FINAL RECOMMENDATIONS

BOARD OF GAME PROPOSALS

November 2011-Region V

Alaska Department of Fish & Game

Division of Wildlife Conservation and
Division of Subsistence

The department's recommendations are based on analysis of the proposals with available information. These recommendations may change after further analysis based on public comment or additional information.

PROPOSAL 1

EFFECT OF THE PROPOSAL: The proposal increases the number of available drawing permits for bull muskox in the spring hunt on Nunivak Island in Unit 18. The number changes from 50 to 100 drawing permits.

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

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PROPOSAL 2

EFFECT OF THE PROPOSAL: This proposal makes all registration permits for muskox on Nunivak Island in Unit 18 available only in the community of Mekoryuk by discontinuing their availability at other locations, especially at the Bethel ADF&G office.

DEPARTMENT RECOMMENDATION**: Do Not Adopt.**

RATIONALE: Time and place of issuing permits is a discretionary authority used by the department. For distribution of Nunivak Island muskox permits, we have followed the Nunivak Island Muskox and Reindeer Cooperative Management Plan since the early 1990s. This plan, developed through a public process, offers guidelines on how and where to issue permits.

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PROPOSAL 3

EFFECT OF THE PROPOSAL: This proposal makes all spring hunt registration permits for cow muskox on Nunivak Island in Unit 18 available only in the community of Mekoryuk by discontinuing their availability at the Bethel ADF&G office. This proposal affects Hunt RX061, a winter hunt for cow muskox on Nunivak Island.

DEPARTMENT RECOMMENDATION: **Take No Action.**

RATIONALE: See rationale for Proposal 2

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PROPOSAL 4

EFFECT OF THE PROPOSAL: This proposal makes all fall hunt registration permits for cow muskox on Nunivak Island in Unit 18 available only in the community of Mekoryuk by discontinuing their availability at the Bethel ADF&G office. This proposal affects Hunt RX060, a fall hunt for cow muskox on Nunivak Island.

DEPARTMENT RECOMMENDATION: **Take No Action**.

RATIONALE: See rationale for Proposal 2

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PROPOSAL 5

EFFECT OF THE PROPOSAL: This proposal would revise the amount reasonably necessary for subsistence (ANS) finding for moose in Unit 18 from 100 – 200 to 500 – 1,000 moose.

DEPARTMENT RECOMMENDATION: **No Recommendation.**

RATIONALE: This is an allocation issue to be determined by the board. The board made a positive customary and traditional use finding for moose in Unit 18 in 1987, which it subsequently reconfirmed in 1992 and determined the amount reasonably necessary for subsistence (ANS) to be 80-100 moose, including 20 – 30 moose in the winter. In November 2009, the board revised the ANS to 100–200 moose in Unit 18. In considering this proposal, the board will need to evaluate the harvestable surplus and recent harvest history from harvest ticket returns and community subsistence

research, as well as consider the number of subsistence users expected to participate. Additionally, if the board revises ANS findings, the board will need to determine whether existing seasons and bag limits still provide a reasonable opportunity for subsistence uses.

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PROPOSAL 6

EFFECT OF THE PROPOSAL: This proposal seeks to eliminate early restrictions on issuing moose registration permits in Units 18, 19 and 23 by making permits available throughout the season from designated vendors.

DEPARTMENT RECOMMENDATION: **Do Not Adopt.**

RATIONALE: Three registration permit hunts for moose in Region V are referenced in the proposal. The Department uses discretionary authority authorized in 5 AAC 92.052 (1) to determine the time and place of permits issued for these hunts. The proposal needs to be corrected to show permit issuing dates of June 1 to July 15 for RM880 in Unit 23, which is a 6-week period compared to the 2-week period listed in the proposal chart.

In Region V, discretionary authority limiting the distribution of permits is applied to hunts where harvest pressure is anticipated to exceed sustainable harvest (or harvest quotas) if unlimited numbers of permits were made available to the public. Issuing permits prior to the hunting season is used in remote areas where timely reporting of harvest by hunters is not easy and distribution of emergency closure announcements by the Department is difficult. Without limiting availability of permits, hunting pressure is high and the risk of overharvest of the game population is high.

In Unit 18, moose hunts RM620 and RM615 are managed with small quotas compared to the number of hunters participating in the hunt. For RM615, we have over 1500 hunters registering for a quota of 100 moose. In this case, the threat of overharvest is high and administration of the hunt would be complicated by continuing to issue permits through vendors while the season is in progress. The most efficient hunt administration is to issue permits during a preseason period so that all hunters are registered before the hunt begins.

Participation in Hunt RM620 is about 45 hunters per year for a quota of up to 20 bull moose. The small quota and remote nature of the hunt increases the risk of overharvest if a much larger pool of hunters were able to participate. The most efficient hunt administration is to limit the number of permits and issue them during a preseason period so that all hunters are registered before the hunt begins.

In Unit 23, moose hunting by resident registration permit RM880 and nonresident drawing permits DM871-877 was initiated in 2003 by the Board as a combined regulatory change in response to steadily increasing numbers of moose hunters in the unit. The increasing number of hunters was of concern due to ongoing user conflicts and moose populations with very low densities (0.03 to 0.6 moose per mi^2). The preseason registration requirement for Hunt RM880 came out of a Board work session and its implementation has successfully slowed the growth in participation in moose hunts in Unit 23, while allowing maximum opportunity (long season and any bull/ any moose bag limits) to Alaskan residents. The factors leading to the creation of RM880 (e. g. high numbers of hunters, user conflicts, low moose density) have not changed, making the preseason registration a necessary requirement for hunt management in Unit 23.

Department surveys, public comments, and other observations have suggested that moose populations peaked in the mid-1980s before being decimated by severe winters and extensive spring flooding during 1988-1991. Starvation of adults, loss of calf cohorts and predation by grizzlies and wolves caused moose populations to decline throughout the unit. Since the mid-1990s, calf recruitment throughout most of the unit has been quite low causing densities to remain at low levels in large portions of the unit. Although recent population surveys by the Department suggest stability at low population levels, local Traditional Ecological Knowledge (TEK) suggests that the populations may be continuing to decline. Studies of low density moose populations suggest there are many challenges to determining low density trends, so it is difficult to assess the status of moose in Unit 23.

Although the harvest of moose by Unit 23 residents (Division of Subsistence data) has not likely increased through use of RM880, harvest reporting rates have improved due to emphasis on permit requirements and hunt reports. Preseason registration has produced more participation by Unit 23 hunters while slowing the overall growth of total moose hunters in the unit. In the early years of RM880, penalties to hunters failing to provide a hunt report were waived due to impracticable administrative oversight by the Department. However, by 2010 hunt administration had improved and penalties were enforced by Alaska Wildlife Troopers which resulted in improved compliance by all hunters. Participation by non local Alaskan hunters initially dropped after RM880 was instituted, but numbers have since returned to pre-RM880 levels. Since substantial interest for moose hunting exists in Unit 23, user

conflict issues continue to persist, and moose remain at low densities, preseason registration for moose hunting permits continues to be the most efficient method of hunt management in the unit.

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PROPOSAL 7

EFFECT OF THE PROPOSAL: For resident hunters in the Lower Yukon Area (downstream of Mountain Village) in Unit 18, this proposal creates a continuous moose season from August 1 until the last day of February, increases the bag limit to 2 moose, and limits the take of antlered bulls to one. For nonresident hunters in this area, this proposal retains the 30-day fall season and antlered bull bag limit.

DEPARTMENT RECOMMENDATION: **Amend and Adopt.**

RATIONALE: Staff proposal; see issue statement. After further consulting with local residents, concerns were raised about harvesting cows with calves and "orphaning" those calves. Based on growth of moose calves, they are able to live independently of their mothers after October 1. By amending the bag limit, the proposal will meet the concerns expressed by the public.

The amended proposal would have the following change:

> Resident bag limit: 2 Moose; only one may be an antlered bull; **a person may not take a cow accompanied by a calf prior to October 1**.

Applying the season and bag limit changes to the current regulatory year would help increase winter harvest levels and reduce rates of increase in the rapidly growing moose population associated with the Lower Yukon Area of Unit 18,.

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PROPOSAL 8

EFFECT OF THE PROPOSAL: For resident hunters in the Remainder of Unit 18, this proposal extends the winter season by 21 days to the end of January and changes the bag limit to one moose. For nonresident hunters in this area, the regulation is not changed and retains 'no open season' in the winter hunt.

