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Nunavunmi Anngutighatigut Aulapkajitkut Katimajiat
Nunavut Wildlife Management Board

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Tammaqtailinahuarnirriit annutighat atuqhugit Inuit qaujimajatuqangillu ilihimaniillu ilitquhiannin Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

21, 2022

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СΔбσ თდგრ ბლკურედები ხულავაσ (ბლკურედები) СΔლუს პლატფორმა
ხულსტრექტს (RM001-2021) ცს წ 10, 2021-Г, თდგ სრლა -
ახელი აღნიშვნა (აღნიშვნა) ბლკურედები ბლკურედები თდგ
არალეგას ცლა ხულავას ერთ და 74-ტლა და ერთ და 74-ტლა და
ცხვარი, არა გრავირული და 74-ტლა და ერთ და 74-ტლა და

Δέοδης ήταν σε απομόνωση στην περιοχή της Καστοριάς, όπου έζησε μεταξύ των ετών 74-77. Τον ίδιο χρόνο ο Αριστοτέλης γράφει στην Επίτοιμη της Μεγαλοπόλεως ότι ο Λέων ήταν ο πρώτος που έγραψε στην Ελλάδα στα ιδεατά της ζωής του. Ο Λέων ήταν ο πρώτος που έγραψε στην Ελλάδα στα ιδεατά της ζωής του.



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Nunavummi Anngutighatigut Aulapkajitkut Katimajat
Nunavut Wildlife Management Board

ѧԱՎԾԱԾՄԸ ծըս ԾԼՀԾԸ գքներուշա ԵԿՆՈՒԾԱՅԻՆ ԾԱԾԿ ՚ ԵԾԱԼԾԾԿԵՐՆ ԳԼԵ՛ ՚ ԵԾԱԿԵՐՆ ՈՒՆՎԱՀԾԱԾ ՚ ԵԾԱԼԾԾԱՅՐՆ
Tammaqtailinahuarriit anngutighat atuqhugit Inuit qaujimajatuqangillu ilihimaniillu ilitquhiannin
Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

▷Η'Α▷СС▷'σ'γ'c ▷L,▷ Δ'ЛС▷РС▷СС▷'σ'γ'c Δ'Г▷Δ'б)▷'АСnσ'γ'c

ԱՌԴՅԱՆ ԱՐԴՐՈՒԹՅՈՒՆ ՀՀ ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ՎՐԱ 5.6.16, 5.16.17(b), ՀԱԼՀ 5.3.3(a) ԹՁԳՐ ԹՁԳՐԸ ԽԱՐԱՀԱԿԱՆ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ՎՐԱ 74-Ծ 84-Ծ, ՀԱՐԱԴՐԱԿԱՆ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ՎՐԱ 74-Ծ 84-Ծ:

¹ ΑΣΕβρΠΔΦΑ τοποθετήσας την πλατφόρμα στην ΕΛΠΙΣ για την προώθηση της ανάπτυξης στην Ελλάδα. Η πλατφόρμα παρέχει στην επιχειρηματικότητα την δυνατότητα να αναζητεί και να συνδέεται με άλλους επιχειρηματίες σε όλη την Ελλάδα, με στόχο την ανάπτυξη της επιχειρηματικότητας σε όλη την χώρα.



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 - ii. $\varphi\varrho^a\bar{C}^b\gamma^c$ $\Delta\delta^bC^a\gamma^cL\sigma^a\bar{\nu}\sigma$ $CL\Delta^a\sigma^b$ $b\bar{U}^c\gamma^c$ $a\bar{U}^bC\Delta^a\sigma^a\bar{\nu}^c$ $17-\bar{\nu}^c$ $a\bar{U}^d\sigma^c$ ($20 > 4^a\bar{\nu}$); \bar{U}^c
 - iii. $\rho\varnothing^c\bar{C}^d\gamma^e$ $\Delta\delta^bC^a\gamma^cL\sigma^a\bar{\nu}\sigma$ $CL\Delta^a\sigma^b$ $b\bar{U}^c\gamma^c$ $a\bar{U}^bC\Delta^a\sigma^a\bar{\nu}^c$ $6-\bar{\nu}^c$ $a\bar{U}^d\sigma^c$ ($7 > 4^a\bar{\nu}$).

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Δέος Διεύθυνση στην Επίτροπο της Ευρωπαϊκής Ένωσης για την προώθηση της ανάπτυξης και της εργασίας στην Ευρωπαϊκή Ένωση στην περίοδο 2020-2023.



