



**SUBMISSION TO THE  
NUNAVUT WILDLIFE MANAGEMENT BOARD**

**FOR**

**Information: X**

**Decision:**

**Issue: Baffin Island Caribou Population Assessment Aerial Survey, 2014:  
Conservation and Implications for Management Action**

**TITLE:** Interim Summary of the Island-wide Baffin Island Caribou Aerial Survey –  
Conservation and Management Status Up-date

**ISSUE:** The number of caribou across Baffin Island has declined drastically since the early 2000's raising concern in the communities and with the Department.

**CO-MANAGEMENT NEED:** The Department is concerned about the low number of caribou and is working closely with co-management partners to address this conservation concern.

**CURRENT STATUS:**

- Co-management partners are working together following a Baffin Island Caribou Workshop in July 2013 (Department of Environment, Government of Nunavut, community Hunters and Trappers Organizations, the Qikiqtaaluk Wildlife Board, Nunavut Wildlife Management Board, the Elders Advisory Committee and Nunavut Tunngavik Inc.). The workshop was designed to support co-management partners working together towards solutions based on Inuit traditional practices for managing harvest in times of scarcity and addressing the immediate conservation needs of Baffin Island caribou.
- In response to feedback provided by participants at the July 2013 Caribou Workshop in Iqaluit, the Department of Environment proposed a new aerial survey for the entire Baffin Island. The purpose is to estimate the abundance and late winter distribution of caribou across Baffin Island.
- The method proposed was a stratified random transect aerial survey technique utilizing a double observer platform. Three fixed-wing aircraft and one rotary-wing aircraft were used. Transect width varied from 7 to 8 to 10 km apart for high, medium and low density areas for caribou, respectively, as identified by community hunters.

- This project required a large amount of community involvement and actively engaged HTOs and community members in the survey effort while incorporating IQ and provide community benefits such as training and employment to local Inuit.
- During recent Community and HTO consultation meetings, Inuit hunters provided valuable and extensive input and advice into the survey design and its implementation.
- In addition, community members participated in the survey as Wildlife Observers' in all aircraft; as well, they conducted ground surveys to inform aerial survey coverage, and provided ongoing logistical support and advice throughout the project.
- Support for the survey was unanimous.

### **Interim Summary of the 2014 Baffin Island Caribou Survey:**

On behalf of the Government of Nunavut and our co-management partners, which include Nunavut Tunngavik Incorporated, the Qikiqtaaluk Wildlife Management Board and the Nunavut Wildlife Management Board, we would like to provide you with a summary of the Baffin Island caribou survey that began on February 26<sup>th</sup> and concluded on March 21<sup>st</sup>, 2014.

During the three-and-half week aerial survey, crews in three planes and one helicopter flew over 46,000 miles, covering nearly all of Baffin Island and much of Melville Peninsula. With the exception of three bad weather days, conditions for flying and sighting caribou were exceptionally good. The survey was successfully completed ahead of schedule.

All of the information provided by community members and HTO representatives during the Baffin Island consultations (December 2013 – January 2014) was used to design and conduct the survey. Community concerns about the previous south Baffin survey resulted in the area being re-surveyed this winter, along with the rest of the island and Melville Peninsula. Also, in response to concerns about the previous survey's flight lines being spaced too far apart, the distance between lines was reduced from 10km to 7km for areas with higher densities of caribou. Flight lines in areas thought to have medium and low densities of caribou were spaced 8km apart, and those in areas indicated as having very low densities of caribou were spaced 10km apart (Figure 1). The increased coverage gives us greater confidence in the results.

In addition to the aerial survey, community members from the hamlets of Qikiqtarjuaq, Clyde River and Arctic Bay conducted ground surveys that covered large areas

