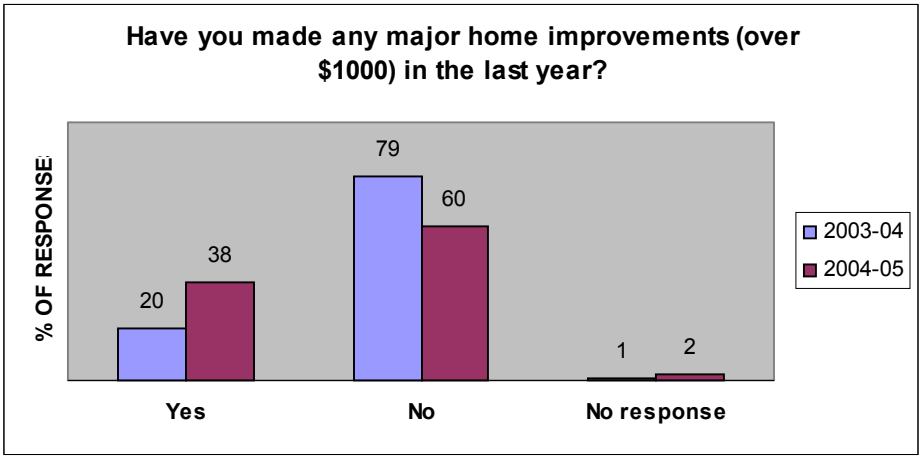

Figure 36. Major home improvements by adults, 2003-2005.

Figures 35 and **36** reflect a general lack of extra income with which to purchase equipment and make home renovations. This could be due to lack of employment, but could also be that the money people are making is being spent on other priorities. *Interpretive Workshop* participants noted that although there is an increase in both equipment purchases and home improvements from 2003-04 to 2004-05, when you consider the number of families who would like to purchase equipment for on-the-land activities and the number of homes which need improvements, these percentages are still low. As in previous years' workshops, people also mentioned the Harvesters' Assistance program, which provides up to $5000 towards the purchase of on-the-land equipment, as being a factor in the higher number of purchases over the last few years. Several people noted that even those who are employed with high wages often spend their money in Yellowknife rather than on their home.

Some of the other questions in the *Community Health Survey* were designed to gather responses related to the strength of community spirit and interpersonal relationships. This includes levels of volunteerism, levels of participation in public meetings, levels of participation in traditional drum dances and hand games, the number of times adults have taken youth out on the land with them to pass on traditional skills, and general community support for youth activities. These results are displayed in **Figures 37** to **46.**

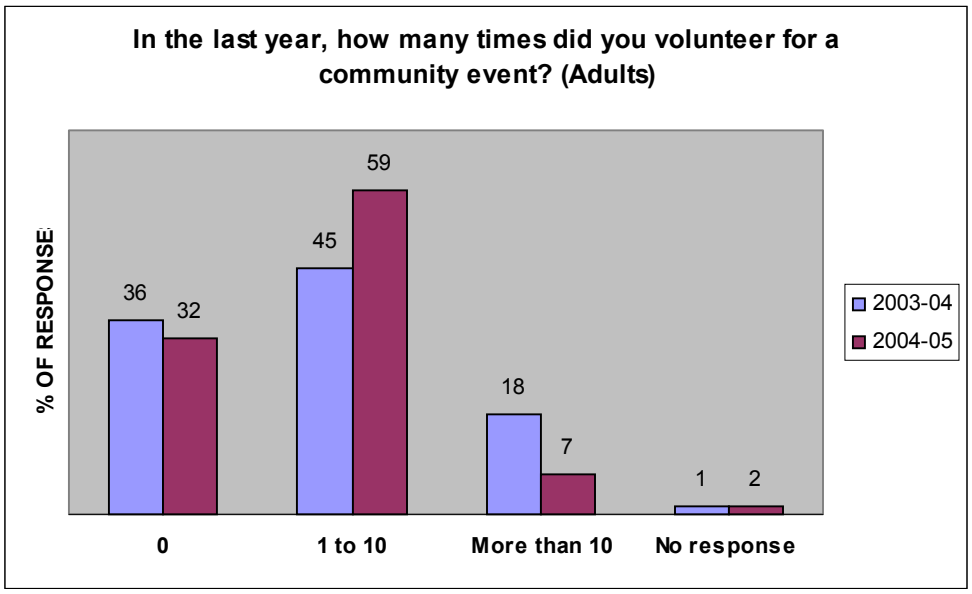

Figure 37. Levels of volunteerism by adults, 2003-2005.

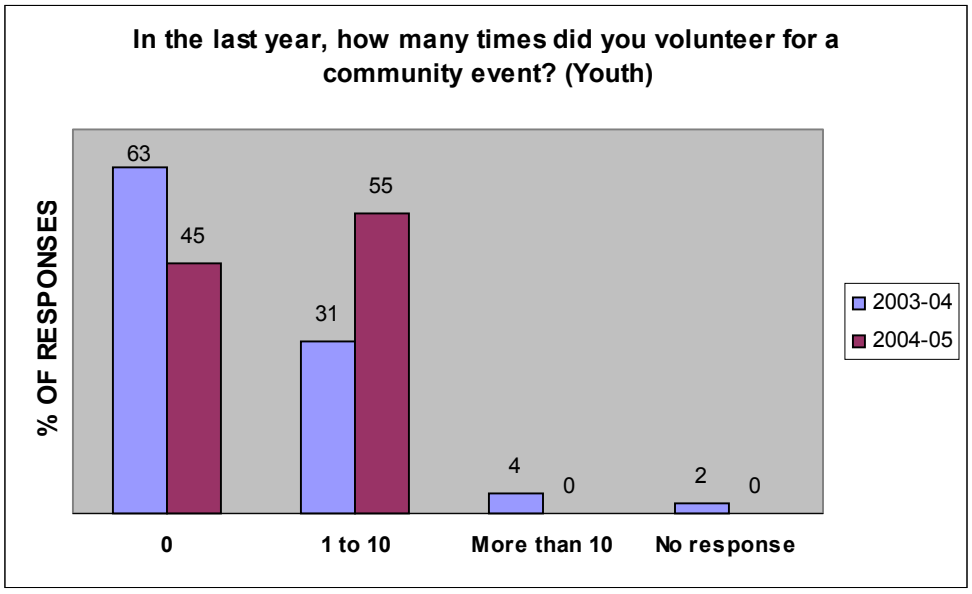

Figure 38. Levels of volunteerism by youth, 2003-2005.

In both years, approximately half (45-59%) of adults said they had volunteered from one to ten times, and a much smaller percentage (7-18%) volunteered more than ten times. There were

more youth volunteering in 2004-05 than the previous year (the number who volunteered from one to ten times increased from 31% to 55%), but approximately half (45%) of youth surveyed did not volunteer at all that year. Although there was an increase in the numbers of both adults and youth who volunteered at least once, there is still a high proportion of community members who do not volunteer. When asked why more people are not volunteering, *Interpretive Workshop* participants said that some people are not motivated or don't want to do anything if they don't get paid. Some people, women especially, may be interested in volunteering but can't find babysitters. One person noted that she had several times mentioned to various departments that she was interested in volunteering, but never got any response. Several youth said it would depend on what the job involved and if they liked doing that kind of activity.

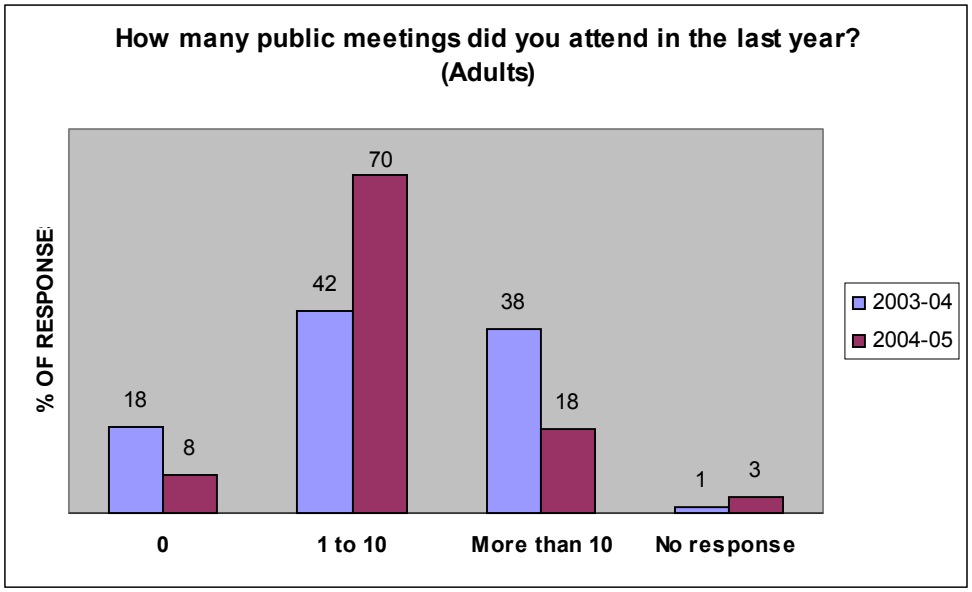

Figure 39. Levels of attendance at public meetings by adults, 2003-2005.

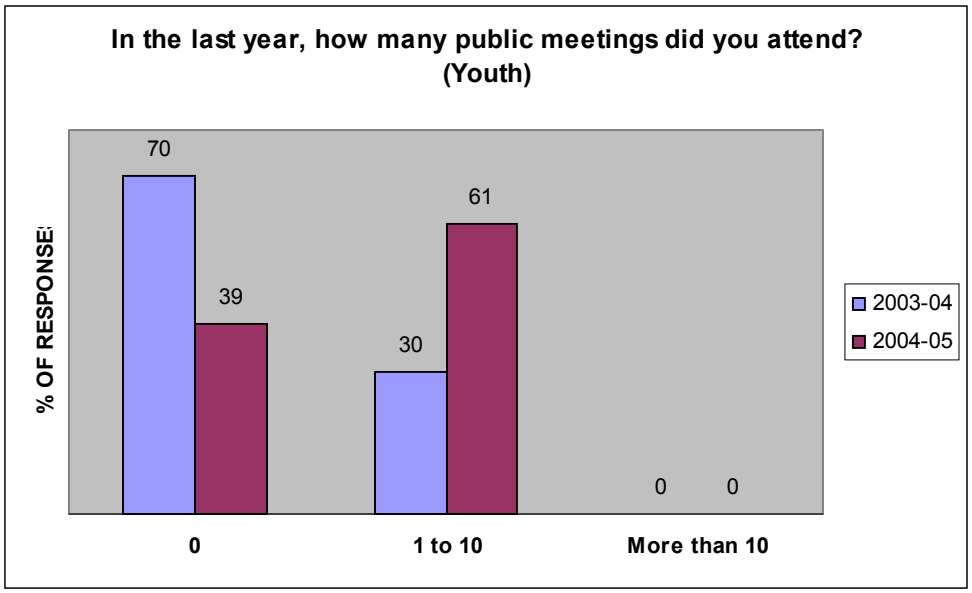

Figure 40. Levels of attendance at public meetings by youth, 2003-2005.

Figures 39 and **40** show there was a large increase in the number of adults who attended between one and ten public meetings (42% in 2003-04 to 70% in 2004-05), and a corresponding drop in the number who attended more than ten meetings. Similarly, the numbers of youth attending between one and ten public meetings increased (30% in 2003-04 to 61% in 2004-05). *Interpretive Workshop* participants noted that in 2004-05, especially for meetings related to parks and protected areas, youth were invited to attend and did so as part of their regular school day. Youth also mentioned that for a while there had been a Youth Committee and regular meetings, but that these had stopped with the departure of a graduate student who had been working in the community. When asked why there was still a significant portion of the community who do not attend public meetings, *Interpretive Workshop* participants offered the following responses:

> *Depending on the topic of the meeting, lots of people don't see the point of going. They don't think their comments really make any difference. I've heard this lots of times from people around town, especially the middle-aged people. (MK 09 03 05)*
>
> *We can do so much but we just don't have the time. It's not because we don't want to participate, it's because of family and other commitments. When I worked all day, I don't want to spend my evenings at a meeting. I'd rather spend time with my family. (RA 09 03 05)*

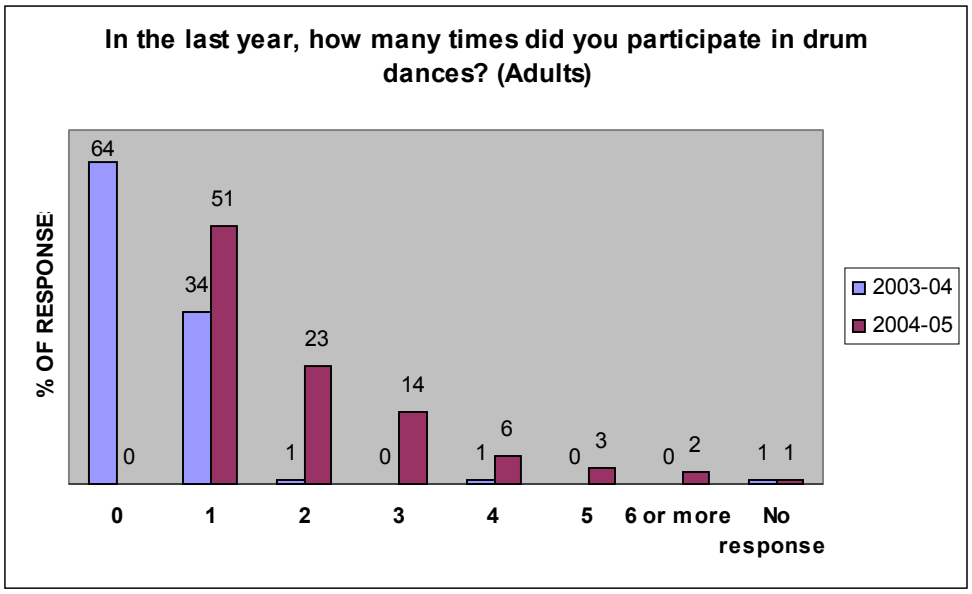

Figure 41. Levels of participation in drum dances by adults, 2003-2005.

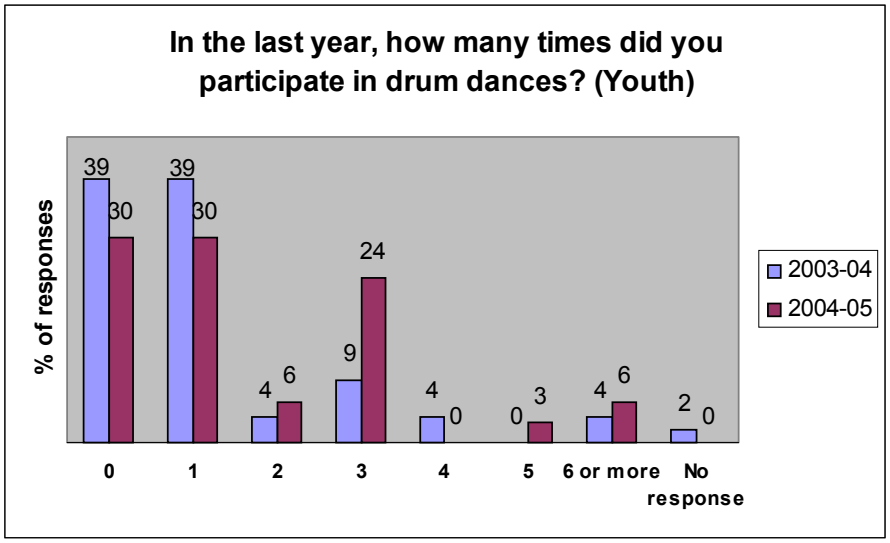

Figure 42. Levels of participation in drum dances by youth, 2003-2005.

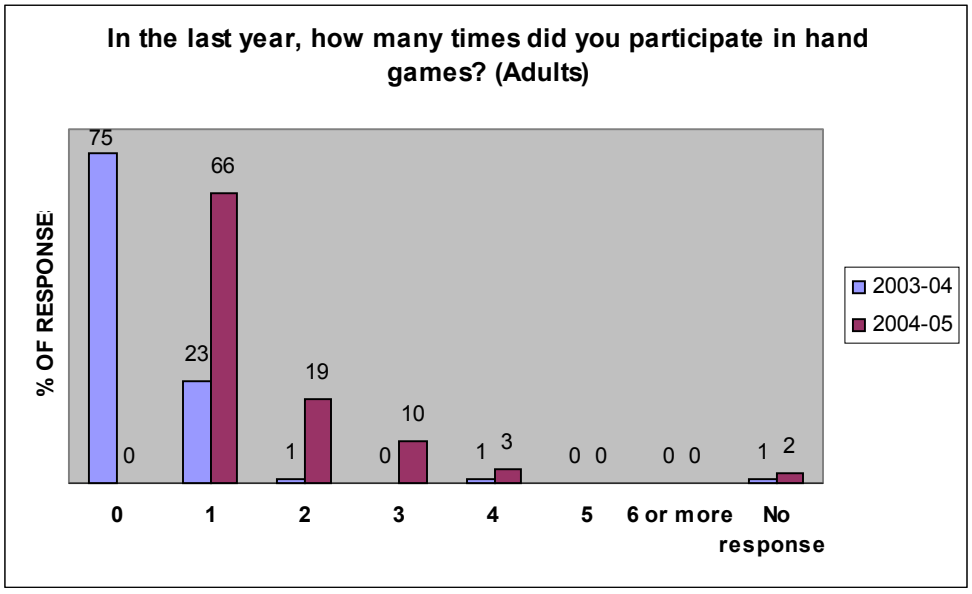

Figure 43. Levels of participation in hand games by adults, 2003-2005.

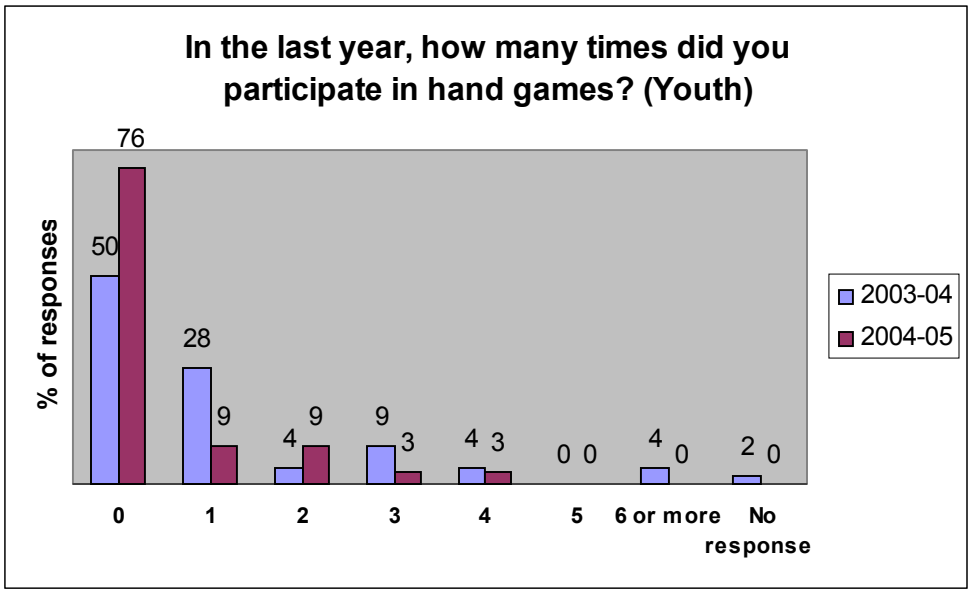

Figure 44. Levels of participation in hand games by youth, 2003-2005.

Figures 41 to **44** clearly show that the majority of people did not participate at all or not very often in traditional recreation activities. However, for both drum dances and hand games, there was an increase in both adults and youth who participated at least once from 2003-04 to 2004-05. *Interpretive Workshop* participants noted that these activities are not offered very often, and this is probably the reason you don't see higher numbers of people participating. Several of the youth noted that they hardly see anyone practicing either drum dances or hand games, except for in Kache (Fort Reliance) during the annual summer gathering or for special events like assemblies. They also said that they don't play because they don't know how, and that more people should be teaching the youth.

