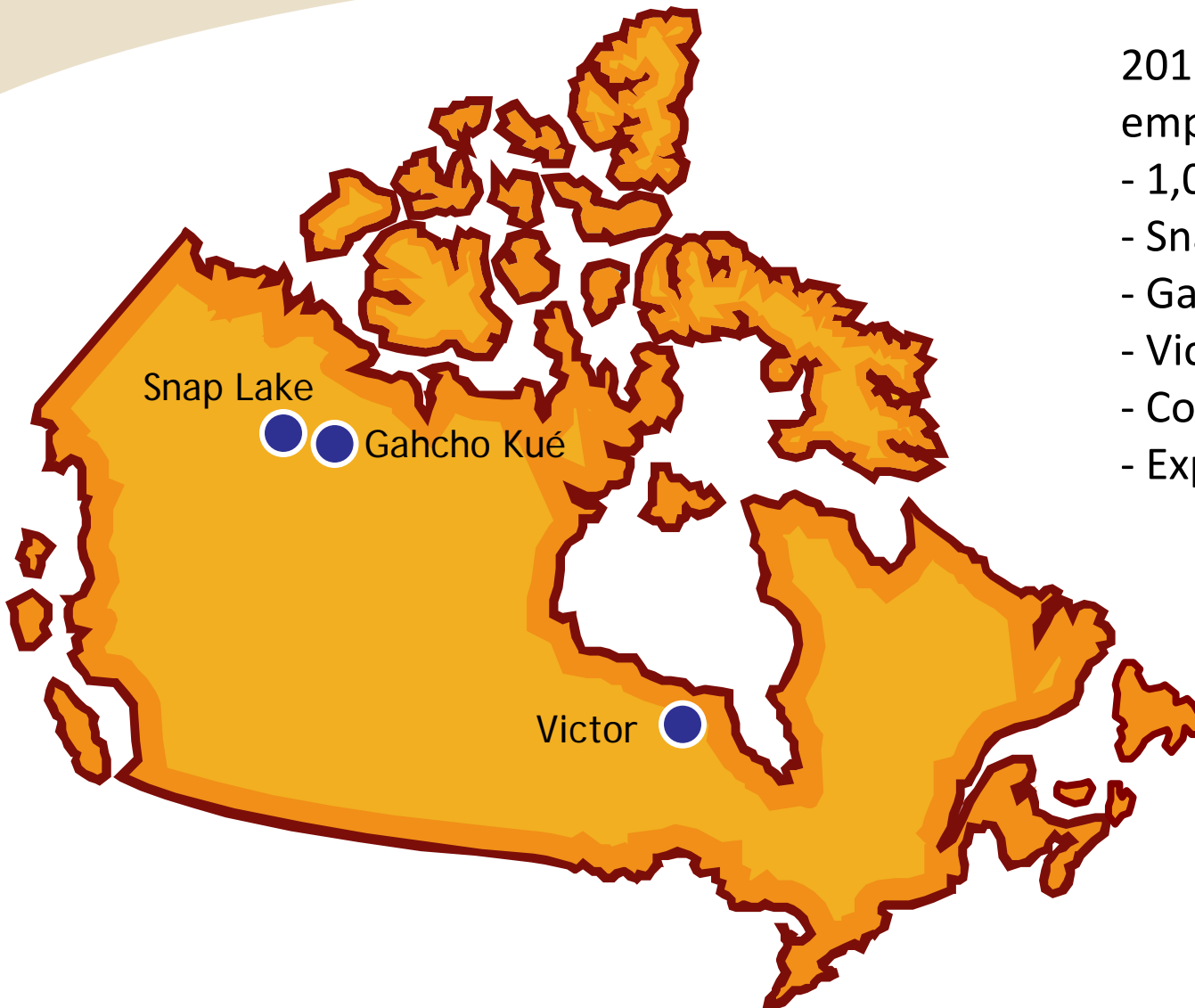


Gahcho Kué Project

Community Meetings February 2012



De Beers Canada



2011 Canadian

employment:

- 1,018 DBC Employees
- Snap Lake Mine
- Gahcho Kué Project
- Victor Mine
- Corporate
- Exploration

Environmental Review Process

- 2007 Oct - Environmental Impact Statement Terms of Reference issued to De Beers by the Review Panel
- 2010 Dec -Environmental Impact Statement submitted
- 2011 July - Terms of Reference Conformity
- 2011 Oct - De Beers' Community & Regulatory Workshop
- 2011 Nov - Review Panel Analysis Sessions
- 2012 Jan - Information Requests Submission
- 2012 May - Technical Meetings
- 2012 July - Information Requests #2
- 2012 Oct - Technical Submission to the Review Panel
- 2012 Dec - Final Hearings

Community Engagement – Looking Ahead

Proposed Gahcho Kué Project Opportunities for Community Participation and Engagement

Q4 2011 to July 2013

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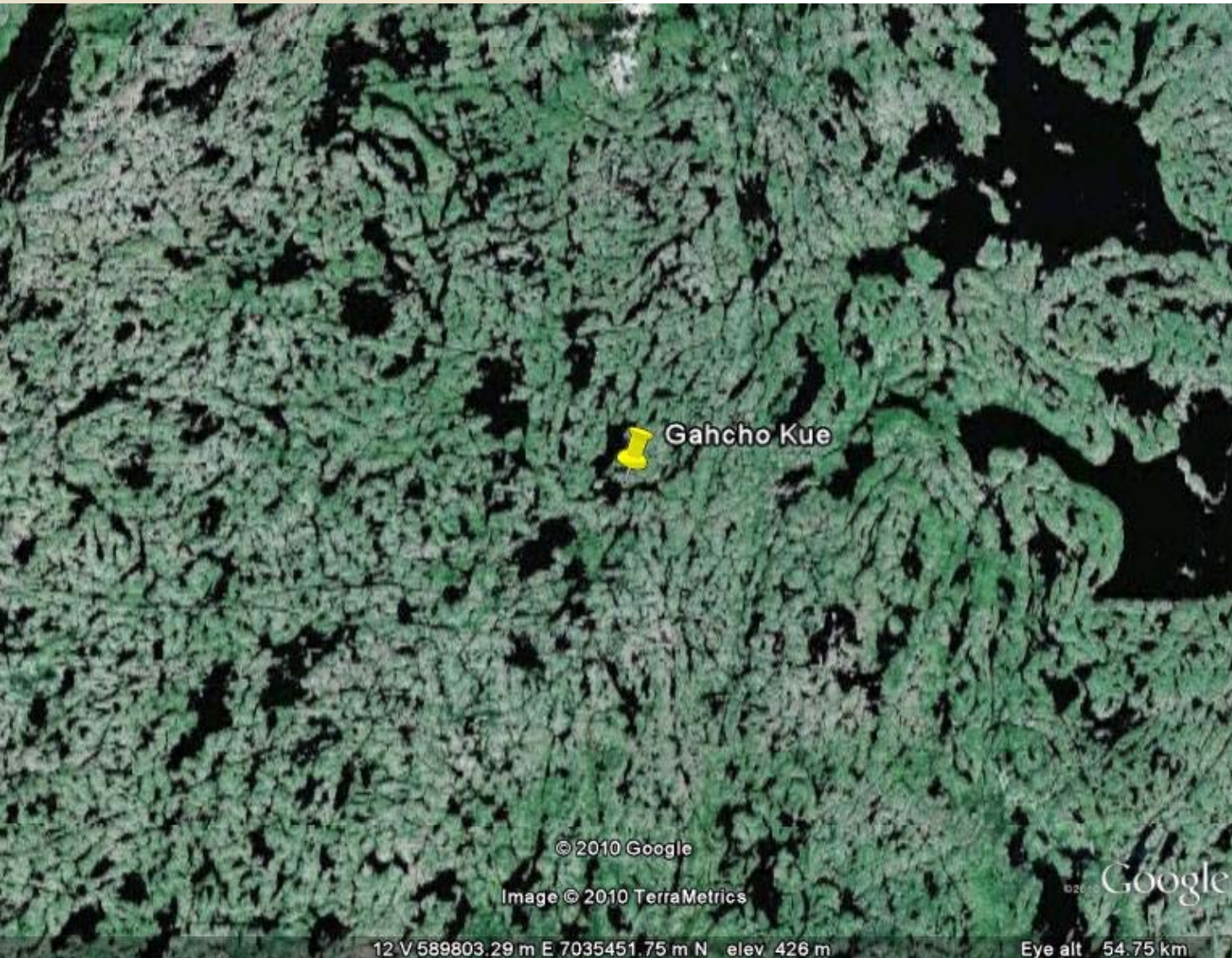
Purpose and Format of Today's Meeting

- Purpose:
 - Update on the Project
 - Share information and ideas on focused topics to help plan the Project with your input
 - Improve dialogue for the future
- Format:
 - Project presentation video
 - Water Management Plan
 - Water and Fish
 - Wildlife
 - Cultural Sites

Project Video

- The video has been updated to reflect the reduced area of the Fine Processed Kimberlite Containment Facility.