DEPARTMENT RECOMMENDATION: **Adopt.**

RATIONALE: Staff proposal; see issue statement.

Applying the season changes to the current regulatory year would help increase winter harvest levels in the Remainder of Unit 18 where moose are abundant and the public has frequently requested emergency action by the Board for extended seasons.

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PROPOSAL 9

EFFECT OF THE PROPOSAL: This proposal reauthorizes the antlerless moose season in the Lower Yukon Area of Unit 18.

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

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PROPOSAL 10

EFFECT OF THE PROPOSAL: This proposal allows the use of electronic call for the taking of moose in Unit 18.

DEPARTMENT RECOMMENDATION: **Do Not Adopt**.

RATIONALE: Restricting the use of electronic calls for the taking of moose is a regulation that has statewide scope as outlined in **5 AAC 92.085 (14) Unlawful methods of taking big game; exceptions**.

Advances in electronics have made electronic calls more efficient and effective as a method for taking a variety of animals. Previously only used for targeting certain species, a wide range of calls now exists to target even more species.

Calls are effective for bringing bull moose out of cover and into range by hunters. As hunting season gets closer to the rut, calling moose is even more effective. The use of electronic calls for moose hunting recently came to the attention of department staff by concerned hunters. The primary reason that the Department does not support the use of electronic calls is that it could have an effect on localized populations by making bulls more vulnerable to harvest.

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PROPOSAL 11

EFFECT OF THE PROPOSAL: This proposal would allow the use of salt licks for the taking of moose in the Lower Yukon Area of Unit 18.

DEPARTMENT RECOMMENDATION: **Do Not Adopt**.

RATIONALE: Restricting the use of artificial salt licks for the taking of moose is a regulation that has statewide scope as outlined in **5 AAC 92.080 (7) Unlawful methods of taking game; exceptions**.

The restriction on use of salt licks applies to all game due to the baiting nature of this method of attracting game. Using salt licks as part of moose hunting would concentrate moose at a specific location by attracting animals from long distances. The department does not support the use of salt licks because it could have a significant effect on localized populations by making moose more vulnerable to harvest.

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PROPOSAL 12

EFFECT OF THE PROPOSAL: This proposal allows the taking of moose from a boat under power in the Lower Yukon Area of Unit 18.

DEPARTMENT RECOMMENDATION: **Do Not Adopt**.

RATIONALE: Restricting the use of a motor-driven boat for the taking of moose is a regulation that has statewide scope as outlined in **5 AAC 92.080 (4) Unlawful methods of taking game; exceptions**. In general, the department does not support changes to the regulation that allow local exemptions or liberalizations of the requirement. However, in locations where traditional methods have been used for harvest, particularly the use of boats for the taking of caribou in Units 23 and 26(A), the method has been approved.

Attempting to take big or small game animals from a boat or other motor driven vehicle while it is under power is an unsafe hunting practice and could result in more firearm related hunting accidents. Seasons are long in this hunt area and bag limits allow for harvesting of moose in the fall or the winter seasons. Moose populations and harvests are at all time high levels and opportunity is being provided through extended seasons and bag limits.

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PROPOSAL 13

EFFECT OF THE PROPOSAL: This proposal would establish unit specific amounts reasonably necessary for subsistence (ANS) findings for wolf trapping and separate findings for wolf hunting in Units 18, 22, 23, and 26(A).

DEPARTMENT RECOMMENDATION: **No Recommendation.**

RATIONALE: This is an allocation issue to be determined by the board. The board made positive customary and traditional use (C&T) findings for wolves in units 18, 22, 23, and 26 in 1989 (for hunting), which it subsequently reconfirmed in 1992. The board then again reconfirmed a positive C&T finding for wolves as part of a general furbearer and fur animal customary and traditional use determination in March 2000 (for trapping). AS 16.05.258 directs the board to determine the amount of the harvestable portion of the population that is reasonably necessary for subsistence uses (an ANS). These findings are made upon the resource population, not the methods and means used to harvest the resource; thus, the board may want to consider whether separate ANS findings for subsistence wolf hunting and subsistence wolf trapping are necessary.

In 1997, the board directed the Department to develop a draft general proposal for considering C&T uses of furbearers and fur animals, rather than making C&T use determinations over a number of years on a species by species and area by area approach. That proposal, originally presented to the board in January 2000, was deferred to March 2000, when the board established positive C&T findings for furbearers outside the nonsubsistence areas. At that time, the board determined that furbearers posed particular complexities for establishing a single ANS because there are four types of common subsistence uses of furbearers, as food (certain furbearers are eaten), as clothing, in crafts that are sold, and as furs for sale to fur buyers (an example of customary trade). It was difficult assigning a single ANS given the multiple uses of furbearers. The board also recognized that the amounts of furbearers reasonably necessary for subsistence uses substantially vary with fur prices and determined that amounts for specific uses could be established on a case by case basis when specific allocation issues between subsistence, general, and nonresident trapping required it. As a result, the board established that the harvestable surpluses for each species were the amounts reasonably necessary for subsistence. This general finding was consistent with the presumption that current regulations adopted at the time (March 2000) provided reasonable opportunities for subsistence trapping, until proposals were received suggesting otherwise.

In considering this proposal, the board should evaluate the harvestable surplus of the various wolf populations in Units 18, 22, 23, and 26(A), and review recent harvest history from harvest ticket returns and community subsistence research. Additionally, if the board revises ANS findings, the board will need to determine whether existing seasons and bag limits still provide a reasonable opportunity for subsistence uses.

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PROPOSAL 14

EFFECT OF THE PROPOSAL: This proposal would close nonresident trapping seasons for beaver, coyote, fox, lynx, marmot, marten, mink, muskrat, land otter, squirrel, weasel, wolf, and wolverine in Units 18, 22, 23, and 26(A) because the amounts reasonably necessary for subsistence (ANS) findings for these furbearer and fur animals in Units 18, 22, 23, and 26(A) states “harvestable portion” in 5 AAC 99.025(13).

DEPARTMENT RECOMMENDATION: **No Recommendation.**

RATIONALE: This is an allocation issue to be determined by the board. The board made positive customary and traditional use (C&T) findings for wolves in units 18, 22, 23, and 26 in 1989 (for hunting), which it subsequently reconfirmed in 1992. The board then again reconfirmed a positive C&T finding for wolves as part of a general furbearer and fur animal C&T use determination in March 2000 (for trapping).

In 1997, the board directed the Department to develop a draft general proposal for considering C&T uses of furbearers and fur animals, rather than making C&T use determinations over a number of years on a species by species and area by area approach. That proposal, originally presented to the board in January 2000 was deferred to March 2000, when the board established positive C&T findings for beaver, coyote, fox, lynx, marmot, marten, mink, muskrat, river otter, squirrel, weasel, wolf, and wolverine in all units with a harvestable portion outside nonsubsistence areas. At that time, the board determined that furbearers posed particular complexities for establishing a single ANS because there are four types of common subsistence uses of furbearers, as food (certain furbearers are eaten), as clothing, as crafts that are sold, and as furs sold to fur buyers (an example of customary trade). It was difficult assigning a single ANS given the multiple uses of furbearers. The board also recognized that the amounts of furbearers reasonably necessary for subsistence uses substantially vary with fur prices and determined that amounts for specific uses could be established on a case by case basis when specific allocation issues between subsistence, general, and nonresident trapping required it. As a result, the board established that the harvestable surpluses for each species were the amounts reasonably necessary for subsistence (5 AAC 99.025(13)). This general finding was consistent with the presumption that existing regulations at the time (March 2000) provided reasonable opportunities for subsistence trapping, unless proposals were received suggesting otherwise.

In considering this proposal, the board should evaluate the harvestable surpluses of the various furbearer and fur animal populations in Units 18, 22, 23, and 26(A), and review recent harvest history from harvest ticket returns, sealing records, and subsistence research results. Additionally, if the board revises ANS findings, the board will need to determine whether existing seasons and bag limits still provide a reasonable opportunity for subsistence uses.

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PROPOSAL 15

EFFECT OF THE PROPOSAL: This proposal increases the wolf hunting bag limit in Unit 18 from 5 wolves per season to 10 wolves per season. This bag limit would apply to both resident and nonresident hunters.