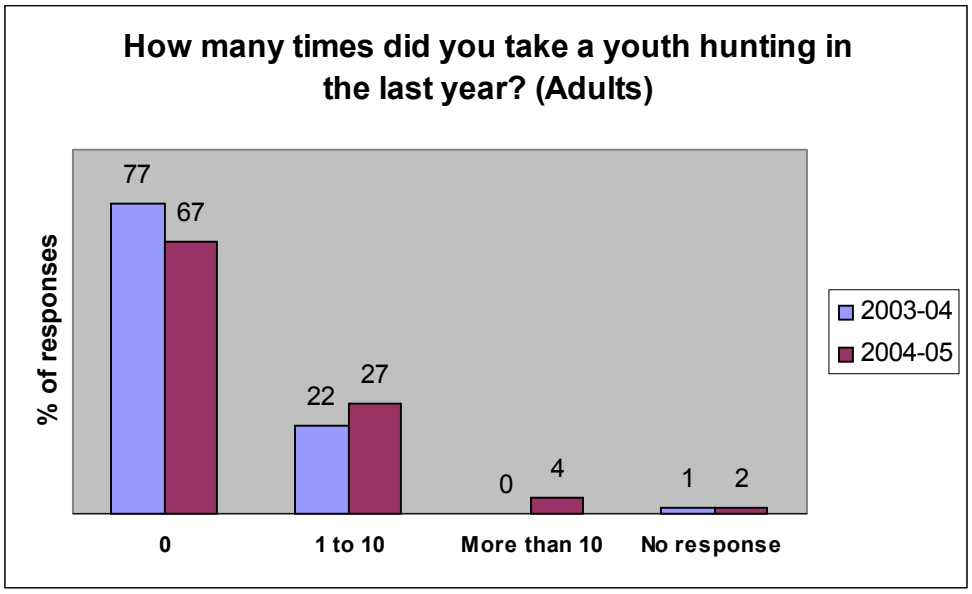

Figure 45. Youth involvement in caribou hunting, 2003-2005.

This question was asked to adults only, and there is clearly a lack of youth participation in caribou harvesting activities, with 67-77% of participants answering zero in both years. *Interpretive Workshop* participants were asked to give their opinions on the reasons behind this. Adults and elders said that the youth were often not interested, even when asked, and that they prefer to just go out and "get the job done" with other experienced hunters. In contrast, the youth at the workshop said that they were hardly ever asked to go out, and that most of the elders only take their grandchildren and their children's friends. However, they did admit that sometimes they are too lazy or not motivated, and they also noted that some families just do not have Skidoos.

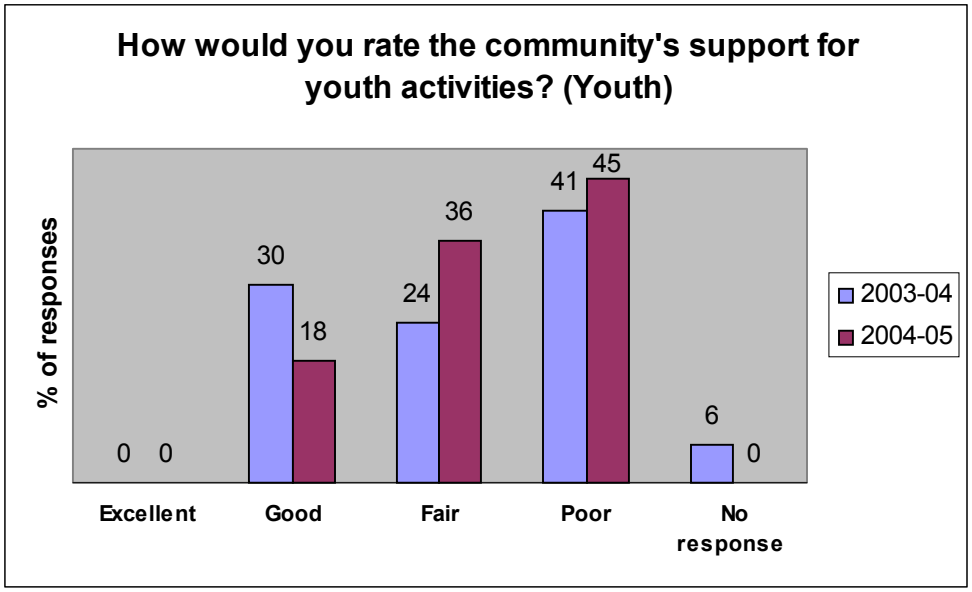

Figure 46. Level of community support for youth activities, 2003-2005.

This was asked to youth interviewees only, and in both years approximately half (41-45%) of respondents rated the community's support for youth activities as "poor". Youth at the *Interpretive Workshop* said that other than a few activities at the community hall or at the gym, there is nothing for youth to do in Łutsël K'e. They also noted that even during community special events such as spring carnivals, the events are often focused on the adults or require entry fees, which prevents many youth from participating.

Another set of questions in the *Community Health Survey* involves an examination of how often people participated in traditional activities over the past year. This includes a variety of harvesting activities, knowledge of and visits to spiritual sites, concern about environmental impacts of industrial development, and the strength of the Chipewyan language (Denesǫłıne Yatı). The results for these questions are displayed in **Figures 47** to **68.**

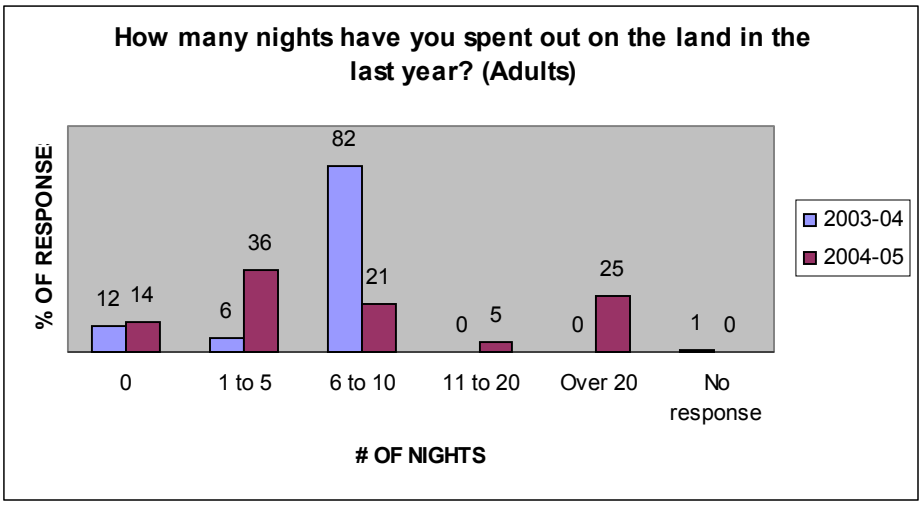

Figure 47. Amount of time adults spent out on the land, 2003-2005.

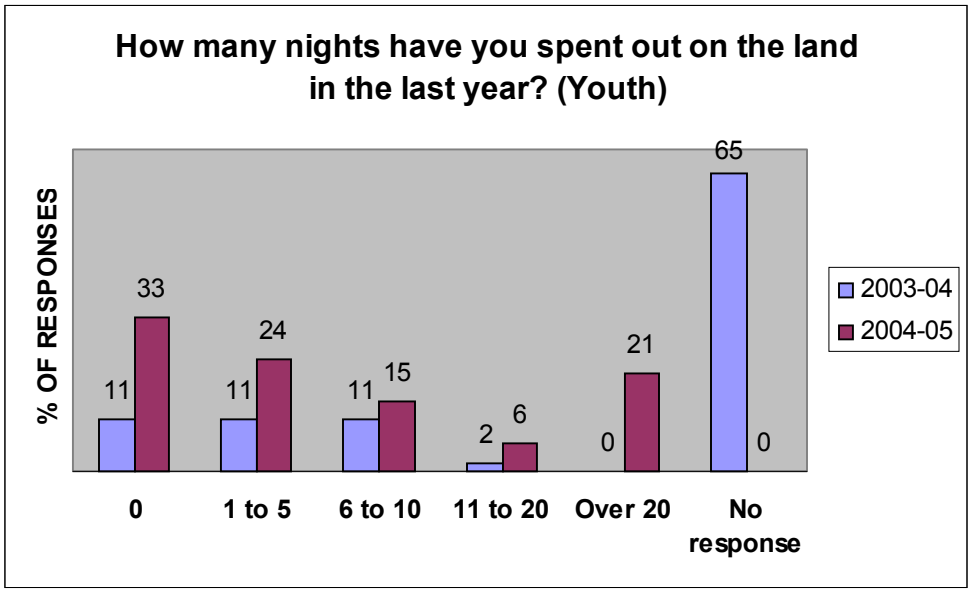

Figure 48. Amount of time youth spent out on the land, 2003-2005.

Figures 47 and **48** show that in 2003-04, the majority of adults (82%) said they spent from six to ten nights out on the land in the last year. This number dropped considerably in 2004-05, but seems to have been because people spent either less or more time out on the land (36% spent from one to five nights and 25% spent over 20 nights). For the youth, in 2003-04 there is a high percentage (65%) who gave no response. This is likely due to respondents not understanding the question. The researcher failed to go through the survey with the youth, but rather gave it to them to fill out on their own, and also failed to double-check that they were filled out completely before filing them. In 2004-05, the responses are fairly evenly distributed throughout the various categories. During the *Interpretive Workshop,* participants noted that many people, especially those with young children, prefer day trips, or that families without access to Skidoos or boats can only go on picnics or other activities within walking distance of their homes. The existence of youth programs such as the summer fish camp continue to contribute to higher numbers of youth who spent at least a few nights out on the land.

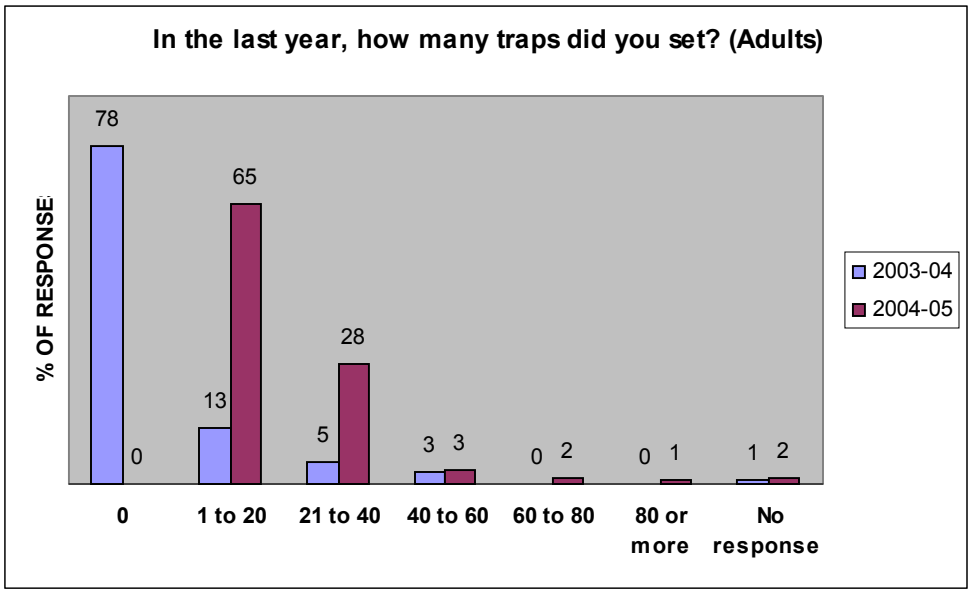

Figure 49. Levels of adult trapping activity, 2003-2005.

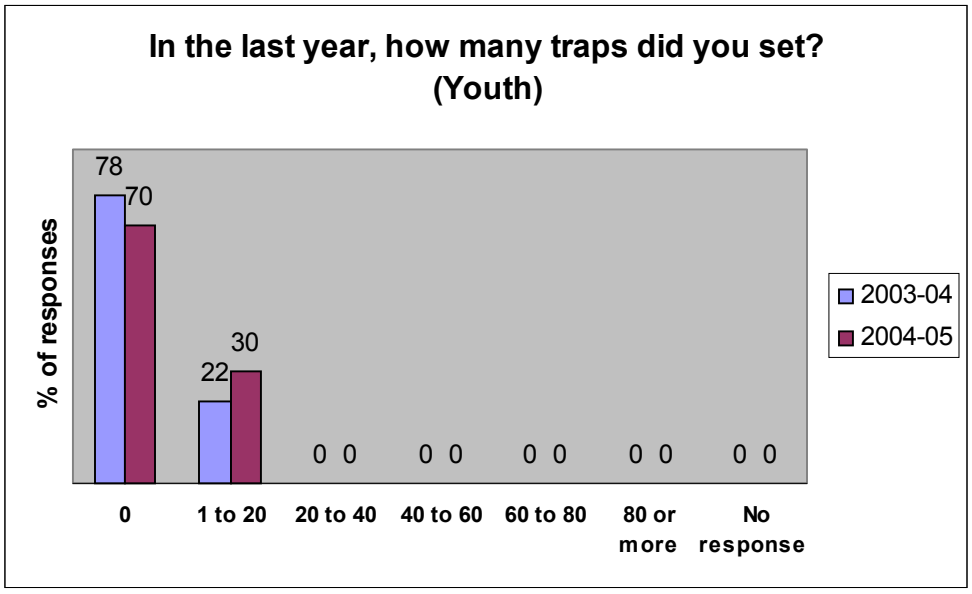

Figure 50. Levels of youth trapping activity, 2003-2005.

Figures 49 and **50** show that for adults, there was a substantial increase from 2003-04 to 2004-05 in the number of people who set at least one trap. There is a small proportion of dedicated trappers in the community who continue to pursue this activity. However, as described in Section 6.1.3 on fur-bearing animals, there are various reasons for the lack of serious participation in trapping, including the inability to make a lot of money due to low fur prices, lack of interest, and/or the lack of equipment and money for gas. For the youth, in both years the vast majority (70-78%) did not set any traps, and those who did only set minimal amounts (one to 20). As well, many women and younger children participated in this survey, and they traditionally do not go trapping.

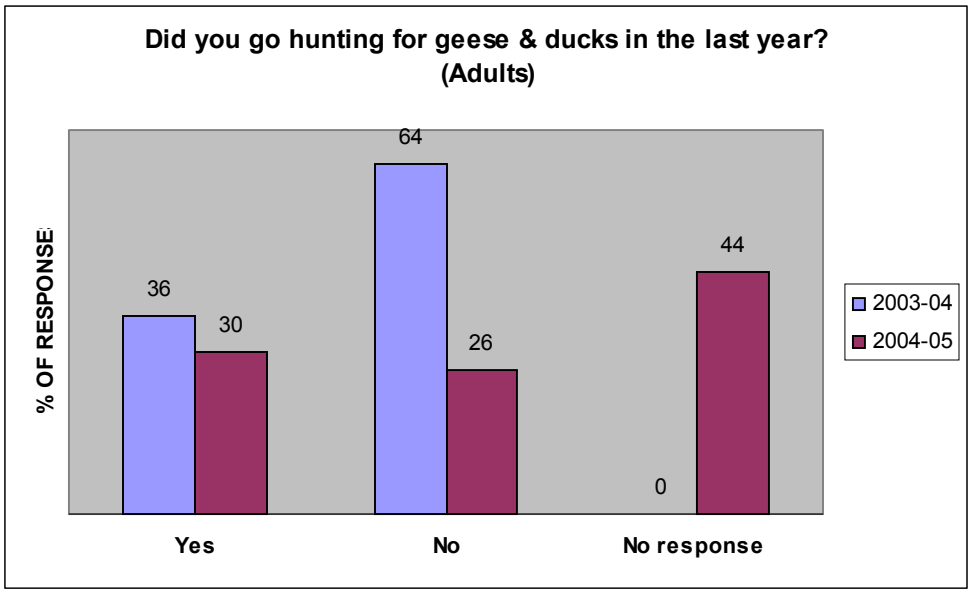

Figure 51. Adult geese and duck hunting, 2003-2005.

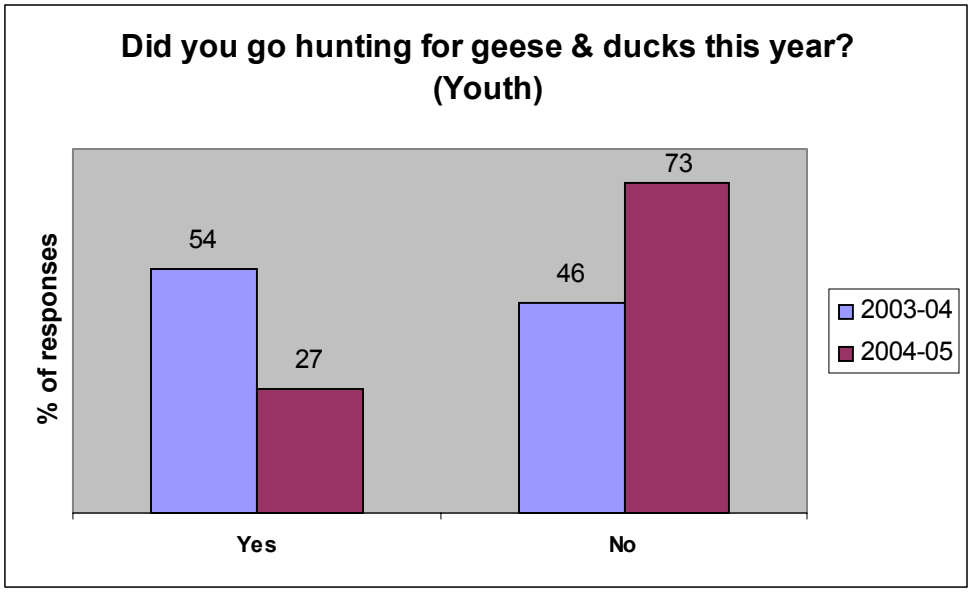

Figure 52. Youth geese and duck hunting, 2003-2005.

In 2003-04, well over half (64%) of those adults interviewed had not gone waterfowl hunting. In 2004-05, almost half (44%) of respondents did not answer this question. Again, this is the fault of the researcher for assuming that people could fill out the survey forms themselves without guidance, and the failure to check over the forms for completeness before they were filed. There is a large decrease from 2003-04 (54%) to 2004-05 (27%) in the number of youth who went waterfowl hunting. *Interpretive Workshop* adult participants again noted that many youth definitely seem to be losing interest in these activities, and that they would rather stay home and watch television than go out on the land. Youth at the workshop again said that it is more a lack of being invited than a lack of interest. People also noted that the extremely late spring and generally cool weather in 2004-05 played a role in the decreased numbers.

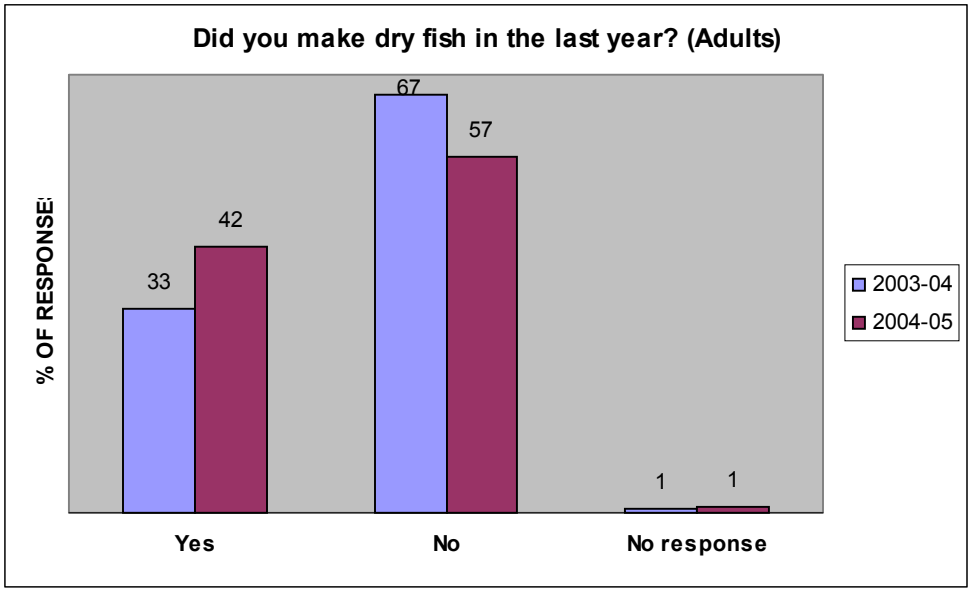

Figure 53. Adult dry-fish making, 2003-2005.