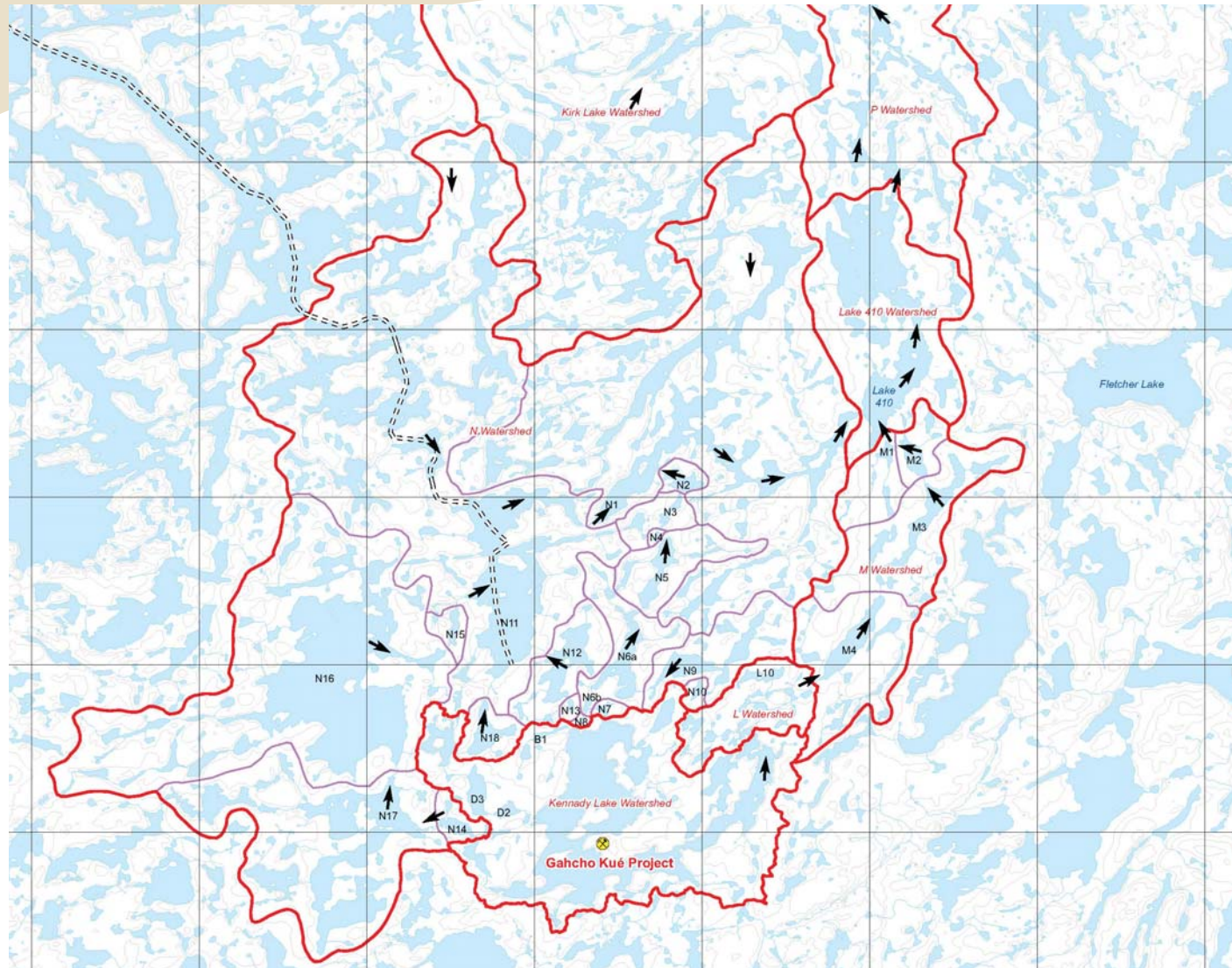
Gahcho Kué Project Location



Google Earth Image of
Kennady Lake

- One of many small
lakes in the region

Downstream Flow Paths and N Watershed



- Headwater Lake, Lower Lockhart River Watershed
- Natural flow north to Lake 410
- Water diverted to N11 also flows to Lake 410
- Flow returns to background levels at Lake 410 during dewatering

Kennady Lake



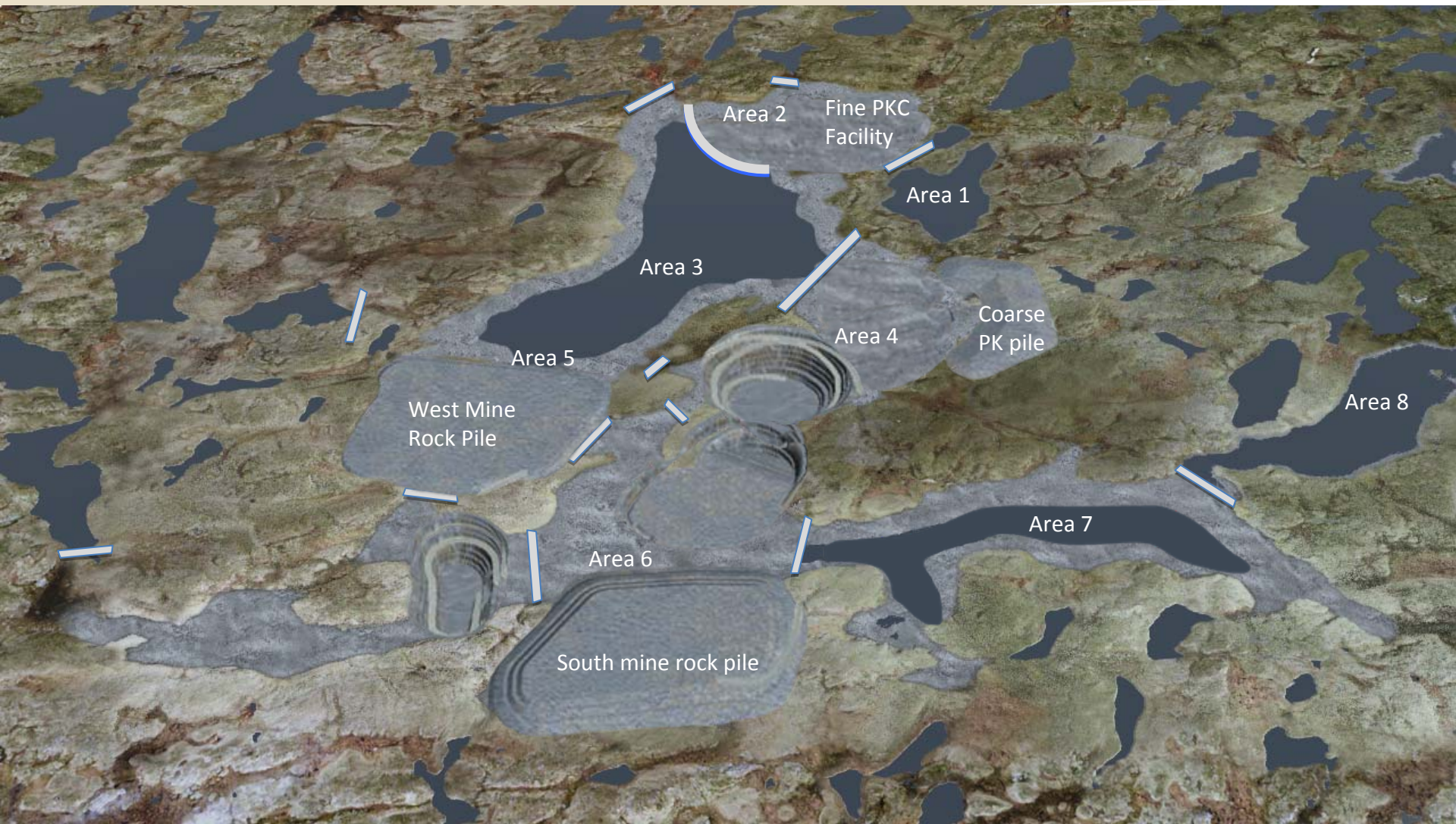
At 870 hectares, or 8.7 Km², Kennady Lake is about 1% of the size of Lac de Gras.