DEPARTMENT RECOMMENDATION: **Adopt.**

RATIONALE: Wolf numbers in Unit 18 are considered stable or slightly increasing. Moose are abundant and increasing in both the Yukon and Kuskokwim river drainages and caribou are abundant and stable or decreasing in the southern portion of the Kuskokwim river drainage.

Harvest of wolves in Unit 18 is mainly in the winter by hunters and trappers. Only 9 wolves in the past 10 years have been harvested before November 10 when only the hunting season is open. Most wolves are harvested with no bag limit in the winter by ground shooting by individuals who have either a trapping license or a combination license (hunting and trapping). Increasing the bag limit to 10 wolves will probably have very little effect on harvest.

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PROPOSAL 16

EFFECT OF THE PROPOSAL: This proposal increases the wolverine hunting bag limit in Unit 18 from 1 wolverine per season to 2 wolverines per season. This bag limit would apply to both resident and nonresident hunters.

DEPARTMENT RECOMMENDATION: **Adopt.**

RATIONALE: In the past 10 years, 224 wolverines have been harvested in Unit 18, either during the hunting season of Sept. 1 – Mar. 31 or during the trapping season of Nov. 10 – Mar. 31. Of those harvested by shooting (n = 62), 11 were harvested in the months of September, October or November. The remaining 51 wolverines were harvested by ground shooting (firearm take with a trapping license) during the months of December through March, a time when both the hunting and trapping seasons were open. During the winter period, individuals with trapping licenses took 5 wolverines and combination licenses (hunting/trapping) accounted for 44 wolverines.

Hunting seasons for wolverine have little, if any effect on overall harvest in the unit. Most harvest occurs when both seasons are open so it is difficult to distinguish hunting-only harvest. Access to areas where wolverines occur is more important than bag limits, so harvests are focused during the winter period. Hunting-only harvest is low and during the last 10 years an estimated at 6 wolverines were harvested by hunting license (not trapping or combination licenses). Due to difficulty in finding wolverines through hunting methods, increasing the bag limit as proposed would be anticipated to have only a slight increase on hunting-only harvests.

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PROPOSAL 17

EFFECT OF THE PROPOSAL: This proposal lengthens the lynx hunting season by 121 days and increases the bag limit by more than double in Unit 18. The season would change from Nov 10-Mar 31 to Aug 10-Apr 30; the bag limit would change from 2 per season to 5 per season. These changes would apply to both resident and nonresident hunters.

DEPARTMENT RECOMMENDATION: **Adopt.**

RATIONALE: The department recommends adopting the proposal to increase the opportunity to take lynx as a food resource in Unit 18. Taking animals for food value compensates for the low fur quality that would be expected

during the proposed fall hunting season. The impact of lengthening the season and bag limit for fall hunting is expected to be low and additional hunting in April will have little influence on trends in harvest patterns.

Currently, the hunting and trapping seasons for lynx are identical, from November 10 to March 31. In the hunting regulations an individual may take only 2 lynx but with a trapping license an individual does not have a limit. In the past 5 years, reported harvest has ranged from 103-491 lynx per year for a total of 1,353 lynx. Harvest by ground shooting (firearm take with a trapping license) has been 0-30 lynx per year, and in the last 5 years 14 lynx were harvested by individuals with hunting licenses (not trapping or combination licenses).

Hunting seasons for lynx have little, if any, effect on total harvest in the unit. Harvest occurs when both hunting and trappings seasons are open so it is difficult to distinguish hunting-only harvest. Lynx numbers have been high for the past 3 or 4 years allowing historical high levels of harvest. In the past year, harvests from the Kuskokwim portion of the unit have declined but the Yukon River drainages have increased in harvest. We expect harvests will decline in the next several years due to natural population fluctuations. In relation to the breeding cycle of lynx and the take of females during August and September, survival of weaned kittens might be low but would vary greatly depending on prey abundance and body condition in any given year.

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PROPOSAL 18

EFFECT OF THE PROPOSAL: This proposal seeks to clarify the regulation that prohibits trapping in the vicinity of trap sites where trapping has caused the incidental take of moose, caribou, or deer. The proposal was submitted with the intent to apply to trapping activities in Unit 18.

DEPARTMENT RECOMMENDATION: **No Recommendation**.

RATIONALE: This proposal considers changes in Unit 18, but offers broad regulatory language that has state-wide impact and scope. Limiting the salvage requirement to 'edible meat' as a way to prevent citation changes the intent of salvage and becomes a broader issue for decision. Since the frequency of incidental catch in Unit 18 is quite low and does not present a conservation concern for affected game species, the department has no recommendation on the proposal.

Restrictions related to continuing trapping activities where incidental take of game has occurred has statewide scope as outlined in **5 AAC 92.095 (12) Unlawful methods of taking furbearers; exceptions**. Also, the salvage of game taken incidentally through trapping has statewide scope as outlined in **5 AAC 92.140 (d) Unlawful possession or transportation of game**.

In Unit 18, incidental take of moose or caribou in wolf snares has been reported 6 times in the last 10 years. Some of the situations are responses to moose expanding into previously unoccupied range and trappers faced with mitigating interactions for the first time in the history of trapping. To help educate trappers with useful snaring techniques, the department has provided 3 wolf trapping clinics during this period of moose population expansion in the unit.

Salvaging ungulates from incidental catches along remote traplines is difficult to accomplish due to infrequent trap-checks, dramatic temperature changes, spoilage of meat from the inside out, large frozen carcasses, and long travel distances. The requirement to salvage incidental catches of moose or caribou in these circumstances makes little sense to trappers when they often travel more than a 100 miles on a trapline. In cases where meat is suitable for human consumption, we think most trappers in Unit 18 will salvage meat and surrender it to the nearest ADF&G office or State Trooper post. To accommodate situations when animals are spoiled or frozen, a possible change to avoid citation would be a requirement for trappers to report their incidental catch to ADF&G in addition to moving their trapping equipment the required distances. In cases of repeat occurrences of incidental catch in the same area, it might be appropriate to have a '3-strikes and out' rule that requires moving to a new trapping area after multiple incidences. Additional state-wide review would be needed if these are viable options for changes to the proposal.

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PROPOSAL 19

EFFECT OF THE PROPOSAL: This proposal would close nonresident hunting seasons for beaver, coyote, fox, lynx, marmot, marten, mink, muskrat, land otter, squirrel, weasel, wolf, and wolverine in Units 18, 22, 23, and

26(A) because the amounts reasonably necessary for subsistence (ANS) findings for these furbearer and fur animals in Units 18, 22, 23, and 26(A) states "harvestable portion" in 5 AAC 99.025(13).

DEPARTMENT RECOMMENDATION: **No Recommendation.**

RATIONALE: This is an allocation issue to be determined by the board. The board made positive customary and traditional use (C&T) findings for wolves in Units 18, 22, 23, and 26 in 1989 (for hunting), which it subsequently reconfirmed in 1992. The board then again reconfirmed a positive C&T finding for wolves as part of a general furbearer and fur animal C&T use determination in March 2000 (for trapping).

In 1997, the board directed the Department to develop a draft general proposal for considering C&T uses of furbearers and fur animals rather than making C&T use determinations over a number of years on a species by species and area by area approach. That proposal, originally presented to the board in January 2000 was deferred to March 2000, when the board established positive C&T findings for beaver, coyote, fox, lynx, marmot, marten, mink, muskrat, river otter, squirrel, weasel, wolf, and wolverine in all units with a harvestable portion outside nonsubsistence areas. At that time, the board determined that furbearers and fur animals posed particular complexities for establishing a single ANS because there are four types of common subsistence uses of furbearers and fur animals, as food (certain furbearers are eaten), as clothing, as crafts that are sold, and as furs for sale to fur buyers (an example of customary trade). It was difficult assigning a single ANS given the multiple uses of furbearers and fur animals. The board also recognized that the amounts of furbearers reasonably necessary for subsistence uses substantially vary with fur prices and determined that amounts for specific uses could be established on a case by case basis when specific allocation issues between subsistence, general, and nonresident trapping required it. As a result, the board established that the harvestable surpluses for each species were the general amounts reasonably necessary for subsistence (5 AAC 99.025(13)). This general finding was consistent with the presumption that existing regulations at the time (March 2000) provided reasonable opportunities for subsistence trapping, unless proposals were received suggesting otherwise.