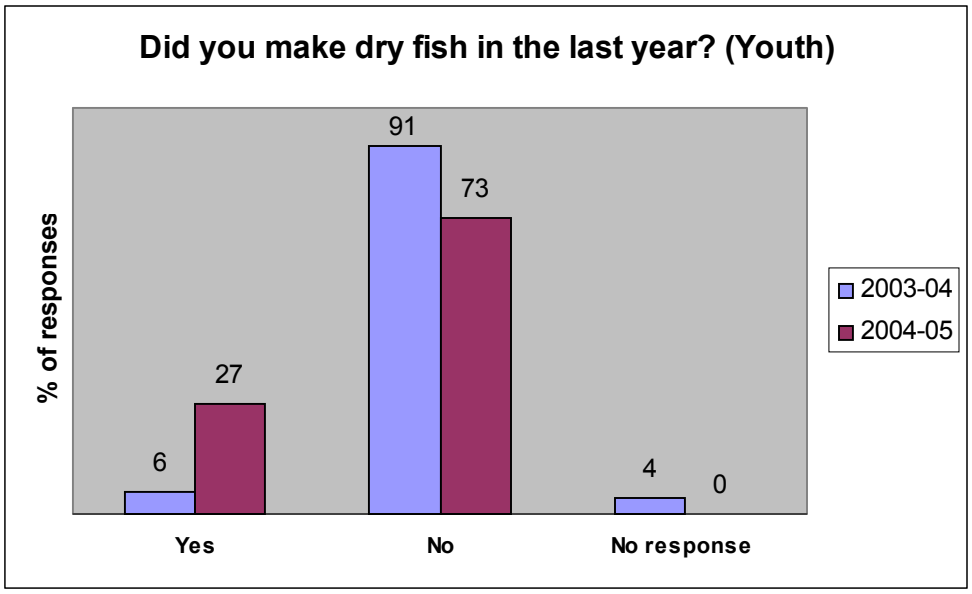

Figure 54. Youth dry-fish making, 2003-2005.

There continues to be a large proportion of both adult and youth in Łutsël K'e who do not make dry-fish, although there was a slight increase in those who did for both groups (the proportion of adults who answered yes rose from 33% in 2003-04 to 42% in 2004-05, and the proportion of youth who answered yes rose from 6% in 2003-04 to 27% the following year). Many of the adults at the *Interpretive Workshop* said that they themselves are just learning how to make dry-fish, so they cannot teach anyone else just yet. The youth said that other than the week-long summer fish camps with elders, no one is teaching them these skills.

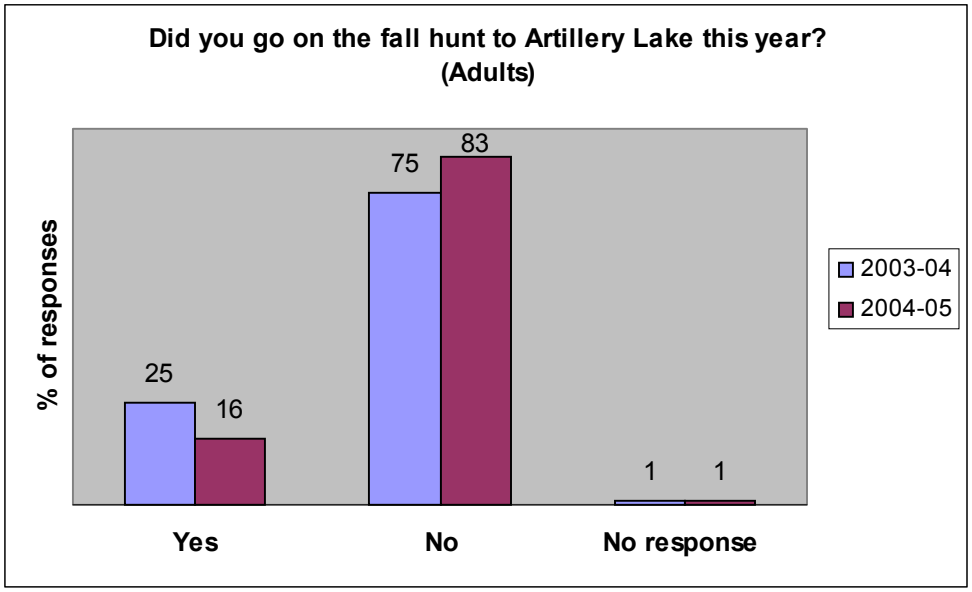

Figure 55. Adult participation in fall caribou hunt, 2003-2005.

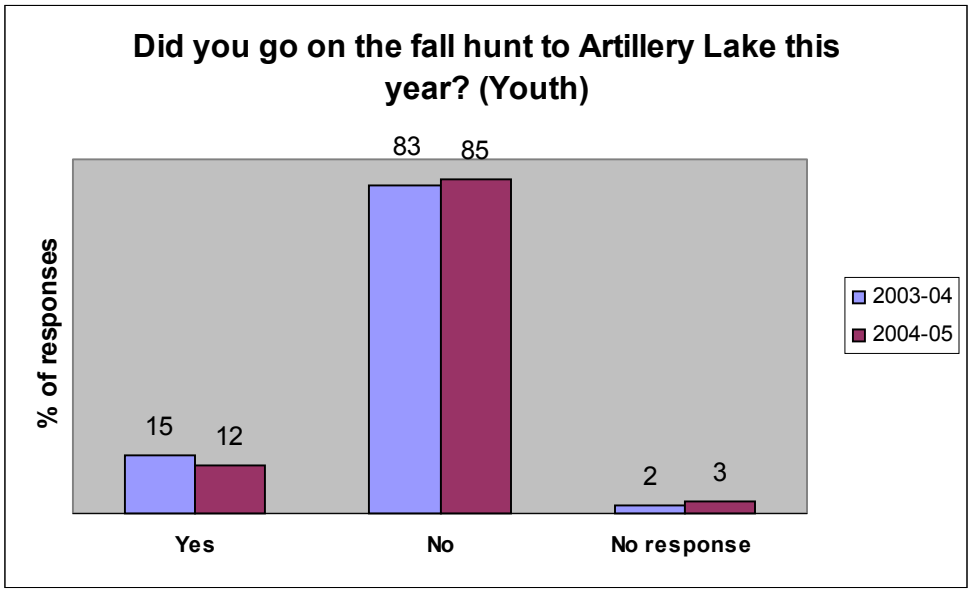

Figure 56. Youth participation in fall caribou hunt, 2003-2005.

Figures 55 and **56** show that the fall caribou hunt at ʔedacho Tué (Artillery Lake) continues to be a community tradition for a small group of people. However, in both years the majority of both adults (75-83%) and youth (83-85%) do not participate. The hunts typically last about a week and people are required to pay for part of the charter costs. *Interpretive Workshop* participants mentioned that it is always the same families who go on the fall hunt, particularly those families with at least one member employed by the Band. Some people had other obligations (i.e. employment) or had small children so they could not be gone for that long. The cost also continues to be a prohibiting factor, especially for those with large families.

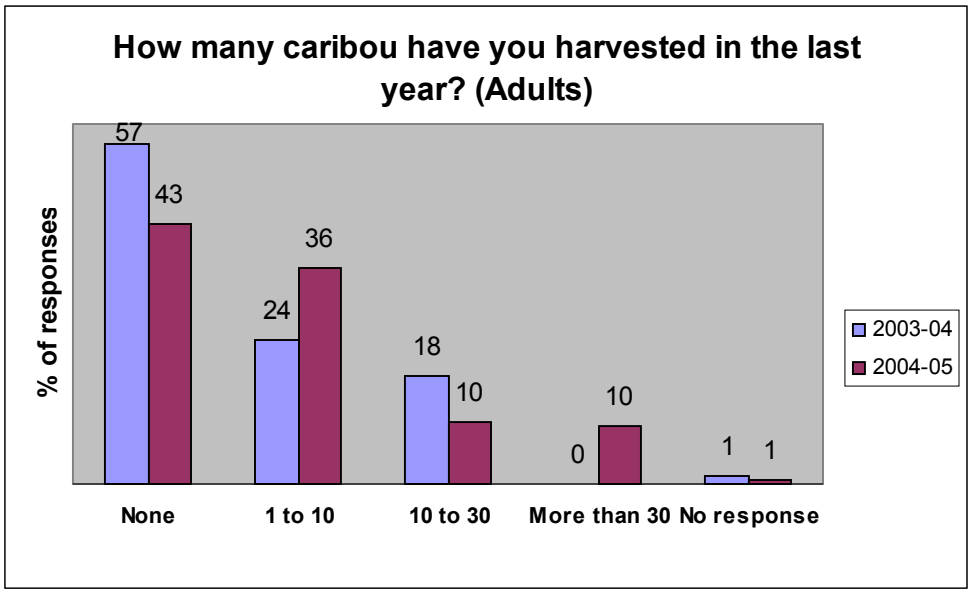

Figure 57. Numbers of caribou harvested by adults, 2003-2005.

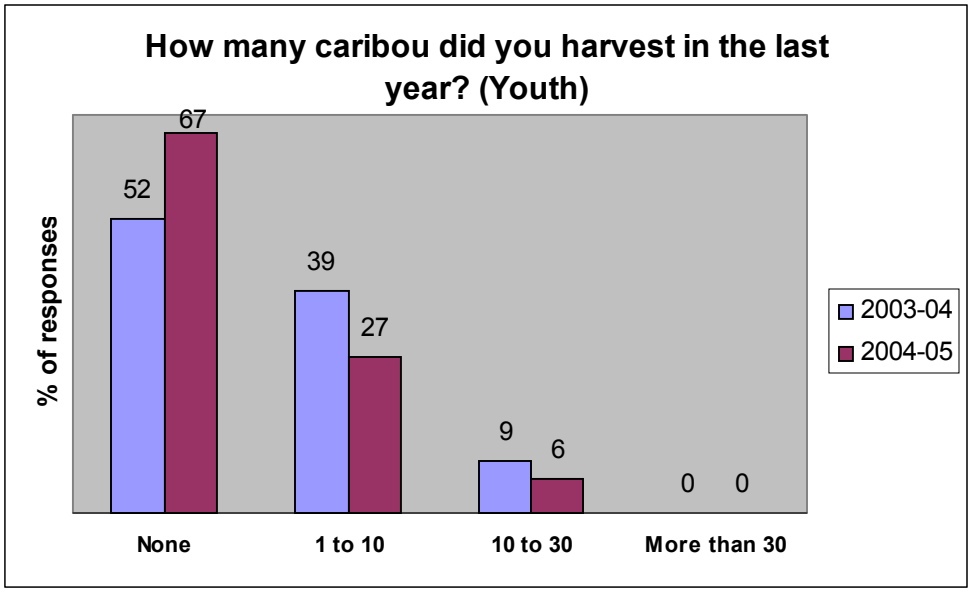

Figure 58. Numbers of caribou harvested by youth, 2003-2005.

In **Figures 57** and **58,** we see that in 2003-04, over half (57%) of those adults interviewed said they hadn't harvested any caribou. This percentage dropped slightly in 2004-05, with more people harvesting from one to ten caribou, but still 43% did not harvest any. The youth responses showed a decrease in all categories from 2003-04 to 2004-05, with well over half (52-67%) in both years not harvesting any caribou. Again, hunting is primarily undertaken by men, and there were numerous women and younger children who completed this survey that may not have gone hunting. Again, *Interpretive Workshop* participants noted the availability of Skidoos and money for gas as the primary reasons that more people do not go out hunting, as well as the fact that people are having to travel further now to find the caribou.

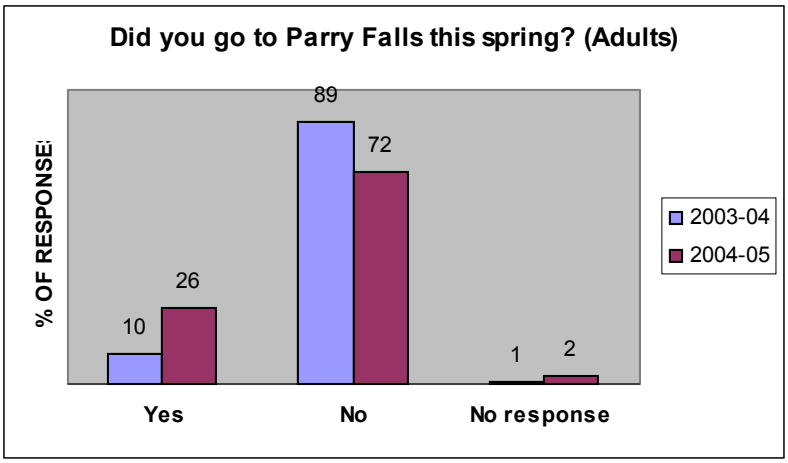

Figure 59. Adult visits to Parry Falls, spring 2003-2005.

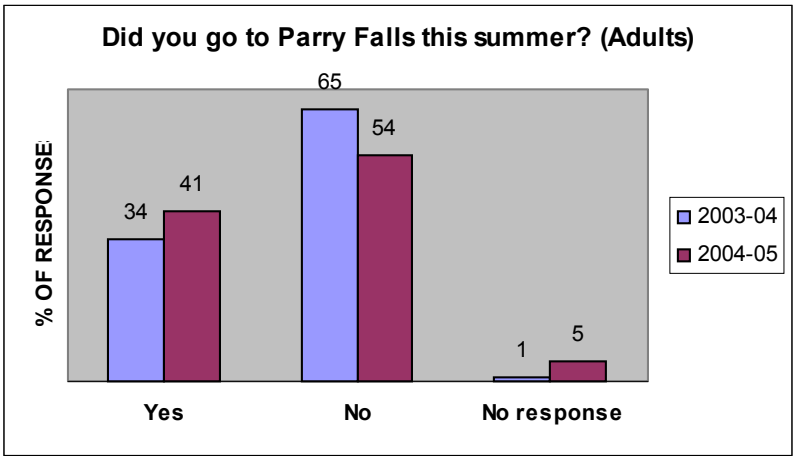

Figure 60. Adult visits to Parry Falls, summer 2003-2005.

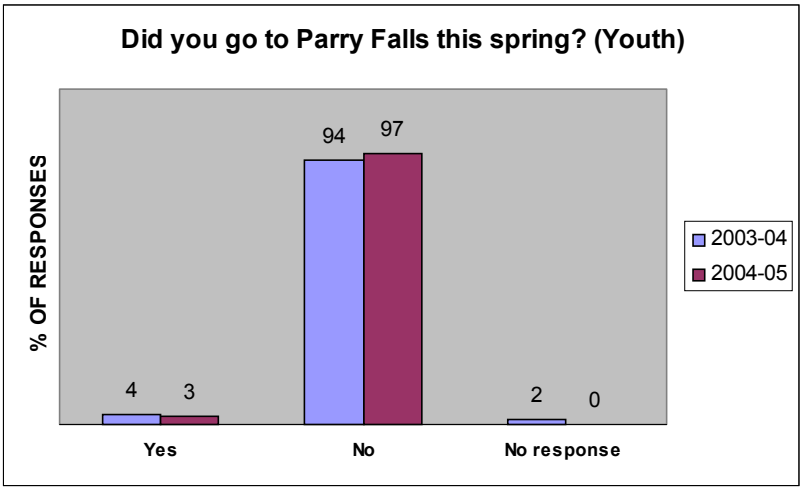

Figure 61. Youth visits to Parry Falls, spring 2003-2005.

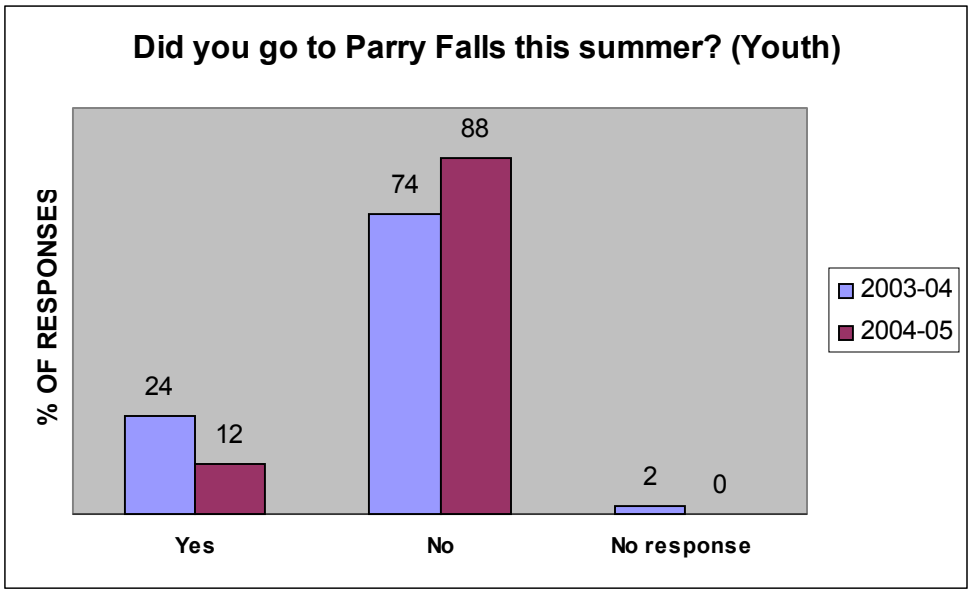

Figure 62. Youth visits to Parry Falls, summer 2003-2005.

Figures 59 to **62** show the proportion of adults and youth who visited the important spiritual site of the "Old Lady of the Falls" (Parry Falls). For adults, there was a slight increase from 2003-04 to 2004-05 in the numbers who travelled to this site in both the spring (10% to 26%) and the summer (34% to 41%). For the youth, almost all of the youth surveyed in both years (94-97%) did not visit Parry Falls in the spring. Even in the summer, when travel is easier by boat and there are Band-sponsored charters for the annual Desnedhe Che spiritual gathering, the vast majority of youth surveyed (74-88%) did not visit Parry Falls. *Interpretive Workshop* participants said that the reasons for this are likely a lack of transportation equipment (Skidoos in spring, boats in summer). As well, even with plane charters available in the summer, many people want to go with their whole families and cannot afford the cost of seats.

Betsi Ghie is another of the most sacred sites for Łutsël K'e residents, and is located in the East Arm of Great Slave Lake. **Figures 63** and **64** show that the majority of adults (70-75%) interviewed in both years were familiar with Betsi Ghie, which demonstrates an awareness of traditional spiritual sites. In contrast, the youth are largely unaware of the importance of this site. In 2004-05, 85% answered that they did not know this place. In 2003-04, only 24% answered no, but there were also 67% who did not answer the question. Again this is the fault of the researcher for not going through the survey with them, but the fact that they did not understand this question suggests they were not familiar with Betsi Ghie. In the *Interpretive Workshop,* youth participants again stressed it is the responsibility of the adults and elders to teach them these things.