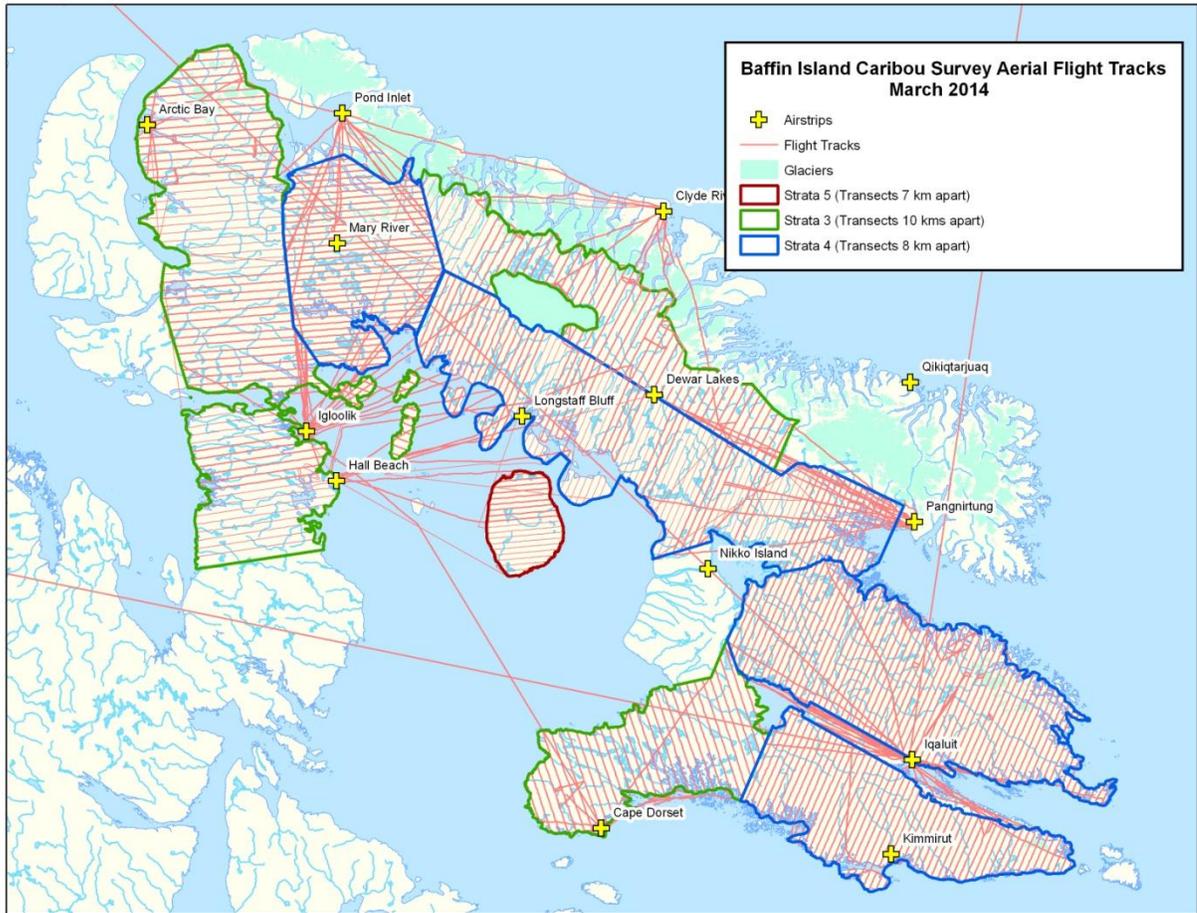
surrounding their respective communities (Figure 2). The Nattivak HTO in Qikiqtarjuaq reported that crews did not observe any caribou within their ground survey area. The other ground survey reports and associated results are still forthcoming.

Observations from the four aircraft are currently being organized and will be shared during the summer of 2014. Interim results and anecdotal assessments suggest the relative densities of caribou within the south Baffin survey area are *low*, which is consistent with the information collected during the south Baffin community consultations, as well as the results from the 2012 survey. Relative densities of caribou within the north Baffin survey area are *extremely low* – far lower than expected following the north Baffin caribou consultations and previous aerial reconnaissance observations made in 2009 and 2010.