In considering this proposal, the board should evaluate the harvestable surpluses of the various furbearer and fur animal populations in Units 18, 22, 23, and 26(A), and review recent harvest history from harvest ticket returns, sealing records, and subsistence research results. Additionally, if the board revises ANS findings, the board will need to determine whether existing seasons and bag limits still provide a reasonable opportunity for subsistence uses.

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PROPOSAL 20

EFFECT OF THE PROPOSAL: This proposal lengthens the ptarmigan hunting season by 46 days and increases the bag limit by more than double in Unit 18. The season would change from Aug 10-Apr 30 to Aug 10-Jun 15; the bag limit would change from 20 per day and 40 in possession to 50 per day and 100 in possession. These changes would apply to both resident and nonresident hunters.

DEPARTMENT RECOMMENDATION: **Amend and Adopt**.

RATIONALE: The department recommends amending the season closure date to May 15.

Ptarmigan are abundant in Unit 18, but distribution in the winter and spring is variable. Harvest in the winter (November through March) is low and mostly incidental. From mid-March through the end of April, ptarmigan can be very abundant locally allowing high harvests near communities. As spring progresses, ptarmigan have generalized movements from interior regions to coastal areas as they follow the recession of snow in April and May. In many years this means the more coastal communities in Unit 18 have very few ptarmigan until early to mid-May.

However, by mid-May, male ptarmigan are defending their territories and they become very tolerant of human presence and therefore vulnerable to hunting. Female ptarmigan typically begin nesting in May and chick rearing occurs in June and July. Late winter and spring hunting has been demonstrated in other populations of ptarmigan to be of concern due to additive effects of mortality on the population. Currently in Unit 18, no methods or studies are being used to index ptarmigan abundance, seasonal distribution patterns, or harvests as they relate to the proposed extended season. Amending the season closure date to May 15 would increase access to this resource for individuals without access to ptarmigan by April 30 while reducing the recognized negative impacts of additive mortality during the nesting season (if hunting was extended to June 15).

The department does not oppose the proposed bag limit increase. In most of Unit 18 access is limited and localized harvest through May 15 is not expected to impact overall ptarmigan numbers.

The board has not determined whether there are customary and traditional uses (C&T) of ptarmigan in Unit 18 pursuant to AS 16.05.258. As a result, the department will provide a C&T worksheet for Unit 18 ptarmigan based upon the 8 criteria found in 5 AAC 99.010 for the board's consideration prior to taking action on this proposal.

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PROPOSAL 21

EFFECT OF THE PROPOSAL: This proposal changes the game management boundary at the intersection of Units 18, 19, and 21 where landforms and drainages are difficult to distinguish due to low topographic relief.

DEPARTMENT RECOMMENDATION: **No Recommendation**.

RATIONALE: This proposal has been deferred two times since being proposed in late 2009. The purpose of the initial proposal was to rectify errors in a small section of game management boundaries where Units 18, 19 and 21 join together in an area of featureless terrain. However, lack of consensus by affected constituents on a revised boundary led to the first deferment at the statewide meeting in January 2010 (Proposal 44) and it was deferred again at the spring 2011 Wasilla meeting (Proposal 205).

A new game management boundary line affects traditional hunting areas and moose hunting along the Kuskokwim River, factors leading to lack of agreement on proposed boundaries. One of the reasons consensus has not been reached is little agreement on traditional hunting areas and how the proposed boundaries would affect moose hunting in a small area that would 'move' from Unit 18 to Unit 19 if the deferred proposal is adopted

At present, a meeting is planned in early October 2011 to bring parties together to reach consensus on boundary solutions. The Department supports this approach and is hopeful agreement can be reached. However, if there continues to be disagreement on suitable boundaries, the Department recommends the board take no action on the proposal. The 'take no action' alternative leaves the boundary unchanged which is less than desirable, but an acceptable solution considering the large amount of time invested in this proposal.

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PROPOSAL 22

EFFECT OF THE PROPOSAL: This proposal reauthorizes the antlerless moose seasons in Units 22(C) and 22(D).

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

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PROPOSAL 23

EFFECT OF THE PROPOSAL: This proposal would eliminate trophy nullification of muskox in the Seward Peninsula subsistence hunts and would eliminate mature male muskox from the subsistence bag limit.

DEPARTMENT RECOMMENDATION: **Do Not Adopt.**

RATIONALE: These changes would have negative long term impacts to the Seward Peninsula muskox population.

State subsistence muskox hunts in Units 22 and 23 Southwest began in 1997 after the board made a positive customary and traditional use (C&T) finding for the Seward Peninsula muskox population. Nullification of subsistence harvested muskox horns is a Department discretionary authority that has been applied to these hunts under the board's direction since Tier II hunting began in 1997. Nullification has served as an effective tool for hunt managers to successfully administer quota-based Seward Peninsula muskox hunts given the combination of factors affecting hunts, including: high interest and volume of muskox hunters, ease of access to hunt areas adjacent to the Nome road system, increasingly lower harvest quotas due to selective harvest of mature bulls, and waiver of resident tag requirements and fees. Numerous public meetings with the Seward Peninsula Muskox Cooperators Group and other organizations have failed to identify alternatives to trophy destruction in subsistence muskox hunts. From a hunt management perspective, trophy destruction provides the greatest amount of hunting opportunity to the largest

number of statewide hunters under the Tier I system and has allowed 80% of the total available Tier I subsistence permits to be issued online with no restrictions.

Several population parameters indicate the population is declining and based on declining bull:cow ratios, low recruitment, high rates of natural mortality, and reduced harvest rates, the forecast for future hunts will be a Tier II harvest regime for 2012-2013, pending discovery of unanticipated population growth during the next scheduled population survey in 2012.

Comparing muskox hunter interest through the drawing permit process and subsistence registration permit systems provides further evidence of the effectiveness of the deterrent effect of trophy destruction under current regulatory structure. Alaska resident hunters entering the drawing process are more than double the number of residents receiving Seward Peninsula subsistence permits (e.g. 867 drawing applicants vs. 367 subsistence permits in 2009). This is a consistent trend with the 3 year average of drawing hunt applicants exceeding 900 individual applicants per year compared to an average 357 Seward Peninsula subsistence permits per year. The reduced number of hunters applying for subsistence hunts is most likely due to trophy destruction and has created manageable, albeit complex, scenarios for establishing subsistence seasons and harvest quotas that provide hunting opportunity to the greatest majority of residents.

Mature bulls, defined as adult bulls 4 years old and older with fully developed horn bosses, have experienced high harvests that have led to rapid declines of mature bull:cow(MB:C) ratios along portions of the road system since 2002 (figures 1 – 3). In 2009, to help deter the selective harvest of mature bulls and begin rebuilding MB:C ratios, the Department instituted a revised version of horn cutting (at the level of the eye) that removed more horn than the tips of horns required in previous hunts. Unit 22(C), the most road-accessible area, has the greatest decline in ratios (figure 1); Units 22(A) and 23SW (figures 2 and 3) shows changes through time that reflect significant selective harvest of mature bulls by hunters.

Even with revised horn cutting requirements, the subsistence take of mature bull muskox remains high with 88% of mature bulls (37 of 42 muskox taken) in the 2010-2011 harvest coming from the road system areas. This illustrates the importance of mature bulls to subsistence hunters, even during a period when mature bulls were more difficult to find due to their depleted numbers.

The high importance of subsistence take of bull muskox is also demonstrated by the proportion of harvested cows compared to the available cow harvest generated by harvest guideline rates. During Tier I (2008-2011), approximately 30% of the total available harvest was allocated to cows but actual harvest by hunters ranged from 5-12% of total harvest. In these hunts the remaining portion of the cow quota was directed towards bulls, as allowed by permit bag limit conditions. Figure 4 summarizes the last 5 years of hunting and shows that in all hunt areas bull harvests are high in subsistence hunts.

Changes to the subsistence bag limit to exclude mature bull muskox would likely shift subsistence harvest patterns towards cows. If mature bulls, the most commonly harvested and most easily identifiable muskox, are unavailable for harvest it is reasonable to assume that hunters will harvest animals from the largest remaining segment of the population. Recent composition survey data estimates that 49% of the Seward Peninsula muskox population is comprised of cows that are 3-years-old or older, where as young bulls in the 2-year and 3-year age classes are found in low numbers (6 % and 4%, respectively). These age-sex proportions of abundance in the herd suggest that cow harvests will increase if mature bulls are not part of the subsistence bag limit.