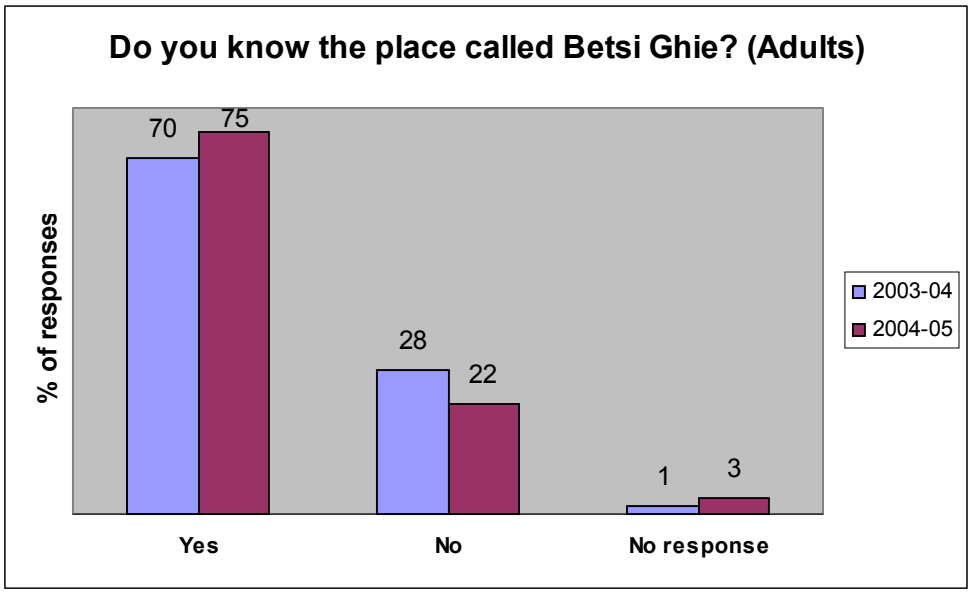

Figure 63. Adult knowledge of the place called Betsi Ghie, 2003-2005.

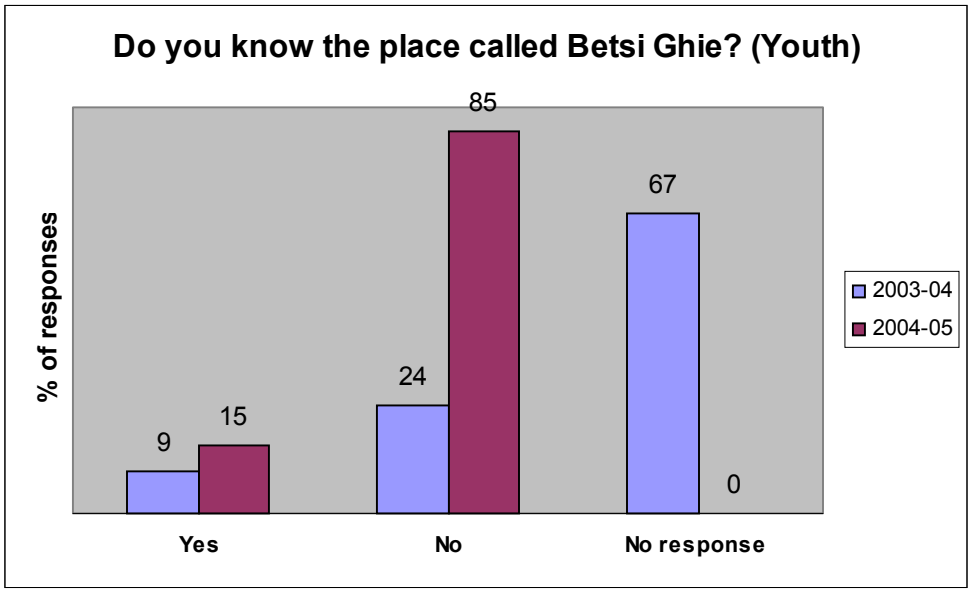

Figure 64. Youth knowledge of the place called Betsi Ghie, 2003-2005.

Figures 65 and **66** show responses to the question about concern over the potential environmental impacts of industrial development (specifically, mining) in the traditional territory.

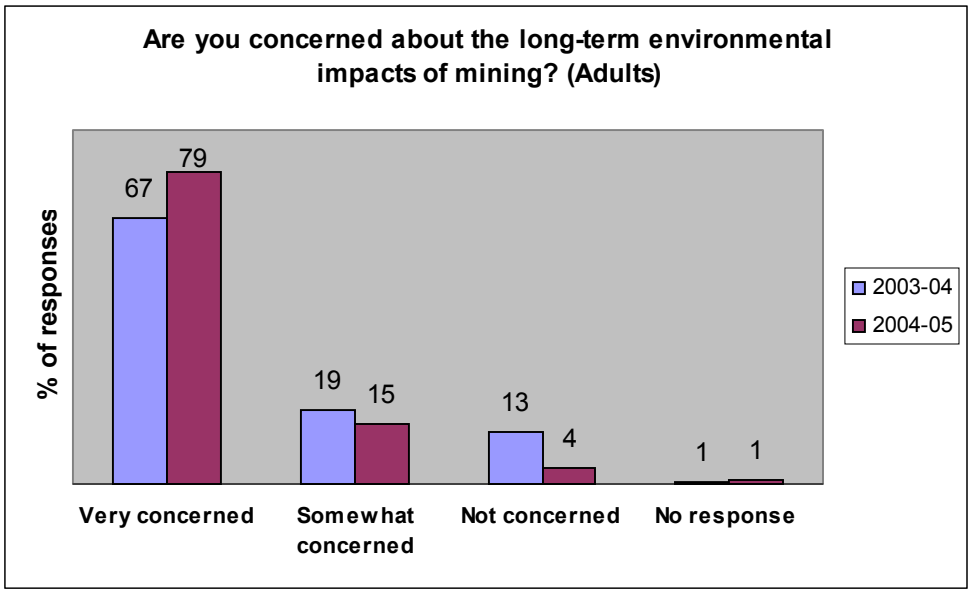

Figure 65. Levels of adult concern over environmental impacts of mining, 2003-2005.

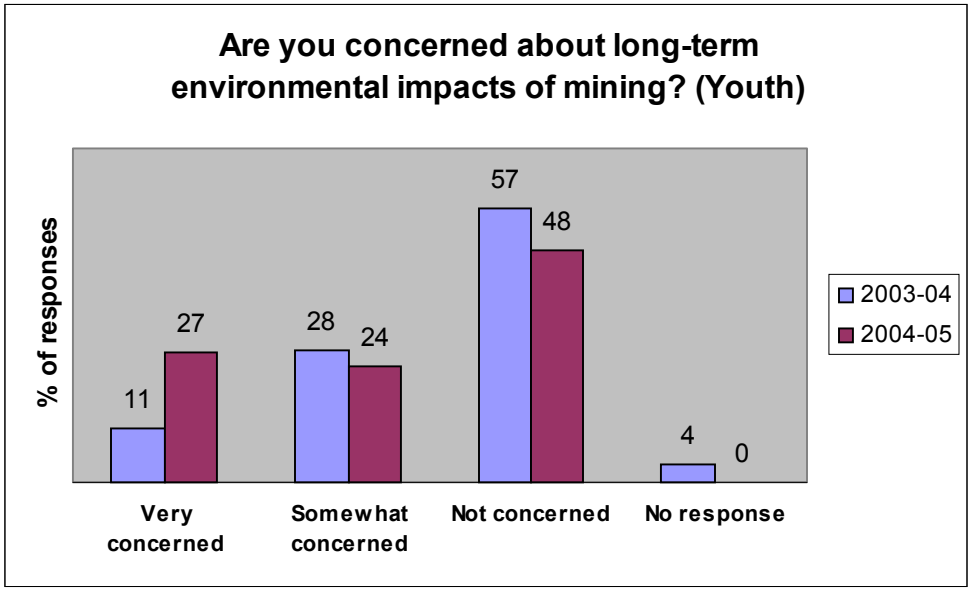

Figure 66. Levels of youth concern over environmental impacts of mining, 2003-2005.

This is one of the questions where we see some interesting comparisons by separating out the adult and youth responses. Overwhelmingly, adults state that they are "very concerned" about the long-term impacts of mining, with 67% in 2003-04 giving this response and even more (79%) in 2004-05. In contrast, approximately half of the youth in both years (48-57%) say that they are "not concerned". *Interpretive Workshop* participants were very surprised at this difference, and questioned whether the youth understood the question. The researcher who conducted these surveys in 2004-05 was present at the workshop, and said that she did explain the question and even gave the youth examples of some possible impacts of mining on the land, water, and wildlife. Participants recommended that the youth obviously need further education on the environmental impacts of mining, and suggested that the WLE staff and Committee members should visit the school and conduct workshops. Some other comments were as follows:

We should even be teaching them the basics about respecting the environment, such as not throwing garbage in the water or on the ground. (RA 09 03 05)

The youth should go on more mine site visits, or at least be shown some videos of what the mines look like and what they do to the land. (LS 09 03 05)

Figures 67 and **68** show the strength of the Chipewyan language (Denesǫłıne Yatı) in the community.

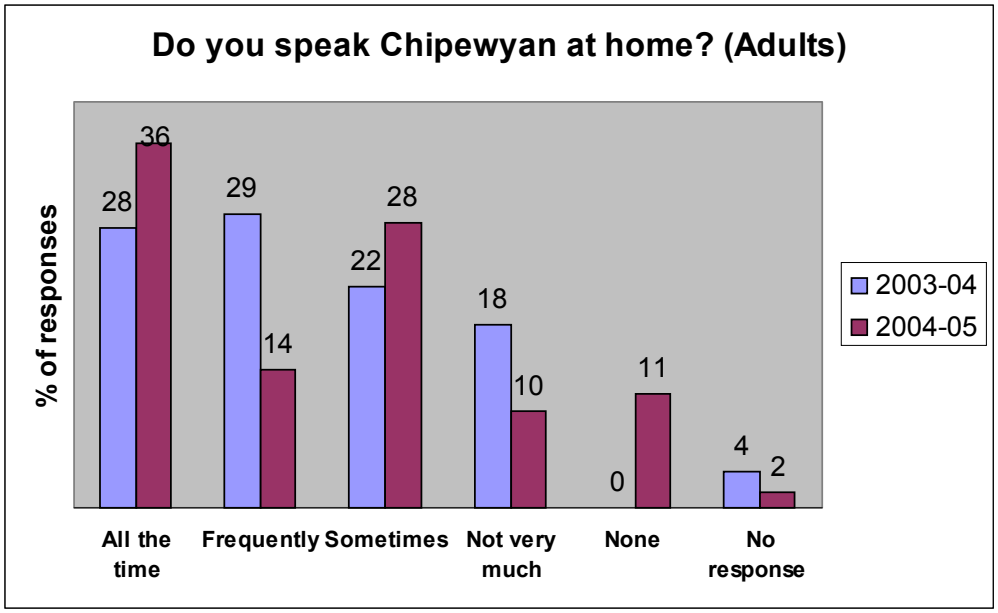

Figure 67. Levels of adult use of Chipewyan language at home, 2003-2005.

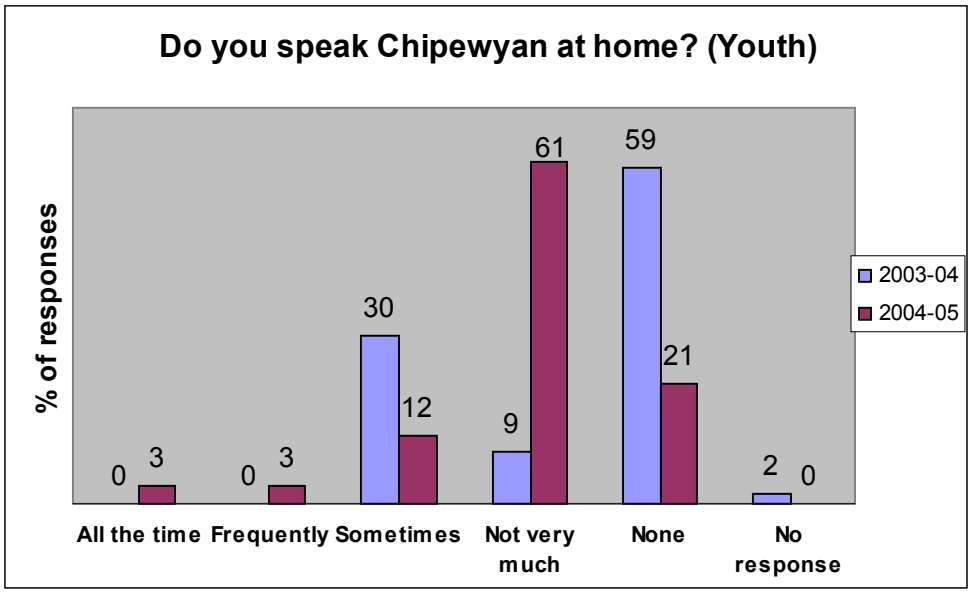

Figure 68. Levels of youth use of Chipewyan language at home, 2003-2005.

For adults, the responses are quite varied in both years, but the majority of those interviewed said they at least spoke their language some of the time. The youth show clearly different results, with the vast majority speaking their language not very much or not at all. When *Interpretive Workshop* participants were asked about these results, some youth said that they are not being taught, while others said that sometimes they try to speak it but people laugh at them for not saying the words correctly. All participants agreed that elders get frustrated trying to teach people, and they need to learn more patience, and that drastic measures need to be taken now to prevent the further loss of the language.

Some questions in the *Community Health Survey* address the adequacy of community infrastructure and services. Overcrowding and homes in dire need of repairs are common, as reflected in **Figures 69** and **70.**

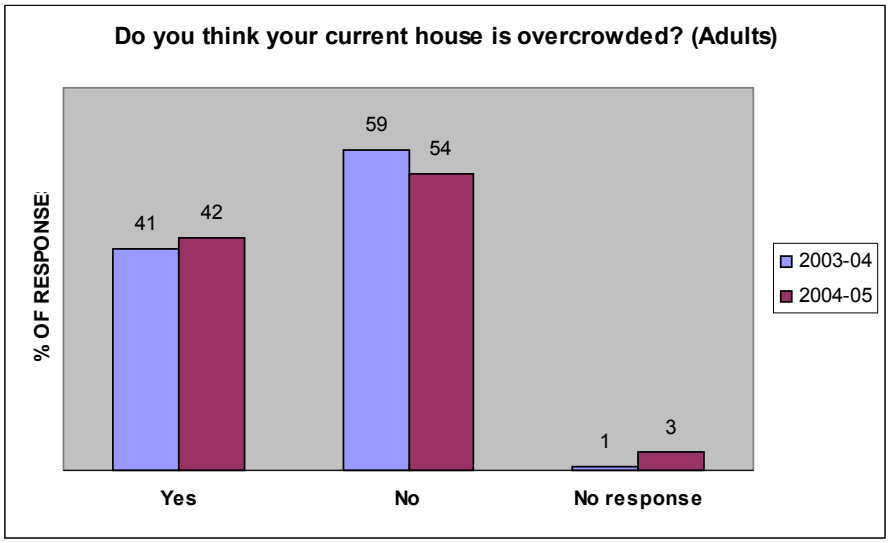

Figure 69. Proportion of adults who feel their house is overcrowded, 2003-2005.

Slightly less than half of the adults surveyed in both years (41-42%) replied that their house was overcrowded. Results were similar for the youth, with 36-37% responding yes. The population in Łutsël K'e continues to grow, and the Housing Authority can only build so many houses per year due to lack of new lot development and high costs. Many people live with their extended families.

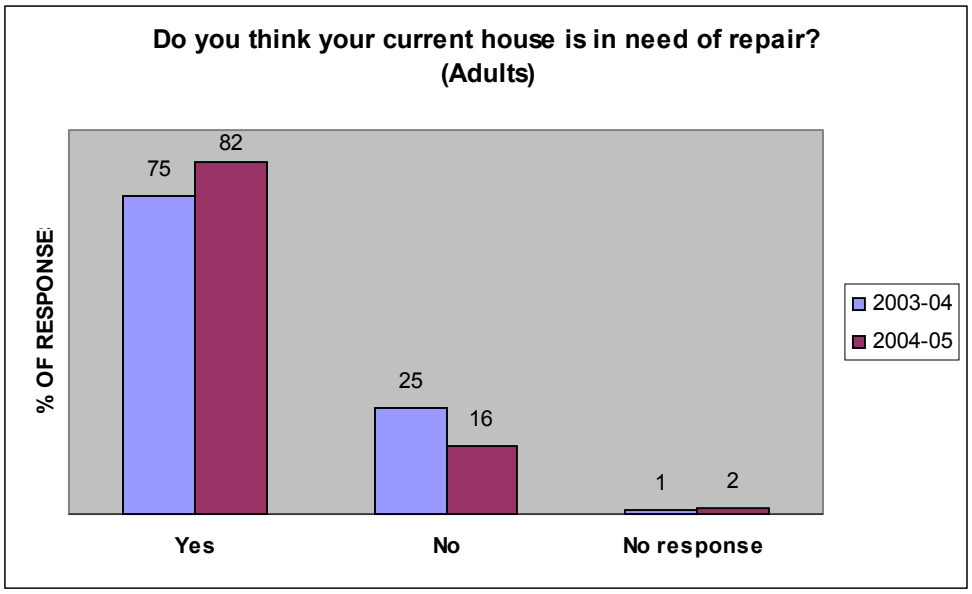

Figure 70. Proportion of adults who feel their house needs repairs, 2003-2005.

The vast majority of adults interviewed in both years (75-82%) thought their house needed repairs. Results for the youth were similar in 2004-05, with 76% responding yes, but this increased dramatically from the previous year where only 44% answered yes. These repairs can range from minor to major endeavours, with varying associated costs. Some *Interpretive Workshop* participants mentioned that those who said they do not need home repairs are probably the ones who live in public housing units. Those families that own their homes have to spend their own money to make any home improvements, and this can cost substantial amounts depending on the problem.

The *Community Health Survey* also asks participants to rate their impressions of the services provided by various community agencies. A representative sample of these responses, for seven of the most important service organizations in town, is displayed in **Figures 71** to **83.** Again, we see some interesting differences between adult and youth responses to these questions.

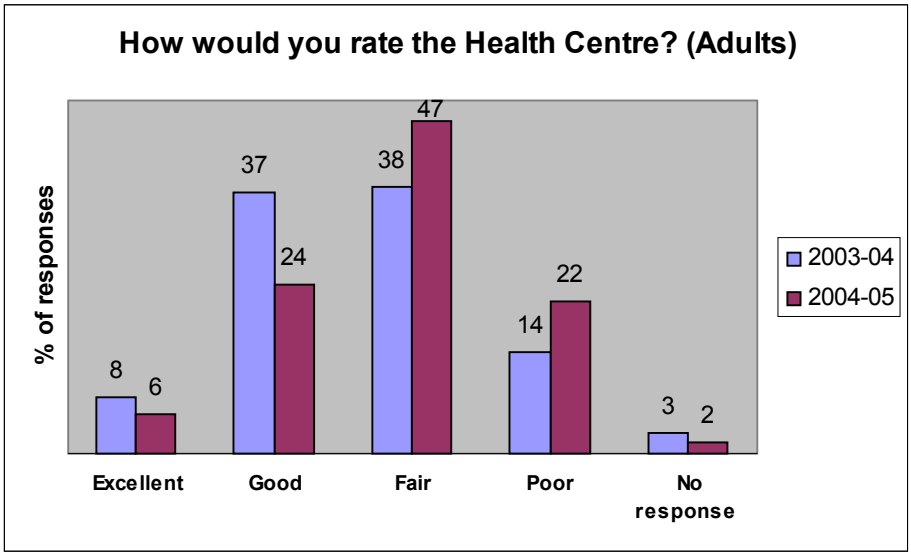

Figure 71. Adult ratings of the services provided by the Health Centre, 2003-2005.