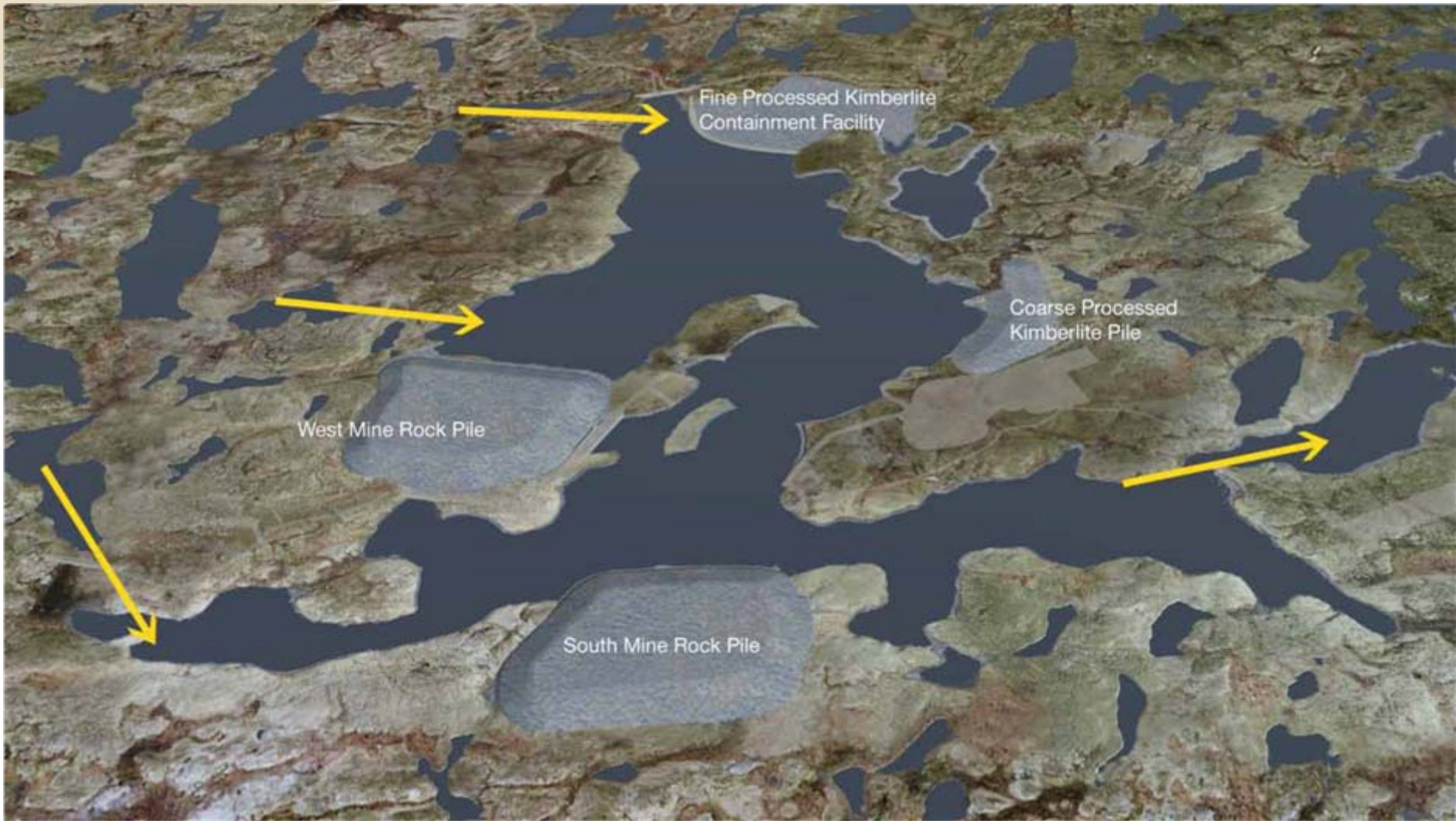
Water Management Strategy

- Key elements of the Water Management Plan:
 - Dewatering Kennady Lake for safe ore access, mine construction and operation
 - Dykes
 - Establishes a water control area, within which all mining activity is confined.
 - Water Management Pond (WMP) to manage contact water
 - Refilling Kennady Lake as quickly as possible to allow recovery of ecosystem









ARCHAEOLOGY

February 2012 Presentation



INTRODUCTION

- Archaeological sites are:
 - Locations containing physical evidence of past human activity
 - Protected under the NWT Archaeological Site Regulations and Mackenzie Valley Land Use Regulations
- Archaeological investigations:
 - Require an annual NWT Archaeologist's permit
 - Were conducted for the Project in 1996, 1998 to 2007 and 2010

ARCHAEOLOGISTS

- The first archaeological work at the Project was a brief survey in 1996 by Fedirchuk McCullough Associates
- Between 1998 and 2003, archaeological investigations were conducted by archaeologists from Jacques Whitford Environment Limited, mostly by Callum Thomson. He conducted the majority of the archaeological inventory around Kennady Lake and along the winter road; Callum also surveyed a possible access route to Snap Lake.
- From 2004 to 2007 and again in 2010, Points West conducted site assessment and some additional inventory
- Each year that field work was conducted, First Nation representatives formed part of the archaeological field crew.

WHAT DID WE DO?

- Aerial reconnaissance to view the types of landforms present in the project area
- Ground reconnaissance of areas in which proposed exploration or development activity has been identified
- Once archaeological sites are found, identify their locations in relation to the various types of development proposed and determine the potential for impact at each
- Conduct testing at sites that may not be avoidable to determine if there are subsurface deposits
- Analyze the data recovered to determine the archaeological significance of each site that may be affected

AREAS OF ARCHAEOLOGICAL INVENTORY

- Kennady Lake Area – within the mine footprint
 - Shores and terraces or ledges near Kennady Lake and other lakes and ponds, including areas with potential lake level changes
 - Inland areas typified by relatively level terrain and a view of the lake or overlooking smaller lakes and ponds
 - Sheltered areas, including areas with trees
 - High points of land providing a view of surrounding areas, including Kennady Lake and other lakes and ponds
 - Areas with exposed bedrock
- Kennedy Lake Area – outside of the mine footprint
 - Proposed and existing road routes across a variety of terrain
 - Proposed gravel sources – usually located on eskers
 - Proposed exploration areas on a variety of terrain types

LAKESHORE WITHIN FOOTPRINT



LAKESHORE OUTSIDE OF FOOTPRINT



LAKEVIEW WITHIN FOOTPRINT



LAKEVIEW OUTSIDE OF FOOTPRINT



HEIGHT OF LAND WITHIN FOOTPRINT



PROPOSED GRAVEL SOURCE



PROPOSED GRAVEL SOURCE



POSSIBLE PASS OR TRAVEL ROUTE



AREA OF EXPOSED BEDROCK



RESULTS OF THE ARCHAEOLOGICAL INVENTORY

- 80 new archaeological sites were found within the local study area centred on Kennady Lake – includes area of mine footprint as well as exploration areas and proposed gravel sources
- Between 1998 and 2010, one previously recorded site near Mackay Lake was revisited and 129 new sites were discovered near the winter access road, for a total of 130 sites examined
- An additional 44 sites were found in surrounding areas not associated with the footprint or winter road
- That is a total of 254 sites in the project vicinity - 253 new sites and one previously recorded site

TYPES OF SITES

- Lithic scatters are the dominant site type
 - Locations with stone tools and the pieces removed in the manufacture of stone tools, called flakes or lithics, both tools and flakes are artifacts
 - Predominantly represented by quartz artifacts although some other materials have been found occasionally
 - At the Project lithic scatters are commonly small in size with sparse archaeological material and are often limited to surface artifacts with no subsurface archaeological material
 - Occasionally features such as hearth or tent rings were found, usually in association with lithic scatters
 - Majority of the lithic scatters are suggestive of use 200 to 2500 years before present

LITHIC SCATTER



ARTIFACT



ARTIFACT



ARTIFACT



ARTIFACT



RESULTS – IMPACT AND SITE ASSESSMENT

- Within the mine footprint
 - The number of sites predicted to be affected by the proposed Project have changed over the years as a result of revisions to the mine footprint
 - In total, 49 of the 80 recorded archaeological sites have been assessed for site significance because at one point in time they were identified as being within the potential impact zone of the mine footprint or associated facilities
 - Site assessment involved intensively examining the surface of each site to identify artifacts and the site condition (disturbed or intact). It also involved subsurface testing, more detailed recording, mapping and photography.

RESULTS – IMPACT AND SITE ASSESSMENT

- Along the winter road
 - Of the 130 sites near the winter road, only three required site assessment. Archaeological material was very limited at all three sites and in the case of the one previously recorded site on Mackay Lake, had been surface collected when it was recorded in the 1960s. No further work has been recommended for these three sites
 - Four other sites near the winter road may require monitoring to ensure avoidance

SUBSURFACE TESTING



SCREENING FOR ARTIFACTS



COMPLETED SHOVEL TEST



COMPLETED SHOVEL TEST



BACKFILLED SHOVEL TESTS



IS FURTHER WORK REQUIRED?

- As a result of changes in the mine footprint, 10 of the 49 assessed sites will not be affected by the Project – no further work is required at these sites
- Because many of the archaeological sites within the mine footprint are small and characterized by a low number of surface artifacts and no subsurface material, there is little that can be done beyond recording, mapping and photography. As a result, no further work is proposed at 18 of the assessed sites
- Of the remaining 21 assessed sites, surface collection is recommended at 6 sites, but it is possible that one of these site may be avoidable
- Surface collection and excavation is recommended at 15 of the assessed sites, but avoidance may be possible at seven of these sites

IS FURTHER WORK REQUIRED?