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Nunavummi Anngutighatigut Aulapkajitkut Katimajiat
Nunavut Wildlife Management Board**

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Nunavummi Anngutighatigut Aulapkajitkut Katimajiat
Nunavut Wildlife Management Board**

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Tammaqtailinahuarnirriit annutighat atuqhugit Inuit qaujimajatuqangillu ilihimaniillu ilitquhiannin Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

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**ᓇᓱᑦᑐ ሪፖርት
Nunavut Wildlife Management Board**

Δέοδαλος ούτε σε έργον τόπον
Αλλά σε πάντα την αίσθησην
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ΔΓΛΕԿ՚ՆԵՐԾՈՒԵԼԸ ՇԽԱԿԱՑ ՀԱՅԿԱԿՆԵՐԾՈՒԵԼԸ ՀԱՅԿԱԿՆԵՐԾՈՒԵԼԸ

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**ᓇᓱᑦᑐ ሪፖርት
Nunavut Wildlife Management Board**



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Nunavummi Anngutighatigut Aulapkajitkut Katimajiat
Nunavut Wildlife Management Board**

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დოკუმენტის შესრულება და მიღების თარიღი 2019-წლის 20 მაისი. ცალკეული დოკუმენტის გვერდზე მოვალეობის მქონე სამსახურის მიერ მიღების თარიღი 2019-წლის 20 მაისი.



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Nunavut Wildlife Management Board

Joshua French

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◀△ 14, 2022

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July 20, 2022

Honourable David Akeeagok
Minister of Environment
Government of Nunavut

Re: NWMB Decision on the Government of Nunavut's Recommendation not to change the Total Allowable Harvest for the Gulf of Boothia polar bear subpopulation

Dear Minister Akeeagok:

Submission to the NWMB

During the Nunavut Wildlife Management Board's (NWMB) Regular Meeting (RM001-2021) on March 10, 2021, the Government of Nunavut - Department of Environment (Department of Environment) recommended that the NWMB maintain the Total Allowable Harvest (TAH) of 74 for the Gulf of Boothia polar bear subpopulation.

The recommendation followed a genetic mark-recapture biopsy survey of the Gulf of Boothia polar bears conducted by the Department of Environment between 2015–2017. The survey resulted in an abundance estimate of 1,525 (range = 1,231–1,819). This abundance estimate is very close to the 1998–2000 estimate of 1,592, suggesting that the subpopulation abundance has remained stable.

The Department of Environment said a TAH at 74 would be in line with the management objective to maintain a viable polar bear subpopulation. The Department of Environment's submission included (1) the science survey report and (2) a summary report of the Department of Environment's in-person consultations with Hunters and Trappers Organizations that harvest from the sub-population (HTOs; Gjoa Haven, Sanirajak, Igloolik, Kugaaruk, Naujaat, and Taloyoak).

Deferral Pending HACCS Review

At the NWMB's In-Camera Meeting (IC001-2021) on March 11, 2021, the NWMB decided to defer consideration of the Department of Environment's 2021 submission pending ongoing consultation and NWMB consideration of the polar bear Harvest



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Administration and Credit Calculation System (HACCS)¹. After consideration of the HACCS at RM004-2021, the NWMB approved HACCS by decision letter dated February 1, 2022. The Minister accepted the NWMB decision on February 7, 2022.

Return and Decision on Gulf of Boothia

On April 19, 2022, the NWMB provided notice of return to its decision-making process regarding the TAH for the Gulf of Boothia. The Board received additional evidence and argument during its Regular Meeting on June 15, 2022.

At the NWMB's In-Camera Meeting (IC002-2022) on June 17, 2022, the Board considered the oral and written evidence and arguments from co-management partners from the March 2021 and June 2022 Regular Meetings and made the following decision:

RESOLVED that pursuant to sections 5.6.16, 5.16.17(b), and 5.3.3(a) of the Nunavut Agreement, the Nunavut Wildlife Management Board modifies the overall total allowable harvest for the Gulf of Boothia polar bear subpopulation from 74 to 84 polar bears and modifies the regional total allowable harvest as follows:

- i. A Kitikmeot regional TAH of 61 polar bears (73 percent).
- ii. A Qikiqtaaluk regional TAH of 17 polar bears (20 percent); and
- iii. A Kivalliq regional TAH of 6 polar bears (7 percent).

¹ The purpose of the HACCS is to administer the polar bear harvest management in Nunavut following the decision by NWMB and Minister in 2019 to change the sex-selective harvest ratio from two males for every female (2:1) to up to one female for every male (1:1). HACCS administers the system where communities can accumulate credits for future use when the annual allocation is under-harvested, or in situations where polar bears are over-harvested, for credits to be deducted from the following year's base allocation.