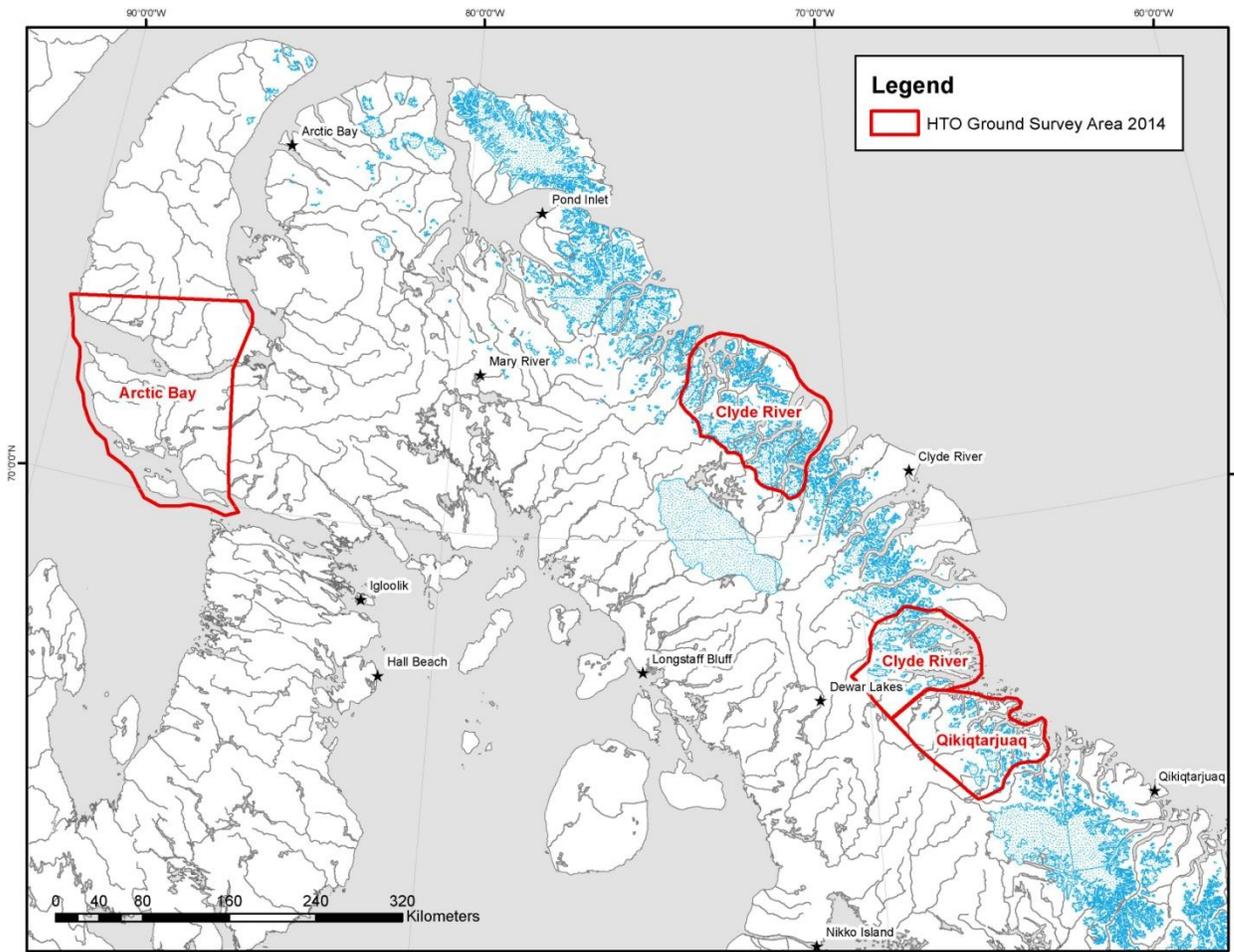
In summary, the February 26<sup>th</sup> - March 21<sup>st</sup> caribou survey met all of the expectations: the survey design resulting from the consultations was fully implemented. The combination of experienced observers and ground crews, ideal weather, and excellent sightability ensured that the data collected during the survey were of the highest quality. While the final results are not yet available, we are confident that they will confirm what hunters and many people on Baffin Island have said, along with the biologists – caribou densities across the island are extremely low.

We would also like to acknowledge and thank the numerous people who made this survey possible (see the attached list of participants, Appendix 1). We will share the final results from the survey with you in the coming months. Furthermore, we are planning a follow-up to the July 2013 *Working Together for Baffin Island Caribou* workshop, tentatively scheduled for fall 2014, where we look forward to discussing this important issue with you and the other Baffin Island communities.

In the meantime, and given the identified conservation need in times of scarcity, we would urge HTOs and communities to assert your co-management authority and initiate community-compliant rules or bylaws to conserve and manage caribou on your own initiative, as discussed during the July 2013 workshop (*Working Together for Baffin Island Caribou Workshop Report, August 2013*). This is urgently needed at this time, particularly for North Baffin Caribou.