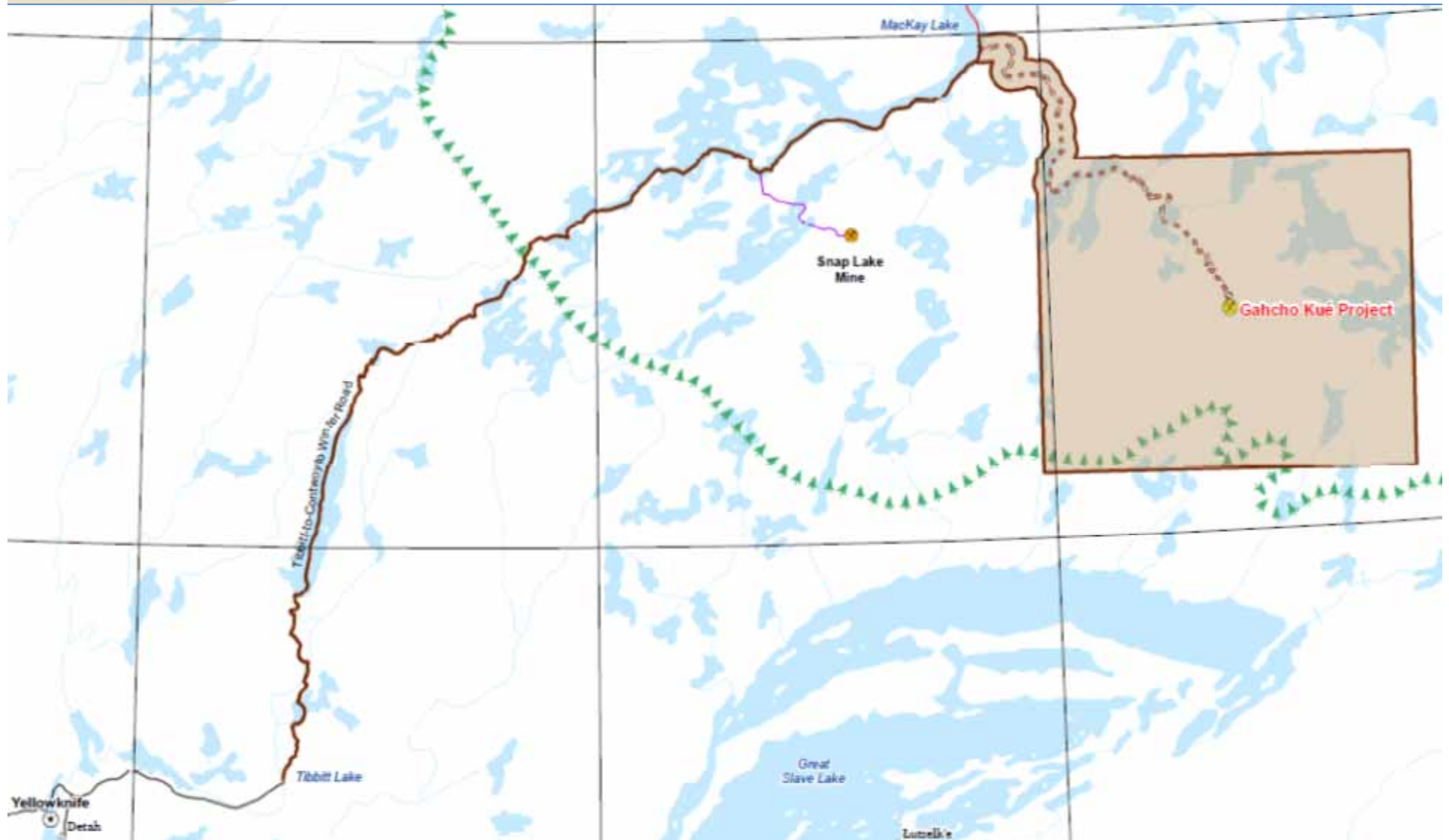
- Monitoring may be required at selected sites in the mine footprint
- Four sites along the winter road may require monitoring
- A draft archaeological management plan will be prepared that includes general and site specific recommendations
- The next step would be to visit the archaeological sites of concern with representatives from invited communities in order to incorporate Traditional Knowledge and finalize the archaeological management plan

Wildlife in the Gahcho Kué Area

Community Meetings February 2012



Gahcho Kué Wildlife Study Area



Wildlife

- Caribou
- Grizzly Bear
- Wolverine
- Wolf
- Fox
- Muskoxen
- Moose
- Arctic hare
- Raptors
- Other birds



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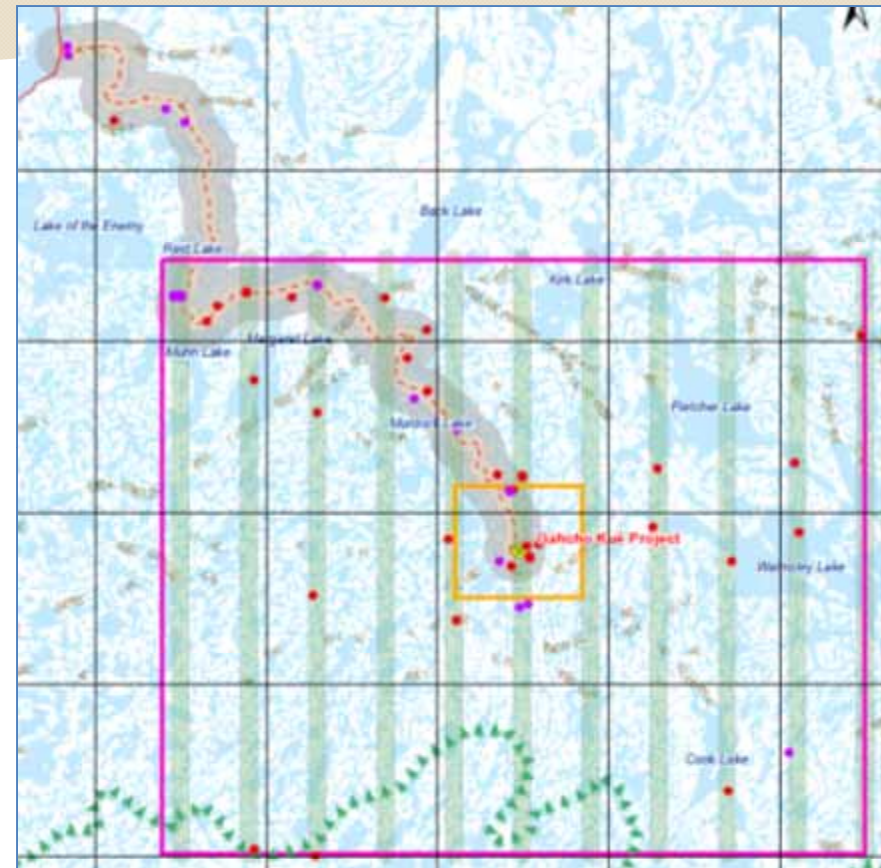
Caribou

- Will caribou be safe around the mine?
- Will the mine change their migrations?
- Will it be safe to harvest caribou from near the mine?
- Will people use the winter road to harvest caribou?