The Department is concerned by the high cow mortality rates found in collared adult cows since radiotelemetry studies were started in 2008. The annual cow mortality rates have been 9%, 4%, 23%, and 19%, respectively, between 2008 and 2011. Since 2008, 12 collared muskox have died between April and July and no mortalities have been observed in other months of the year. By itself, the high level of natural mortality in the population is of concern, but combined with a potential increase in subsistence harvest of cows creates an accelerated population decline if harvest rates are not reduced significantly. A Tier II harvest regime is the likely outlook for 2012-2013 hunts on the Seward Peninsula unless growth in the population is found during the March 2012 muskox population survey.

The apparent high rates of natural mortality present in the herd, the decline of bull:cow ratios, and recent declines in recruitment rates all support the 2010 range-wide muskox population estimate showing little or no population growth between 2007, when 2688 muskox were observed, and the 2010 when the population was estimated at 2,616 muskox (Figure 5). Data suggest the Seward Peninsula population is likely declining under current management regimes. Changes to the subsistence bag limit that potentially increase the removal of cows from the population contribute to a conservation concern. The Department recommends pro-active hunt management through

conservative harvest rates, discretionary authorities and permit conditions that reduce the selective harvest of mature bulls, and increased monitoring of age-sex ratios and composition of the herd.

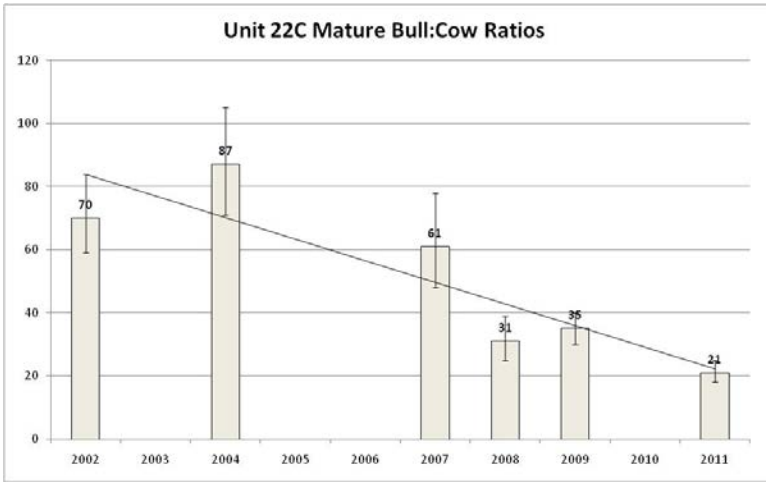

Figure 1. Muskox composition ratios of mature bulls:cows in Unit 22(C), 2002 to 2011.

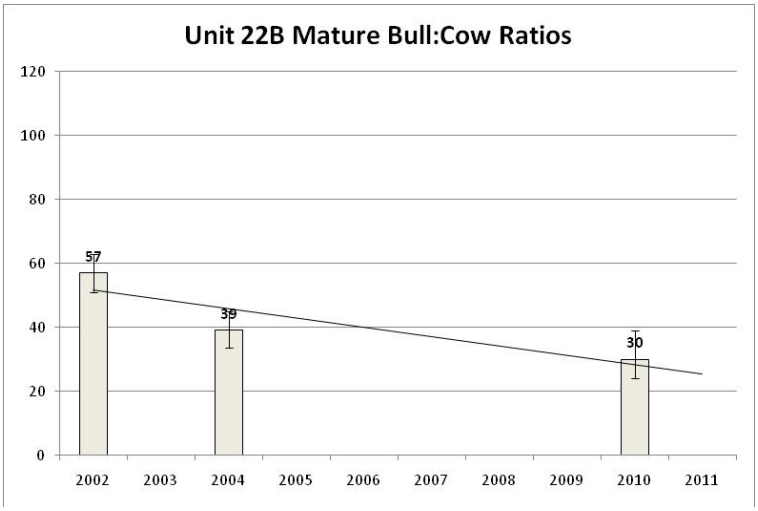

Figure 2. Muskox composition ratios of mature bulls:cows in Unit 22(B), 2002 to 2011.

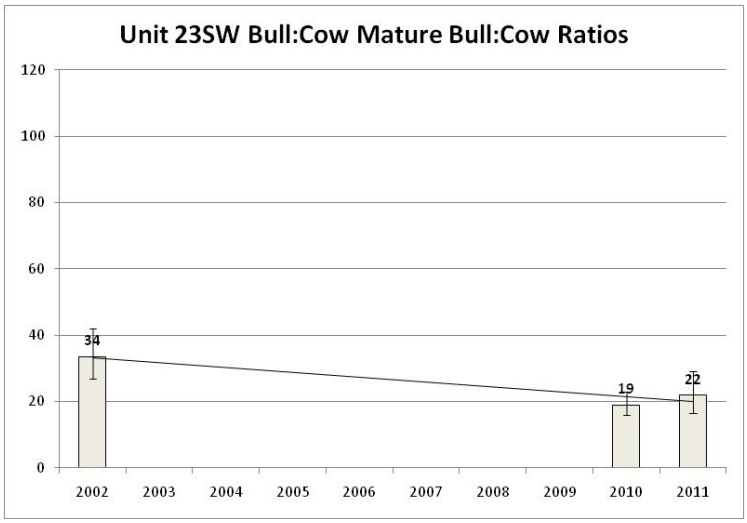

Figure 3. Muskox composition ratios of mature bulls:cows in Unit 23 Southwest, 2002 to 2011.

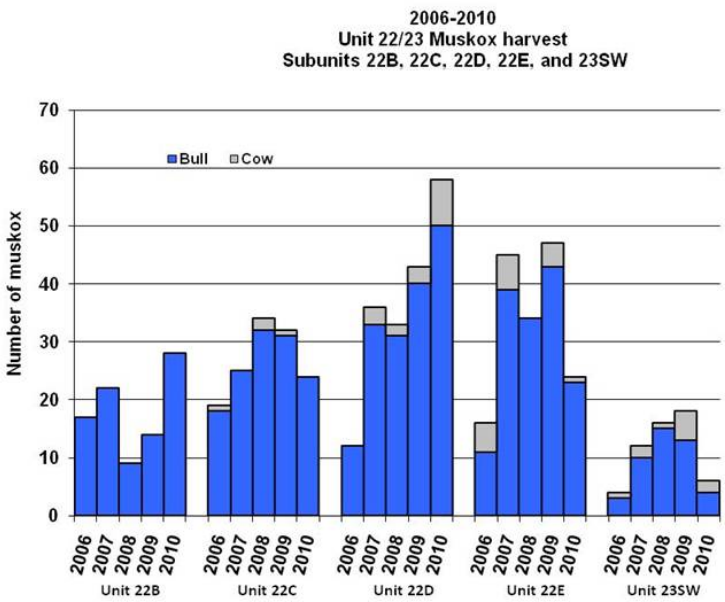

Figure 4. Subsistence harvest of muskox from the Seward Peninsula, 2006-2010.

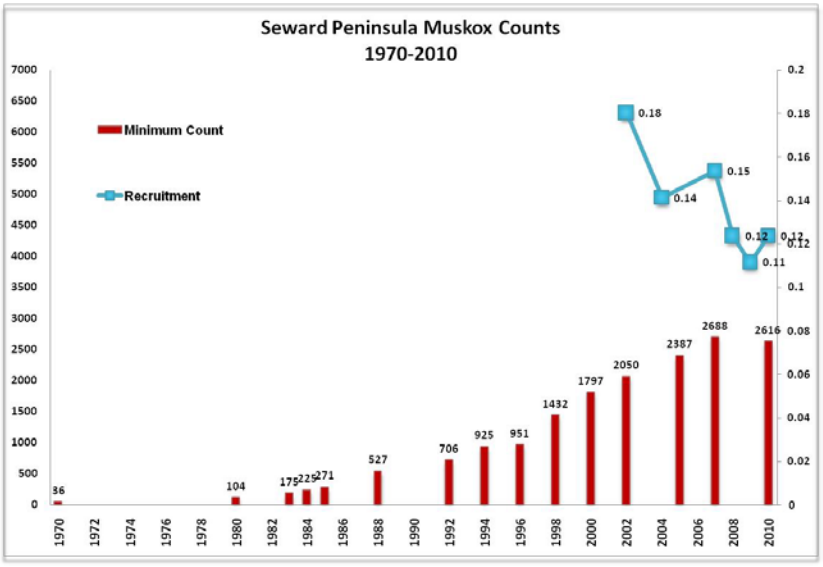

Figure 5. Population count results for Seward Peninsula muskoxen, 1970 - 2010

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PROPOSAL 24

EFFECT OF THE PROPOSAL: This proposal would lengthen the Unit 22(C) brown bear season to August 1 – May 31; and increase the bag limit to one bear every regulatory year.