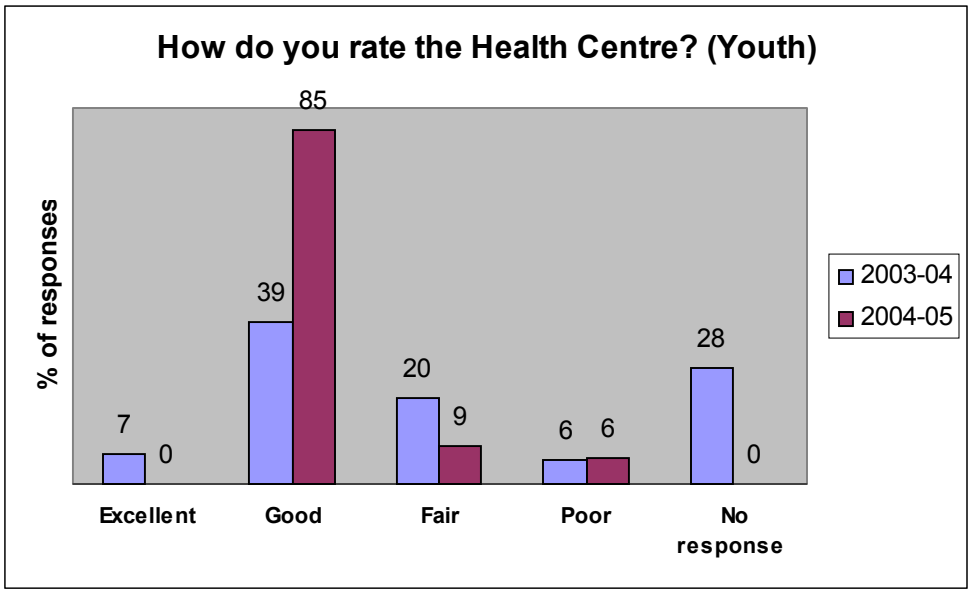

Figure 72. Youth ratings of the services provided by the Health Centre, 2003-2005.

For adults, in 2003-04 there was an almost equal proportion of respondents who classified the Health Centre services as good (37%) or fair (38%). Ratings seem to have dropped the following year, with almost half of adults (47%) rating services as fair, and an increase in the number of people rating it poor. A high proportion of youth (39%) in 2003-04 rated the Health Centre as good, and this number increased substantially the following year, with 85% of youth giving this rating. *Interpretive Workshop* participants, especially the representatives from the Health Centre, said that these ratings were interesting but emphasized that this type of survey really doesn't allow you to understand the reasons behind the ratings. This was a concern raised frequently throughout the workshop. Usually people's personal experiences with the Health Centre and the staff will influence how they rate this organization.

Figures 73 and **74** show adult and youth ratings of the services provided by the local Co-Op store.

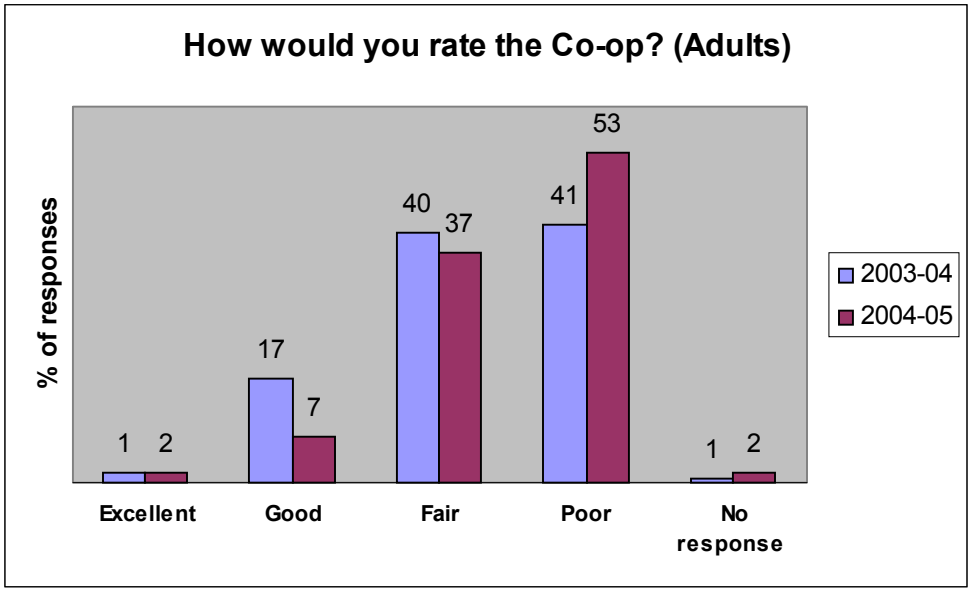

Figure 73. Adult ratings of the services provided by the local Co-Op store, 2003-2005.

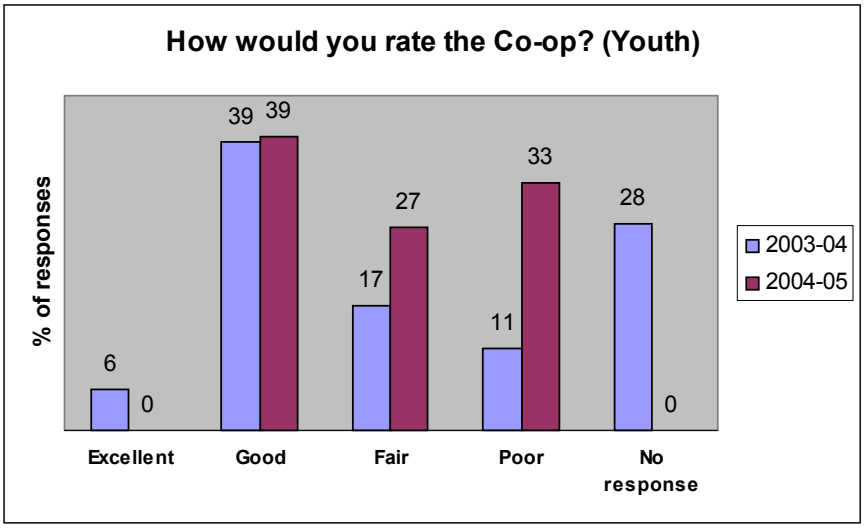

Figure 74. Youth ratings of the services provided by the local Co-Op store, 2003-2005.

The overwhelming majority of adults interviewed in both years rated the Co-Op as either fair or poor. As it is the only store in town, many people who do not travel to Yellowknife regularly have no other choice in where to shop. The Co-Op has a very limited selection of goods, partly due to the small building they are located in, and everything is very expensive. A much higher percentage of youth (39% in both years) rated the Co-Op as good, with the rest of the results mostly divided between fair and poor. *Interpretive Workshop* participants noted that the Co-Op has severe limitations with cash flow. People also frequently complain about the quality of staff, the lack of fresh fruit and vegetables, and the inability to charge cigarettes to their account. Youth were likely rating the Co-Op higher because as long as they have chips and pop, they probably won't think there is anything wrong. People noted there have been some improvements recently, such as having more sales and giving summer jobs to students, but there are still many areas of deficiency that the Co-Op needs to address.

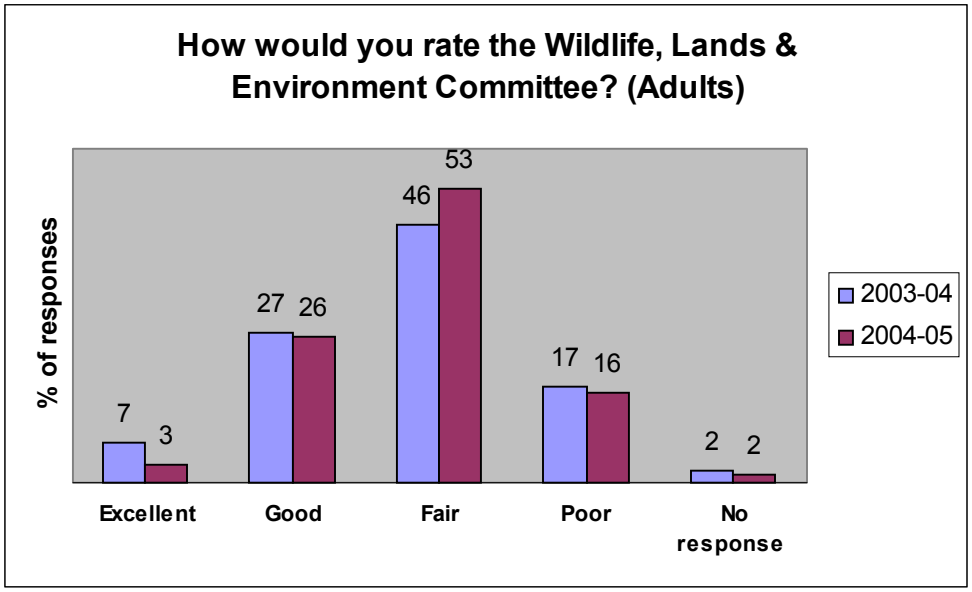

Figure 75. Adult ratings of the effectiveness of the WLEC, 2003-2005.

The Wildlife, Lands and Environment Committee is one of the most important Committees in town, dealing with all land use and environmental issues. Community perception of their effectiveness is therefore extremely important. For 2003-2005, approximately half of adults surveyed in both years (48-53%) rated the WLEC as fair. It is worthwhile noting that community elections for a new WLEC were held in January 2005, with only one of the previous members remaining on the Committee, so it will be interesting to compare with next year's comments. *Interpretive Workshop* participants said that some of the complaints about the previous WLEC were that they didn't have enough technical background to understand what companies were talking about, that they didn't take a strong enough stand on some issues, that they were always travelling to meetings but never provided any updates to the membership, and that they seemed to be on the WLEC just for the honoraria and not because they were concerned about protecting the land.

Adults were also asked to rate the Denesǫłı̨ne Corporation (called the Economic Development office when this survey was first created). This is the business arm of the Łutsël K'e Dene First Nation, responsible for creating and administering joint ventures and other business opportunities.

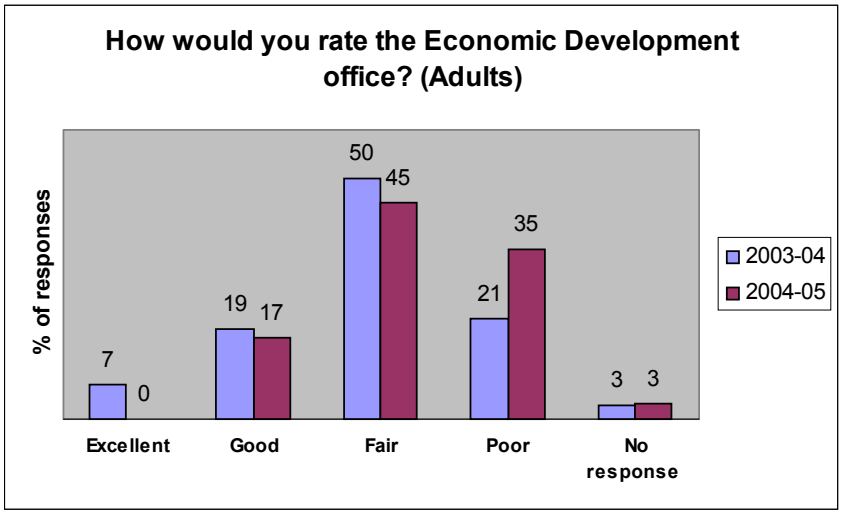

Figure 76. Adult ratings of the services provided by the Denesǫłı̨ne Corporation, 2003-05.

Approximately half of all adults surveyed in both years (45-50%) rated the Corporation as fair, with an additional 21-35% rating it as poor. A common complaint is that there is not enough focus on small business opportunities for community members. Some people have tried to get assistance with accessing small business loans, but have been told the staff are too busy to help them. People also noted there is financial mismanagement, that disorganization and a lack of qualified staff means the community is missing out on potential business opportunities, and that the joint ventures which are in place were not negotiated very well and are not really making the community any money.

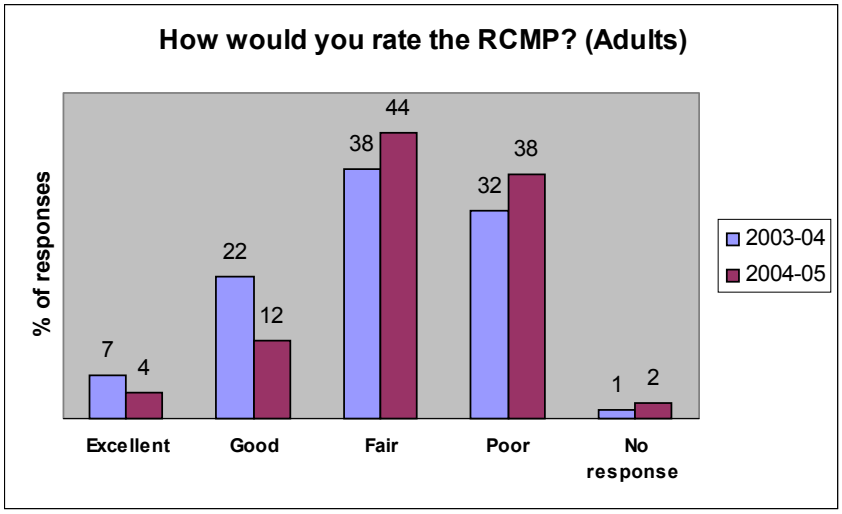

Figure 77. Adult ratings of the services provided by the RCMP, 2003-2005.

Figure 77 shows the ratings adults assigned to the RCMP in Łutsël K'e. The vast majority of adults surveyed in both years rated the RCMP as either fair or poor. In contrast, almost half of the youth in both years (37% in 2003-04 and 45% in 2004-05, graph not shown) rated the RCMP as good. *Interpretive Workshop* participants noted that many adults have not had good experiences with the RCMP, resulting in the lower ratings. The RCMP do not respond quickly enough, there are too many changes in staff, they have bad attitudes and don't seem to take people seriously when they ask for help, and they are not doing enough to curb the alcohol and drugs coming into town. There were also a couple major incidents this past year where certain RCMP members drew their firearms, in what people viewed as incidents not serious enough to warrant such behaviour. The higher youth ratings were thought to be due to the more positive experiences youth have had with the RCMP. In particular, RCMP members frequently visit the school, are involved in the breakfast program, assist in coaching sports teams, and have organized donations of sports equipment.

As noted in several other sections in this report, the lack of recreational activities (especially for children and youth) is seen as a major issue in Łutsël K'e. The Recreation Department is responsible for organizing all community events and activities, but relies heavily on donations from mining companies and other large organizations in order to hold such events. **Figures 78** and **79** show the ratings given to this department for the last two years.

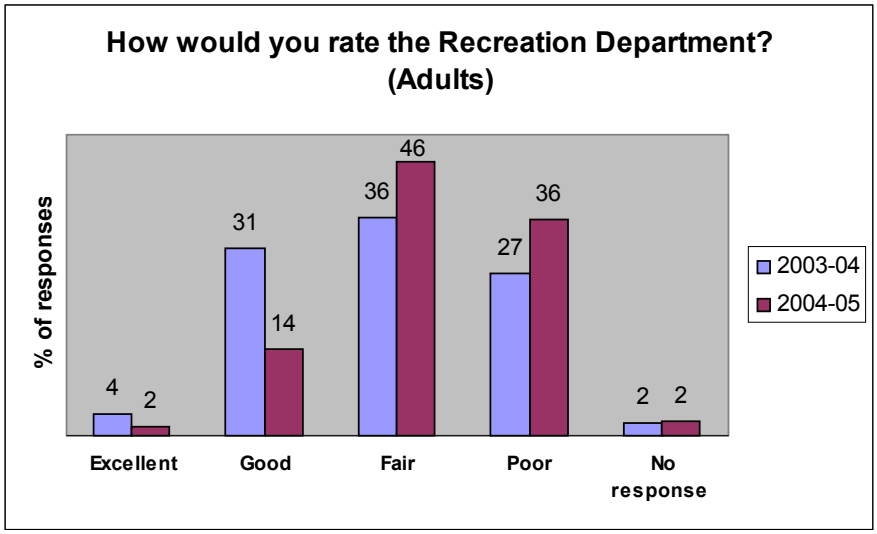

Figure 78. Adult ratings of the Recreation Department, 2003-2005.

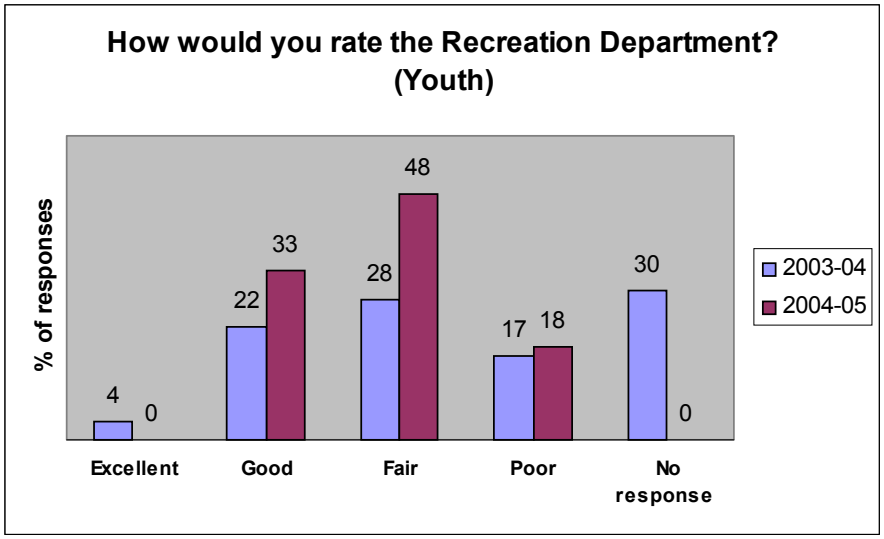

Figure 79. Youth ratings of the Recreation Department, 2003-2005.

In 2003-04, adult ratings were distributed fairly evenly between good (31%), fair (36%) and poor (27%). Most recently, we see almost half of adults surveyed (46%) rating the Recreation Department as fair, and an additional 36% rating it poor. Youth seem to echo this opinion, with approximately half (48%) in 2004-05 rating it as fair, although an additional 33% in this year rated it as good. *Interpretive Workshop* youth participants said that there should be more activities planned, especially in the evenings and on the weekends, and that they are often bored with nothing to do. Adult participants noted that perhaps too much responsibility for planning and implementing activities was being placed on the Recreation Department. They are short of money and staff, and often cannot find volunteers to help them. People could easily organize their own activities, and said that there used to be spontaneous games of volleyball or baseball, but nobody is doing this anymore.

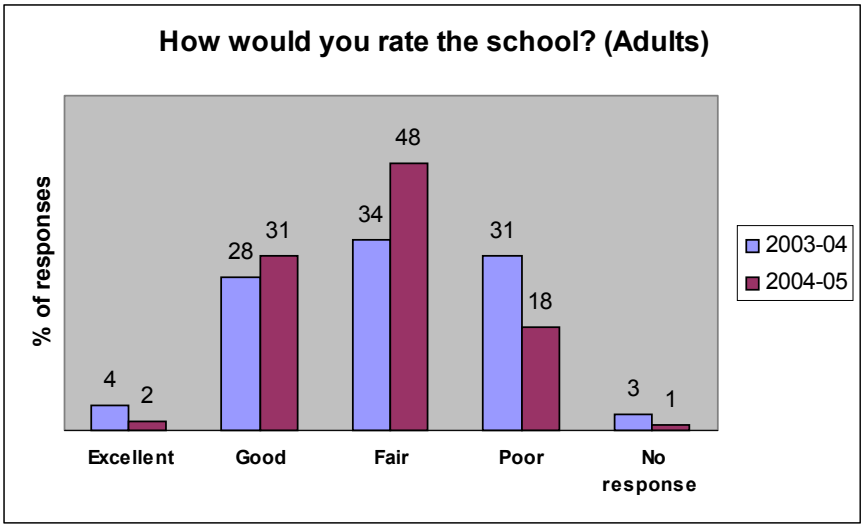

Figure 80. Adult ratings of the education provided by the Lutsel K'e Dene School, 2003-05.