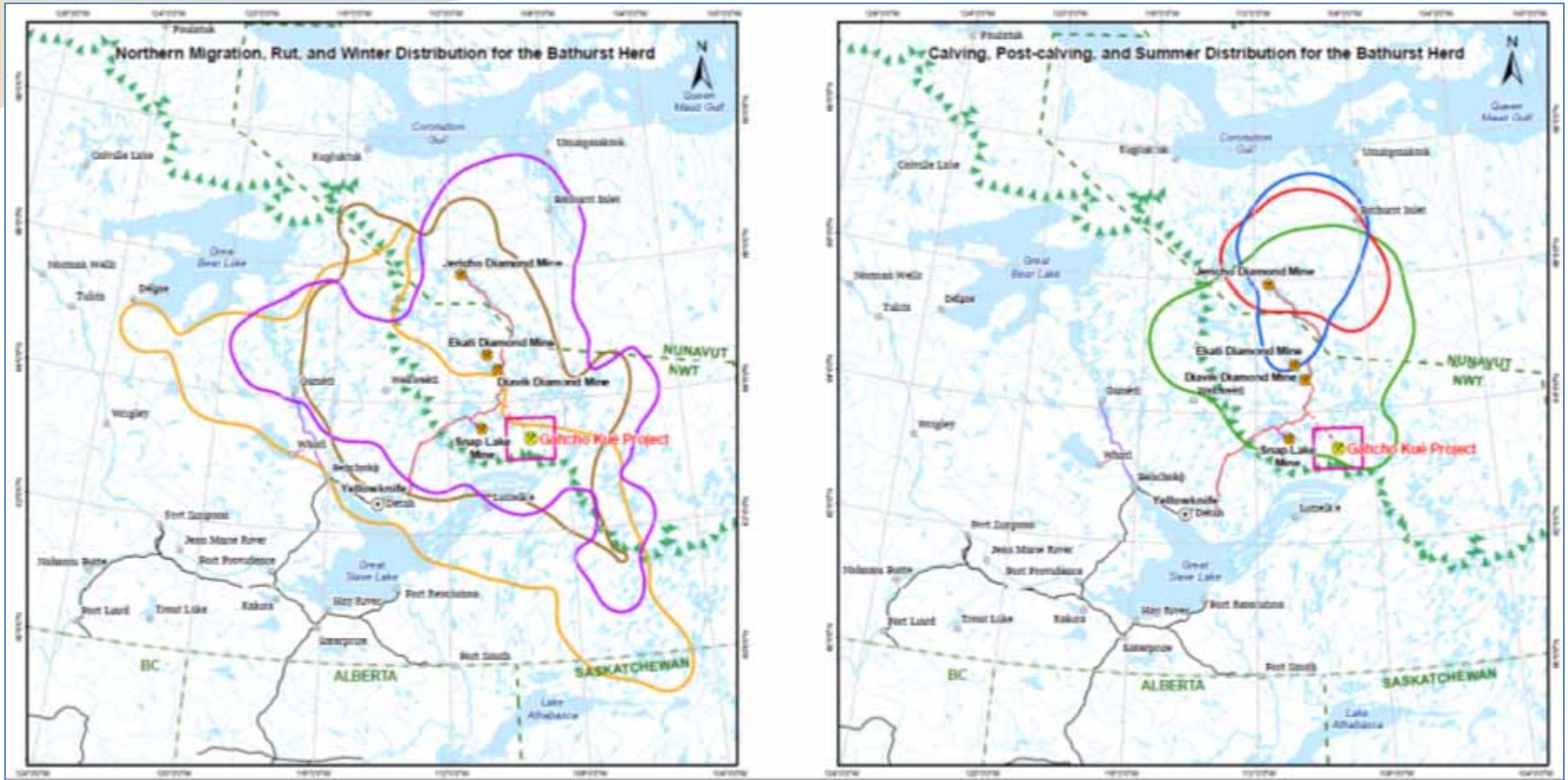


Caribou

- Annual studies from 1999 to 2005, and 2011
- Aerial surveys documented caribou locations over a 5,700 km² area
- Satellite collar data 1995 to 2010 is helpful
- Caribou most common in early spring, then summer and fall



Bathurst Caribou Seasonal Ranges



- Effects on caribou habitat were assessed for each seasonal range

Caribou

- Caribou travel through the region
- Caribou follow traditional migration routes, leaving trails on the land
- De Beers recorded the location of caribou trails
- **De Beers Actions:**
 - Minimize land disturbance
 - Minimize dust
 - Drivers will be warned with signage and radio when caribou are moving through the area.
 - Record caribou behaviour around the site
 - Participate in regional monitoring
 - Community involvement in monitoring
 - Report back to communities and obtain feedback



Grizzly Bears

- Grizzly bear have large home ranges
- Listed as sensitive, bear population appears stable
- 6 bears observed in 2005
- 3 active den sites in 2004-2005
- No bear mortalities at site to date



- Concerns:
 - Traffic and Roads
 - Waste Management
- **De Beers Actions:**
 - Wildlife awareness training, site drivers licence
 - Communicate presence and location of wildlife on-site through radio
 - Report all relevant observations of wildlife (particularly caribou, fox, wolverine, and bear) to environmental monitors
 - All wildlife will have the right-of-way on roads
 - Speed limits will be established and enforced
 - Food waste transported to incinerator in sealed containers for immediate incineration
 - Incinerator located in own building

Grizzly Bears

- De Beers set up 80 scratch posts to collect grizzly bear hair, 2010 and 2011
- De Beers is working with Ekati and Diavik to monitor bears in the region
- Community involvement is important for success



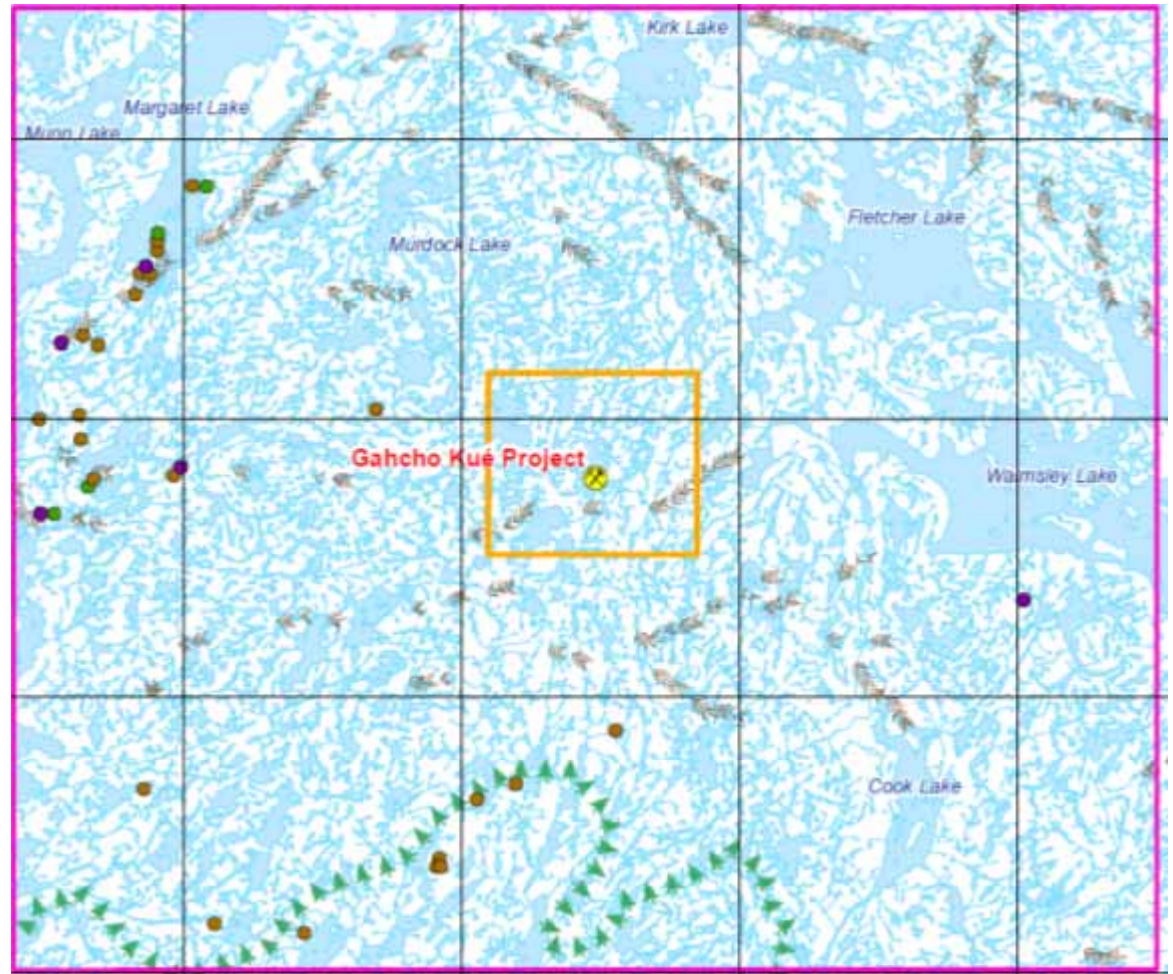
Wolverine

- Winter track count surveys were completed by a biologist and community monitor
- 27 wolverines observations in the RSA between 1998 and 2005
- DNA hair snagging in 2005, show 9 female and 8 male wolverines were identified
- 2006 detected 17 individuals
- Wolverine activity and frequency of sightings coincided with the spring and fall caribou migrations
- Waste management is very important



Raptors

- De Beers has searched and monitored raptor nests in the region
- All known raptor nests are more than 18km from the project site