DEPARTMENT RECOMMENDATION: **Amend and Adopt.**

RATIONALE: The Department recommends amending the proposal to provide a split hunting season with no change to the bag limit of one bear every four regulatory years in Unit 22(C). The amendment would retain the existing fall season of Aug. 1 – Oct. 31 and change the existing spring season of May 10-May 25 to the dates of May 1-May 31. The amended regulation would apply to resident general hunts and nonresident drawing permit hunts. The Department also recommends amending spring subsistence brown bear season dates to May 1- May 31 while retaining the bag limit of one bear every regulatory year for subsistence hunting.

Beginning in 1997, brown bear hunting regulations in Unit 22 were incrementally liberalized by the Board of Game to increase bear harvest and decrease the unit-wide bear population as a way to lower predation rates on declining moose populations in large portions of Unit 22. Deep snow initiated the moose population declines (1988-1992) and low recruitment through suspected bear predation on moose calves further depleted moose in the unit. Moose in

Unit 22(A), Unit 22(B) Remainder (West of the Darby Mountains), Unit 22(D) Kuzitrin River drainage, and Unit 22(E) experienced the greatest reduction in moose numbers. In response to liberalized bear hunting, the Unit 22(C) moose population has maintained good recruitment and requires antlerless harvest to prevent excessive population growth. Moose populations in Units 22(B) and 22(D), bordering Unit 22(C), have yet to recover after significant declines so directing bear harvest pressure in these areas would be helpful.

Unit 22(C) provides brown bear hunting opportunity in a road-accessible portion of the unit where harvest pressure is considered high by the Department. Both fall hunts (Aug. 1 – Oct 31) and spring hunts (May 10- May 25) have variable harvests that can be influenced by weather for hunting, food for bears (fall season), and snow travelling conditions when bears emerge from dens (spring season). Historical harvests have averaged 8 bears per year during 1990 - 1997 and then it increased 88% to 15 bears annually during 1998-2010 after regulations were liberalized through lengthened seasons for all hunters and tag exemptions for resident hunters. Adding hunting opportunity earlier than the Department's amended spring date of May 1 or changing the bag limit to one-bear-per-year is anticipated to increase harvest to unacceptable levels and exceed the management objective of continuing brown bear harvest at or near current levels.

Brown bear population data is minimal in Unit 22 making it difficult to assess current population levels and sustainable harvest in the area covered by this proposal. In 1991, a capture-mark-recapture (CMR) census was completed covering a relatively small area centered at the intersection of Units 22(B), 22(C) and 22(D). Broad extrapolation of the density estimate to all of Unit 22(C) suggests that harvests (at the time of the census) were at upper sustainable levels. Recent harvests have increased 88%, and although bear population data has not been revised through census work, current harvests are likely at maximum sustainable levels. Measurements from bears harvested in Unit 22(C) show no changes in mean age, mean skull size, and mean proportion of sows (35%) suggesting the population is stable or being replenished by bears immigrating from peripheral areas.. However, increasing the season length to Aug 1- May 31 and changing the bag limit to one-bear-per-year will increase opportunity substantially and yield high hunting pressure that is expected to increase harvests to the point of having negative impacts on the bear population.

The Unit 22(C) moose population is currently above the management objective of 450-525 moose. In 2010 a moose population survey estimated 663 moose (± 17% 90% C.I), and spring calf recruitment has been between 11% - 19% since 2004. Since moose (and muskox) population levels in Unit 22(C) do not show impacts of brown bear predation, the Department does not support regulatory changes that would allow spring hunting during March and April when good snow travel conditions would improve hunter success and cause significant increases in brown bear harvest. However, amending the spring season to open on May 1 and close May 31 provides an additional 15 days of opportunity and satisfies the public's long standing concern of deteriorating spring travel conditions during the existing May 10 - May 25 season. The additional days of hunting in early May provide easier and safer travel by snowmachine and increased access to bears that are of concern to local reindeer herders during the peak reindeer calving season. Additionally, the May hunting period in Unit 22(C) preserves the opportunity for early season bear hunting (March and April) in the adjoining Units 22(B) and 22(D) where brown bear predation has impacted moose population numbers. Directing hunters to areas in need of increased brown bear harvest is an advantage of the Department's amended proposal.

Units 22(B) and 22(D) have brown bear season dates of Aug1-May 31 with a bag limit of one bear every regulatory year for both resident and nonresident hunters. This liberal season and bag limit helps focus bear harvest where we believe bear predation on moose calves is continuing to cause poor recruitment and has prevented the recovery of moose populations. A radiocollar study in the mid 1990s in Unit 22(B) west of the Darby Mountains found that 71% calf mortality occurred within a month of calving. In 2010, the Unit 22(B) West moose population survey estimated 570 moose (± 17% 90% C.I) which is below the management objective of 1200 moose; and spring recruitment surveys in the area have found 9% recruitment since 1997. The 2011 population survey in Unit 22(D) estimated 1601 moose (± 21.8% 90% C.I) which is at the management objective of 1600 moose and found a calf recruitment rate of 10%. Moose population improvement through increased calf survival is still needed in these areas and allowing long periods of spring hunting in Unit 22(C), as proposed in Proposal 24, should be avoided so that hunters will be directed to hunt in Units 22(B) and 22(D) during periods of good spring travel in March and April.

Amended regulation:
5 AAC 85.020 (20)

Units and Bag limits (20)	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season

…

Unit 22(C)	
RESIDENT HUNTERS	
1 bear every regulatory year by registration permit	Aug. 1- Oct. 31 **May 1 – May 31** [MAY 10 – MAY 25] (Subsistence hunt only)
1 bear every 4 regulatory years	Aug. 1- Oct. 31 **May 1 – May 31** [MAY 10 – MAY 25]
NONRESIDENT HUNTERS	
1 bear every 4 regulatory years by drawing permit only; up to 27 permits may be issued in combination with Unit 22(B)	Aug. 1- Oct. 31 **May 1 – May 31** [MAY 10 – MAY 25]

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PROPOSAL 25

EFFECT OF THE PROPOSAL: This proposal would change the current brown bear seasons of Aug 1-Oct 31 and May 10-May 25 in Unit 22(C) to a continuous season of Aug 1-May 31 with no changes to the bag limit of one bear every four regulatory years.

DEPARTMENT RECOMMENDATION: **Take No Action.**

RATIONALE: See recommendations in Proposal 24.

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PROPOSAL 26

EFFECT OF THE PROPOSAL: This proposal would change all Unit 22 brown bear season dates to 'no closed season' with no change to the bag limit.

DEPARTMENT RECOMMENDATION: **Do Not Adopt.**

RATIONALE: In Unit 22, a population estimate of brown bears is not available to help calculate harvest based on sustainable harvest rates. Instead, performance of ungulate populations has been used to guide brown bear seasons and bag limits. Beginning in 1987 the board started making changes to regulations by 1) adopting subsistence brown bear hunts, and 2) liberalizing brown bear regulations in response to moose population declines and slow recovery due to low recruitment from suspected predation of calves by brown bears. The liberalized regulations have produced a 70% increase in bear harvest in Unit 22. During the period 1990-1997 average annual harvest was 54 bears, and after liberalization from 1998-2010, the average annual harvest was 91 bears (range 66-105). Response to fewer bears by moose populations has been noticeable with Units 22(C) and 22(E) above population objectives; Unit 22(D) at the population threshold, and only Units 22(A) and 22(B) below management objectives. Current bear harvests are likely at high enough levels to continue improvement of moose numbers, and further increases in bear harvest would be potentially detrimental to the bear population. Consequently, the Department does not support Proposal 26.