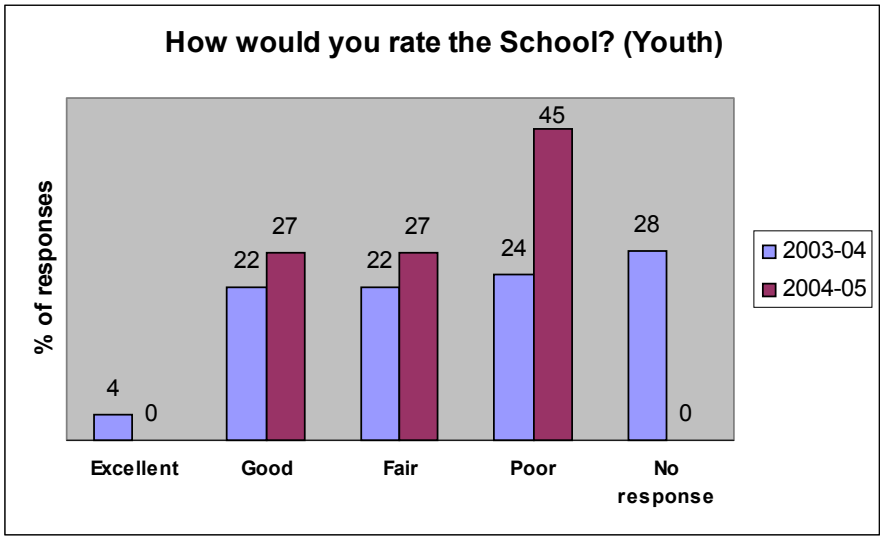

Figure 81. Youth ratings of the education provided by the Lutsel K'e Dene School, 2003-05.

Figures 80 and **81** show that in 2003-04, adult responses were fairly evenly divided among ratings of good (28%), fair (34%) and poor (31%). 2004-05 saw a more marked divide in responses, with 48% of adults rating the school as fair, and the rest divided mostly between good (31%) and poor (18%). There was a similar pattern with the youth, and we see a broad range of responses in 2003-04 but almost half of youth (45%) in the following year rated the school as poor. During the *Interpretive Workshop,* participants noted that frequent staff changes, a lack of cultural activities offered, and discipline problems contributed to the low ratings. Several of the youth said that they rated the school poor or fair because they found the work too easy and were not being challenged. They said they were taught the same things every year. The elders at the workshop commented that they had given higher ratings to the school because they hadn't heard about any kids getting expelled or any major problems. Several of the parents mentioned some of their concerns:

> *I'm concerned about the grade extension, they're talking about offering Grade 11 here now. I think this will only hold them back more, they don't get the same level of education here as they do in Yellowknife or Fort Smith. (RA 09 03 05)*

The teachers are trying hard, but the high turnover rate disrupts the kids. (LS 09 03 05)

The classes are too big, and I think we need to separate the grades more. (RA 09 03 05)

Two related questions asked youth to reflect on how they felt about the value of their education, and if they were willing to leave Łutsël K'e to pursue their higher goals. Results are shown in **Figures 82** and **83.**

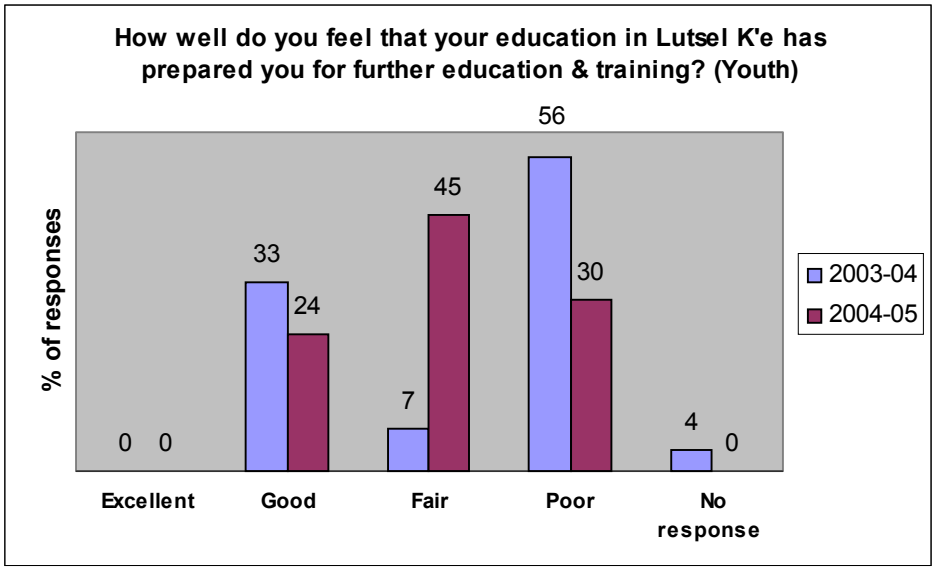

Figure 82. Youth perceptions on the value of their education, 2003-2005.

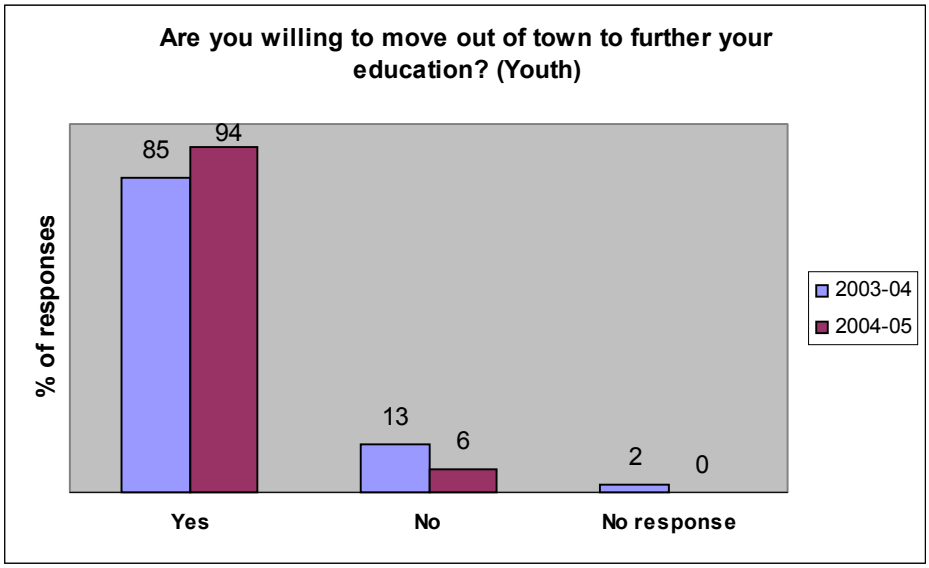

Figure 83. Youth willingness to leave Lutsel K'e to further their education, 2003-2005.

In 2003-04, over half of youth surveyed (56%) rated the value of their education in Łutsël K'e as poor, with 33% rating it good. In 2004-05, we see a similar dissatisfaction with the quality of education offered, with 45% of youth rating their education as fair, and an additional 30% rating it poor. Overwhelmingly in both years, youth were willing to leave town to further their education (85-94% answered yes). During the *Interpretive Workshop,* youth were questioned about the

reasons behind their responses. They said that they do not feel prepared for Grade 10 when they leave here, and that there are major differences in the curriculum between Łutsël K'e and bigger centres. They also mentioned there are less facilities here, such as a proper science lab.

A final aspect of the *Community Health Survey* deals with personal health and healing issues. Questions were focused on traditional food consumption (considered a healthier diet), the adequacy of drug and alcohol services in the community, and people's perception of their overall health. These results are displayed in **Figures 84** to **91.**

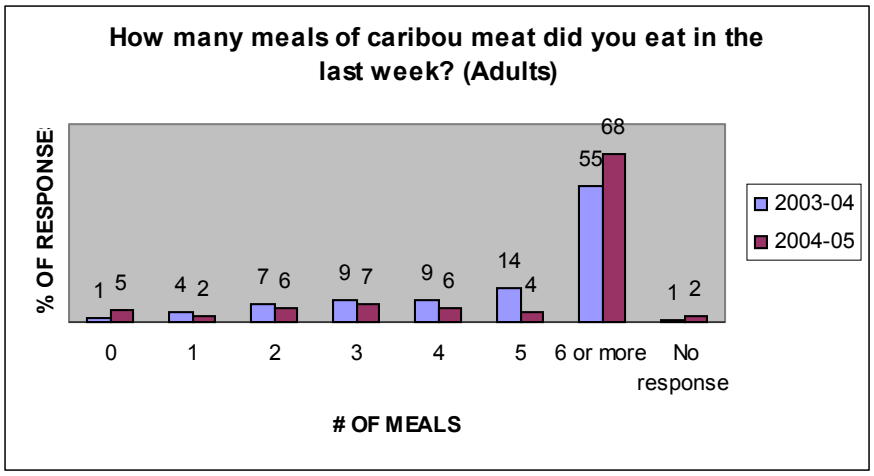

Figure 84. Adult weekly consumption of caribou meat, 2003-2005.

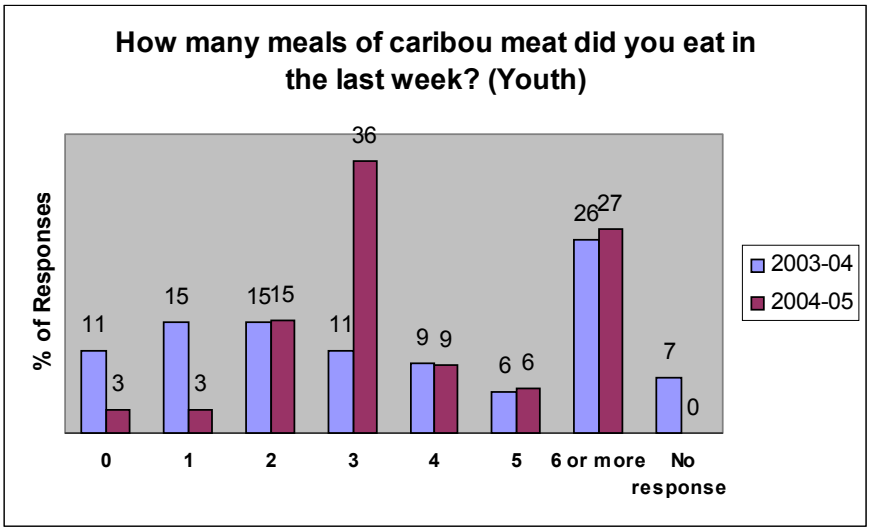

Figure 85. Youth weekly consumption of caribou meat, 2003-2005.

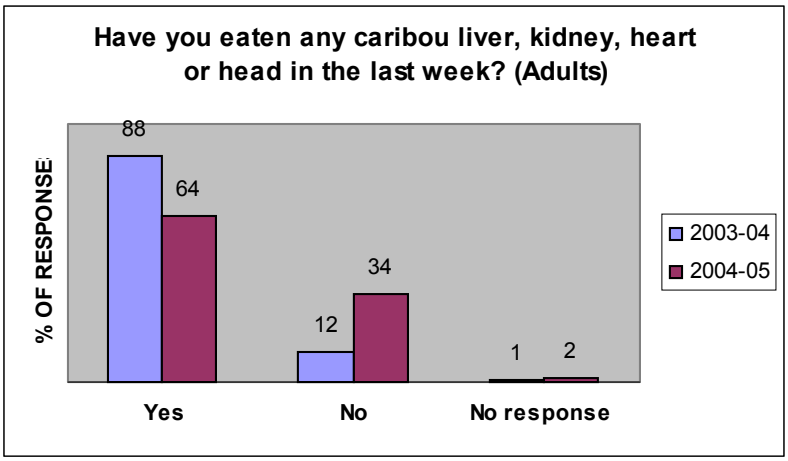

Figure 86. Adult consumption of caribou head and organs, 2003-2005.

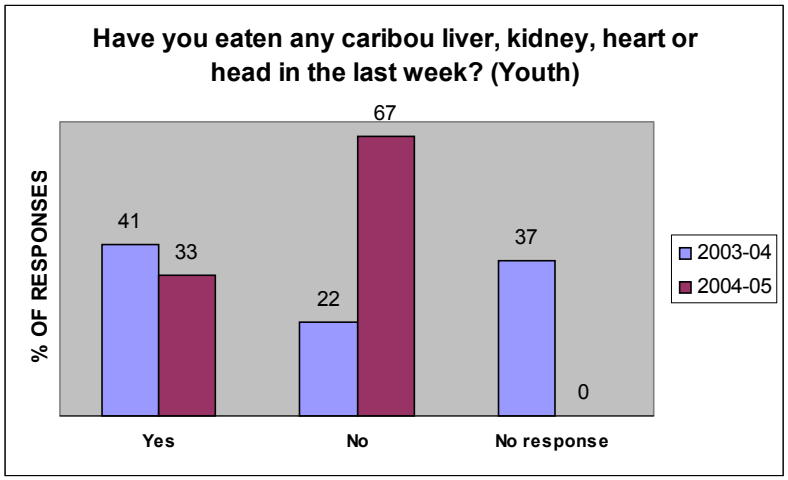

Figure 87. Youth consumption of caribou head and organs, 2003-2005.

Figures 84 to **87** clearly show the large proportion of both adults and youth who continue to eat caribou meat on a regular basis. Well over half of adults surveyed in both years (55-68%) ate six or more meals of caribou meat in a week, and about a third of youth surveyed in both years (26-27%) ate the same amount. The consumption of caribou head and organs decreased for both adults and youth – for adults, from 88% (2003-04) to 64% (2004-05) saying they had eaten these traditional foods in the last week; for youth, from 41% (2003-04) to 33% (2004-05) answering yes. During the *Interpretive Workshop,* participants noted that the caribou were further away this year, and that some children just do not like caribou head or heart. Several people also noted that hunters often cook the "goodies" like caribou head right away, and don't bring them back to town.

Figures 88 and **89** show people's satisfaction with the drug and alcohol services provided in Łutsël K'e.

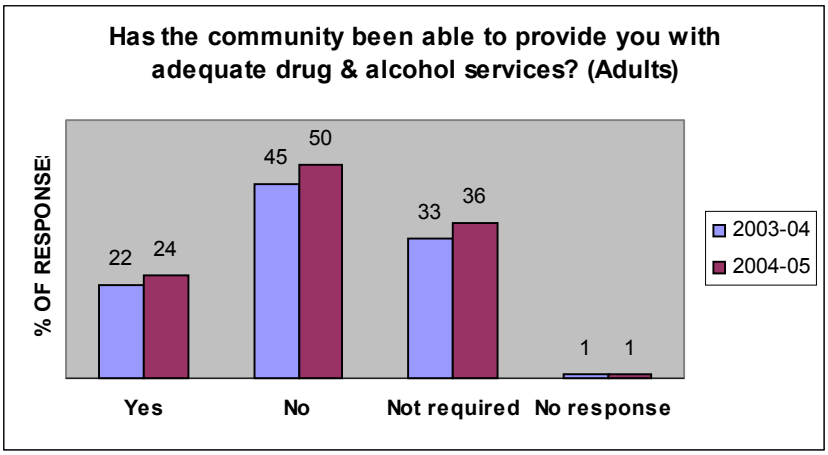

Figure 88. Adequacy of drug and alcohol services for adults, 2003-2005.

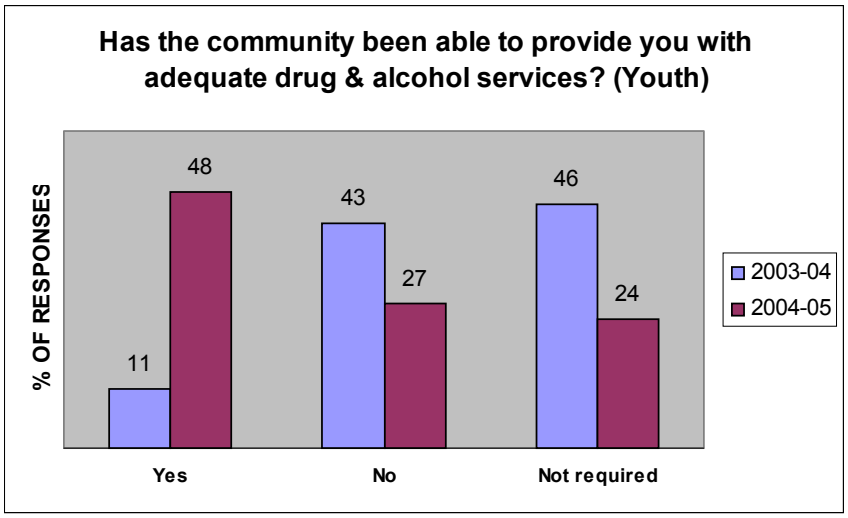

Figure 89. Adequacy of drug and alcohol services for youth, 2003-2005.

Of the total adult respondents, approximately half in both years (45-50%) said they were not satisfied with the level of services provided. About a third of those adults interviewed in both years (33-36%) said they had not needed any drug and alcohol services in the last year. For youth, in 2003-04 the responses were fairly evenly divided between not satisfied (43%) and not required (46%). In 2004-05 almost half of youth surveyed (48%) said they were satisfied with the services provided, but there was a lower percentage of youth (24%) who felt they hadn't needed any services over the last year. During the *Interpretive Workshop,* participants noted that many adults don't think they need help, so will answer that these services are not required. The representatives from the Health Centre and the Resource Centre also said that the way the question is worded may be misleading. These two organizations offer a number of "community wellness" programs which may not fit in the "drug and alcohol" category. These include various other forms of counselling, saunas, and anything else which promotes self-healing. The youth at the workshop said that they feel comfortable going to the Resource Centre to talk with people there, and they can also talk to their families. Some youth thought that many of the "not required" responses were just people not wanting to answer the question honestly.

The *Community Health Survey* also asked people about their perceptions of their current state of health. These results are shown in **Figures 90** and **91.**

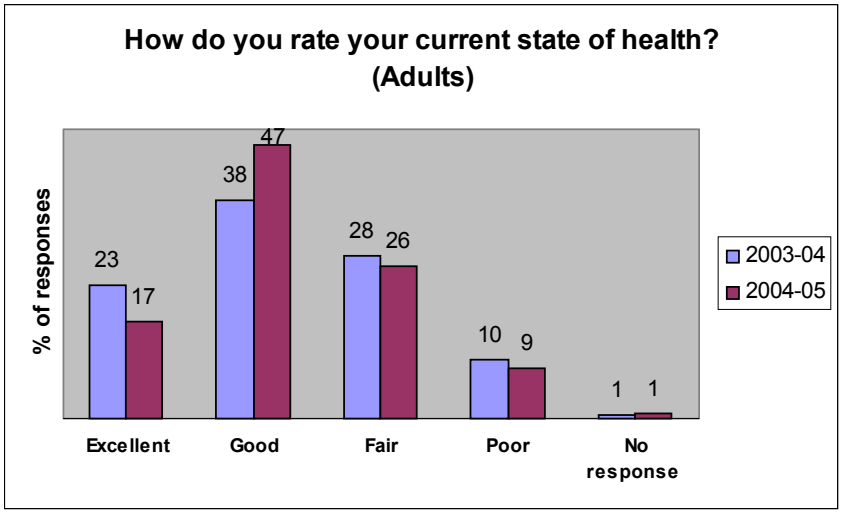

Figure 90. Adult perceptions of current state of health, 2003-2005.

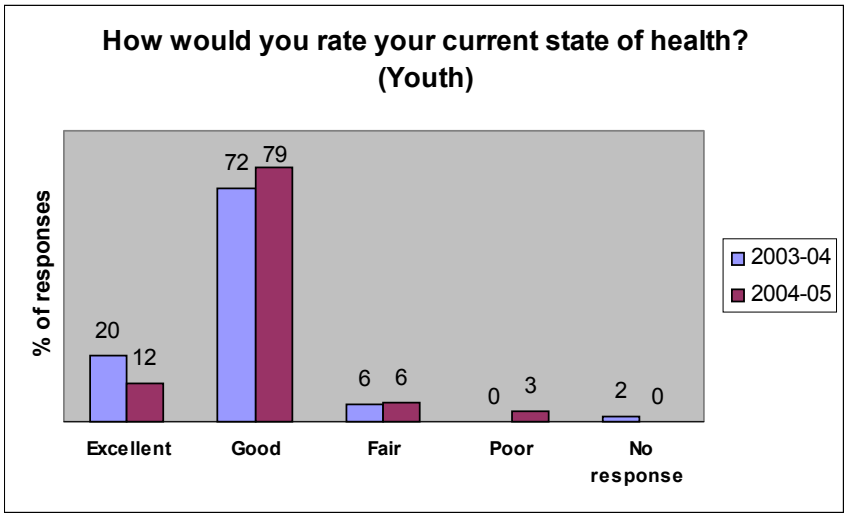

Figure 91. Youth perceptions of current state of health, 2003-2005.