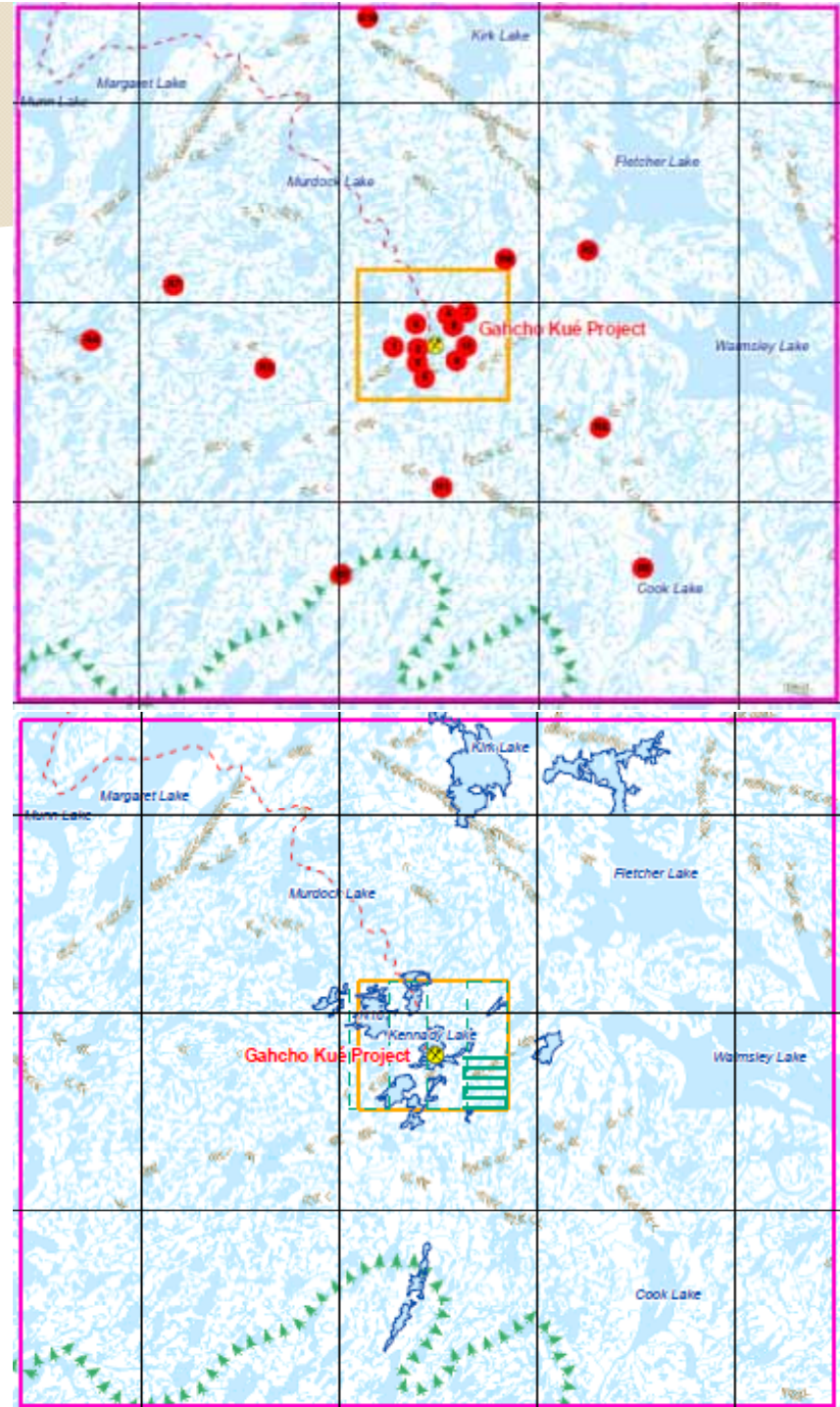
Raptors

- Ten active raptor nests, including 22 chicks, were observed in 2004 and 2005
- 2010 determined that 9 nests were occupied by raptors, five of which contained at least one chick



Other Birds

- Two bird biologists and a community monitor from walked side by side covering 5 x 500m lines at each location
- Water bird aerial surveys were completed in the LSA and at selected lakes in the RSA
- 2010 water bird survey on Kennady Lake and Lake X6 (a reference lake), by a biologist and a community monitor



Raptors and Other Birds

- **De Beers Actions:**

- Prevent upland breeding birds and raptors from nesting on mine infrastructure and man-made structures. If nest is found and eggs are present, then the nest will be monitored and efforts will be made to avoid the area.
- Complete land clearing for all facilities outside of the breeding season for migratory birds (15 May to 15 September)
- Report any nesting activity observed on Project infrastructure or within 1.5 kilometres (km) of the Project

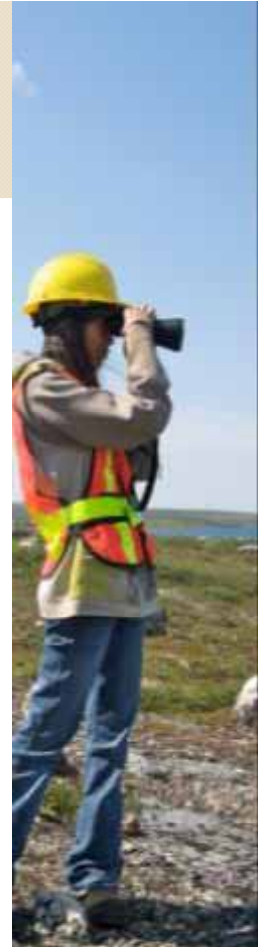
Monitoring

- De Beers wants community help with monitoring
 - Share ideas and knowledge of the land
 - Improve dialogue with communities
- How will/should communities be involved in monitoring during operations/after closure?



Path Forward

- Communities will be involved in monitoring wildlife
- With the help of communities, De Beers will take measures to protect and monitor wildlife
- De Beers will be respectful of wildlife and habitat