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Nunavut Wildlife Management Board

Summary of Evidence and Argument

Consideration of the total allowable harvest

Input from the Department of Environment

The Department of Environment 2015–2017 science study results (abundance, productivity, and body condition index) suggest that the Gulf of Boothia polar bear subpopulation is healthy. The abundance estimate of 1,525 is very close to the 1998–2000 estimate of 1,592, indicating a stable population. The survey report shows that the proportion of adult females relative to males increased to 0.61 compared to 0.57 in the 1998–2000 study. The report also showed a cub-of-the-year litter size of 1.61 (range = 1.51–1.70) and a yearling litter size of 1.53 (range = 1.41–1.61), all in the typical range for healthy populations with good population growth potential. The NWMB heard that density and reproductive performance indices for the Gulf of Boothia are higher than those reported in other polar bear subpopulations (e.g. Baffin Bay, Foxe Basin, Western Hudson Bay, Southern Hudson Bay, and the Chukchi Sea). Rates of migration between the Gulf of Boothia sub-population and neighbouring subpopulations in M'Clintock Channel, Foxe Basin, and Lancaster Sound are unknown and may have influenced the current population abundance estimates.

The Department of Environment conducted an Inuit Qaujimajatuqangit study in 2020. The Department of Environment staff and consultants interviewed active hunters and elders from Gjoa Haven, Taloyoak, Kugaaruk, Naujaat, Igloolik, and Sanirajak via zoom to document their knowledge of polar bears. The study results suggest the Gulf of Boothia subpopulation is increasing. This is based on reports of increased observations of healthy bears, including females with cubs and young bears. Feedback from Inuit interviewed

suggested that polar bear management today must find ways to address the lack of Inuit knowledge. The Inuit Qaujimajatuqangit study was submitted to complement the scientific survey to provide further evidence of female and cub survival and good body condition.

Harvest records

The NWMB reviewed harvest records submitted by the Department of Environment for the Gulf of Boothia polar bear subpopulation. The records show that communities have historically harvested below the TAH of 74, with an average harvest of 65.8 polar bears per



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Nunavummi Anngutighatigut Aulapkaijikit Katimajiat
Nunavut Wildlife Management Board

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year (88.9 percent of the TAH) in the last five years (2016–2021).

Input from co-management partners

The NWMB considered oral and written evidence and argument from co-management partners during the March 2021 and June 2022 Regular Meetings and records of community consultation attended by NWMB staff. The NWMB also took account of Inuit responses included in the Inuit Qaujimajatuqangit study.

Environment and Climate Change Canada (ECCC) repeated their caution in both Regular Meetings that there is a risk associated with maintaining the TAH at 74 because the harvest sex ratio was changed from 2:1 to 1:1. ECCC said that a TAH of 74 under the 1:1 harvest ratio would result in an increase in the number of females that may be harvested. To explain this, ECCC stated adult females are the most important contributors to population growth. They recommended conducting a harvest risk assessment to assess the potential risks from the increased female harvest.

The Kitikmeot Regional Wildlife Board (KRWB) and Taloyoak HTOs recommended an increase in the TAH. Taloyoak HTO said they would like the TAH to increase to 100. Naujaat and Gjoa Haven HTOs supported Taloyoak HTOs' position.

The NWMB asked affected communities to justify their recommendation to increase the TAH, given the current TAH is not fully used. The NWMB heard that when the 2:1 harvest sex ratio was in place, communities proactively closed the harvest once the female portion of the TAH was reached to avoid female overharvest and subsequent quota reductions. The NWMB understands this practice led to the accumulation of mostly male credits (84% of the accumulated credits at present are male credits). In 2019, the 2:1 harvest sex ratio was replaced by the 1:1 harvest sex ratio. HTO representatives said they do not expect the same level of under-harvesting under the 1:1 harvest system.



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The HACCS and harvest credits

The collateral consequence of credit resets from a new TAH was a significant focus of submissions in both Regular Meetings. The issue of resetting credits after a new TAH remains a contentious issue among co-management partners.

The practice of resetting credits after a new TAH is established has been the standard polar bear policy since 2005. The NWMB understands the Department of Environment's position that resetting credits to zero when a new TAH is established avoids "double counting" polar bears because unharvested bears (credits) are counted within new population estimates like the genetic mark-recapture biopsy survey used to determine the recommendation for the Gulf of Boothia.