**Figure 1:** Survey strata for the 2014 Baffin Island caribou survey.



**Figure 2** Areas surveyed by ground crews during the 2014 Baffin Island caribou survey.

## **BACKGROUND:**

- Caribou are an extremely valuable resource to Nunavummiut, for both preferred food and clothing.
- Baffin Island caribou are used by all ten communities on Baffin Island, representing 60% of all Nunavummiut.
- Social science research and Inuit knowledge collected through HTO and community consultations highlighted community concern for caribou, difficulties locating caribou, and recent year declines in caribou numbers and distribution.
- Anecdotal reports by Inuit to biologists have suggested that more than 100,000 caribou inhabited Baffin Island in 1985. The estimate was updated in 1991 when it was suggested that South Baffin caribou were stable at 60,000 -180,000, Northeastern Baffin caribou were about 10,000 in number, and North Baffin caribou numbered 50,000 -150,000 (Ferguson and Gauthier 1992).
- An aerial survey of South Baffin Island was conducted in 2012 to determine caribou abundance and distribution using distance sampling techniques.
- Survey findings provided an abundance density of 5.3 caribou per 1,000 square kilometers, or under 5,000 caribou on South Baffin Island, the most populated area for caribou on Baffin Island. This low abundance indicates a caribou decline of more than 90% since the 1990s, when previous abundance estimates were in the 60,000 to 180,000 range.
- There is a conservation and management concern due to low caribou numbers.
- A Baffin Island Caribou Co-management Steering Committee was formed in spring 2013. It is comprised of representatives from the Government of Nunavut's Department of Environment, the Qikiqtaaluk Wildlife Board, the Nunavut Wildlife Management Board and Nunavut Tunngavik Inc..
- A meeting of the Elders' Advisory Committee was also held last spring (2013) to discuss this issue. At that time DOE sought the Committee's input on traditional knowledge with respect to managing caribou and harvesting in times of scarcity and for any other knowledge that could provide guidance on the situation. The Elders provided valuable information and advice. For example, they stated the caribou do have a cycle of reducing in numbers and increasing in numbers again. They said it is important to begin planning now to make sure the caribou come

back and that harvest controls should be put in place to keep them from depleting, especially given the improvements in hunting techniques/ efficiency in modern years.

- The Steering Committee organized a workshop funded by the Department entitled *Working Together for Caribou* last July, 2013. It brought together more than 60 representatives from the Baffin HTOs, the department and invited speakers and elders to:
  - *Share Inuit and scientific knowledge about Baffin Island Caribou*
  - *Share knowledge on traditional community-based practices for managing harvesting in challenging times and share/discuss successes and challenges from other regions (e.g. Peary Caribou HTO and community hunting moratorium around Grise Fiord; Southampton Island HTO Total Allowable Harvest controls and enforceability with GN Conservation Officers)*
  - *Address key stewardship and caribou management questions for Baffin Island*
  - *Identify conservation measures to be taken by individuals, communities and management authorities*
  - *Work together to come up with recommendations for management action.*
  
- *Workshop participants identified a community-based approach that supports Inuit self-management as the preferred system for caribou management on Baffin Island. Under this system, local Hunters and Trappers Organizations (HTOs) will work with community members to establish community restrictions and management actions, in partnership with various wildlife co-management partners, including the Government of Nunavut.*

#### **CARIBOU CONSULTATION SUMMARY POINTS**

- Following the Workshop, Elder, HTO and community consultations occurred (July 25 2013, December 2013 – January 2014, respectively)
- Harvesters, Elders and community members have told us that caribou are becoming increasingly difficult to find, and have also expressed concerns about the negative impacts of land use, changing climate and icing events, disease and health monitoring concerns and other factors on caribou and their habitat.
- Participants at the July 2013 Caribou Workshop identified a community-based approach that supports Inuit self-management as the preferred system for caribou

management on Baffin Island. Under this system, local Hunters and Trappers Organizations (HTOs) will work with community members to establish community restrictions and management actions through bylaws, in partnership with various wildlife co-management partners, including the Government of Nunavut.