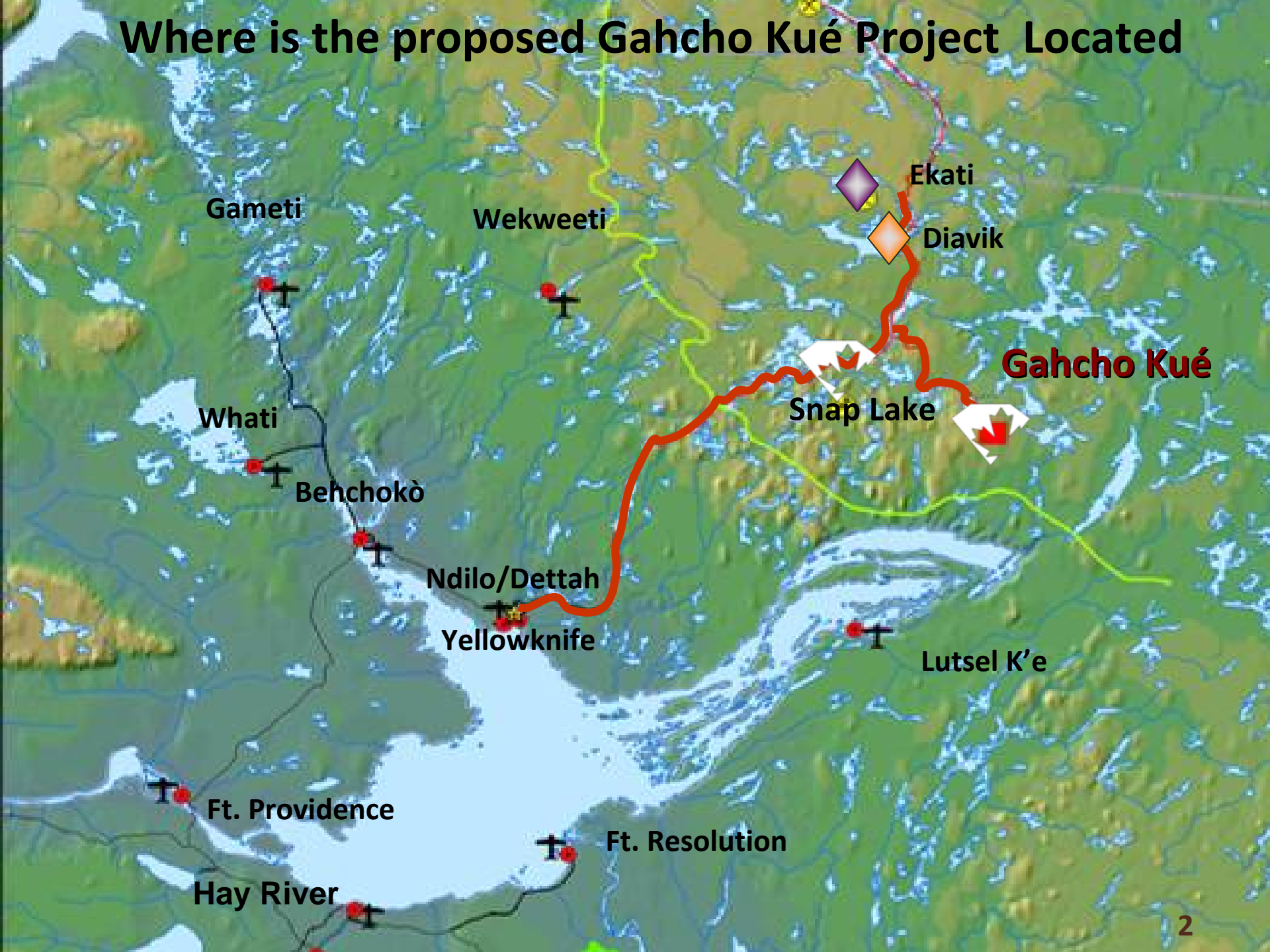
Gahcho Kué Project

Water and Fish

February 2012

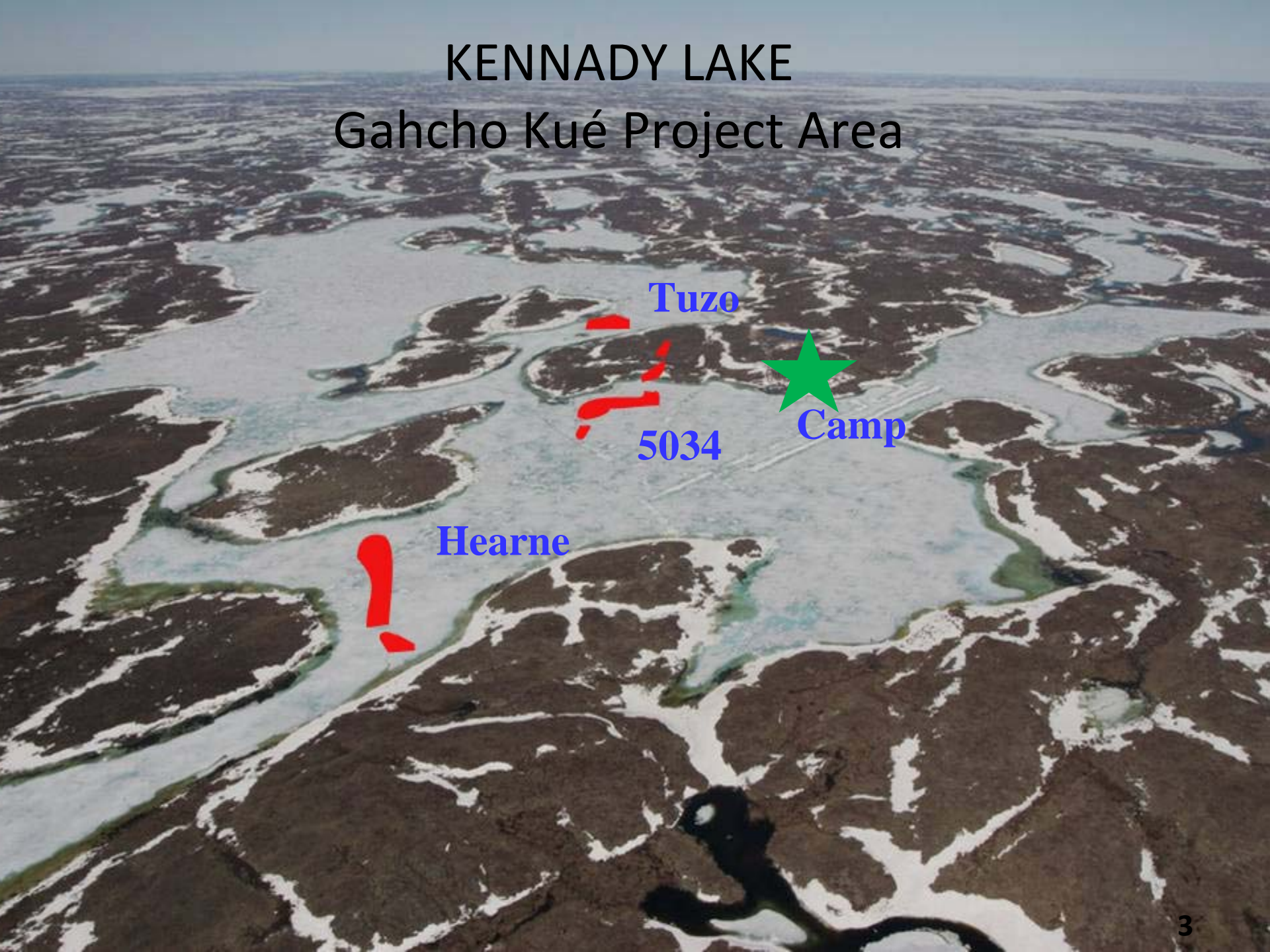


Where is the proposed Gahcho Kué Project Located



KENNADY LAKE

Gahcho Kué Project Area



Tuzo

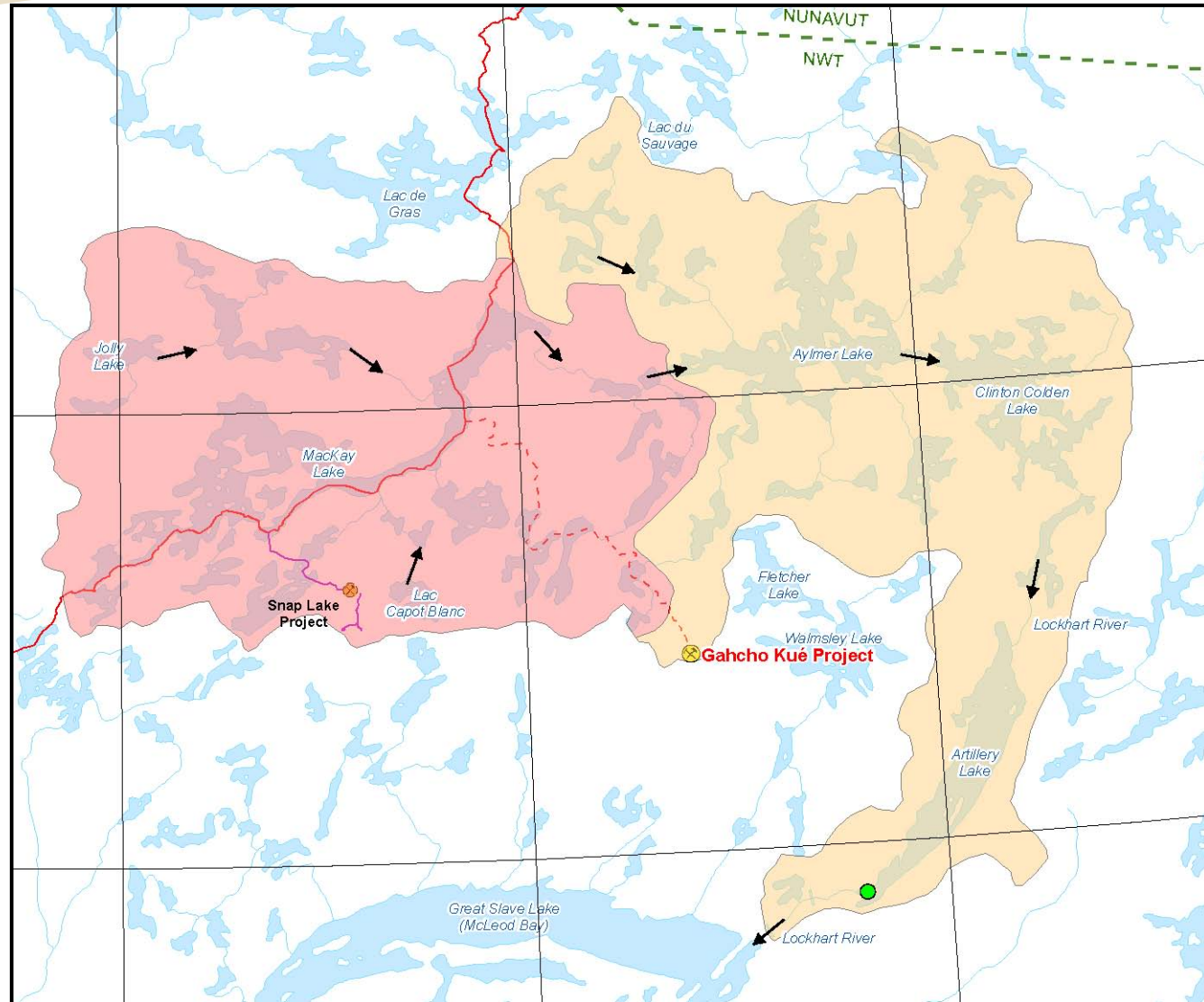
5034

Camp

Hearne

Regional Study Area - Watersheds

- Project located in watershed of Kennady Lake, a small headwater lake within Lockhart River system
- Lockhart River drains into the east arm of Great Slave Lake



Water and Fish

What did we measure and where did we measure?

- Water Quantity (Water Flows)
- Water Quality
- Fish and Fish Habitat

Water Quantity – Water Flows

What did we measure?

- We measured water flows from 1996 to 2011
 - Climate data (e.g. Temp and rain)
 - Water flow in lakes and streams
 - Water level and flows out of and into Kennady Lake
 - Water depths lake and stream bottoms
 - Stream and lake shorelines
 - Ice and winter water flows
- Additional regional data
 - Environment Canada
 - Water Survey of Canada



We Measured – streams and channels



- Creek width, depth, flows and features throughout the seasons



Winter Water Flow Measurements

- We measured in the winter to find out which lakes freeze to the bottom and which lakes still have water flows