The NWMB deferred consideration of this TAH question in March 2021, pending the completion of the HACCS decision-making process. This was in part to allow more time for consultations on the HACCS and credit impacts of the TAH decision, a position promoted by the QWB with an Executive Motion calling for deferral of the TAH issue. After separate NWMB consideration at RM004-2021, the HACCS was approved by the NWMB and the Minister in February 2022. The practice of zeroing credits remains part of the HACCS approved earlier this year.²

Communities that harvest from the Gulf of Boothia polar bear subpopulation accumulated 159 credits between 2005 and 2021 (132.98 males and 26.76 females). Only a few credit requests have been made in the previous five years (Taloyoak=14, Sanirajak=20, and Igloolik=5). Inuit harvesters described challenges with accessing information and understanding how to make requests to use credits.

The Kitikmeot Regional Wildlife Board said that resetting credits to zero is a disincentive to years of community stewardship. They suggested that credits could be used for defense of life and property kills or target older, sick, or bears behaving unusually. Nunavut Tunngavik Inc., Naujaat HTO, and Gjoa Haven HTO representatives made similar submissions. Inuit harvesters who addressed the NWMB were unanimous in their appeal for an increase in the TAH to offset hunting opportunities that will be lost when credits are reset to zero following a new TAH for the Gulf of Boothia.

² "When a new TAH decision is made, all unused credits are set to zero because the credits have been carried forward through inclusion in the latest population estimate provided by science and Inuit Qaujimajatuqangit (IQ)." Section 5.4, HACCS (2021 Version)



In the NWMB's February 1, 2022, decision letter regarding the Harvest Administration and Credit Calculation System, the NWMB recommended that "the Government of Nunavut and co-management partners work together towards a fair and acceptable alternative to resetting harvest credits to zero when a new Total Allowable Harvest is set." The Minister's letter dated February 7, 2022, acknowledged the NWMB recommendation. The Minister's statements are worth recalling here:

The Department of Environment is committed to working with co-management partners as evidenced by the development of the HACCS based on feedback from these partners. My department is optimistic that after filling their technical advisor positions, the RWOs will fully realize their roles and responsibilities in polar bear harvest management.

We must strive to balance management using sound science, Indigenous knowledge, and conservation principles. To that end, the department recognizes that the increases in co-management organizations' capacity will likely allow the full utilization of the harvest management system, as it is designed. I believe active engagement with co-management partners will address concerns of credit usage and management as well as improve public access to harvest information.

Consideration of regional sharing arrangements

Polar bears in the Gulf of Boothia subpopulation are harvested by more than one community, with communities in this case from the three regions of Nunavut. The current TAH for the Gulf of Boothia is shared by six Inuit communities as follows: Igloolik (11), Sanirajak (4), Kugaaruk (24), and Talojoak (25), Gjoa Haven (5) and Naujaat (5). In such a situation, the *Nunavut Agreement* (s. 5.6.17(b)) directs the NWMB to express the TAH in terms of a regional total allowable harvest.

In 2005, the TAH of 74 was allocated between the three regions as follows: Qikiqtaaluk Region (15 polar bears, or 20% of the TAH), Kitikmeot region (54 polar bears, or 73% of the TAH), and Kivalliq region (5 polar bears, or 7% of the TAH). Harvest records from the Department of Environment show that over the last five years, although communities have harvested below the TAH, each region has stayed within its allocated proportion. The NWMB specifically requested submissions from RWOs on the issue of tag allocation within communities and on the issue of regional TAH, but no submissions were received specifically addressing regional sharing arrangements.

In light of the absence of submissions on this issue, for the current Gulf of Boothia polar bear TAH

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decision, the NWMB kept the same proportion as existing previously when it recalculated the regional TAH for this decision.

Reasons for Decision

The NWMB considered that harvest credits were a significant factor in the Gulf of Boothia TAH decision, given the significant number of accumulated harvest credits for the Gulf of Boothia polar bear subpopulation and the need to continue to work toward a fair and acceptable alternative to resetting harvest credits to zero when a new TAH is set. The NWMB agreed that resetting the accumulated 159 credits for this subpopulation to zero could act as a disincentive to responsible harvest practices after years of community stewardship. However, the NWMB recognized the long-standing stated practice of resetting credits and the recent adoption of the HACCS, which maintains the practice of resetting credits. The NWMB acknowledges the collateral consequence of credit reset is not central to its decision because there is no distinction in the HACCS for resets in either positive or negative credit situations, nor the relative accumulated "balance" being affected, when credits are zeroed with a new TAH.