- The Department is committed to working with all co-management partners to promote the recovery of caribou on Baffin Island.
- The Department of Environment, together with QWB, NTI, and NWMB, have recently completed community consultations across Baffin Island and the communities of Hall Beach and Igloolik, which also hunt on the Island.
- HTOs that we met with during the consultation tour have agreed to give further consideration to the types of management actions that are necessary, either at the community level or island-wide. Some of the potential actions that were mentioned during the consultations included:
  - Limit/regulate the sale of caribou meat.
  - Restrict harvest of females during calving and post calving, pregnant females, females accompanying calves, and calves.
  - Establish limits on the number of caribou harvested per household.
  - Only take one or two caribou from a group and leave the rest.
  - Bull-only harvest.
  - Introduce a bounty for harvesting wolves.
  - Eliminate the commercial harvest.
  - Harvest Reporting – utilize Conservation Officers to provide information on harvesting activities in their community, or the use of hunter booklets to record harvest and observations of disease.
  - Tag System (TAH).
- While not mentioned regularly, moratorium was also suggested by HTO members as a management action to speed up the recovery of caribou (2 meeting mentions).

#### **NEXT STEPS:**

- HTOs are continuing discussions within their community as to what types of management actions they can consider. However, most have deferred action until the results of the upcoming Baffin Island Caribou Survey (to be conducted in March 2014) are released. The information provided by this survey will help further inform the HTOs and community members as to what management actions may be needed.

- A workshop will be organized following the above-noted 2014 aerial survey to share the knowledge gained from the surveys and discuss both community management actions and plans, and an island-wide caribou management plan. This may be held in conjunction with a wildlife board meeting in order to reduce the costs and travel requirements. It could occur in summer 2014.

Appendix 1 as per attached (below)

## Appendix 1

### 2014 Baffin Island Caribou Survey Participants List

#### **Project Logistics and Planning:**

Mitch Campbell & Jaylene Goorts – Nunavut Department of Environment

#### **Project Field Leaders:**

Mitch Campbell, Jaylene Goorts (Nunavut Department of Environment) & David Lee (Nunavut Tunngavik Inc.)

#### **Senior Managerial Support:**

Drikus Gissing (Director of Wildlife, GN, DoE, Iqaluit), Lynda Orman (Manager of Wildlife Research, GN, DoE, Igloolik), and Jimmy Noble Jr. (Assistant Director of Operations, GN, DoE, Iqaluit)

#### **Aircraft Crew Leaders/Experienced Observers/Navigators:**

1. David Lee – Nunavut Tunngavik Inc., Rankin Inlet, NU. (Fixed Wing)
2. Jaylene Goorts – Department of Environment, Pond Inlet, NU. (Rotary Wing)
3. Mitch Campbell – Department of Environment, Arviat, NU. (Fixed Wing)
4. Morgan Anderson – Department of Environment, Igloolik, NU. (Fixed Wing)

#### **Department of Environment Observers/Data Recorders:**

1. Aaron Skoblenick (DoE Wildlife Officer, Cape Dorset, NU)
2. Caleb MacDonald (DoE Legislation and Management Technician, Igloolik, NU)
3. Chris Wex (DoE Wildlife Officer, Pangnirtung, NU)

#### **Experienced Observers:**

1. Andrew Muckpa (HTO Rep., Arctic Bay, NU)
2. Chris Wex (DoE Wildlife Officer, Pangnirtung, NU)
3. Jacob Jaypoody (HTO Rep., Clyde River, NU)
4. Jaypootie Akpalialuk (HTO Rep., Pangnirtung, NU)
5. Jaypootie Moesesie (HTO Rep., Qikiqtarjuak, NU)
6. Jobie Atagootak (HTO Rep., Pond Inlet, NU)
7. Kelly Owljoot (DoE Wildlife Technician, Arviat, NU)
8. Leo Ikakhik (DoE Casual, Arviat, NU)
9. Levi Kaunak (HTO Rep., Hall Beach, NU)
10. Oqituk Ashoona (HTO Rep. Cape Dorset, NU)
11. Robert Karetak (NTI Rep., Arviat, NU)
12. Solomon Mikki (HTO Rep., Igloolik, NU)
13. Tim Soucie (HTO Rep., Pond Inlet, NU)