Proposal 26 cites impacts to subsistence users, food caches, and cabins as reasons to increase bear harvest. When this occurs outside of established seasons, the Department recommends the use of Defense of Life and Property (DLP) regulations to remove nuisance bears. During regulatory years 2000 to 2010 the number of DLP bears has averaged 5 bears per year.

In addition, unrealized moose population parameters or intensive management objectives have not surfaced in Unit 22 to prompt liberalizing the brown bear regulations to 'no closed season'. Adopting a year-round hunting season would likely create conservation concerns by increasing bear harvest above the management objective of continuing

brown bear harvest at or near current levels. Current hunting seasons through general hunts, draw hunts, or subsistence registration hunts, with amendments offered in Proposal 24, are supported by the Department.

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PROPOSAL 27

EFFECT OF THE PROPOSAL: This proposal adds 22 days to the Unit 22 ptarmigan season by changing the season from Sept. 1-Apr. 30 to Aug. 10-Apr. 30 with no changes to the bag limit of 20 ptarmigan per day, 40 in possession.

DEPARTMENT RECOMMENDATION: **Adopt.**

RATIONALE: Opening the season earlier for willow, rock, and white-tailed ptarmigan in Unit 22 would provide additional opportunities to harvest and would not likely affect the abundance. An August season date would also align the season with Units 18, 23, and 26(A) in Region V and with the majority of Game Management Units. The season opening was shifted from August 10 to September 1 in 1997 based on the impact the earlier season opener had on young ptarmigan.

Ptarmigan nesting begins in May with chicks being reared during the months of June and July when the season is closed. Hunting season dates opening in August increases the likelihood of juvenile birds being harvested, however the effects of hunting pressure in Unit 22 are expected to be localized and not detrimental to the unit-wide population. Fall ptarmigan harvests are considered compensatory, meaning many of those ptarmigan would have died during winter months had they not been harvested, so the impact of hunting in August has a minimal effect on the population. Since the proposal does not extend the spring season, the additive effects of spring harvest (removing birds that have survived the winter and are recruited into the population) are avoided.

The ptarmigan population in Unit 22 does not have a census or abundance estimate, although their numbers have cycled in response to cold and wet springs, loss of browse through competition with snowshoe hares, predation, and other natural causes. Results from breeding bird census routes on the Nome road system show that willow ptarmigan are abundant and rock ptarmigan are frequent in suitable habitats. These observations indicate the population is capable of sustaining increased hunter harvest.

The board has not determined whether there are customary and traditional uses (C&T) of ptarmigan in Unit 22 pursuant to AS 16.05.258. As a result, the Department will provide a C&T worksheet for Unit 22 ptarmigan based upon the 8 criteria found in 5 AAC 99.010 for the board's consideration prior to taking action on this proposal.

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PROPOSAL 28

EFFECT OF THE PROPOSAL: This proposal reauthorizes the antlerless moose season in Unit 23.

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

Harvest of cow moose is low in Unit 23 with approximately 10-12 cows taken annually over the last 20 years. In years when caribou are not available, the low antlerless moose harvest rates allow additional harvest opportunity for resident hunters without negatively impacting the moose population.

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PROPOSAL 29

EFFECT OF THE PROPOSAL: This proposal requests that 50% of all nonresident drawing moose permits in hunt DM875 be awarded to applicants who have completed guide/client agreements. This establishes a requirement for guide-client agreements in advance of the drawing application process.

DEPARTMENT RECOMMENDATION: **No Recommendation**.

RATIONALE: This is an allocation issue for permits to a guide operating in Unit 23 that needs to be determined by the board.

Nonresident hunters would be affected by the additional requirement of having to complete a guide/client agreement prior to applying for drawing permits. This requirement would likely be similar to the proof of guide/client agreements established for moose drawing permit applicants in 5 AAC 92.069 as applied to portions of Units 21(B), 21(D) and 24. If the board chooses to require the use of guide-client agreements, the Department suggests the following conditions to be consistent with other guide-client drawing permit requirements: 1) Guides must be properly registered in the Guide Use Area for the time-frame that the permit is valid; 2) Guide and client must sign an agreement prior to submission of an application in the drawing process; and 3) Clients must apply for a drawing permit and declare the signed guide-client agreement on the application. It would be the responsibility of the guide and client to comply with these requirements and provide proof or documents if checked by an enforcement officer. Another factor to consider is that this type of agreement may conflict with Alaska Statute 16.05.407 which does not require a nonresident to have a guide to hunt moose. In areas where a guide-client agreement has been implemented for moose hunting, two types of hunts are available for nonresidents: the available permits are allocated and nonresidents can choose to apply for either the guided hunt or the non-guided hunt.

In Unit 23, moose Hunt DM875 was established in 2005 for nonresident hunters and since its inception each drawing cycle has been fully subscribed with 24 permits issued each year. Based on applications received each year, the success rate of receiving a permit ranges from 30-60% for individual applicants. Based on hunt reports received by the Department, 50-90% of the individuals receiving permits participate in hunting. This leaves 10-50% of the permittees reporting that they 'did not hunt'. The proposal seeks to implement regulatory methods that would reduce the number of hunters who choose not to hunt. Because the number of available permits is determined in advance of the drawing, this proposal would not have a biological effect on the moose population in the hunt area.

Summary of Unit 23 Nonresident Drawing Hunt DM875
Season: Sept 1 – Sept 20
Bag Limit: One bull with 50-inch antlers or 4 or more brow tines on at least one side

Year	App's Rcvd.	Permits Available	Permits Awarded	% Drawn	# Hunted	% Hunted
2005	56	24	24	43	21	88
2006	77	24	24	31	17	71
2007	71	24	24	34	14	58
2008	59	24	24	41	18	75
2009	39	24	24	62	12	50
2010	63	24	24	38	12	50
2011	68	24	24	35		

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PROPOSAL 30

EFFECT OF THE PROPOSAL: This proposal would set an annual harvest quota, within the Noatak National Preserve, based on a 3-year average harvest rate of less than 8 percent of the adult brown bear population. Quota-based management would invoke emergency order closures of hunting by the Department when quotas have been reached.

DEPARTMENT RECOMMENDATION: **Do Not Adopt**.

RATIONALE: Although the proposal seeks to change regulations within the Noatak National Preserve, having harvest quotas for a small portion of the unit contained in the preserve (24 %) creates complicated regulations that are not supported by population, harvest, or hunting pattern data. Harvest quotas based on small land management units creates problems because bear habitats and home ranges established by bears are ignored. The Department favors uniform unit-wide regulations so that confusion between differing federal and state regulations are not increased or accentuated. In addition, evidence provided by reports from the public and survey information indicate that the bear population has increased in size during recent years making regulatory changes that restrict harvest unnecessary.

Considering the lack of bear census data in Unit 23, it is very difficult to apply harvest rate objectives based on adult bears to generate harvest quotas for portions of the unit, or for the unit as a whole. In the past 25 years there have been two bear census efforts centered in small portions of the unit, one in 1987 and one in 2008. The gap in time, primarily due to difficulty and expense of methods, and localized nature of the censuses makes it impossible to

numerically quantify the population in the unit. Additionally, obtaining information through collared bears has been avoided due to cultural sensitivities regarding the use of drugs and collars on bears in Unit 23.

Based on generalized extrapolation of previous census estimates, the brown bear population is considered to be stable or increasing in Unit 23. Previous census projects include: a capture-mark-recapture (CMR) method in the vicinity of the Red Dog Mine in 1987, and a stratified random sample method (SRS) in 2008 in the Lower Noatak River area, where a portion of the Noatak survey area overlapped with complete coverage of the Red Dog Mine area. The 2008 survey was led by the National Park Service and final results are not yet available. The Red Dog CMR census results, with sightability correction factor applied, show a density estimate of 1 adult bear (3+ years) per 25.7 mi^2 (Ballard et al. 1991). The 2008 coverage of the Red Dog Mine area, using preliminary minimum counts (**without** sightability correction applied) yields a density of 1.9-2.2 adult bears (2+ years) per 25.7 mi^2. Because the Red Dog Mine area was censused in both studies, the density is simply generated from the total number of bears observed. Although the bear densities cited here are not directly comparable due to different definitions of adult bears (3+ years in 1987 Red Dog Mine vs. 2+ years in 2008 Noatak), the general population condition does not suggest a decrease in bears. An alternative minimum density estimate of 1.15 adult bears per 25.7 mi^2 generated from a stratified random sample within the entire 2008 Lower Noatak survey area, also suggests a general level of stability in the population. In these estimates, the Department recognizes that bear densities are habitat specific and cannot be applied broadly to differing habitat zones or to specific areas within the unit. Since less than half of the Preserve referenced in this proposal overlaps with the census area, it is probably unreliable to apply census-generated densities based on high quality bear habitat to the entire Preserve containing lower quality habitats.