Adult responses to this question were quite varied. In 2003-04, a little more than a third of those interviewed (38%) thought they were in good health, while approximately the same numbers of people rated themselves as in fair or excellent health (28% and 23%, respectively). In 2004-05, we see approximately the same divisions, except that the proportion of adults rating themselves as in good health increased slightly to 47%. In both years, the youth overwhelmingly classified themselves as in good health (72-79% of respondents), with almost all of the rest saying they were in excellent health. Only a small percentage of adults in both years (9-10%) thought they were in poor health, and this number was even smaller for the youth (0-3%).

A final question dealt with people's confidence in their children's future. Results for both adults and youth are shown in **Figures 92** and **93.**

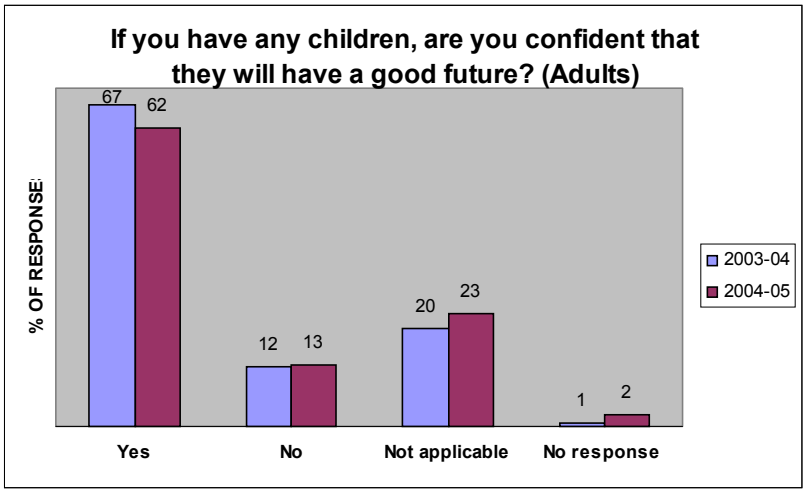

Figure 92. Levels of adult confidence in children's future, 2003-2005.

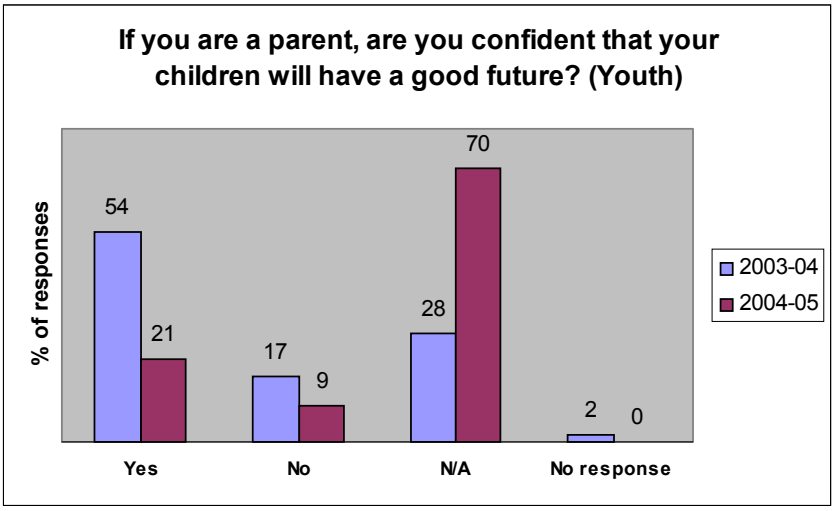

Figure 93. Levels of youth confidence in children's future, 2003-2005.

In both years, the majority of adults surveyed (62-67%) answered yes, with only a small percentage (12-13%) answering no and the rest saying the question was not applicable (ie. they had no children). The youth surveyed showed slightly different results. In 2003-04, over half of youth (54%) answered yes, with the rest of the responses divided fairly evenly between no (17%) and not applicable (28%). In 2004-05, the majority of youth (70%) said the question was not applicable. Of those who did answer, the majority (21%) responded yes. *Interpretive Workshop* participants were encouraged by these results. They said it shows that despite some of the problems and difficulties in the community, people remain positive and have faith that their children will have a good future.

6.3.2 Mine Employee and Spouse Survey

The *Mine Employee and Spouse Survey* was designed to analyze the impacts of the mineral development sector on employees and their families. The survey was conducted in 2003 and 2004 with any community member who had been or continued to be employed in the mining sector over the past year, as well as their spouses (if any). Because of issues related to literacy, researchers visited each participant and filled out the questionnaire with them. The data collected was entered into an Excel database, allowing comparison between years of results.

For 2003-2004, a total of 6 current or past mine employees were interviewed, as well as 3 spouses. For 2004-2005, we interviewed 20 employees and 8 spouses. These numbers reflect the continuation of a trend identified in the 2002-2003 *Ni hat'ni – Watching the Land* report. In 2001, 60% of employees interviewed were employed full-time. This number dropped to 34% in 2002, but there was an increase in numbers of people employed in casual or seasonal positions (LKDFN and Ellis 2003: 96). Although overall numbers of Łutsël K'e residents employed in the mining industry remains very low (refer to **Figure 32** from the *Community Health Survey),* there has been an increase in the number of casual and seasonal positions. Due to the low numbers of interviewees in the last two years, we present a summary of results in various categories of indicators, rather than presenting the data in a graph format.

The following results demonstrate the type of mining employment gained during 2003-2005.

Due to the personal nature of these questions and our wish to ensure confidentiality, direct quotes from interviewees are written in italics, but are not identified with the person's initials.

Type of Employment

- 2003-04: Of the six employees interviewed, two were full-time, one was part-time, and three held seasonal positions.
- 2004-05: Of the 20 employees interviewed, nine were full-time (45%), five were part-time, three were casual, and three held seasonal positions.

Employers

- 2003-04: Of the six employees interviewed, four worked for a major diamond mining company (two for BHP Billiton, one for Diavik, and one for De Beers at Kennady Lake). The other two employees worked for companies on contract to the diamond mines (one for Western Explosives and one for Nuna Logistics).
- 2004-05: Of the 20 employees interviewed, nine worked for BHP (45%), five for De Beers at Snap Lake, four for Nuna Logistics, two for De Beers at Kennady Lake, and one for Diavik.

Job Titles

For 2003-2005, Łutsël K'e residents employed full-time worked as haul truck drivers, pump truck operators, and driller's helpers. Other people held seasonal positions as ice road flooders, environmental monitoring assistants, and archaeological survey assistants. There were also a few people employed as general labourers and housekeepers, and one person worked as an underground surveyor in 2004-05.

Work Schedules

- 2003-04: All six employees interviewed worked a two week in, two week out schedule.
- 2004-05: Of the 20 employees interviewed, the majority (14 out of 20, or 70%) worked a two week in, two week out schedule. The rest had varied shifts depending on the nature of the position. Two people worked three weeks in, one week out. Two people worked six weeks in (ice road flooding). One person worked four weeks in, two weeks out and one person worked a three-week contract.

Effects on Home and Family

Questions were also asked about the effects of mining employment upon families. The responses demonstrate the difficulty in balancing the need for monetary income and the desire to remain at home with one's family.

Employees were asked "Has mining employment affected you at home?" In 2003-04, four out of six employees (67%) said yes. In 2004-05, six out of 14 employees (30%) said yes. When asked to elaborate, employees responded that they had trouble sleeping due to working night shifts, missed out on family activities and time with their children, were getting into more arguments with their spouse (especially over how money is being spent), and noticed that their children were starting to have discipline problems.

Employees were also asked "Has there been more family break-ups since mining employment started?" In 2003-04, five out of six employees (83%) said yes. In 2004-05, nine out of 20 employees (45%) said yes. One person responded that *"Most people I know that are working remotely are going through separation",* while another said *"Not that I could see now, but maybe in the future."*

When asked "If you were making the same amount of money, would you rather work in town?", four out of six employees (67%) in 2003-04 and 15 out of 20 employees (75%) in 2004-05 answered yes. All spouses interviewed (100%) in both 2003-04 and 2004-05 said that they would rather have their partner stay in Łutsël K'e for employment if the money was the same and if jobs were available. There were some responses which suggest that other factors may be determining people's choices for employment location. One employee said he would rather work in town, but has had trouble securing a job even when one is available. *"Definitely I would rather work in town, if people stop being prejudiced and discriminating against their own people."*

Effects on Traditional Way of Life

Three of six employees (50%) in 2003-04 and eight of 14 employees (57%) in 2004-05 responded that their jobs were having a definite effect on their traditional way of life. They don't get out on the land as much, there's no time to hunt or trap as they used to, and they miss out on traditional family gatherings and activities such as picnics. Employees also mentioned that you can't hunt, trap or fish at the mine site, there is no traditional food served, and they miss being able to cook outside. Many of the spouses in both years agreed, saying that during their two weeks away, they miss out on a lot of opportunities and the family tends not to go out as much without them there.

Numerous employees also commented that they had concerns about the impacts the mine was having on the land which sustains their traditional way of life. Air pollution, effects on wildlife (especially caribou), and a general feeling that the mines were destroying the land were all mentioned. One employee said that he felt he was becoming immune to these concerns. *"Everything is focused on the job. You kind of forget about your traditional way of life."*

Reasons for Working in Mining Sector

Mineral development companies continue to be attractive to potential employees for the higher wages offered and the general lack of jobs in Łutsël K'e. When asked why they were working in the mining industry, all employees in both years responded that the money was their main motivation for remaining employed there. Other responses included the chance to get out of town, the opportunity to stay away from alcohol and drugs, good food, the enjoyment of their job, and the opportunity to learn something new and gain experience. Some other representative responses are as follows:

> *"Because Lutsel K'e authorities only hire their own families and discriminate against others."*
>
> *"What else am I supposed to do? Welfare doesn't help, I need to work."*

Spouses who were asked how employment at the mining sector has benefited their families all responded that the financial benefits were great, and the money helped pay bills and provide for family needs.

A number of people interviewed had been employed in the mining industry in the past year but were not anymore. When asked for the reasons, the majority of people in both years said that they had only held seasonal positions. One person left for health reasons and one went on maternity leave. A number of other former employees said that they had gotten fired or laid off. A sample of these responses follows:

> *"I really wanted to stay and work but I had a criminal record. I did a good job when I was there. It would be good to work on your own land, your own backyard."*
>
> *"I left my job due to harassment from the foreman. If someone says they are not treated fairly at the mine site, it should be looked into or taken seriously."*
>
> *"Racism exists in large companies like BHP – they will find a way to get rid of you."*

Suggested Improvements

Employees and spouses were also asked how mining employment could be improved for the people of Łutsël K'e.

Employees suggested a variety of ways, including wage raises, different work schedules (such as one week in/one week out), more training offered in Łutsël K'e rather than at the job site and more varied training, more jobs created in Łutsël K'e, the hiring of more Aboriginal people, and longer terms of employment for some jobs (especially casual and seasonal positions). Other suggestions included more opportunities for promotion (in 2004-05, only four out of 20 employees said there was any promotion in their job), direct flights from Łutsël K'e to the job site (ie. not through Yellowknife), and more focus on training and education for young people. One employee commented that some trades and training (specifically, industrial warehousing) are not recognized by the Department of Education.

A number of former employees also said that they had tried to regain employment in the mining sector, but were having difficulties. Many had sent resumes numerous times to various potential employers, but gotten no response. This is a common complaint heard around town, that the mining companies promise lots of jobs but when you send in your resume (even if you don't have a criminal record and are qualified for the job) you never hear anything back. One respondent said that this was because the mining companies are discriminatory against Aboriginal people, and would rather hire people from down south. His suggestion was that *"Łutsël K'e should have their own mine, not operated by outsiders."* Spouses were also asked for suggestions on how to make employment in the mining industry better. Some responses included better benefits for the families of employees, training offered to spouses and families, and family visits to the job site.

The *Interpretation Workshop* for the *Mine Employee and Spouse Survey* was planned and rescheduled a number of times throughout late February and early March 2005. We invited the actual employees and spouses who had completed the survey in 2003-2005, as well as those community organizations who deal with mining companies, local employment opportunities, and health and well-being (ie. Wildlife, Lands & Environment Department, Denesǫłıne Corporation, Chief & Council, Impact & Benefit Agreement negotiators, and Health & Social Services). Due to several major political issues in the community during the same time period, community members were attending public meetings almost every day, many of which lasted into the evenings. Researchers had difficulty scheduling appropriate times, and many people who were invited to the workshop said they were interested in hearing the results but had spent so much time at

meetings lately they were missing out on time with their families. Due to time constraints for submission of the final report, we were unable to keep rescheduling this workshop for when everyone was available. As such, we had a very small turnout (only three people). All participants agreed that the results from 2003-2005 are very revealing, and give a clear picture of the current status of employment in the mining industry and some obvious ways it could be improved. A sample of other comments offered during the workshop is as follows:

I like my job because of the ability to work with minimum experience in mining. Finding the good jobs where you don't need the education. We do need more training, though, and we should be focusing on training the young people to work in this industry.

We need more Dene people working, more flexible shifts, and better communication between employers and employees.

I have friends who work at the mines. They're gone for a long time, even for Christmas and holidays and sometimes even for their own birthday, but they usually postpone it until they come back. They still practice their traditional Dene culture and go out hunting, fishing and getting wood.

6.3.3 Cultural Vitality Survey

Beginning in 2002, the *Cultural Vitality Survey* was administered to a representative sample of both adults and youth. Questions were designed around youth issues, and the youth version of the questionnaire asks for more in-depth and detailed responses. Questions included level of knowledge about their history, how they learn about their culture, their goals in life, and the main challenges facing youth today. Adults were asked for more general responses on the type of cultural activities they engage in, ideas on how to keep traditions alive, knowledge of legends, and issues facing youth today. In 2003-2004, a total of 40 adults were interviewed and zero youth. Due to confusion over the number of different youth surveys, the Socio-Economic Researcher completed the general *Youth Survey* (see section 6.3.4), thinking it was the *Youth Cultural Survey.* This error was not caught by the Manager until she started reviewing the data entry, and by then there were other priorities to deal with. Therefore, there is no youth *Cultural Survey* data for 2003-2004. This is extremely unfortunate as the entire survey was designed to reflect youth issues. However, both the adult and youth *Cultural Survey* was completed for 2004-2005. As well, an *Interpretive Workshop* was held in March 2005 to present and discuss the results from both years. Eleven people participated in this workshop, with all age groups represented (youth, adults and Elders).

Due to the wide variation in responses and multiple responses per question, this information was very difficult to display in graph format. We have therefore included a representative sample of responses to several prominent questions for surveys.

What kinds of cultural activities do you participate in?

Adults mentioned a wide variety of activities such as hunting, camping, fishing, trapping, family picnics, sweats/saunas, nature walks, setting snares, making drymeat and dry-fish, hand games, drum dances, cutting wood, boating, picking berries, and making bannock. During the *Interpretive Workshop,* some people said that some Elders don't practice their traditional skills as much as before because they are getting old and sick. Youth said that they don't participate in these activities because they have no equipment, support or encouragement.

How well do you know your traditional history and legends?

The majority of adults and youth interviewed knew stories taught to them by parents and elders, family background, history of the Treaty, the locations of archaeological and spiritual sites, and

locations where people lived in the past. Several of the younger adults mentioned that they don't know as much due to the language barrier, and also mentioned that stories and history should be put in writing and on video so people can learn it. Most adults and youth had heard the legends about the Old Lady of the Falls, the giant beaver, and various battle stories, but many adults mentioned that elders should tell these stories more often to children and youth. Many of the youth also said they wanted to encourage the Elders and adults to write books and record stories on audio & video tapes. They also suggested that more adults should practice and teach the Dene ways, such as speaking their language more at home and at work.

How can we keep our Dene ways alive?

Adults interviewed had numerous suggestions, most of which involved the younger generations. They mentioned going out on the land more often, using traditional skills, taking youth out for cultural camps, increasing cultural activities in the school, elder/youth workshops, and making sure children get lots of hands-on experience. Other things of importance were continuing to keep the language alive, encouraging parents to teach their children, speaking out more at public meetings when people aren't following Dene ways, and dealing with addictions (i.e. drugs, alcohol, gambling) which take time away from families. The vast majority of the youth interviewed suggested hands-on experience was the best way to keep traditions alive. They also thought more cultural activities should be offered and taught at the school, the Dene language should be promoted and taught both at home and at school, and that more facilities should be built out on the land ("bush schools") to teach traditional skills.

What are some of the main challenges facing youth today?

Adults mentioned the influx of modern technologies such as satellite TV and video games, language barriers and the loss of language, drugs and alcohol, lack of recreational activities, not enough cultural teachings, and lack of encouragement and patience from elders and families.

A sample of representative comments gathered during the *Interpretive Workshop* follows:

The youth need to really sit down and listen to what the Elders have to say, you would be amazed at the hardships they have endured to survive. There are a lot of old stories here at the Wildlife office that were recorded from our Elders, and you can probably get copies if you want. (JD 04 03 05)

There are a lot of youth (and adults too) who don't know how to set traps, set nets, clean and fix fish, make dryfish and drymeat, skin caribou, tan hides, set tents…The youth will face hardship in the future if they do not start learning from what few Elders we have left today. (PM 04 03 05)

Some Elders still practice their culture but not as much as before because they lost a loved one, or because of old age or sickness. Maybe some don't have Skidoos, but they can still hunt or set snares at a walking distance. (PM 04 03 05)

When you have lived out in the bush and learned how to survive, and you come back to town with furs or meat, you will feel good about yourselves and respect all those around you.(JD 04 03 05)

Elders and adults need to teach kids their language at a young age. We can all do it if we give it a try. Try to say one Chipewyan word a day, and don't laugh at them, just correct and encourage them. (DE 04 03 05)

Remember when they used to have snowshoes and people used to run in them? How come they don't do that anymore? (DC 04 03 05)

When I was young, me and Kyle used to go out hunting a lot. Now it's not like that. There is no motivation and encouragement, and Kyle moved away. (DM 04 03 05)

It's hard to teach young people nowadays. They have it easy. If they were living in the bush in a tent they would have to get up and make fire because it's cold, and it's not like that in a house…I travelled the barrenlands in the Artillery Lake area since I was very young. It was hard in those days but no one complained. I only had an axe and one of those old long saws, we didn't have any chainsaw. I started getting wood at six years old, and I always helped elders when they needed help. I used to sew my torn moose hide mitts, my mother taught me that. I had to stitch them closed so the cold wind would not go through. I helped my mother around the cabin and did what needed to be done. Nowadays everyone works for money…most people are lazy now, even me! Life is much easier now. When you ask a youth to do something, they always say just wait. Why wait? You do what you were asked to do. We don't wait around. If something needs fixing, we fix it as soon as possible, and don't be lazy. (JD 04 03 05)

6.3.4 Youth Survey

40 youth participated in this survey in 2003-2004, and 27 youth in 2004-2005. The *Youth Survey* is geared to discussions around youth goals, schooling, and main challenges facing them today. An *Interpretive Workshop* was also held in early March 2005 to discuss the results from both years. Eight youth participated in this workshop. A representative sample of responses to several of the main survey questions follows. Again, the data was too complex and qualitative to be represented in graph form, and is presented instead in summary form.

What are some of the main challenges facing youth today?

The youth surveyed in both years mentioned boredom, trying to stay away from drugs and alcohol, increased numbers of youth breaking the law, violence, and peer pressure. Other responses included trying to stay in school, fighting and bullying, gossip, sex, having children too young, the loss of Dene culture and language, and no one teaching them how to survive on the land.

What are some of your goals in life?

Youth surveyed had a number of goals, ranging from short-term goals like finishing high school to future career choices. Some of the careers being contemplated were a mining employee, Chief, fisherman, nurse, doctor, lawyer, pilot, professional soccer player, hunter, hairdresser, lawyer, carpenter, welder, mechanic, pediatrician, and Band Manager. Several youth mentioned their goal was to be a good role model for others, and a few said they were not sure yet what they wanted to do.

Is there support for youth in the community?