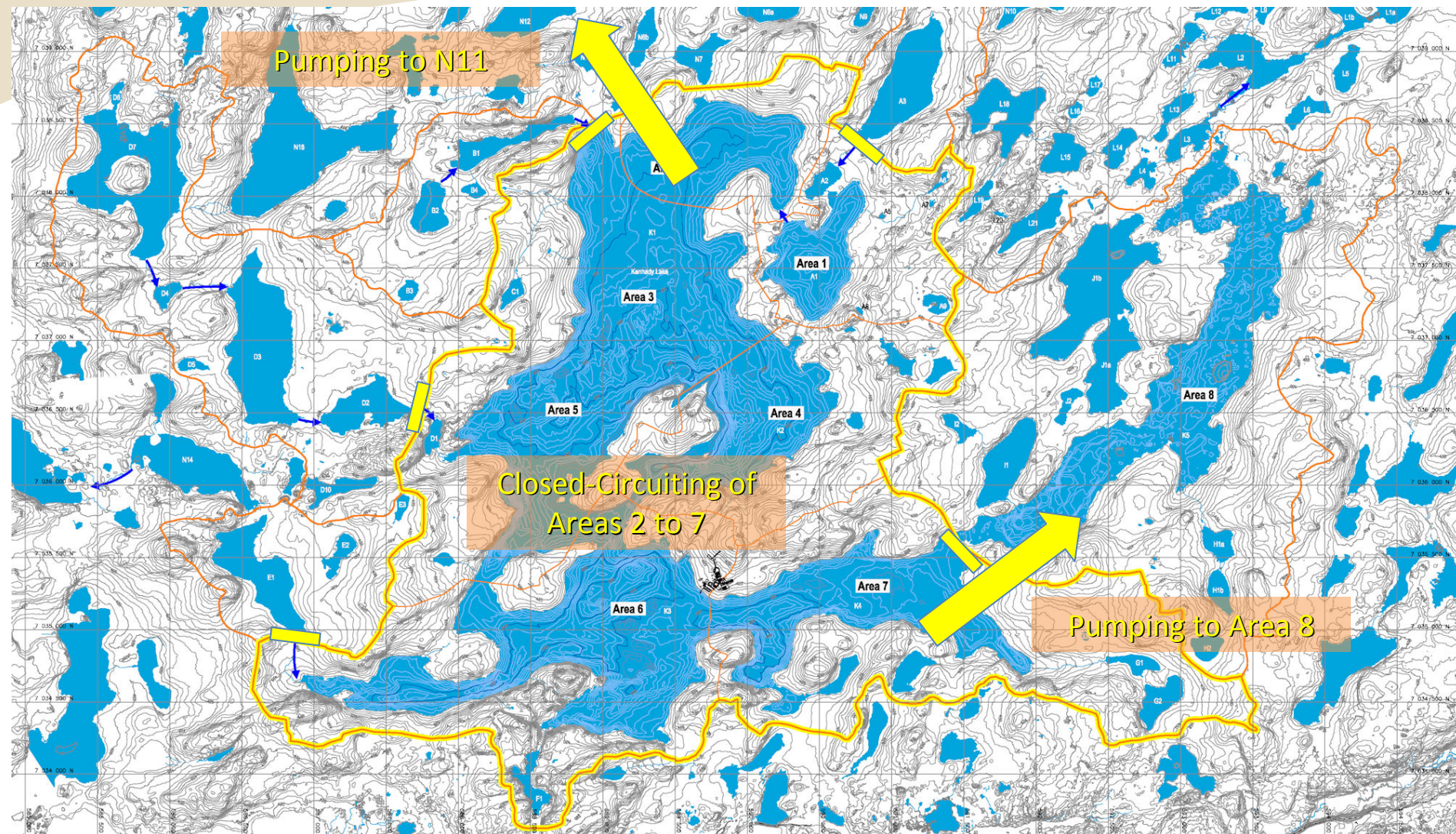
What we learned about shorelines



- Many lake shorelines are made up of boulders and bedrock



What will be happening to the Water during Construction?



What will happen in Kennady Lake and Downstream Channels?

Channel and Bank Stability Findings

Kennady Lake Watershed

Exposed Lakebeds after dewatering
Raised lakes maybe subject to erosion as new shorelines are established.

Downstream (channels) Watershed

Will have higher water flow – during dewatering in streams but the channels are big enough
Limited Erosion



Gahcho Kué Project

Water Quality, Fish and Fish Habitat



Fish and Fish Habitat – What did we measure?

- Measured Water and Fish between 1996 and 2011
- Focused on Kennady Lake, adjacent watersheds and downstream watersheds
- What we measured:
 - Water Quality
 - Sediment
 - Fish Habitat
 - Fish Communities



What we learned about Lake Fish Habitat

- Aquatic Habitat and Water - Lakes
 - Kennady Lake
 - Mean ~5 m and max depth ~18 m
 - Nearshore area mostly boulder/cobble with limited aquatic vegetation
 - Deeper offshore habitats mostly loose, fine sediments
 - Small lakes
 - Generally shallow depressions in tundra
 - Few offer overwintering habitat as they freeze to bottom



What we learned about Stream Fish Habitat

- Fish Habitat - Streams
 - Majority of streams flat, boulder/cobble substrates with low-moderate fish habitat potential
 - In spring, some streams provide habitat for Arctic grayling spawning and northern pike spawning migrations
 - Flows reduced in summer with many streams becoming ephemeral and restricting large-bodied fish movement



What fish did we see in the Lakes

- Fish Measurements - Lakes
 - Fish presence and distribution determined
 - Half of sampled lakes were non fish-bearing
 - 8 fish species in Kennady Lake
 - Lake trout and round whitefish most abundant large-bodied species
 - Arctic grayling, northern pike, burbot also present
 - Forage fish include lake chub, ninespine stickleback and slimy sculpin



What fish do we see in Streams?

- Fish Investigations - Streams
 - Arctic grayling most abundant species captured in streams
 - Other large-bodied and forage fish also captured
 - Arctic grayling and northern pike make extensive spawning migrations (spring)
 - Other species found to move into streams for feeding



What we learned about small animals fish feed on in Lakes and Streams

- Phytoplankton, zooplankton and benthic invertebrate (small animals fish feed on) communities typical low numbers but many different kinds



What Happens to Fish and Fish Habitat

- In the Kennady Lake Watershed, there will be losses to fish and fish habitat
- De Beers is proposing a fish salvage – “fish out” before construction/dewatering

What does DeBeers need to do - Fish Out?

- DeBeers will involve local communities in the fish out to harvest, prepare and deliver fish captured to communities
- The fish out will follow DFO protocols but we need your advice!



What does DeBeers need to do – Fish Out

- The fish out will be completed using gill netting and setting Gee minnow traps.
- Fish may be transferred to neighbouring streams and lakes
- Fish harvested may be used for human consumption
- The fish-out may also provide valuable data about lake characteristics and fish community to NWT that may not always be available.



- What are your thoughts on fish-out?

Fish Habitat Compensation Plan

- Development of the proposed mine will remove and change fish habitat in the Kennady Lake watershed
- Approximately 157 ha of fish habitat are expected to be lost , which is an area slightly smaller than the Yellowknife airport.
- Large areas of the lake will also be dewatered while the mine is operating and refilled once mining is over.
- De Beers intends to construct fish habitat similar to habitat lost or altered which is DFO's highest priority of compensation options.
- Habitat improvements or new habitat created needs to be valuable to the fish species in the area.

Ideas on Habitat Compensation

- 10 habitat compensation options have been identified by De Beers which include:
- **Flooding new areas to enhance fish habitat** in lakes and streams
- **Create habitat for spawning**
- **Create a rocky reef habitat** on a dry lake bed prior to refilling. Reef habitats will increase spawning, a nursery for young fish and provide food for adult fish
- **Monitoring habitat improvements** or habitat creation will assist in ensuring productive fish habitat is achieved

What are your thoughts on how best to create fish habitat?

Water and Fish— Ongoing and Future Work

- Transition baseline data to **Aquatics Effects Monitoring Program (AEMP)**
- Develop **compensation monitoring programs**
- Additional sampling for **flow mitigation monitoring**
 - Fish passage at barriers, measurements of physical habitat



What are your thoughts on water and fish monitoring?

Gahcho Kué Project

Conceptual Closure and Reclamation Plan

February 2012



Final Reclamation



Goals of the C&R (The Plan)

- The **overall Goals** of the Conceptual C&R Plan includes:
 - ❖ **Minimize the environmental impacts** of operations to the extent practical
 - ❖ **Re-establish productive fish and wildlife habitat** as quickly as possible, incorporating community input and meeting regulatory requirements
 - ❖ **Create self-sustaining ecosystems**
 - ❖ **Achieve post-closure conditions** that do not require maintenance
- The C&R Plan is considered “**conceptual**” at this stage, and will be refined over time.

Objectives

➤ Objectives of the Plan:

- ❖ **Reclaim areas** as soon as possible
- ❖ **Minimize the risk of erosion/sediment** loss from on-site runoff
- ❖ **Stabilize slopes** to maintain safe working conditions and to aid reclamation activities
- ❖ **Restore natural drainage**, where possible
- ❖ **Establish ground cover** to limit soil erosion and dust production
- ❖ **Maintain and Monitor** an environmentally safe site

Key Concepts Community on Closure Objectives

➤ **Community Feedback and Traditional Knowledge**

- ❖ Beginning with the earliest phases of exploration at Kennady Lake, De Beers initiated and maintained contact with the communities near the Project
- ❖ Based on feedback received during the engagement process, De Beers identified community inputs for reclamation
 - Example: restore Kennady Lake as quickly as possible

Company response

- Example: pumping water from Lake N11 during refilling will reduce the time required to fill Kennady Lake from 20 years to 8 or 9 years



What are your thoughts on the reclamation and closure?

November 28-December 2, 2011

APPENDIX F

Community Engagement Looking Ahead

Community Engagement – Looking Ahead

Proposed Gahcho Kué Project Opportunities for Community Participation and Engagement

Q4 2011 to July 2013

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