### **Community Based Observers:**

1. Albert Issigaitok (DoE Wildlife Lab Technician, Igloolik, NU)
2. Candice Sudlovenick (HTO Rep., Iqaluit, NU)
3. Carson Sangoya (HTO Rep., Pond Inlet, NU)
4. David Kuniliusie (HTO Rep., Pangnirtung, NU)
5. Isa Taqtu (HTO Rep., Arctic Bay, NU)
6. Isaac Akpaleapik (HTO Rep., Pond Inlet, NU)
7. Jeetaloo Kakkee (HTO Rep., Iqaluit, NU)
8. Jimmy Inookee (HTO Rep., Iqaluit, NU)
9. Joshua Alorut (HTO Rep., Hall Beach, NU)
10. Kolola Pitsiulak (HTO Rep., Kimmirut, NU)
11. Manasie Naullaq (HTO Rep., Hall Beach, NU)
12. Methusalah Kunuk (HTO Rep., Iqaluit, NU)
13. Mosesee Akpialialuk (HTO Rep., Pangnirtung, NU)
14. Natalino Piugatuk (HTO Rep., Igloolik, NU)
15. Paul Ejangiaq (HTO Rep., Arctic Bay, NU)
16. Paul Haulli (HTO Rep., Hall Beach, NU)
17. Pitsiula Micheal (HTO Rep., Kimmirut, NU)
18. Qaumayuq Oyukuluk (HTO Rep., Arctic Bay, NU)
19. Simiga Suvega (HTO Rep. Cape Dorset, NU)

### **Air Charter Support (Fixed and Rotary Wing):**

1. Alain Desjardins (Rotary Wing Pilot, Expedition Helicopters, Ontario)
2. Andrew Dennison (Fixed Wing Pilot, Discovery Air, Yellowknife, NWT)
3. Bob Schnurr (Charters, Discovery Air, Yellowknife, NWT)
4. Borris Kotelewetz (Fuel Caching, Ookpik Aviation Inc., Baker Lake, NU)
5. Collin Crosby (Fixed Wing Engineer, Discovery Air, Yellowknife, NWT)
6. Douglas Singaqti (Fuel Caching Assistant, Ookpik Aviation Inc., Baker Lake, NU)
7. James Babcock (Fixed Wing Engineer, Discovery Air, Yellowknife, NWT)
8. Jason Pineau (Fixed Wing Pilot, Discovery Air, Yellowknife, NWT)
9. Mark Manikel (Rotary Wing Engineer, Expedition Helicopters, Ontario)
10. Mike Bergmann (Fixed Wing Fuel Caching Pilot, Ookpik Aviation, Baker Lake, NU)
11. Ted Duinker (Fixed Wing Pilot, Discovery Air, Yellowknife, NWT)

### **Logistic Support:**

1. Brenda Panipakoocho (North Baffin Operations Manager, Pond Inlet, NU)
2. Brian Madore (InnesNorth, Hall Beach, NU)
3. Bruce-Jerry Hainnu (DoE Wildlife Officer, Clyde River, NU)
4. George Koonoo (DoE Wildlife Officer, Pond Inlet, NU)
5. Jackie Price (Coordinator, Research and Planning, QWB, Iqaluit, NU)
6. Jason Shaw (Geomatics Specialist, CASLYS Consulting, Victoria, BC)

7. John Boulanger (Ecological Statistician, Integrated Ecological Research, Nelson, BC)
8. John Paton (Traffic Manager, CGS, GN)
9. Kristina Alariaq (Dorset Suites, Cape Dorset, NU)
10. Louis Robillard (InnsNorth, Pangnirtung, NU)
11. Mark Mcculloch (Senior Manager, CGS, GN)
12. Mathew Akikulu (DoE Wildlife Officer, Arctic Bay, NU)
13. Nenette Demavivas (Manager of Accounting, DoE, GN)
14. Nikki Nweze (Director of Finance, DoE, GN)
15. Rex Balbuena (Financial and Travel Analyst, DoE, GN)
16. Rita Webb (InnsNorth, Pond Inlet, NU)
17. Robert Arsenault (DoE Wildlife Officer, Igloolik, NU)
18. Todd Tilley (Senior Procurement Officer, CGS, GN)
19. Wei Zeng (Manager of Finance, DoE, GN)

## **Organisations**

### **Financial Contributors:**

1. Government of Nunavut
2. Nunavut Wildlife Management Board
3. Aboriginal Affairs and Northern Development Canada (AANDC)

### **In-Kind Contributors:**

1. Aiviq HTO
2. Amaruq HTO
3. Hall Beach HTO
4. Igloolik HTO
5. Ikajutit HTO
6. Mayukalik HTO
7. Mittimatalik HTO
8. Nangmautug HTO
9. Nattivak HTO
10. Nunavut Tunngavik Inc.
11. Peregrine Diamonds
12. Pangnirtung HTO
13. Qikiqtaaluk Wildlife Board