Until the results of the 2008 study are finalized, with sightability correction factor applied, the magnitude of the population change between 1987 and 2008 will be uncertain. Sightability correction factors can be highly variable, very survey specific, and influenced by weather, snow conditions, topography, and perhaps most importantly by pilot/observer ability. However, the 2008 SRS density estimate will undoubtedly increase because bears 'missed' on the initial survey have not been added to the estimate through sightability correction procedures. Final 2008 estimates for the Red Dog Mine area are expected to confirm or verify that the bear population has increased during 1987 – 2008.

In a broader view of Unit 23, brown bear populations show no signs of deteriorating in abundance. Over time, harvest levels have fluctuated but appear to be most influenced by non-regulatory factors (e. g. weather, economics) rather than regulatory changes. Median skull size and median age of harvested bears varies from year to year (Table 1), but shows a consistent stable trend for more than 20 years (contrary to the interpretation expressed in the proposal). Observations from the public and traditional ecological knowledge also suggest brown bear populations are probably increasing, not declining, in most portions of Unit 23. There is no evidence to suggest that brown bear populations in the Noatak National Preserve are being subjected to harvest regimes that cause conservation concerns.

Because local subsistence hunters of inland communities in Unit 23 have traditionally harvested brown bears for meat, fat, and hides (Loon and Georgette 1989), this proposal may negatively impact subsistence users if the quota is met and the season closes in an area where they traditionally hunt.

BALLARD, W.B., L.A. AYRES, K.E. RONEY, D.J. REED AND S.G. FANCY. 1991. Demography of Noatak grizzly bears in relation to human exploitation and mining development. Final Report. Alaska Department Fish and Game. Federal Aid in Wildlife Restoration Grant W–23–1, W–23–2, and W–23–3 Study 4.20. Juneau. 227 pp.

LOON, H. AND S. GEORGETTE. 1989. Contemporary brown bear use in NW Alaska. Alaska Department Fish and Game, Division of Subsistence. Tech. Paper No. 163. Kotzebue, AK.

Table 1. Mean skull size and mean age of brown bears harvested in Unit 23, 1990-2009

	Males				Females			
Regulatory year	Mean skull size	*n*	Mean Age	*n*	Mean skull size	*n*	Mean Age	*n*
1990	22.0	24	9.9	23	19.8	14	6.9	14
1991	21.8	25	9.1	22	18.9	8	4.1	7
1992	21.3	39	7.8	29	19.7	16	8.2	11
1993	21.3	31	7.0	26	18.9	8	3.4	7
1994	21.1	24	5.6	21	18.0	8	5.4	7
1995	21.2	29	5.6	26	19.7	9	7.4	9
1996	21.3	23	7.7	19	19.5	9	7.6	7

1997	21.8	23	9.6	17	19.8	7	8.2	6
1998	21.3	44	5.7	33	18.7	7	5.0	7
1999	21.5	38	6.8	36	20.2	14	7.8	13
2000	22.2	47	7.7	39	19.2	26	7.9	20
2001	22.1	31	7.0	28	19.3	16	6.4	16
2002	21.5	20	7.1	19	19.9	20	8.8	16
2003	21.8	30	7.9	28	20.2	11	10.2	11
2004	22.6	55	9.5	51	19.3	18	6.8	17
2005	22.5	36	9.6	36	20.6	15	8.1	13
2006	21.3	32	7.6	25	19.9	16	7.7	15
2007	22.1	23	7.9	18	18.5	5	6.4	5
2008	21.3	28	7.3	22	19.5	21	6.9	17
2009	21.4	39	7.4	30	18.7	12	6.5	11

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PROPOSAL 31

EFFECT OF THE PROPOSAL: This proposal reauthorizes the antlerless moose season in Unit 26(A).

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

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PROPOSAL 32

EFFECT OF THE PROPOSAL: This proposal adds Unit 26(A) to the list of areas where a resident brown bear tag is not required for hunts.

DEPARTMENT RECOMMENDATION: **Amend and Adopt**.

RATIONALE: Staff proposal; see issue statement. The Department recommends amending the proposal to add Unit 18 to the list of areas where a resident brown bear tag is not required for hunts. Also a housekeeping change that removes a duplicate listing for Units 22 and 23 in paragraph (b) of the regulation is part of the amendment.

Unit 18 has a healthy brown bear population based on observations during moose and caribou surveys, observations by hunters, and other information. The harvest has ranged from 5 – 39 bears per regulatory year over the last 10 years and is within the sustainable harvest for the unit. It is unlikely that the proposed change will increase bear harvest. This will add Unit 18 to the neighboring group of Game Management Units with no resident tag requirement. The subsistence permit hunt for brown bears in Unit 18 already has the tag requirement exempted and is not affected by this amendment.

Amended regulation:
5AAC 92.015

(a) A resident tag is not required for the taking of brown bear in the following units:
…
(4) Units 12, 19, 20, 21, 24, 25, **and** 26[B, AND 26(C)]
(14) Unit 18

(b) In addition to the units specified in (a) of this section, if a hunter obtains a subsistence registration permit before hunting, that hunter is not required to obtain a resident tag to take a brown bear in the following units:
…
(4) [UNIT 18]
…
(7) [UNIT 22;]
(8) [UNIT 23;]

…
(10) [UNIT 26(A)]

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PROPOSAL 33

EFFECT OF THE PROPOSAL: This proposal would increase the length of the wolverine hunting season in Unit 26for residents and nonresidents from Sept. 1 – Mar. 31 to Aug. 1 – Mar. 31.

DEPARTMENT RECOMMENDATION: **Do Not Adopt**.

RATIONALE: Proposal 33 considers all of Unit 26; however, only Unit 26(A) falls within Region V and is considered in this analysis. Information for Units 26(B) and 26(C) will be presented at the board meeting for Region III.

In Unit 26(A), there have been no surveys to determine wolverine numbers in recent years. However, the number of wolverines reported through aerial moose surveys, hunter's reports, and trapping records all indicate that wolverine numbers are at satisfactory levels in the unit. Sealing records indicate that 23, 26, 11, 20, 7, 27, 6, 11, 13, 26, and 24 wolverines were harvested each year since 2000. This shows that annual harvests have been quite variable, but under the current harvest level there has been no increasing or decreasing trend.

It is unlikely that this proposed regulation change would significantly increase wolverine harvests. However, female wolverines with kits wean their young from late July through early August. Harvesting females with young in August may result in decreased survival rates of kits. Also, wolverine furs are not prime in August, so it would be a waste of a resource to take fur before it is prime later in the year. In addition, opening the wolverine season on August 1 in Unit 26 would create an inconsistency in the starting date from all other units in Alaska (September 1).

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PROPOSAL 34

EFFECT OF THE PROPOSAL: This proposal reauthorizes the resident tag fee exemptions for brown bear in Units 18, 22, 23, and 26(A)

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

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PROPOSAL 35

EFFECT OF THE PROPOSAL: This proposal presents an intensive management plan for moose in Unit 15A.

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement. The Department will make additional information available on the board's web site prior to the board meeting. Materials may include a revised feasibility assessment, new draft codified language, and an operational plan which will describe the details of implementing this plan.

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PROPOSAL 36

EFFECT OF THE PROPOSAL: This proposal presents an intensive management plan for moose in Unit 15C.

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement. The Department will make additional information available on the board's web site prior to the board meeting. Materials may include a revised feasibility assessment, new draft codified language, and an operational plan which will describe the details of implementing this plan.

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PROPOSAL 37

EFFECT OF THE PROPOSAL: This proposal amends the predation management plan for the Southern Alaska Peninsula caribou herd.

DEPARTMENT RECOMMENDATION: **Adopt**.

RATIONALE: Staff proposal; see issue statement.

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