The NWMB understands that the management objective for the Gulf of Boothia is to maintain a viable polar bear subpopulation. Based on the evidence and argument from parties at the NWMB's two Regular Meetings as well as the science and Inuit Qaujimajatuqangit studies submitted for this issue, the NWMB determined a TAH increase from 74 to 84 would not necessarily lead to a population decline. Parties did not raise concerns about the population abundance of the subpopulation, indicating that the subpopulation seems to be stable or increasing. In March 2021, the NWMB determined the Gulf of Boothia polar bear subpopulation was healthy and productive. The recommendation to maintain the TAH combined with the consistent under-harvesting suggests responsible harvest management and stewardship practices at the community level. The NWMB was persuaded by arguments made by Inuit representatives that the TAH should be increased to offset hunting opportunities that will be lost when the credits are reset.

Relying on this evidence and argument, the NWMB decided to modify the TAH for Gulf of Boothia polar bears from 74 to 84 pursuant to Sections 5.3.3(a), 5.6.16, and 5.6.17(b) of the *Nunavut Agreement*.



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Need for improved communication regarding harvest credits

The Nunavut's polar bear harvest co-management system has undergone significant changes since 2019. The NWMB heard more calls in its most recent Regular Meeting on the Gulf of Boothia polar bear subpopulation TAH for improved communication and information dissemination between the Government of Nunavut and Regional Wildlife Organizations and Hunters Trappers Organizations. These calls emphasized credit accumulation and use, as well as harvester support programs. Some communities stated that until recently, they were not aware of their harvest credit status. The Minister's statement about the Department of Environment's commitment to continue working with co-management partners remains valid and important to pursue.

The NWMB continues to encourage co-management partners to work together towards sustained engagement, improved communication, increased transparency, and constructive feedback. The NWMB was encouraged to hear that Department of Environment staff are working with KRWB and other Regional Wildlife Board staff to find agreeable solutions to the credit issue. NWMB staff will continue to support and facilitate communication among co-management partners on these matters as much as possible.

Conclusion and Recommendations

Polar bear management in Nunavut is complex. The 2019 Nunavut Polar Bear Management Plan represents a significant achievement for setting out a shared vision for the approach to wildlife management for this species. However, serious issues still need attention, such as counting polar bears killed to defend life and property as part of the TAH, the definition of subpopulations and the respective management unit boundaries, and the co-management administration of polar bear harvesting (and credits). The NWMB stands by its recommendations from its February 1, 2022, HACCS decision letter again now as it modifies the TAH for the Gulf of Boothia polar bear subpopulation, a situation where a significant number of accumulated credits will also, as a consequence, be reset.

The NWMB looks forward to your reply and completion of the *Nunavut Agreement Article 5* decision-making process. If you have questions regarding this letter, do not hesitate to contact the NWMB.



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Joshua T. Arreak
Acting Chairperson
Nunavut Wildlife Management Board

c.c. Drikus Gissing, Director of Wildlife Management, Government of Nunavut.

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July 14, 2022

Mr. Joshua Arreak
Acting Chairperson
Nunavut Wildlife Management Board
P.O. Box 1379
Iqaluit, NU X0A 0H0

Re: NWMB Decision on the Government of Nunavut's Recommendation not to change the Total Allowable Harvest for the Gulf of Boothia polar bear subpopulation

Dear Mr. Arreak,

Thank you for your decision sent on July 20, 2022 concerning the Total Allowable Harvest (TAH) for the Gulf of Boothia polar bear subpopulation.

To reiterate the decision of the Nunavut Wildlife Management Board (NWMB):

"RESOLVED that pursuant to section(s) 5.6.16, 5.16.17(b), and 5.3.3(a) of the Nunavut Agreement, the Nunavut Wildlife Management Board modifies the overall total allowable harvest for the Gulf of Boothia polar bear subpopulation from 74 to 84 polar bears and modifies the regional total allowable harvest as follows:

- i. A Kitikmeot regional TAH of 61 polar bears (73 percent).*
- ii. A Qikiqtaaluk regional TAH of 17 polar bears (20 percent); and*
- iii. A Kivalliq regional TAH of 6 polar bears (7 percent).*

As per section 5.3.9(a) of the *Nunavut Agreement*, I hereby accept your decision to increase the TAH in the Nunavut settlement area of the Gulf of Boothia polar bear subpopulation to eighty-four (84) polar bears.

This TAH decision will be implemented forthwith and the TAH will be put into regulation. This decision will remain in place until I receive a new NWMB decision following the submission of updated population information.



I trust that we will work collaboratively in the continued implementation of this management decision and the close monitoring of this polar bear subpopulation to ensure that the management objective is maintained. I appreciate the efforts that have been put forth in its consideration.

Sincerely,

Cahan Akeeagok

Hon. David Akeeagok,
Minister of Environment

Cc. Henry Coman, A/Deputy Minister, Environment