When asked if they thought the community supported activities for young people, the majority responded no. They said the only activities available happened once in a while at the school gym or the community hall, and otherwise there was nothing to do. When asked who they talked to if they had a problem, the majority responded that family members or friends would help them. In 2004-05, one respondent answered that she talked to her dog, and out of the total 27 youth interviewed, 25% answered that they had no one to talk to.

How can youth be of help?

Responses included helping people, picking up garbage, telling leaders what they want in the community, not talking back to teachers, talking with and listening to elders, volunteering, doing chores at home, and being respectful and kind to others.

The youth at the *Interpretive Workshop* were quite shy and had to be prompted to make any comments, but a sample of representative responses follows:

My grandparents take me out, and I learned a lot. I know how to skin a caribou, make fire, set traps, set nets, and a little bit of my language. Kids who are in town don't learn because there is drugs and alcohol and laziness. But you can learn from friends and family. (JB 04 03 05)

You have to sit down with Elders and parents and really listen. If you are willing to learn, you will. (TM 04 03 05)

If we have more cultural activities in recreation, in school and at home, then the Dene ways will never die in the future. (JB 04 03 05)

6.3.5 Leadership Review Survey

In this monitoring cycle, a representative selection of youth, adults and elders were asked to provide direction to their elected leaders. This survey was conducted in June 2004 and January 2005. 21 people were interviewed for 2003-04 (eight youth/ten adults/three elders), and 56 people were interviewed for 2004-05 (25 youth/15 adults/16 elders). Due to literacy issues, researchers visited each participant and filled out the survey form with them. Information was then entered into an Excel database. Numerous community members were approached to complete this survey in 2003-04, but they were so concerned about confidentiality issues and the possibility that Chief and Council would find out what they were saying, they refused to participate. This fear of negative consequences is in itself a serious issue facing Łutsël K'e leadership, but seems to have been resolved by the time this survey was conducted the following year, as people were more than willing to answer questions. There was a lot of political upheavals in the community early in 2005, as the membership voted to oust the current Chief & Council. The responses for the last two years are quite indicative of the reasons behind this decision. Again, this survey produced such varied and detailed responses that we have summarized them in written sections rather than in graph format.

Due to the personal nature of these questions and our wish to ensure confidentiality, direct quotes from interviewees are written in italics, but are not identified with the person's initials.

Where the Chief should be spending most of his time?

In 2003-04, the majority of youth respondents (62%) said the Chief should stay in town as much as possible, only going out for very important meetings, and should spend as much time on the land as he can. 100% of adults and 100% of elders surveyed said that the Chief's priority should be in town. He should only travel if absolutely necessary for issues of major importance, such as land claims, and should also get out on the land more often. All other meetings should be delegated to Council members or other community members. Of the three elders surveyed, all also said that the Chief was attending too many meetings out of town, and that he should be spending the majority of his time either in Łutsël K'e or out on the land.

In 2004-05, 100% of all respondents said that most of the Chief's time should be spent in town. People also commented that the Chief needs to spend more time with the people and interact

with them, and that several times they had noted the Chief left meetings before they were finished. They did not find this acceptable.

Some additional comments were as follows:

> *When the town is hungry and needs meat, the Chief should not let his people be hungry.*
>
> *There should be meetings out on the land, that's where the reality is.*

What is the best way for Chief and Council to inform the community?

In 2003-04, approximately half (49%) of youth respondents suggested more frequent public meetings as the best way to provide the community with information. The adults surveyed gave widely varied responses. All said that public meetings and home visits were some of the best ways to communicate with people, but there were also many other ways. Suggestions included monthly newsletters, updates on the local radio station, a web page, and having more of an open-door policy. The three elders surveyed also said more frequent public meetings, ideally once a month, would help in communicating and informing the community. One also suggested newsletters as a useful medium to convey updates.

In 2004-05, these suggestions were echoed almost exactly. All respondents suggested public meetings, newsletters, radio updates, home visits, and letters in mailboxes were effective ways to inform the community. Some other suggestions this year from the adults were to ask people for advice more often, have monthly membership updates, and more of an open-door policy for people to come and ask questions. The elders said more updates should be given on out-of-town meetings, people should be told about any decisions made, and the leadership should go to the school more often to speak with the kids. The youth this year had some very unique suggestions, including having more meetings with dances, feasts, or Bingo afterwards to encourage people to come. They also suggested putting up posters or more of a visual update on activities (vs. written memos in mailboxes), and one youth thought they should have "Council Hour" on the radio.

What are the most important issues Chief and Council should be dealing with?

In this question, participants are asked to give direction to Chief and Council as to where they should focus their efforts, thereby reflecting issues of high priority for community members.

Not surprisingly, youth suggested a focus on youth issues, including providing greater recreational and learning opportunities, and also passing on traditional skills and language. In 2004-05 especially, youth said that the leadership should be dealing more with drugs, alcohol, and bootlegging. They also mentioned the importance of land claims and protecting the land and water. Adults in both years thought the leadership's focus should be on protection of the environment, promotion of culture and language, self-government, health, settling treaty entitlement, protected areas negotiations, hydro projects, employment, youth issues, dealing with addictions (i.e. alcohol, drugs, gambling), and more community development and training. Several people also said they should focus on talking more to community members and treating people more equally and fairly. In 2004-05 especially, adults mentioned dealing with financial issues should be a priority, as well as promoting more local business opportunities and economic development for the community. Elders' responses focused on protecting the land/water/ air/wildlife, dealing with the impacts of mining activities, settling treaty entitlement negotiations, youth issues, protected areas, social issues, financial stability, and developing local businesses.

Do you have any general comments for your leadership?

Youth respondents all said that the Chief and Council need to get out and talk to the youth more, to find out what they need and what should be done. Several also said they wanted to be more

informed about why people go out of town, what happens at all the meetings, and what's going on at the diamond mines. They felt strongly that they should be regularly informed and involved as they are the future generation. Some representative comments are as follows:

> *The leadership should deal with important issues so our traditional Dene culture stays strong and is passed on to the younger generations.*
>
> *Think of the future and well-being of the people of Łutsël K'e, not only Chief and Council.*
>
> *The Chief should have a heart for the people and treat everyone equal.*

Elders said that Chief and Council should speak for the people, not for themselves, and should be required to maintain sobriety. They emphasized that leadership needs to keep community members informed at all times, and should be asking the elders for advice more often. Others had more specific ideas, such as focusing on local environmental issues, such as cleaning up the community along the shorelines. Some other representative comments were:

> *In all my 80 years, I have never seen the way Chief and Council has been behaving. It's not very good.*
>
> *They should talk about how they are spending money and always be on top of finances. They shouldn't just spend the public money and do whatever they want. Now there's just talking, no action plan.*
>
> *People should be talking about the Dene way of life and not about money. Teach your kids the Dene way and preserve it.*

Adults were the most vocal in offering suggestions for improvement to Chief and Council. At the time these surveys were completed, leadership was not perceived in a very positive light. Most adults commented that they often felt unable to express their concerns without fear of backlash, that leadership did not listen to the wishes of community members, and that there is too much favouritism, and they therefore had little respect for Chief and Council. The majority of people said they need to have public meetings and updates much more often, get involved in healing programs themselves rather than "preaching" to others, do their homework and be more cautious when signing important agreements, create more employment opportunities, deal with the severe housing shortage, stay more informed about the financial situation and stop unnecessary spending on travel, and start working more for the people and not just for themselves and their families. Adults overwhelmingly felt that Chief and Council need to become more organized and honest, and prove that they are committed to making a difference for the entire community of Łutsël K'e in order to earn back people's respect. Some representative comments are as follows:

> *Stop and say hi! It's a simple start.*
>
> *Find out who is selling drugs and alcohol – we need tougher laws on this or else kick them out of town. We need action on this ASAP!*
>
> *Being leaders and role models is important to the young generation – for them, please do good.*
>
> *Get with it before it's too late!*

An *Interpretive Workshop* was also held in early March 2005 to discuss the survey results from the last two years. Eleven people participated, and some of their comments are as follows:

More out-of-town meetings should be delegated to Councillors or Committee members or just regular community members. It's too much work for one person and can be stressful. It's better to work together.

If the Chief starts doing what he wants, if he is making his own decisions and not communicating with the people, then there is something seriously wrong. If things are not corrected, then future leaders can behave in that same manner and we can't have that.

If you have respect for each other, be kind to each other, and work together we can keep our traditions strong and alive. We need to work together for the future. If you be a role model, the youth will respect you and follow your path. The youth have a strong voice and beliefs, and with the right guidance and support the youth can be strong future leaders to keep our Dene culture strong.

7.0 DISCUSSION AND CONCLUSIONS

The *Ni hat'ni – Watching the Land* program is still in its early years of implementation. Although it builds upon several years of previous research, it is only just beginning to integrate the analysis and interpretation of both socio-economic and environmental indicator information. Due to various unforeseen circumstances, the program did not achieve its desired goals for 2003-2005. As well, the quality and reliability of the environmental monitoring data collected for 2003-2004 is somewhat suspect due to the large amounts of time which passed between actual harvesting activities and interviews being conducted. The socio-economic data is not as susceptible to details lost in time, but again there were problems with the completeness and accuracy of data collected.

In particular, although *Interpretive Workshops* were held to discuss the results of two years of data collection for all environmental and socio-economic surveys, we were not able to hold the *Integrative Interpretation Workshops* as identified in the proposal. These workshops would have analyzed environmental and socio-economic data together, and identified areas where the two overlap. This type of cross-analysis was detailed in the *2002-2003 Ni hat'ni – Watching the Land Final Report (LKDFN and Ellis 2003).* When we look at the results generated during the 2003-2005 monitoring cycles, we see that all of the trends identified in the 2002-2003 report are continuing. If the *Integrative Interpretation Workshops* had been held, we would have again concluded that the wage economy and the traditional economy do impact each other. Some results show that people employed in the wage economy are spending less time on the land. For example, during their two weeks off, employees and their families tend to engage more in day trips and harvesting activities do not take them very far from Łutsël K'e. However, other results show that families with at least one member employed are better able to afford on-the-land equipment such as Skidoos or boats, and are in a better position to participate in activities like the community fall hunt, where charter airfares can be expensive. There continue to be very few people employed in the mining sector, other than temporary seasonal positions, and the majority of people would prefer to work in town if there were jobs available.

Environmental monitoring cycles continue to show that most animal species are healthy and in good condition, with the exception of the Bathurst caribou herd and the fish in Stark Lake, which are undergoing significant and drastic changes. Some species are exhibiting rises and falls in population numbers, but this conforms to the natural cycles that people have been observing for years. Socio-economic monitoring cycles continue to show that use of the Chipewyan language and knowledge of traditional skills is rapidly decreasing among the younger generation, and drastic measures need to be taken now to prevent this trend from continuing. There are very few people participating in traditional recreational activities such as drum dances and hand games, and there are still low levels of people who attend public meetings and volunteer for community

events. Youth are not satisfied with the quality of education they receive in Łutsël K'e, and feel they are not well prepared when they move to bigger centres to further their education. There is little community support for youth activities, and very few recreational opportunities available (although an arena is planned for next year). The community is currently dealing with massive financial problems and a leadership crisis.

Rather than reiterating all of these same trends, which can clearly be seen in **Section 6.0 (Results),** we want to emphasize that the key now is to act on this information. The results of the *Ni hat'ni – Watching the Land* monitoring program must inform decision-making and be used to implement programs to address some of the concerns. This applies not only to the leadership and community organizations within Łutsël K'e, but also to other government and non-government agencies. Rather than just collecting data for another few years, and presenting the same kinds of results to people, we want to ensure that this valuable information is actually used. This will be the goal for the 2005-2006 *Ni hat'ni* program, to

The *Ni hat'ni* program is extremely valuable, and should serve as an example for other communities wishing to implement similar community-based monitoring programs. It employs local researchers who are trained in data analysis and interviewing skills, and the results can be used to inform decision-making at the community level and beyond.

8.0 LINKS WITH PARALLEL STUDIES

The current study is linked to the following projects being undertaken or already completed by the Wildlife, Lands and Environment Department of the Łutsël K'e Dene First Nation:

- Community-Based Monitoring Pilot Project (1997)
- Community-Based Monitoring (1999-2002)
- Traditional Knowledge Study on Community Health (1998)
- Traditional Ecological Knowledge Project in the Kache Kué Study Region (2001-2002)
- Stark Lake Fish Habitat Study (2001-2002)
- Traditional Fishing Knowledge of the East Arm of Great Slave Lake (2001)
- GIS/Database Project (2000-present)
- Denesǫłıne Land Use in the ʔ edacho Tué and Desnedhe Che Region (2001-2002)
- Traditional Knowledge in the Nạ Yaghe Kué Region (2001-2002)
- Ni hat'ni – Watching the Land: Cumulative Effects Assessment and Management in Łutsël K'e (2001)
- Caribou Condition Study (in partnership with the University of Manitoba and Dr. Phil Lyver, 2000-2001)
- Caribou Movement Study (in partnership with the University of Manitoba and Anne Kendrick, 2000-2002)

9.0 TRAINING ACTIVITIES AND RESULTS

During the course of 2003-2005, several community members were trained in interviewing techniques, recording interviews with multimedia equipment (video cameras, mini-disc recorders, etc.), transcribing interviews, database and spreadsheet entry, basic computer skills, graphing and charting using Microsoft Excel, introduction to Microsoft Access, and GIS procedures. As a result, we now have additional community members who are capable of independently conducting activities related to community-based monitoring, and who have a better understanding of Wildlife, Lands and Environment Department goals and activities, which they can share with the rest of Łutsël K'e and beyond.

The most recent staff members also gained experience in compiling and analyzing results, creating PowerPoint presentations, organizing and conducting workshops with community members, and preparing minutes of workshops. The G.I.S. Technician attended a week-long course in Calgary to learn a new cumulative effects modelling program called ALCES II (A Landscape Cumulative Effects Simulator), and he also recently prepared and delivered a presentation on community-based caribou monitoring at the annual BHP environmental workshop in Yellowknife. In 2004-2005, staff members also attended a Canadian Aboriginal Minerals Association (CAMA) conference in Yellowknife, were a part of consultation meetings related to the Long Lake Containment Facility at BHP's Ekati diamond mine, and were invited to all regular meetings of the Wildlife, Lands and Environment Committee.

10.0 LOOKING AHEAD: 2005-2006

First priorities for 2005-2006 will be rehiring and training new researchers, and conducting a series of short workshops to re-evaluate some of the surveys and interviews. As mentioned earlier in this report, both of the main researcher positions (Socio-Economic and Environmental /Land Use) are now vacant. In April 2005, we will again have to post for jobs, conduct interviews, and re-train new employees. This all takes a great deal of time and effort, which could be put to much better use if there was consistency in staffing and additional positions created to assist with workload. However, we feel confident we can overcome these difficulties and continue the high calibre community-based research for which Łutsël K'e is renowned.

The request to re-evaluate surveys was one we heard many times during the *Interpretive Workshops,* particularly in regards to the *Community Health Survey.* People thought that perhaps some questions need to be reworded and surveys designed slightly differently (although still with the ability to compare results between years), in order to better examine the reasons behind the responses. People also suggested that perhaps the issues of concern have changed since these surveys were first designed, and we should revisit both the environmental and socio-economic surveys to make sure they address those issues.

The 2005-2006 series of interviews and surveys for the *Ni hat'ni – Watching the Land* program are planned by month and we are fully prepared to keep all activities on schedule this year. Our proposal to WKSS and other potential funding agencies for 2005-06 will again include two additional positions, in the hopes of rectifying the staff workload issues which caused a large part of the problem in 2003-05. These positions are a *Research Director*, assumed to be a graduate student who would coordinate the *Ni hat'ni* project and directly train staff in statistical methods and report writing, effectively splitting the current WLE department manager position into two. This would free up the manager to focus more exclusively on land use issues and dealing with mining and exploration companies. It would also allow more in-depth statistical analysis of particularly the socio-economic monitoring data collected over the years, and an additional focus on more effective ways to present and utilize the data. The second position is a *Research Coordinator*, a community member who would directly train under the *Research Director*, with the intent of taking over that position within one to two years. We interviewed several candidates for the *Research Director* position in the summer of 2004, in anticipation of receiving the required funding. However, due to the budgetary constraints of many of our potential funding agencies (including WKSS), we were unable to access the additional funding. The *Ni hat'ni* program is thus continuing in its current form. This is not necessarily a negative thing, but it has definitely prevented us from moving forward.

During 2005-2006, we plan to hold "visioning" workshops with the WLEC, Elders, youth, land-users, community organizations to determine new directions for research, and to ensure that we are focusing on the priorities and issues that are most important to the people of Łutsël K'e. We also have several new and exciting projects upcoming in 2005-2006 related to the *Ni hat'ni – Watching the Land* program. We have secured some funding from the Walter & Duncan Gordon

Foundation for a pilot initiative on caribou monitoring. We will be working with the Government of the Northwest Territories (Resources, Wildlife and Economic Development - RWED) to jointly analyze and interpret caribou abundance and distribution data. We hope that this project will clearly show how scientific knowledge (the radio-collared caribou movement data collected by RWED) and traditional knowledge (the on-the-ground hunters' observations generated through the *Ni hat'ni* program) can be integrated to give a better picture of what is happening. We have also gotten confirmation from De Beers Canada that they will fund a proposal to have Łutsël K'e land-users, youth and Elders on site at Snap Lake, to observe caribou as they are moving through the mine site area. This project will utilize the same type of monitoring conducted under the *Ni hat'ni* program, but take it outside of Łutsël K'e.

Our focus will be on the use of the many years of data collected through this project, building linkages and partnerships with outside organizations to promote the *Ni hat'ni* program and its results, and sharing results with other Akaitcho First Nations. We also want to encourage and offer training to other communities who may wish to develop their own similar community-based monitoring programs.

We have seen a huge improvement in organizational skills and development of a strong team atmosphere, which has contributed to our success, and we look forward to another year of valuable research.

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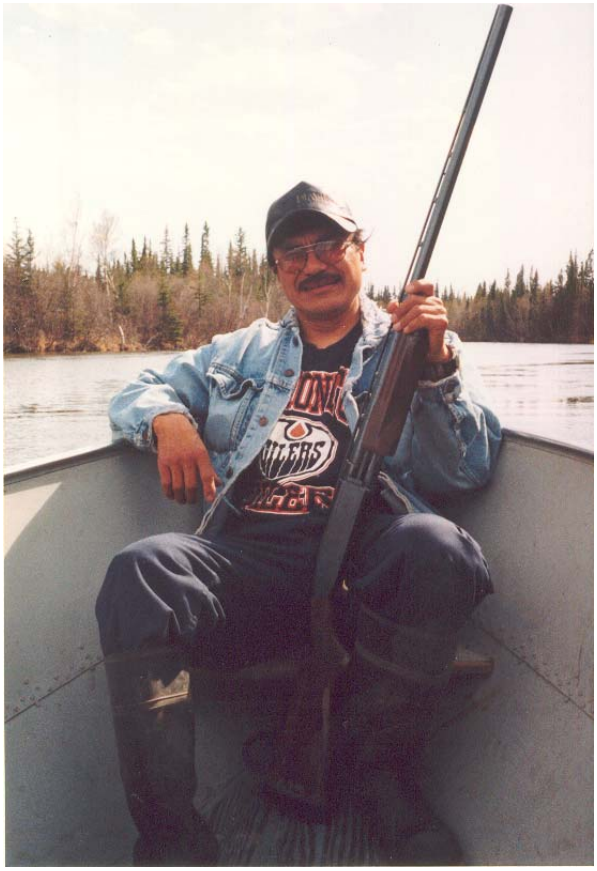
APPENDIX A: PICTURES OF PROJECT ACTIVITIES

Elders Noel Drybone and Pierre Marlowe during a mapping project.

Elders and staff members working on a mapping project.

John Rombough during a summer angling interview.



Charlie Catholique during a spring duck & geese hunting interview.

Marcel Basil shows Henry Catholique where he went hunting.

Boarding the plane after the fall caribou hunt at ʔ edacho Tué (Artıllery Lake).